ETHNOGRAPHIC FILM STUDY OF INDONESIAN CULTURE & CLIMATE

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Ethnographic Film Study of Indonesian Culture & Climate

An Interactive Qualifying Project
submitted to the Faculty of
WORCESTER POLYTECHNIC INSTITUTE
in partial fulfillment of the requirements for the
degree of Bachelor of Science

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Date:
30 April 2019

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Link to Final Videos
https://www.youtube.com/playlist?list=PLKGhrroLIuwDlS5XrC-BxepHGZCHL9KtT

Abstract

The Centre for Education and Research in Environmental Strategies (CERES) wanted to enhance the experience of their visitors by incorporating a series of documentaries into their Indonesian Village. Our documentaries focused on climate relief efforts related to the topics: Air Pollution, Rubbish, Flooding, and General Climate Change. In order to achieve this goal, our team conducted 49 video-recorded interviews with Indonesian community members. The clips from the interviews were then produced into separate topic-based documentaries. CERES will incorporate these videos into the education program in their Indonesian Village to help visitors of the park learn more about the Indonesian culture through the personal stories we documented.

Acknowledgements

We would like to acknowledge the following people, who helped make this project successful. Their names include, but are not limited to:

- Our partner from CERES, Subik Baso along with his intern Dina Putri who provided support and guidance throughout this project.
- Our advisors, Professor Althea Danielski and Professor Susan Jarvis for their advice and direction throughout this project.
- Our Pre-IQP instructor and Global Lab Co-Director, Professor Steve McCauley for his support of the goals we set and oversight of our team's dynamic.
- Professors Ingrid Shockey, Lesley Dodson and Mike Elmes for their wisdom on ethnographic storytelling.
- The multitude of interviewees we meet with for taking time out of their days to talk with us.
- Previous IQP teams focusing on multimedia storytelling for their knowledge from their project experience.
- The Education Staff at CERES for their warm embrace and constructive feedback on our project.

Authorship

Each member of the project team contributed equally to the authorship of this report. All preliminary writing was divided evenly between the team members for each of the five chapters. The overall outline of the report was drafted and revised by the entire team during in-person meetings. Authorship of a particular section was often based upon team members' exposure to and comfort with articulating the topic. In the Introduction and Background chapters, this often was dependent upon where the individual's research was directed. In the latter three chapters, these sections were written by the team member with the most experience in the field during production, or who felt that they had the greatest insight to contribute. Following each stage of drafting, the entire team reviewed the collective work and suggested major edits. Lesser edits such as spelling or grammatical errors were made automatically, as the team agreed that consultation with the first writer was not necessary. The formatting and imagery in this report was decided by the team as a whole.

TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF TABLES

Executive Summary

In recent years, there have been calls for action to deal with the escalating impact of climate change. However, current statistics show that the percentage of people who acknowledge the need to take individual action may not be adequate enough to create change on a global scale (Stokes). Studies suggest that emotional stimuli may be an effective way to compel individuals. Digital forms of media such as video can convey personal feelings, and act as an effective emotional stimulus.

Our team was tasked with creating climate change videos that not only showed the challenges being faced but also the actions being taken to adapt and mitigate in response to change. To achieve this, we decided to conduct an ethnographic film study, which is a study on people, place and culture. We interviewed Indonesians who were interested in sharing their personal experiences with climate change in Indonesia. Cinematic methods of storytelling were an effective technique in executing our goal as it gives viewers a better understanding of the challenges people in Indonesia face and, hopefully, inspires viewers to take action themselves.

We worked alongside the Centre for Education and Research in Environmental Strategies (CERES) Environment Park, a community based not-for-profit organization located in Melbourne, Australia to achieve our goal. CERES is a “place for community-based learning and action to create environmentally beneficial, socially just, economically satisfying, culturally enriching and spiritually nurturing ways of living together” (CERES). The Indonesian cultural village located at CERES would like to present various climate stories to its visitors through experiences of Indonesian Community members living in Melbourne. These ethnographic films will help to promote CERES’s environmentally sustainable lifestyles within the park by using first person experiences on the challenges being faced by the Indonesian community and the actions people are taking to mitigate these issues.

Methodology

CERES requested a series of documentaries focusing on positive climate stories from Indonesian community members. The goal of this project was to enrich the learning experience of visitors at CERES environment park by producing cultural climate stories of Indonesians living in Melbourne, Australia through a series of ethnographic interview-style videos. We developed the following objectives in order to achieve our goal:

1. Engage with experts in ethnographic filmmaking to refine the project’s scope, establish applicable communication skills, and devise an effective inquiry approach.
2. Identify candidates to interview, and develop a production schedule.
3. Compile stories utilizing ethnographic interviews with Indonesian nationals residing in Melbourne that document perceptions of ecological phenomena and support an ethnographic representation of climate change impact.
4. Produce a series of focused topic videos and a broader documentary-style narrative to augment the educational experience at the Indonesian Village and encourage sustainable environmental behaviors.

We broke our project into three main sections: Pre-Production (Pre), Production (Pro), and Post-Production (Post). This is a typical format that most films follow. Using the pre, pro, post format helped us organize our ideas and accomplish all of our objectives as shown below:

1. Pre-Production
    a. We met with experts with background ethnographic filmmaking at Worcester Polytechnic Institute. This helped us determine what interview style would result in a fruitful conversation between the interviewer and interviewee.
    b. We conducted a practice interview before we left for the project site, to ensure our equipment and interview skills were effective.
    c. Our Indonesian counterpart from CERES scheduled our interviews and organized facilities where we could conduct the interviews.
2. Production
    a. We conducted video recorded interviews with 49 Indonesian community members.
3. Post-Production
    a. We organized all our interviews and analyzed them for patterns in the information.
    b. We produced four short documentaries using professional video editing software (iMovie and Adobe Premiere Pro).
    c. We delivered our documentaries to our partner at CERES for distribution.

Results

In the first two weeks of the eight-week project, we completed thirty-five interviews with forty-nine participants. The raw footage was delegated to each team member to review and code. During the coding process, the production team clipped important responses from interviewees and noted each clip with a timestamp and a note. Furthermore, the clips were categorized into four different categories: air pollution, rubbish disposal, flooding, and general climate change. These topics were then developed into short films ranging from 6 to 7 minutes. A synopsis of each focused topic is provided below:

Air Pollution

In the city of Jakarta, air quality has been of major concern to the residents of Indonesia. Indonesian residents of Melbourne speak on their experiences with the traffic in Jakarta, investigate why the issue exists, and describe the efforts by the government and people to alleviate the traffic issue.

Rubbish Disposal

The growth of unmanaged waste has affected the quality of life of many in Indonesia. Indonesians share their experience with rubbish and how their communities are taking action to implement sustainable changes. Several non-profit organizations and local communities have developed innovative methods to encourage people to reduce waste, eliminate plastic, and clean the environment.

Flooding

Flooding is a major issue in Indonesia, particularly in the capital city of Jakarta, where flooding affects the largest population. Indonesians share the perspectives and stories regarding their experiences, including causes, changing flood patterns, and related challenges. This is followed by a discussion of community and government action to improve these conditions.

General Climate Change

This documentary studies the general climate changes happening in Indonesia, and relief efforts to help combat those issues. Topics mentioned in this video include general awareness of climate change by Indonesians, the responsibility of people to act to reduce climate change, sustainability efforts, and how the environment and spirit are one.

These four videos narrate the challenges Indonesians face in regards to climate and the responses they have for the issues presented.

Several factors contributed to the development of high-quality videos that encapsulated Indonesian culture and climate. These included valuable preparation, good team dynamics, experience with videography, an established connection with the target population, and essential interviewing techniques. We believe that having a team that works well together and has prior experience with video production was very important. Another essential element to our success was the fact that we were able to use professional equipment and had the experience to handle technical difficulties during filming.

With the support of our partner organization, who acted as cultural ambassadors, we were able to develop immediate connections with the Indonesian community in Melbourne and schedule interviews. The production schedule was prepared and set before the production team arrived on site, which gave us a lot of time for post-production. The extra time we had was crucial for responding to feedback from our sponsor and advisors. After experiencing thirty-five interviews, the team has learned some valuable interviewing techniques which include:

- Arriving early to the interview site
- Researching and building prior knowledge of the main focus of the interview
- Planning questions for the interview
- Starting a pre-interview conversation with the interviewee
- Understanding how to guide a conversation
- Listening and reacting without making a sound
- Knowing how to conclude an interview

These factors all contributed to our completion of a successful ethnographic film study project.

1

INTRODUCTION

The need for environmental action is increasing with the escalation of climate change impacts in recent years. The mobilization of these initiatives is dependent on the action of individuals in support of sustainable behaviors. Widespread recognition of climate change threats has increased in the technological age. However, many in the general population will not take personal responsibility for the mitigation of this issue. Only 67% of people acknowledge that action must be taken on an individual basis (Stokes, 2015). This shortcoming may be attributed to the common use of quantitative data and scientific terminology to promote climate action. At present, most climate-based media fails to appeal to emotional precepts. Studies show that individuals are less compelled by scientific evidence than direct, local experiences, particularly when supported by visual media that is emotionally stimulating (Clayton, 2015). Current education strategies are not sufficient means of inciting adequate individual responses to environmental issues. Alternative solutions must be explored in order to motivate personal action.

Despite a decade-long push of environmental initiatives and encouragement to integrate sustainability education into school curriculums, Australia has not achieved its anticipated results. In 2018, Australia ranked 37th in achieving its Sustainable Development Goals (SDG) – down from 26th place the previous year. The CERES Community Environment Park in Melbourne, Australia, is one of many organizations striving to promote sustainable ways of living through environmental programs, agricultural projects, green technology demonstrations, and social enterprises. Their cultural village exhibits study various countries and communities around the world including their neighboring country, Indonesia. These villages make a significant impact on their 300,000 to 400,000 visitors every year by implementing interactive educational activities. In regards to their Indonesian Village, CERES' goal is to enhance visitors' experience at the park by sharing personal stories from Indonesians who have been affected by climate change and the actions that they are taking to mitigate or adapt to those changes by implementing a video series along the path of the village.

At the Indonesian cultural village, CERES Environment Park wanted to categorize these climate stories by addressing issues currently being facedby Indonesia. To accomplish this, CERES Environment Park extended outreach to the Indonesia community within Melbourne to collect their experiences of the Indonesian climate prior to migration to Australia. The topics that were archived include: Air Pollution, Flooding, General Climate Change and Rubbish Disposal. These four categories were filmed, complied, and produced into a video series encapsulating the issues mentioned. This video series provided to the visitors of CERES Environment Park is a first-person perspective of not only the challenges being faced by the Indonesian community, but also what is being done to mitigate against these issues.

Previous methods utilized to promote sustainable environmental behaviors offer a primarily logic-based account of climate change impact. However, climate stories offer a narrative that appeals to all modes of persuasion—ethos, logos, and pathos, which respectively contribute to an audience's ethical, logical, and emotional response (Athon, 2016). The Climate Stories Project is a global environmental initiative that shares audio and video narratives on a web platform. It captures emotional accounts of the personal and community impacts that climate change has on an international scale (Climate Stories Project). Climate stories have been developed in countries around the globe, including similar initiatives that have been undertaken by prior WPI project teams at the Iceland, New Zealand, and India sites. Ethnographic storytelling is a powerful approach towards worldwide ecological awareness and understanding, yet to be truly effective, it requires extensive global data and a wealth of compelling narratives. This climate story initiative strives to bridge ecological action across communities, providing a global platform for local narratives and promoting the mobilization of worldwide sustainable behaviors.

With the motives to continuously improve the CERES Environment Park, the staff at the park wanted to add an education component to each of the villages within. In particular, the staff was interested in adding the voices and stories of Indonesians' living in Melbourne and friends from home about the environment in Indonesia. The staff at CERES believed that with the augmentation of personal stories, visitors of the park would be better engaged, and learn more about the environment in Indonesia.

The goal of our project was intended to enrich the learning experience of visitors at CERES environmental park by producing cultural "climate stories" of Indonesians living in Melbourne through a series of ethnographic interview-style videos. To accomplish this goal, we identified four main objectives:

1. Engage with individuals of ethnographic specialty to refine project scope, establish applicable communication skills, and devise an effective inquiry approach.
2. Identify candidates to interview, and develop a production schedule.
3. Compile stories utilizing ethnographic interviews with Indonesian nationals residing in Melbourne that document perceptions of ecological phenomena and support an ethnographic representation of climate change impact.
4. Produce a series of focused topic videos and a broader documentary-style narrative to augment the educational experience at the Indonesian Village and encourage sustainable environmental behaviors.

With these objectives, we concluded that our project enriched the learning experience of visitors at CERES.

2
BACKGROUND

Climate change has different effects based on the community and location. The perceptions of how to combat it vary equally so. While scientific data gives us one important perspective into the impacts of climate change, this phenomenon can be complemented by valuable first-hand experiences. Supporting the effects of climate change through people's experiences, not purely scientific data, was the backbone of our project. Our mission was to enrich the learning experience of visitors at the CERES Environment Park by capturing ethnographic climate stories of Indonesians living in Melbourne through a series of interview-style videos. While the topics introduced in each video differs, the feeling of change in the environment is mutual, and conveying that message in a digestible way was one of the goals of our project. Understanding the perspectives, experiences, and views of the environment of Indonesians benefits the quality of the videos. By connecting these different perspectives into videos, we were able to show the diversity of our subjects' experiences with climate change.

Environment organizations such as CERES have established sustainability centers across the globe to build awareness of current issues and provide resources to promote environmental sustainability. In order to achieve our goals of contributing to the learning experiences at CERES with a series of videos capturing climate stories from Indonesia, we first had to understand why climate change has become a substantial issue, and how showcasing climate stories can help people understand the importance and need for climate action. In this chapter, we discuss the topic of climate change on a global scale, research Indonesia's relationship with climate, discuss CERES's environmental sustainability mission, and discuss impactful ways of collecting climate stories to convey sustainability messages. Finally, we give a brief overview of climate change and the ways it has affected the Indonesian region.

2.1: Climate Stories Initiative at CERES Environment Park

2.1.1: CERES

The Center for Education and Research in Environmental Strategies (CERES) Environment Park is a not-for-profit organization located by the Merri Creek in Brunswick East, Victoria, Australia. CERES is a community outreach center focused on providing sustainability education through environmental and agricultural programs at its Sustainability Hub. CERES hosts student excursions, which educates visitors on waste, water, land, biodiversity, and energy. The site of the park was once home to the indigenous Wurundjeri tribe before its use for bluestone mining following European settlement. The area then served as a landfill until its abandonment in the 1960s. The 450-acre region was converted in 1982 by the founders of CERES into the outdoor environment park which stands today, visited by over 400,000 people each year, 65,000 of whom are students. The Center is governed by a Board of Management and is staffed by approximately one-hundred thirty individuals. Apart from donations received by external supporters, CERES funds itself via its social enterprises, shown in Figure 1, which include a market, grocery, cafe, kitchen, permaculture nursery, and online organic supermarket, all of which aim to provide the community with nutritional, locally-sourced products and encourages individuals to grow their own food. CERES is the only site in Australia to conduct comprehensive environmental programs of this nature. The organization encompasses partnered social, economic, and environmental growth, making it their mission to create "environmentally beneficial, socially just, economically satisfying, culturally enriching, and spiritually nurturing ways of living together" (CERES).

Figure 1: Map of CERES Environment Park

2.1.2: Goals of the Cultural Villages

CERES has a collection of indoor and outdoor Cultural Villages, which spotlight the environmental experiences of Indigenous Australian, Indonesian, and African communities, relating the contexts of these communities' diverse cultural backgrounds to a common trend of climate change impacts and initiatives. Each of these cultural programs is led by a member of the education department who is native to the respective region. The goals of these spaces are to link visitors to others across the globe but also to forge stronger relationships between community members with roots to these regions. The utilization of Cultural Villages in sustainability education at CERES is a highly unique approach that offers varying global perspectives centered around a common goal. Of the four venues, the two indoor spaces feature the Multicultural Classroom and Dapur (kitchen), while the Namalata Willem and African Shelter are covered outdoor areas equipped with fire pits. One building of the three-piece Indonesian complex is pictured below (Figure 2). The spaces may be rented for external functions, providing a culturally rich and unique alternative to a typical meeting venue (CERES).

Figure 2: Indonesian Village at CERES

2.1.3: How Climate Stories Could Support CERES's Goals

Climate change stories are utilized to create a balanced and personalized expression of climate change actions and challenges happening in various regions around the globe. The Climate Stories Project captures emotional accounts of the personal and community impacts that climate change has on an international scale (Climate Stories Project). This is a more dynamic approach than the scientific, fact-based perspectives that are often portrayed in regard to climate change. As further discussed in §2.2.3, the credibility and familiarity of sources can play a more impactful role in individual action than the content itself. Studies show that direct, local experiences are more compelling than an informative tone, particularly when the display is emotionally stimulating (Clayton, 2015). Therefore, accounts of an individual's personal experiences with climate change, backed by clear, relevant statistical data are likely to positively influence viewers to support environmental policy.

The Cultural Villages at CERES Environment Park are linked by an outdoor walking trail, the vision for which is similar to that of the famous Trail of the Elephants at the Zoos Victoria. The Elephant Trail allows visitors to walk among a variety of endangered animals centered in an Asian village whose livelihoods are threatened by human impact on the environment. The experience frames the emotional response triggered by observation of these creatures with a scientific background and proposed mitigation strategy. The trail aims to utilize a combination of objective and subjective strategies to achieve the development of individual behaviors towards environmental support (Trail of the Elephants). The Cultural Villages at CERES maintain a similar mission, harboring the belief that the utilization of climate stories may, in fact, generate an even more compelling personal narrative than that of the animals, as the utilization of human communication elicits an explicit recognition of climate-based challenges and how their influence extends to the audience. Additionally, mitigation and adaptation policy may be expressed more candidly in the context of human experiences than those of animals, as humans share more direct relationships to the development of this legislation.

2.2: Climate Change and Climate Responses

2.2.1: Australia's Relationship with Climate Change

Under the Paris Agreement adopted on December 12, 2015 by the United Nations Framework Convention on Climate Change, countries vowed to drastically reduce their carbon emissions and adhere to national climate change goals that coincided with a worldwide temperature reduction of approximately two degrees over the next thirty years (United Nations, 2016). However, even if national pledges are fulfilled by 2050, the effects will not be sufficient for the realization of global climate change decline. The plan must be updated by country at the upcoming meeting in 2020, during which nations will report updates about their progress and reevaluate the feasibility and impact of their current aspirations (Skarbek, 2018). However, these updates may not be attainable, as many countries are already struggling to adhere to their present pledges.

Australia shows great promise in its advancement towards necessary energy modifications. The national target for 2030 was a 26-28% reduction from 2005 emission levels, with total emissions reaching net zero by 2050. There have been significant reductions in the land sector since 2005, as well as a small decline due to electrical modifications, resulting in an overall emission decrease of 11%. At present, the nation is on target for its 2020 goals (Skarbek, 2018). However, the future pledges, while ultimately feasible, are not possible with current and pending policies, as improvements will be negated by population and economic growth. A net zero carbon footprint is within range for Australia in 2050 if land and electricity policy reform was enough to meet national standards for 2030, with the addition of building, transport, and industry reform (Dooley, 2018).

Progress towards the goals on net emissions has become stagnant since 2013 as progress in smaller sectors has reversed (Skarbek, 2018). In order to resume momentum towards these goals, the Australian government must take action. This includes deforestation reduction, improved standards for building and vehicle emissions, and the phasing out of coal with growth towards low carbon fuel and renewable energy (Dooley, 2018). The overwhelming opportunity for Australian climate change must be supported by these low-cost policy solutions.

2.2.2: Climate Change in Indonesia

As of 2018, Indonesia has been rated as highly insufficient in regard to their action against climate change. The nation's emissions have increased rapidly relative to 2014 data (Climate Action Tracker). A majority of their emissions are centralized around the palm oil industry. Palm oil is used in a myriad of products; it's in food, cosmetics, cleaning products, and in recent years, fuel. Due to the high demand for palm oil, Indonesia saw this as a substantial source of profit. To make room for their lucrative palm oil plantations, palm oil companies and farmers began to clear out forests. Not long after, Indonesia and Malaysia dominated the world's supply of palm oil. Alone, Indonesia produces up to 90% of the global supply (Lustgarten, 2018).

Indonesia's palm oil industry led to an increase in forestry-related emissions, with deforestation becoming one of the country's top contributors of greenhouse gas emissions. To quickly clear large patches of forests, palm oil corporations resulted to the use of illegal fire. The widespread wildfires in Indonesia have altered forest composition and structure causing habitat loss, disrupted ecosystems, and the interannual buildup of global atmospheric CO_2 and CH_4 (van der Werf, et al., 2008).

Indonesia has taken great steps towards creating plans on the issue of climate change. By signing the Paris Agreement, Indonesia agreed to make one of the largest reductions in emissions in the world. This is, however, due to Indonesia being one of the largest emission producers (den Elzen et al., 2016). Nevertheless, there have been partnerships such as the University of Leicester collaborating with the Indonesian government and the European Space Agency (Space Daily, 2010). This mission is to monitor deforestation in vast forests of Indonesia and ensure that the spread of this deforestation is controlled and can intervene before this issue spreads.

Indonesia's agriculture sector is the second largest employer, supplying 35% of the jobs to Indonesians (Aji, 2015); farming is the main source of income for most families in Indonesia. In recent years, drought has greatly hindered yield numbers for rice paddies in Indonesia (Surmaini, Hadi, Subagyono, & Puspito, 2015). Scientists have developed an agricultural drought index based on the "ratio of real-life drought-induced paddy damage area to the total paddy area planted." According to data, crop damage during regular drought seasons range from 250 to 870 hectares. Moreover, a delay in wet season caused by El Niño, yield loss can range from 562,000 up to 780,000 tons. However, this early agricultural drought index has assisted farmers and saved crops by shifting the irrigation systems before the dry seasons affects paddies.

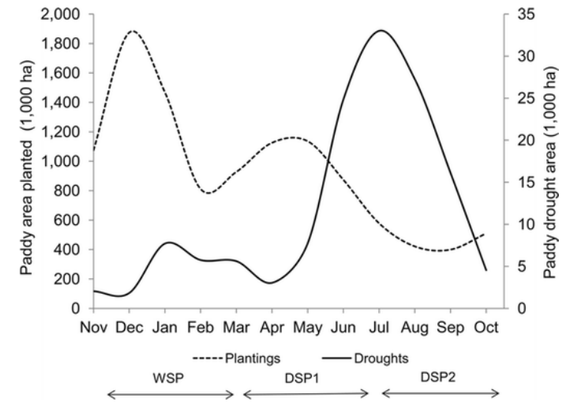

Figure 3: Planting season of rice farmers by Surmaini (2015)

Figure 3 illustrates the various planting seasons that rice farmers may follow. The first period, known as the "wet season planting," is the main planting season for paddy fields who can only afford to plant once or twice per year. However, "dry season planting" is done by farmers who can afford to have irrigation systems in place during lack of water or those farmers who have easier access to water. This planting season can be troublesome for farmers as knowing when the dry seasons may fall and how long they will last may not always be predictable due to El Niño. Indonesia has already seen an estimated maximum loss of 1,278 tons of rice in the May – July dry season planting. Therefore, scientists have created a new index known as the Paddy Drought Impact Index (PDII) which is linked to the El Niño 3.4 index to monitor rainfall and dryness patterns when a new El Niño arrives.

With nearly half the urban expansion of land projected to take place in Asia, the island of Java's population will increase by 215% to 357% by 2030 (Muis, Güneralp, Jongman, Aerts,

Jeroen C. J. H., & Ward, 2015). Indonesia and its growing urban population are at great risk for coastal and river flooding. After the major flooding of Jakarta in 2007, flood risk assessment has been a major study in Indonesia. Spatial planning will create a risk reduction of up to 57% and 84% in river and coastal areas, researchers say that the flood risk in Indonesia can be greatly reduced before 2030 by simply limiting the amount of new urban land in flood-prone areas.

Figure 4 shows the probability of flood risks in coastal and river areas relating to change in Expected Annual Damage (EAD) in response to urban planning. It shows that, the higher the enforcement, the lower the percentage of change in EAD relative to no urban planning and the higher the flood risk is in flood-prone areas. A common method that has been used for flood-prone areas of Indonesia is enhanced flood protection. Enhanced flood protection leads to an immediate effect in reducing current, as well as projected risk. However, this involves building flood defenses rather than regulating urban building sites, and in some ways can be costlier.

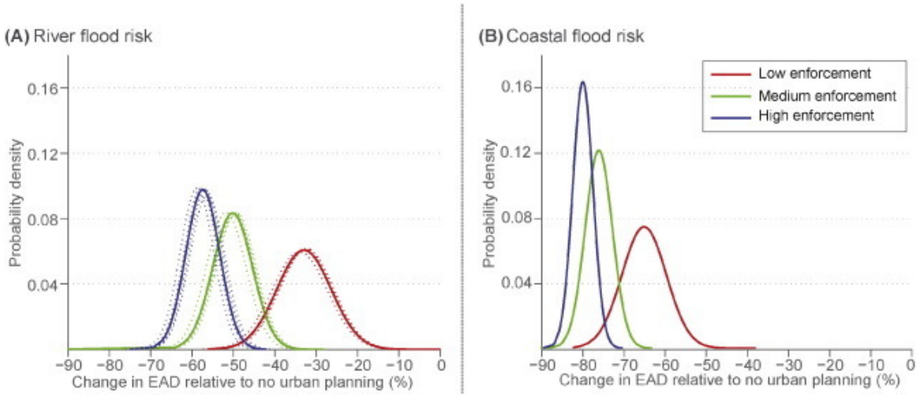

Figure 4: Probability of flood risks in rover and coastal areas by Science of the Total Environment (2015)

2.2.3: How can Australia Learn from Indonesia

There is a widespread belief that environmental policies should be adopted in order to limit carbon emissions and ultimately reverse the impact of climate change. Studies show that 78% of the global population recognizes policy support as a prominent solution to the spiraling degradation of the atmosphere. However, only 67% find that individual lifestyle changes are a necessary factor, supporting the notion that despite a general consensus that action must be taken, people are often unwilling to put their own priorities at risk for a vague societal objective (Stokes, 2015). This shortcoming is where environmental education plays a key role in the progress of sustainability initiatives. Source credibility and relatability plays a key role in causing the comprehensive audience, spanning Australia and the internet, to relate to Indonesian climate issues on a global scale.

National financial stability and resources also regulate the deflection of personal responsibility, as the economic status of a country feeds into its ability to recognize and combat ecological impacts. Despite its classification as a developing country, Indonesia is the third highest contributor of greenhouse gas emissions, according to a 2012 study (Shahputra, 2018). Due to Indonesia's largely agriculture-dependent economy and lack of technological resources, the country is more susceptible to the effects of climate change than wealthier nations. Many developing countries do not have the resources to independently achieve most mitigation tactics, and thus believe that it is the responsibility of more established nations to implement sustainable actions (Clayton, 2015). The environmental challenges faced in Indonesia are felt by communities across the globe. The unique cultural perspectives and low-cost solutions introduced by local communities serve as a global remedy, if recognized and established on a larger scale by nations with greater financial capability. Australia as individuals migrate in pursuit of higher education, the opportunity for community members to share their experiences has expanded. The introduction of these climate change stories outside of the storytellers' native nation establishes the subject as a global issue affecting and requiring the action of all communities.

2.3: A Climate Ethnographic Study

The most substantial deliverable in our project was video documentaries on the topic of climate change from the perspectives of Indonesian community members who have migrated to Melbourne, Australia. We had to learn several techniques to enhance our interviewing skills so that we would gain the trust and confidence of the individuals we interviewed. To do this, we researched three main categories, ethnographic interviewing, the art of eliciting responses in interviews, as well as studying past WPI Interactive Qualifying Project reports (introduced in 2.3.3) which had a similar task.

2.3.1: Ethnographic Interviewing

Interview style is an important part of telling a story because it creates continuity throughout a piece, helping the reader/viewer understand the message that the creator is trying to convey. One style of interviewing which helps tell climate change stories is called *ethnographic interviewing*. It is a type of interviewing which qualitatively researches a topic through detailed observation and one-on-one interviews. Most people use this technique when trying to understand the practices of another culture through individuals (Mai, 2018).

However, with ethnographic interviewing, information is not only collected from a person but also from observation and immersion with the topic. To enhance our skills of ethnographic interviewing, we followed five different categories (Gee & Ullman, 2017):

1. Grand Tour Questions
2. Mini-Tour Questions
3. Example Questions
4. Experience Questions
5. Native-Language Questions

Although all of these don't have the same value to an ethnographic film about climate change, they all help prosper growth in interpersonal skills which are essential for interviewing.

Grand Tour questions are the broadest. They establish a connection between the person interviewing and the interviewee. It's important to establish how elements work together as part of the bigger picture. Questions like "What are your daily tasks?" can be categorized as grand tour questions. Further, specific tour questions which are embodied by a general tour can be used to inquire about a specific incident that occurred. In the context of climate change, this was used to relate to a natural disaster. Other types of grand tour questions can even involve asking for a tour. This was very helpful for our climate change stories because people we interviewed showed us images, illustrating their climate change story.

The next type of question is Mini-Tour questions. This can be used to branch off a grand tour question. These can be treated as follow-up questions to a topic brought up in the grand tour section. For example, if we asked an individual about where they grew up and their response is "a farm", a follow-up question can be: "What did you work on when you lived on the farm?"

Furthermore, example questions can be used when the interviewer wants to hear a specific example of something. Questions like "Can you give me an example of the type of irrigation system your farm used?" can be categorized as example questions.

Experiences are something that is unique to each individual. An example of an experience question is "How did the floods affect your family's food supply during the wet season last year?". Many stories from interviewees' experience are not available online, therefore, extracting as much knowledge from one's personal memory is crucial to conveying a personable tone in films. This is why experience questions are very important to an ethnographic study.

Finally, native-language questions can be very helpful during interviews. These types of questions include local slang or terms in another language. For example, "Subak system" is a term for irrigation in Indonesia. Interviewees are more likely to respond to terms they recognize personally.

These five categories of questions are significant in encouraging detailed, personal responses during an interview for an ethnographic study. The outcome should help investigators learn more about the target population's people, culture, and environment.

2.3.2: How to Elicit Good Responses

Forming a good relationship between two people often results in a more comfortable exchange of personal topics. Eliciting a good response requires trust between the interviewer and the interviewee. As Forester (2005) suggests, people will be more willing to share sensitive stories if you are open to them.

Establishing a connection to the interviewee is also important. If we have small talk with the interviewee before an interview starts, then the interview that follows will flow more smoothly since it feels more like a conversation rather than a formal interview. Asking sensitive questions sometimes results in discomfort. Examining on a person-to-person basis, interviewers should avoid sensitive questions unless there is full confidence that it wouldn't have a negative effect on the interview or interviewee (Forester, 2005).

2.3.3: Organizing Responses

With the myriad of video clips expected to be collected during production and compiled into a data archive during post-production, the raw footage may seem as if they were all conducted in the same tone, and with a similar message. Some responses may not be as useful as others; therefore, a form of organization is required.

Transcription is the first step. This step allows the production team to code each interview, searching for keywords or phrases that are important to telling ethnographic climate change stories. Transcription helps the data transform from qualitative to quantitative. This can be especially helpful when trying to sort interviews. Sorting the interview response data does not necessarily result in categories which can be useful for indications of patterns. Keeping in mind of what the end goals are, the categories for coding can be discussed and decided by the team.

2.3.4: Projects Completed by Other WPI Students

Building off past IQPs similar to our project scope enlightened us to techniques that did and did not work. After reviewing the work of peers, we synthesized that having the interviewee repeat the question before they answer can help the viewer gain context on what topic is about to be discussed in a video. Simply answering the question doesn't provide any background to the viewer about what the viewer seeks to gain out of the answer. Although, sometimes this is harder said than done. Some interviewees will repeat the question in their answer, but others may not. These idiosyncrasies can be ironed out in post-production.

Iceland A'18, Perceptions of Climate Change in Iceland (Seibert, McClung, Jalbert, & Yeung, 2018) provided an excellent example of ethnographic storytelling. We discovered that the concept of a script was "done away with" as it made interviewees' responses sound robotic after meeting with the advisor and editor of this project. Instead, informal but to-the-point conversations were had

with the natives of Iceland. Various camera angles and scenes were also employed to keep the viewer enticed as well as establishing, scenic b-roll clips that made the viewer experience the landscape with the natives. This created an immersive feeling on the topic of climate change in Iceland as well as the different challenges that were faced by locals.

The technical aspects of past IQPs also needed to be improved. Upon review of CERES B'18, Climate Change Narratives for the Indonesian Village (Kelly, Odell, & Sairs, 2018) IQP deliverables, we realized that audio clipping was a common mishap in these videos. Clipping often occur when a louder sound is recorded than the filmmaker expected. This happened a lot in previous IQPs, and it is very distracting. In addition, the filming compositions were unconventional and often felt out of place. Interview locations weren't dynamic, and some were often exhausted. This can lead to a viewer becoming disinterested in the video being viewed.

2.3.5: Building Upon Past WPI Projects

Previous teams' archive helped define the final product of this IQP. CERES, B'18 mentioned that the Indonesian consulate of Melbourne thought the previous videos brought light to the environmental problems Indonesia is facing. However, the Consulate General suggested to the previous team to add a second series of positive videos regarding the state of Indonesia presently. Therefore, videos produced by our team will bring light to the efforts that the Indonesian government has made to improve the environmental status of Indonesia. Upon completion of our IQP, at the Indonesian Village located at CERES Environment Park will display our final product on the "Chook" app, CERES YouTube channel, and CERES Environment Park website.

3 METHODOLOGY

Our project was intended to enrich the learning experience of visitors at CERES environmental park by producing cultural “climate stories” of Indonesians living in Melbourne through a series of ethnographic interview-style videos. To accomplish this goal, we identified four main objectives:

1. Engage with experts in ethnographic filmmaking to refine the project’s scope, establish applicable communication skills, and devise an effective inquiry approach.
2. Identify candidates to interview, and develop a production schedule.
3. Compile stories utilizing ethnographic interviews with Indonesian nationals residing in Melbourne that document perceptions of ecological phenomena and support an ethnographic representation of climate change impact.
4. Produce a series of focused topic videos and a broader documentary-style narrative to augment the educational experience at the Indonesian Village and encourage sustainable environmental behaviors.

Different methods were used to complete these objectives including but not limited to: interviews, casual conversations, observations, and documentation.

3.1: Establishing Scope and Goals

3.1.1: Development of Project Scope

The development of our project scope was solidified through consistent communication with our partner, Subik Baso, at CERES, whom we had the opportunity to collaborate with in order to fulfill the vision of our partner organization. During our initial contact with our partner via video conference, we developed our shared intentions for the project’s final deliverables based on an exploration of the successes and challenges of the preceding team.

The mutual vision of CERES and our project team was the production of brief topic videos, infographics, and an extended documentary utilizing the documentation of Indonesian climate stories. We created four focused topic videos, each approximately 6-7 minutes in length. The videos were split up by subject, including topics of flooding, air pollution, rubbish disposal, and general climate change. We transcribed all footage and developed latent codes to identify broad environmental themes that recurred throughout the interviews. Following the establishment of these subjects, we applied an additional manifest code to the transcripts in order to confirm the distribution of these themes spanning our collective footage (McCauley, 2019). The focus videos are to become available via the CERES Chook App and CERES vlog, accessible by search in a web browser and as an interactive exhibit in the Indonesian Village at the park. We created a more comprehensive version of our footage and presented it as an ethnographic documentary, which included all previously-cited topics, and will be uploaded to YouTube as part of the organization’s global outreach mission when they decide to release it to the public.

Our predecessors, tasked with the same project objectives, received feedback from the Indonesian Consulate in Melbourne, Australia that their final product conveyed minimal evidence of climate change mitigation and adaptation strategies in Indonesia, concentrating primarily on negative environmental impacts. We aimed to supplement the initiatives of this team by highlighting mitigation and adaptation strategies in Indonesia in addition to the challenges that this nation faces in relation to climate. Based on the number and experiences of the subjects that we interviewed and our time constraints, we developed our own footage of climate impact stories in addition to expressions of positive action. Since time and quality of our personal content was permitting of this, we did not need to combine our footage with that of the previous team in order to produce our final deliverables.

3.1.2: Soft Skills Training

Our team received insight into the “soft skills” facet of interviewing from Professors Stephen McCauley and Leslie Dodson in the Foisie Innovation Studio’s Global Lab at Worcester Polytechnic Institute. This training allowed us to enact a direct approach in terms of our communication with interviewees. When initiating contact with the interviewees, whose selection will be reviewed in §3.2, we established a clear statement of our personal identities and project mission as it pertains to the interviewees, conveying their role in terms of the greater project scope. This preliminary conversation also included a value proposition, through which we aimed to express why it was in the interviewees’ best interests to collaborate with our team. Utilizing this expression of partnership rather than viewing these individuals as subjects, we described their participation as an opportunity to share their story and help others understand them better, particularly in the context of sharing the experience of Indonesian immigrants with Australians.

These skills also carried over to the act of conducting a formal interview, as it was important to establish a basis of understanding, likeability, and trust with the interviewee. This was achieved by arriving to interviews on time and with an aura of respect, kindness, and professionalism. We practiced our interview and technical skills in order to ensure a smooth setup, in addition to providing our interviewee with sufficient background about our work to convey our dedication and competence. Our strategy included traveling to interviews in a team of four, where three individuals focused on the technical work. The other teammate practiced the act of establishing a warm and conversational tone with an interviewee before formally asking any questions on tape. Additionally, we aimed to abate the stress that the situation might have induced by positioning the camera as inconspicuously as possible and proceeding as though having a normal conversation with the interviewee about their personal story.

3.2: Pre-Production

3.2.1: Identifying Participants

The first step in our process of documenting ethnographic climate stories was to identify who will be the subjects of our video series. Since our project focused on the Indonesian Village at CERES, our target population was Indonesians living in Melbourne, Australia. Indonesians make up a small but important population of immigrants in Melbourne. Our partner, Subik Baso, connected us with members of the Indonesian community. He assigned an intern, Putri Siti Raudina Carmelia (Dina), to reach out to the growing community at the Indonesian Consulate. We were able to expand our network of participants within their community as friends and family of participants became interested in sharing their stories as well. As we were documenting the experiences primarily of Indonesian immigrants living in Melbourne who have connections to our partner, this identification process may be considered convenience sampling.

3.2.2: Determining Locations

An important part of video production and storytelling is finding a setting that will help enhance a story's theme. We considered locations that were suitable for the production team and convenient for the participants. The production team's goal was to produce videos that encapsulate a positive atmosphere of Indonesian culture and environment. In order to achieve those goals, we aimed for outdoor locations that comprised of warm lighting from the sun and vibrant nature prospects.

In Figure 5 below, the regions in green show where the largest populations of Indonesians reside according to the State Government of Victoria. These highlighted regions in Melbourne include Wyndham, Melbourne Central Business District (CBD), Boroondara, Whitehorse, and Monash. When scheduling the locations of the interviews, we took into account that several of our interviewees are students from universities located near or around Melbourne CBD. This made Melbourne CBD the most favorable location. We conducted interviews at sites such as Melbourne University, Queen Victoria Gardens, and Federation Square. Some interview grounds we filmed at that were not located in Melbourne CBD included the Indonesian Consulate and the home of an Elder.

Figure 5: Popular regions for Melbourne's Indonesian Community

3.2.3: Establishment of Interview Style

We began to establish a strong basis for our interview procedures by gathering the expertise of a variety of resources, including Stephen McCauley and Leslie Dodson in our soft skill training, Ingrid Shockey and the Iceland Climate Stories project team with their prior experience with climate stories videos, the preceding CERES project team in Melbourne, as well as New Zealand project advisor Mike Elmes, who offered an enlightening perspective on environmental storytelling in indigenous communities. We gained valuable insight from the interview style of the Iceland project team, as their initially structured interview approach proved far less valuable than the conversational methodology adopted by their team as the project progressed. We achieved a similar outcome by conducting our interviews using a semi-structured conversational technique (McCauley, 2019), which encompassed the soft skills described in the previous section (§3.1). The methodology of this approach is investigated in further detail in §3.3 of the Methodology.

3.2.4: Creation of Interview Questions

With consideration of the interviewing methodology employed by Iceland B'18, we questioned our interviewees on personal, reflective life stories which provided a cultural perspective on ecological phenomena taking place in their homeland. Questions were not heavily scripted, nor had a clear directive to the topic of climate change, which generally has a negative connotation. To provide a more comfortable and open environment for the interviewee, we asked the interviewees personal experience questions about their lives. These questions assisted in adding a human factor to the climate stories as a touching memory. Every interview was different as each investigator improvised questions on the spot to build upon a specific topic or memory the interviewee was focused on. A list of common questions that helped start and guide our conversations are located in Appendix A.

3.2.5: Developing a Production Schedule

In order to deliver quality, educational videos to our partner organization, we needed to craft a detailed production plan. The three main stages of video production include pre-production, production and post-production. Pre-production started during our Social Science Research class and continued into the first week on-site. We conducted background research to gain a better understanding of our project and solidified our missions and objectives. Furthermore, we began the process to obtain quality video production equipment, trained our soft and technical skills with professionals, and prepared interview questions. During the two weeks before we arrived at the Melbourne Project Center, CERES began contacting and scheduling our interview candidates.

After we finished our pre-production preparations, our next steps were to film our content. Production started in the first and continued to the second week of the term. During shooting, there are several responsibilities the team needed to be aware of. One

person needed to take on the role of Interviewer who conversed with the interviewee(s) before and during production as the rest of the team set and monitored the equipment. The team needed to consistently check the sound, lighting, and camera framing to make sure everything was running smoothly throughout the interview.

After the footage was obtained, we moved on to post-production when most of the editing and formatting of the footage took place. Post-production started during our third week and ended within the last week of the eight-week project. As we finished filming each interview, we meticulously organized the footage on several hard drives which included a hard drive for each team member and an extra backup hard drive. We divided up the raw footage and had each team member go through their portion. Each member was responsible for transcribing the interviews and making annotations with timestamps of crucial points in interviewees' responses. With that information collected, we started compiling clips to create videos of specific topics on climate in Adobe Premiere Pro.

3.3: Production

3.3.1: Interviewing Candidates

After establishing a suitable time and location with the candidates, we selected one interviewer from the team, whilst the rest of the team operated and monitored both the video and audio equipment. This was done to make the interviewee comfortable and not feel a part of a set, and thus, inhumane. The interviewer conversed with the interviewee whilst the team members finalized the setup of the equipment. The interviewer then commenced asking questions about their personal lives in order to jog the memory of the individual (Appendix A). Team members then jotted minor notes in order to mark key points in the interview.

3.3.2: On-site Coordinator

One of the main roles during field production is an On-site Coordinator. The responsibilities of an On-site Coordinator included contacting the interviewees to confirm the interview time and location as well as keeping in touch with the participants to make sure they can find the meeting location. It was important to send an exact location of where the production setup is since each meeting location has various filming spots. For example, the agreed meeting location with the interview might be "Federation Square," but the film team has scouted locations by the river, on the hilltop, or by the park tables. If any interviewees had trouble finding the team, it was also the On-site Coordinator's job to find them and walk them to the filming location.

3.3.3: Rotating Task Schedule

Our team utilized a rotating task schedule during filming to ensure that each team member became equally familiar with the various roles that went into production. We quickly identified interviewing as the most strenuous of the roles, so we developed a system of alternating in pairs between the interviewer and audio recording tasks to give the interviewer a break between each interview, as well as an off day in between serving this duty. Therefore, on a Rotation A Day, Jarod and Molly would alternate between interviewing and operating the audio recorder with each interview, while Michelle and Tahvorn switched between cameras. On the following day, a Rotation B Day, the roles would be reversed so that Jarod and Molly would have a rest from interviewing to operate the cameras, and Michelle and Tahvorn would alternate between interviewer and audio operator. This system worked very well, as it allowed for a fair distribution of individual contribution and enabled each member to gain expertise in all areas. It also provided the interviews with an equal distribution of content and delivery, which varied somewhat due to each team member's interview style.

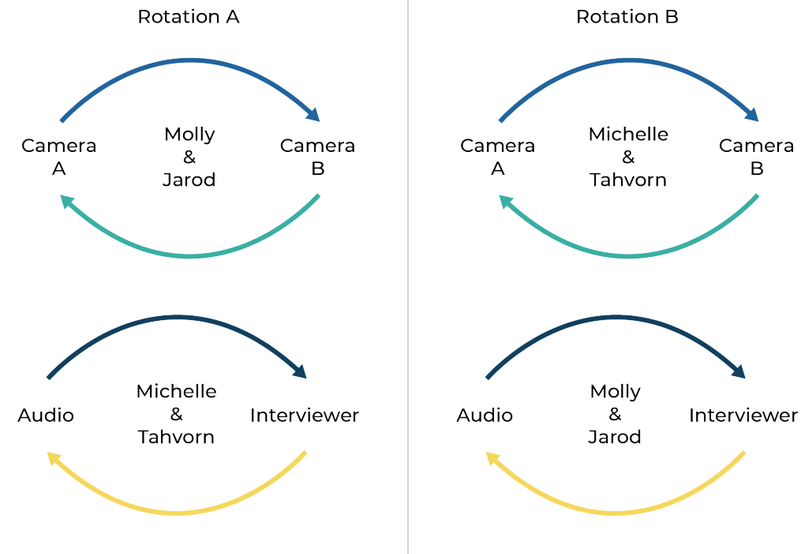

Figure 6: Rotating task schedule

3.3.4: Camera Placement

For interviews consisting of one person, camera A and B had more flexibility when it came to where these tripods could be placed. However, there were a few rules that the camera operators had to bear in mind. The background for each camera must not be busy as it will take away from the person speaking. Both cameras must be on the same side of the individual as to not have a horizontal flip effect. Both cameras must be on the left, both on the right of the individual, or one camera facing the interviewee head on with the other camera on the left or right of the interviewee. Camera operators must also follow the rule of thirds when aligning a shot.

Figure 7: Rule of thirds composition

Figure 7 shows a typical rule of thirds composure for camera A. The frame of the camera was divided evenly by two vertical and two horizontal lines. The eyes of the subject approximately touch or be slightly above the first horizontal line. The subject's body was not placed in center of the frame but, offset to the left or right of the center of the frame.

Figure 8: Wide angle composition

For camera B, the wide angled camera, the framing of the subject could be complemented greatly by the background of the subject. At the Consulate General of Indonesia, shown in Figure 8, the statue behind the interviewee gave a strong sense of the culture of the subject. A large wooden carved statue like this isn't in your everyday household. This can elude to the importance of the subject and viewers will subconsciously pay more attention to what he has to say.

When interviewing more than one individual, camera B's angle was chosen to fit every interviewee in the camera frame. Since this is the wide angled camera, it had to be coordinated with the boom pole operator so that the microphone stayed out of the frame of the camera whilst collecting high quality audio. The placement of camera A, our main camera, was of the utmost importance. Camera A's tripod had to be conveniently placed to capture the face of every interviewee while maintaining a flattering angle and adhering to the rules of a singular subject.

Figure 9: Typical Camera Layout

Figure 9 shows a typical interview setup that consisted of three interviewees. Note the location of camera A, it is situated at such an angle that each interviewee's face can be seen at a suitable viewing angle without interfering with the placement of camera B. Camera B has been placed in the middle of all interviewees in order to capture a symmetrical framing of all three people.

3.4: Post Production

As previously stated, the key outcome of our project was a deliverable set of videos. Each video had its own theme based on the four categories envisioned by our partner at CERES:

1. Air Pollution
2. Rubbish Disposal
3. Flooding
4. Climate Change (General)

In addition, our partner at CERES wanted us to create a longer video which encompassed all four of these topics to publish on YouTube. As a team, we agreed that these topics are broad enough to address individually, but weren't so broad that they would be repetitive.

3.4.1: Video Editing

All the video editing for this project was completed in Adobe Premiere Pro. As a world-class software, Adobe Premiere Pro provided all the features that we needed to import, edit, and export for this project. As a team of four, we split the four videos mentioned above up among all members. For the longer video, which our partner at CERES specifically requested, we split up different parts of the long video between group members, and compiled them all after we finished our sections.

3.4.2: Audio Editing

Even with high quality audio equipment, post processing is still needed to add a final polish on the raw audio of the interviews. In Adobe Audition, we used noise reduction to suppress background noises that may appear too dominant in an audio file.

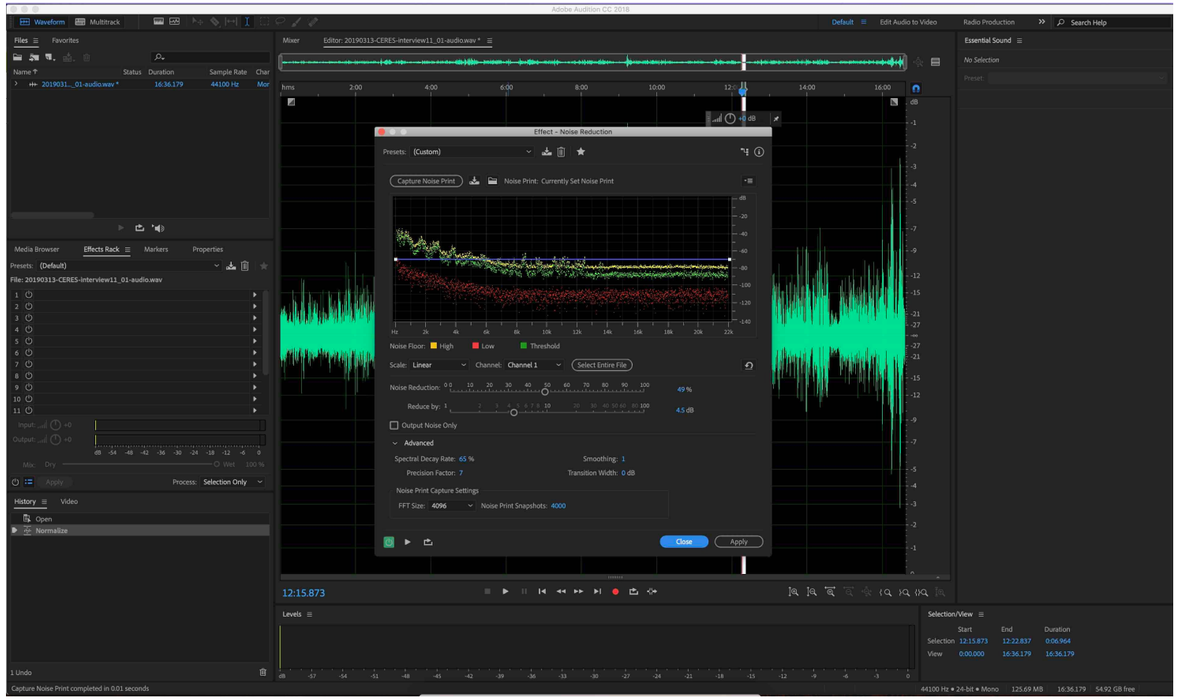

Figure 10: Noise reduction window in Adobe Audition

In order to have successful noise reduction, the audio engineer must record at least ten seconds (more is usually better) of background noise. No on-set vocals must be captured in this audio snippet (this can either be done before or after the interview). In post-production, this audio snippet is selected in Adobe Audition and is registered as a noise print. A noise print is used to define what background noise is in the audio file. Afterwards, the noise reduction process was used to reduce the background audio in the interview audio. Noise reduction can be a play-by-ear process, as too much noise reduction may give voices a very processed and robotic tone. A perfect balance of background audio and foreground vocals must be determined from the scene that will be used. For example, the absence of background noise may give a studio effect and may be off putting to a viewer if the subject is in the middle of a jungle. It was up to the post-production team's discretion to determine the amount of background noise needed.

3.4.3: Royalty Free Content

During post-production, editors may face many problems in this final process that includes lack of footage. Lack of footage can be caused by the filming crew either not recording enough during the production process, or the film crew was physically unable to obtain this footage. Our crew faced an issue of not being physically able to obtain footage. Since our project was about Indonesia, our team searched the world wide web for accompanying b-roll footage of the places and ideas spoken about in our videos. B-roll is footage alternative to the main shot of the film but is related to the scene whether through narration or environmental hints. To acquire this, our team had to search the internet for royalty free footage and music that would be appropriate for this project.

When sourcing cinematic content on the web, videographers will come across the term copyright quite often. Copyright is a form of reuse protection given to creators who share their content on the internet. Royalty Free is a form of copyright licensing in which the creator of the royalty-free content allows reuse of their work without need for accreditation or payment, no matter the use. Our team chose royalty free copyright content to avoid a claim of copyrighted material by another party when these ethnographic study videos are distributed on the web.

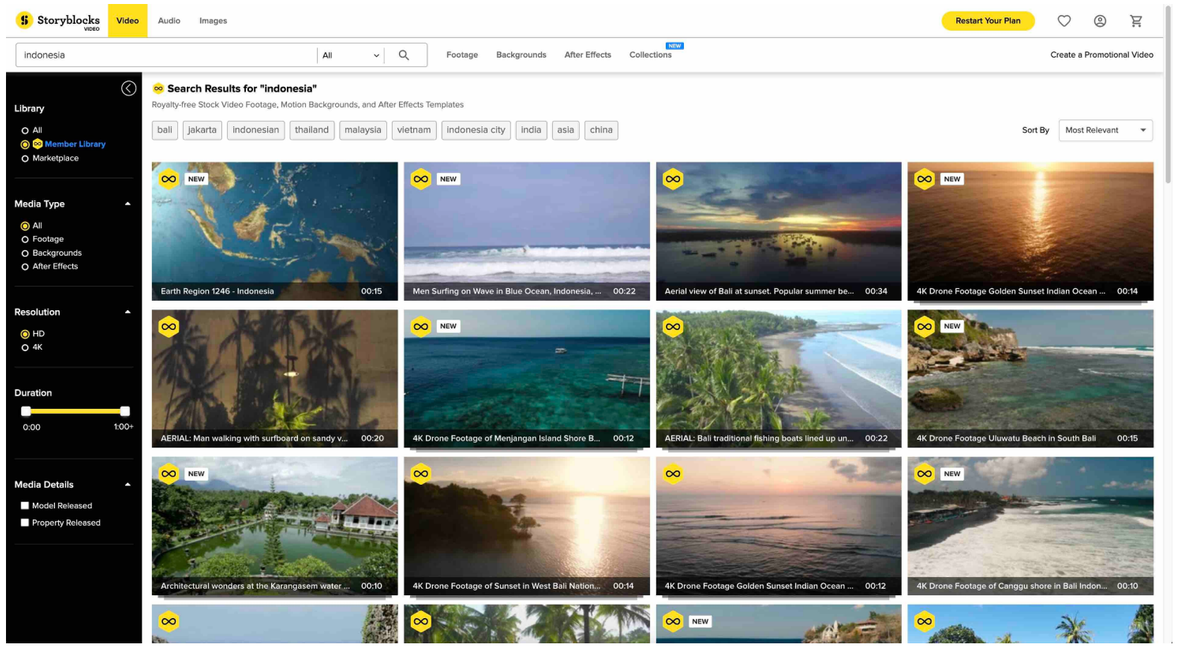

Figure 11: Home page of Storyblocks

Our choice for royalty-free b-roll primarily came from Storyblocks.com and Videvo.com. Other sites such as Youtube.com were used with special consideration to the licensing the author put on their videos. When videos could not be obtained through our royalty-free mediums, the authors of videos were credited in each video whether it was their watermark or a "sourced from" subtitle inserted with the b-roll.

3.4.4: Implementation

The videos produced will be distributed to digital displays at CERES in the Indonesian Village. The digital displays are not yet physically in the village, but CERES plans to add these in the coming year. Subtitles were created in order to help the viewer understand what people are saying in the video. Even if the interviewee can be understood when listening to the video in an ambient quiet environment, the volume on the displays may not be adequate when in place. Further, the videos will be distributed to the park's app, 'Chook' in the coming year. The videos will be hosted on CERES's YouTube channel and then embedded into the app, website, and any other platform from which they wish to spread climate change stories in the future.

3.5: Equipment

In order to develop a professional quality documentary, it was essential to have professional equipment. The equipment our university supplied through the *Global Lab* was not sufficient to create videos to the caliber that the team set out to achieve; luckily, members of our team had professional filming equipment. If we didn't have our own professional-grade equipment, we would have needed to consider several factors which included: budget, weather durability, location, size of production, and type of work. The technicalities of the equipment we used were broken into three main sections:

1. Camera
2. Audio
3. Software

A photo of our equipment is below Figure 12 and a list of our equipment is on the next page (Table 1). While not all of the equipment on this list was mandatory to create the caliber of videos that our team created, it very helpful to the success of our project.

Figure 12: Equipment

Table 1: Production Equipment List

Production Equipment List

#	Name	Category	Description	Value
1	Canon 5D Mark III	Camera	Camera A	$2,385
2	Nikon Z 6	Camera	Camera B	$1,999
3	Nikon D3400	Camera	Camera C	$500
4	Sony RX 100 Mark III	Camera	Camera D (BTS)	$650
5	Canon EF 70-200mm f/2.8L	Camera	Camera A Lens	$1,349
6	Tamron SP 24-70mm f/2.8 G2	Camera	Camera A Lens	$1,199
7	Nikon Z 35mm f/1.8 S	Camera	Camera B Lens	$847
8	Nikon 35mm f/1.8G	Camera	Camera C Lens	$217
9	RICOH THETA V	Camera	Camera E (360-Camera)	$380
10	Adobe Premiere Pro	Software	Subscription Based Software	$20/month
11	Adobe Audition	Software	Subscription Based Software	$20/month
12	Adobe Photoshop	Software	Subscription Based Software	$20/month
13	Adobe Illustrator	Software	Subscription Based Software	$20/month
14	Adobe Lightroom	Software	Subscription Based Software	$20/month
15	Adobe After Effects	Software	Subscription Based Software	$20/month
16	Tascam DR-40	Audio	Multi-Input Microphone Recorder	$190
17	RØDE NTG2	Audio	Shotgun Mic (For outdoor interviews)	$269
18	RØDE Boom pole	Audio	Pole used to hold shotgun mic	$50
19	XLR Cables	Audio	Connects devices to Tascam (#14)	$30
20	Bose Quiet Comfort 35	Audio	Soundproof headphones to monitor	$350
21	RØDE Fur Wind Shield (WS6)	Audio	Used to cut down on wind noise	$60
22	RØDE Shock mount	Audio	Reduces noise between pole and mic	$15
23	Zomei Tripod (Z699)	Accessory	Camera B's tripod	$80
24	Manfrotto Tripod	Accessory	Camera A's tripod	$160
25	Saramonic UWMIC9 RX9+TX9	Audio	Wireless mic system	$270
26	Spare Batteries	Accessory	6x Spare Batteries	$100
27	ND Filter	Accessory	Used to reduce light in bright cond.	$80
28	Circular Polarizer	Accessory	Used to reduce reflections	$30
29	Memory Cards	Storage	5x64GB (SD, XQD, CF Cards)	$218
30	External Storage	Storage	4x2TB Hard Drives ($80 each) 1x500GB SSD ($100 each)	$420
			Total Production Value:	$11,888.00

3.5.1: Camera

Our team had five cameras available for use during this project as shown in Table 2 below.

Table 2: Camera Detailed List

Camera Options

Name	Recording Options		Max Record Time	Notes
Canon 5D Mark III	1920x1080	30 FPS 24 FPS	29:59	Interchangeable Lenses
Nikon Z 6	3840x2160 1920x1080	30 FPS 24 FPS 120 FPS 100 FPS 60 FPS 30 FPS 24 FPS	29:59	Interchangeable Lenses
Nikon D3400	1920x1080	60 FPS 30 FPS 24 FPS	29:59	Backup Camera
Sony RX 100 Mark III	1920x1080	60 FPS 30 FPS 24 FPS	29:59	Used for Behind the Scenes footage.
RICOH THETA V	3840x1920 1920x960	30 FPS 30 FPS	40:00	360-Camera

However, we only used two cameras because more than two would have distracted our interviewee.

Before leaving for the project site, we double checked our cameras to make sure they had the necessary capabilities to complete this project. We decided to record all videos at 1080p, 30 FPS to save storage space. Even though the Nikon Z 6 can record in 4K, shooting at 1080p, 30FPS is a healthy medium between image quality and file size.

We used a two-camera setup at most interviews: Camera A and Camera B (abbreviated camA &camB). CamA was a Canon 5D Mark III, and camB was a Nikon Z 6. Both cameras are professional level and require significant experience using them. Since the Canon angle was used more often in the videos, we decided to give this the label 'camA.'

Lens selection is equally as important as camera selection. All the lenses we used are listed in Table 3 below.

Table 3: Lens Options

Lens Options

Name	Camera Compatibility
Canon EF 70-200mm f/2.8L	camA
Tamron SP 24-70mm f/2.8 G2	camA
Nikon Z 35mm f/1.8 S	camB
Nikon 35mm f/1.8G	camC

We tested several different lenses to understand the major differences between them all. The tests shown in Figure 13 & Figure 14 show the differences that focal length and depth of field have on an image.

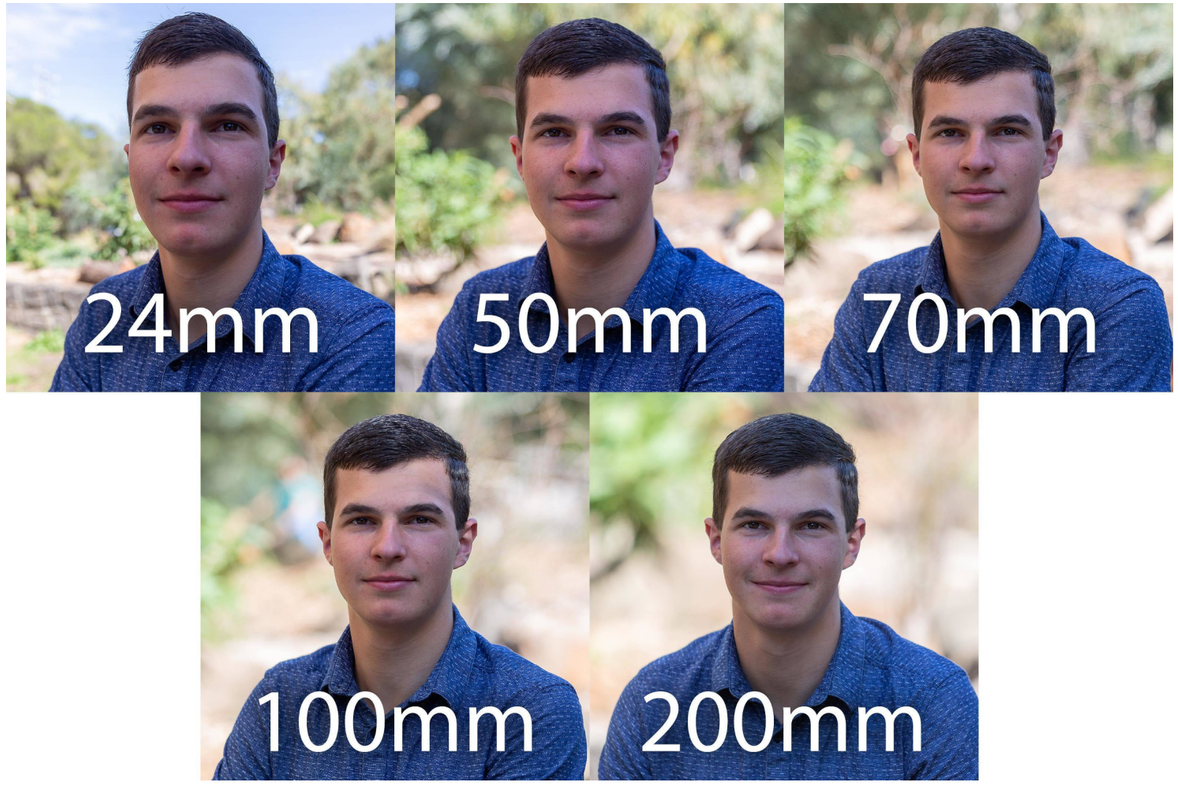

Figure 13: Focal length demonstration

Figure 14: Depth of field demonstration

The Canon EF 70-200mm f/2.8L was determined to be the best lens we had for interviews from these sample images. Its long zoom range and depth of field (amount the background blurs) is an industry standard. We confirmed on our first day of shooting that the Canon 5D Mark III with the Canon EF 70-200mm f/2.8L lens was the right choice for our main camera as shown in Figure 15. Nikon Z 6 was assigned as camB, as it was the next best camera option. The lens selection we had

for the Z 6 was limited. We only had a wider lens at our disposal (Nikon 35mm f/1.8), which, as shown in Figure 17, offers more context to the scene by showing more of the background.

Figure 15: camA in action (camB in back left)

Figure 16: Image from camA

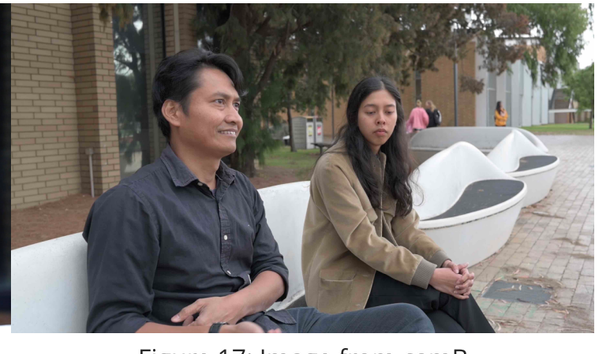

Figure 17: Image from camB

3.5.2: Audio

Audio equipment is just as important as video equipment. When choosing audio equipment, there are specifics to what microphone is applicable in what situation. Given that most of our interviews were scheduled in a public location, our microphones had to should be able to capture the voice of the interviewees with isolation of environmental sounds. This would call for microphones with a unidirectional pickup pattern. A pickup pattern is the sensitivity of a microphone to sounds from different directions.

Figure 18: Example of directional pickup pattern by Azden Corp. (2018)

Figure 18 shows a production crew using a directional microphone and the pickup pattern associated with it. The greatest frequency response is the front of the microphone, towards the actor. This response is the ideal pickup pattern for outdoor scenes since there will be a lot of environmental noise that can pollute a scene. It allows for most of the actors' voices to be captured with minimal environmental noises (minor frequency response to the rear of the microphone).

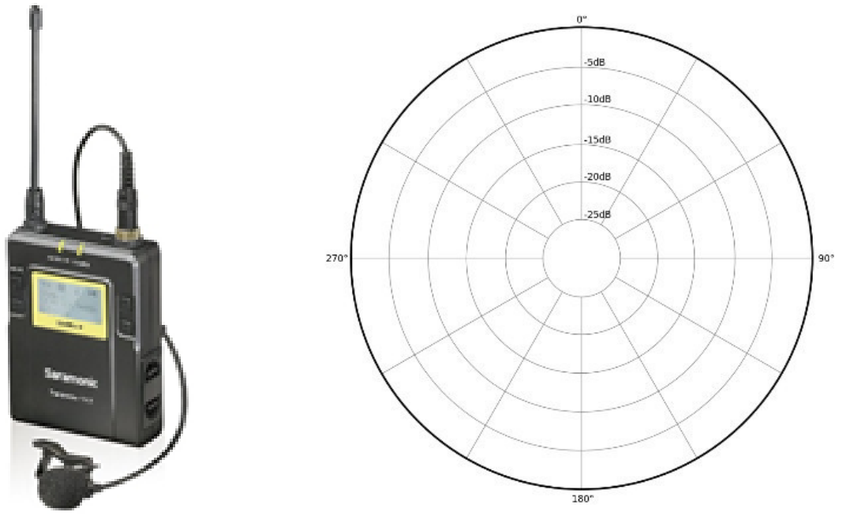

Figure 19: Lavalier mic and pickup pattern by Saramonic USA (2018)

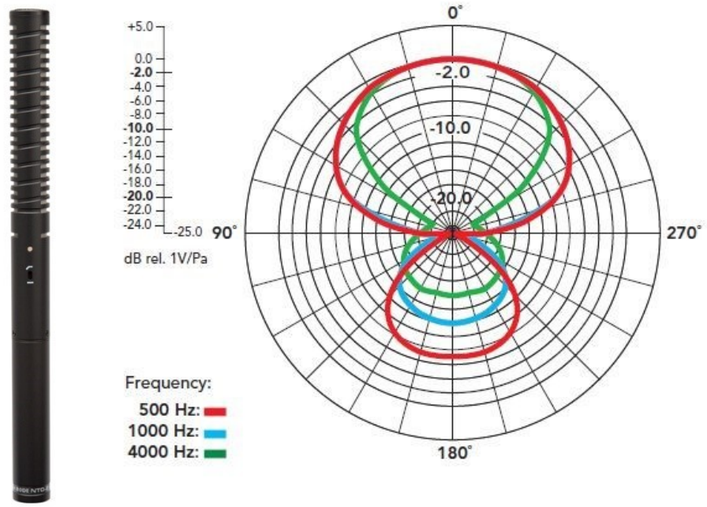

Figure 20: RØDE NTG-2 with associated pickup pattern by RØDE microphones (2004)

We chose a lavalier microphone for interviews with only one interviewee. A lavalier microphone is an omnidirectional microphone that can be attached to the interviewee's clothing and be easily hidden. A lavalier microphone is omnidirectional (able to pick up environmental noises better than a directional mic would), shown in Figure 19. An omnidirectional microphone has a 360-degree pickup pattern with no bias to the origin of the sound, whereas a lavalier microphone is closer to the mouth of the interviewee, drowning out background noises as the interviewee's voice is the dominant sound. The lavalier mic system chosen for this project was the Saramonic UWMic9 RX9 + TX9, which is a wireless microphone system that can easily clip onto an interviewee and avoid the use of wires.

We chose a shotgun microphone for the main audio source. A shotgun microphone is a tubular directional microphone with the ability to clearly capture soundwaves from the voices of each interviewee without the need to be close to the mouth of the interviewee. This microphone isn't as restricted as the lavalier microphone because the shotgun microphone can be mounted to a "boom pole" and be moved around set depending on the individual that is speaking. We chose the RØDE NTG-2 as the shotgun microphone for this project. The RØDE NTG2 is "a lightweight condenser shotgun microphone, designed for professional applications within the film, video, television and production industries." Due to the vocal frequency range of humans (approximately 300 Hz to 3400 Hz), the RØDE NTG-2 is perfectly suited for this job in accordance with its frequency pickup pattern in Figure 20.

Each microphone is then routed, using XLR cables, into a portable field recorder, which is a device capable of recording the sound captured by the microphones. These audio files were later synchronized with the footage obtained from cameras A and B to replace the in-camera audio and provide a higher quality audio for post-production. We chose the TASCAM DR-40 as our field recorder for this project because it is a 4-track portable audio recorder capable of XLR input microphones and compatible with the specifications of the RØDE NTG-2.

Figure 21: TASCAM DR-40 portable audio recorder by TASCAM (2010)

Figure 22: Audio layout

Figure 22 shows the audio equipment layout of a typical interview. When interviewing only one person, the lavalier mic was incorporated alongside the shotgun mic. Though the lavalier mic is a reliable source of audio, the shotgun was still recording as a form of backup audio. The lavalier mic was clipped to the collar of the interviewee and routed through their clothing and out of frame of the cameras. The receiver of the lavalier microphone system was connected to camA, as this conveniently had a microphone input, eliminating the need to synchronize two separate audio files to the final videos. The shotgun microphone was covered with a fur windshield to prevent strong winds from interfering with the audio recording. The microphone was then connected to a shock mount, which is a device used to reduce the vibrations made by the boom pole and its operator. The shock mount, which attached to the boom pole, was held by the appointed audio engineer for the day who monitored the audio of the shotgun mic throughout the entire interview from the "line out" provided on the TASCAM DR-40.

3.5.3: Software

We used Adobe Premiere Pro and Adobe Audition as our main content editors, although we did utilize many other programs in the Adobe Creative Cloud suite for smaller tasks as well. The Adobe Creative Cloud is a software package which costs $20/month for students and includes every software Adobe develops. A breakdown of all the software we used is shown below in Table 4.

Table 4: Software

Software			
Name	**Compatibility**	**Price**	**Notes**
Adobe Premiere Pro	Windows & Mac	$20/month (Adobe CC Suite)	Video Editing
Adobe Audition	Windows & Mac		Audio Editing
Adobe After Effects	Windows & Mac		Motion Graphics
Adobe Illustrator	Windows & Mac		Graphics
Adobe Photoshop	Windows & Mac		Photo Editing
Adobe Lightroom	Windows & Mac		Photo Organization
iMovie	Mac Only	Free	Video Editing

One team member used iMovie, since she was not as experienced with Premiere. This is a great option for people who are inexperienced with video editing software. Figure 23 compares the functionality of Adobe Premiere and iMovie as video editing software options.

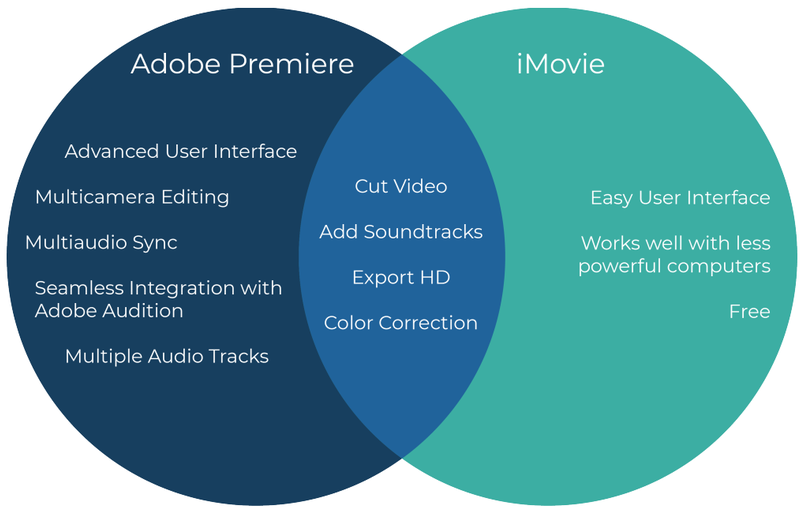

Figure 23: Comparison between Adobe Premiere and iMovie

3.4.1: Distributing Media

We organized the media into the folder structure after every day of shooting, as shown on the next page in Figure 24.

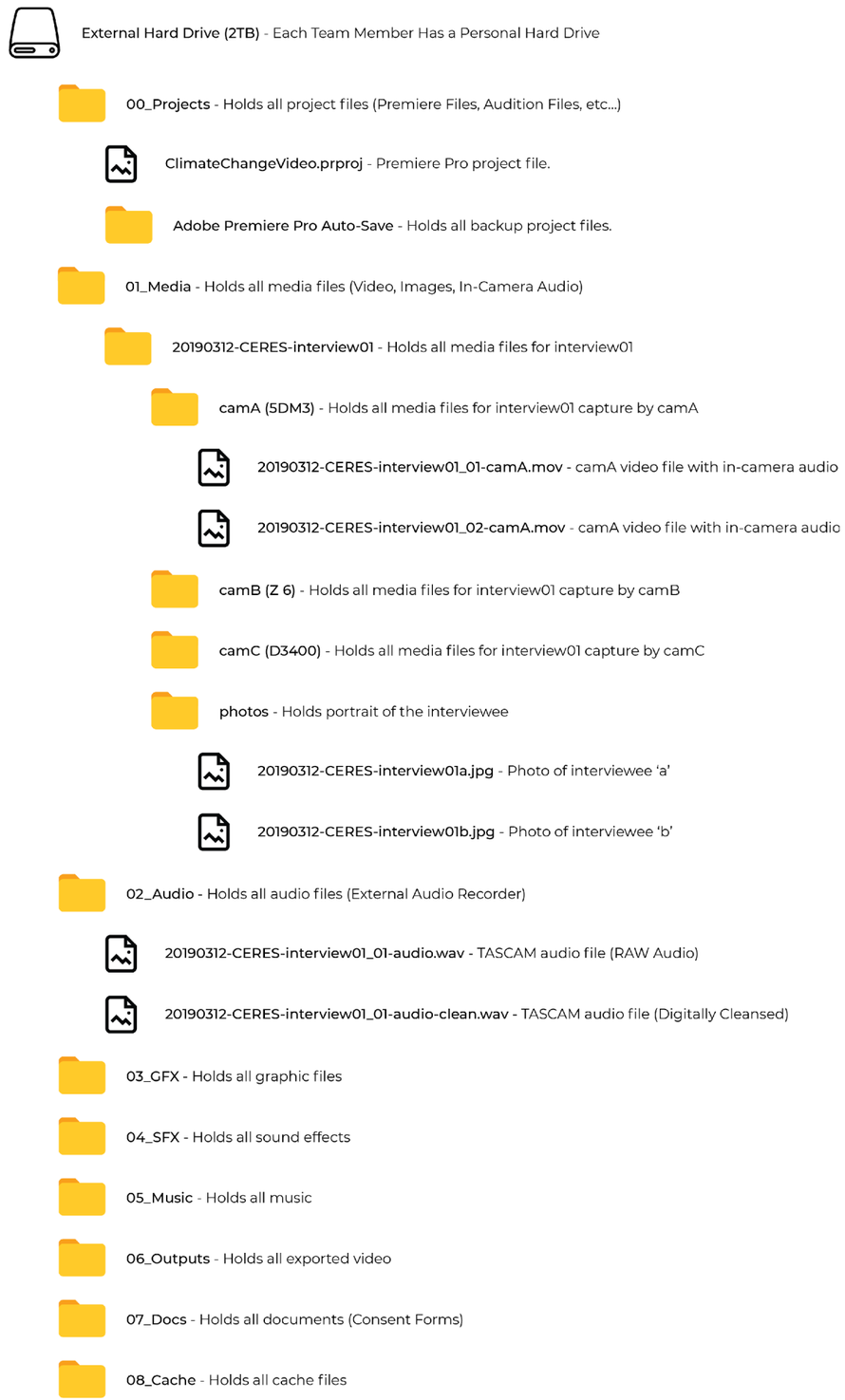

Figure 24: Folder structure

We used five hard drives to store data for this project. Each team member had their own hard drive, and then we stored one extra hard drive in a secure location as a backup in case any distributed hard drives were damaged. The folder structure shown in Figure 24 was very useful, since it helped keep data organized without too much effort. The hardest part of the folder structure was maintaining the consistent file naming scheme. Naming files was not challenging, but with five hundred individual clips in the project, it was important to keep up by organizing/file naming after every day's shoot.

File naming was crucial to this project. We developed a file naming scheme to keep files organized as shown in Figure 25.

Figure 25: File naming scheme

This scheme was the most efficient way to parse through hundreds of files, and it also made coding the interviews easy. Filename, camera angle and clip number were heavily used in the coding process as show in Figure 26. Coding occurred after all interviews were filmed. We divided the interviews up evenly, and watched our own dividend of videos in full, taking notes anytime we heard a topic that could be relevant to any of the four major topics: general climate change, flooding, rubbish and air pollution. At the time when we coded, we thought that deforestation could be its own topic video, which is why there was a column for it in the notes section. After reviewing the footage, we concluded that deforestation would have to merge with general climate change topics, since we didn't have enough material on just deforestation. In addition, we italicized descriptions of solutions related to climate improvement. This helped us keep the tone of the videos positive so we weren't creating interview clips with only negative connotations about Indonesia.

Folder Name:	20190313-CERES-interview08							
Interviewee ID	Name				Hometown			
a	Panda Kuyune				Bali, East Java			
Notes on Video								
Description	Angle	Clip #	Time	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
In Bali, since January 1, they try to ban all the plastic bags.	A	01	3:45 – 4:20		X		X	
Things she would do in Indonesia *No Straws* *Plastic Bottles* *Separate the Trash*	A	01	5:16 – 5:36		X		X	
People need to feel the responsibility to take care of the trash.	A	01	6:00 – 6:25				X	

Figure 26: Interview data sheet sample

4

RESULTS

4.1: Summarizing Each Video

4.1.1: Air Pollution

The island of Java houses Indonesia's capital and largest city, Jakarta. With over millions of people residing in Jakarta, it is one of the busiest business districts in the country. With that many people living in Jakarta, traffic is very common in the city. The city is growing at a pace the infrastructure can't support. Air quality has been a major concern for the residents of Jakarta, Indonesia for the past few years due to the sheer number of vehicles. A thick layer of smog covers the city by sunrise and makes it unbearable for some to walk in. From experiencing Jakarta's air to its large volume of traffic. Indonesian community members in Melbourne, Australia, gave their take on the experiences of being in Indonesia's busiest city. Polices, successful and unsuccessful were discussed with government officials and citizens alike. Traffic regulations such as the former three-in-one law was explained by Indonesian Consulate General employees as to why this regulation was unsuccessful. New modes of public transportation were introduced into this film and its comparison to private transport. Finally, this video wraps with keen words on why the environment is for all of us and why we should treat it carefully whilst inspiring others as well.

4.1.2: Rubbish Disposal

The rubbish disposal video encapsulates stories about how the growth of rubbish has affected the quality of life in Indonesia and current efforts from organizations and local communities in response to the environmental impacts. Tourism, habit, and lack of education has contributed greatly to the piles of unmanaged waste in rivers and roadside. In recent years, local waste management groups and youth organizations have started movements to make Indonesia more sustainable. From developing incentive for locals to recycle plastic bottles for bus tickets and food coupons to reusing non-biodegradable waste for building material and crafts, Indonesians have found innovative solutions to reduce waste and inspire others to do the same.

4.1.3: Flooding

The flooding topic video shares the perspectives and stories of Indonesians regarding their experiences with flooding issues and efforts. The primary region discussed in this video is the capital city of Jakarta, where flooding affects the largest population. The first half of this video focuses on challenges and stories related to this issue, including causes, changing flood patterns, damage to homes and schools, and challenges involving transportation. The video then transitions into community and government action to improve these conditions. Culture-based community response, developing technologies such as pumps and dams, government sanitary efforts, policy, and education are introduced to support the widespread mitigation tactics being implemented in Indonesia.

4.1.4: General Climate Change

This short documentary studies the general climate changes happening in Indonesia, and relief efforts to help combat those issues. The environment is changing which damages rice plantations. The number of crops dying and turning yellow during the harvest, not green, has increased over time. Emerging forms ofpublic transportation could reduce the harmful effects of greenhouse gases.

Most of the interviewees mention that awareness of climate change is the problem. Indonesian community members need to learn what actions to take to reduce their climate footprint, especially palm oil plantation farmers, who occupy up to 50% of some of Indonesia's islands.

This documentary also includes information about the renewable energy in Indonesia. Residential and commercial buildings are starting to adopt rooftop solar panels. There are even non-profit organizations which help rural areas get power with the installation of solar panels.

The subak system is also introduced in this film. It is an irrigation system which recycles water, not only making it environmentally friendly, but it carries a strong spiritual meaning. The land and people are one, so farmers can't just take land and use it for their own personal gain at the cost to the others around them, they have to think about their environment to make sure they don't destroy places that everyone holds close to their spiritual selves.

4.2: What Was Essential to the Project's Success

4.2.1: Team Dynamic, Experience, Equipment

Our team dynamic was the most essential component in ensuring our project's overall success. The individual strengths of each member played a pivotal role in the achievement of our goals, as we offered varying perspectives, backgrounds, and interests. The equal distribution of our introverted and extroverted personality types, as well as our levels of technical skill versus literary expertise, created a strong balance of leadership and delegation to each member in their respective area of strength. Where one team member found difficulty, another member was able to supply constructive feedback for the betterment of the team and realization of its aspirations.

Despite the importance of these complementary differences between individuals on the team, the common ground shared by all members was the most significant to the success of this particular type of project. Institutional videography studies are dependent on collective video interest and experience, in addition to the prevalence of creative initiative. All members of our team had prior experience with filmmaking and familiarity with at least one video editing software. This allowed our team to more seamlessly formulate a shared vision for the project, as well as dedicate attention to our deliverables rather than utilizing valuable project time to establish these skills. Therefore, we feel strongly that the extensive prior experience of our team members was essential to our adherence to the proposed project schedule.

A key factor in the professional quality of our team's work was the equipment that our team introduced to the production, in addition to our familiarity with its function. Most of production was completed using the personal video and sound technology of our team. This choice was made due to our doubts about the technical capabilities of the equipment provided to us by the university

and our own comfort in its use. Our recommendations based on these essential factors in the success of a video production team are explored in §5.2.

4.2.2: Connections with the Indonesian Community

Having connections with people in the Indonesian community in Melbourne was very important in making our project successful. Working on a project in Melbourne that revolves around Indonesian people and culture was a challenge to the team. How could we capture authentic Indonesian stories while not physically being in Indonesia? Fortunately, Subik Baso, the head of the development of the Indonesian Village at CERES, and his intern, Dina, are both Indonesian immigrants. They reached out to their Indonesian connections, which included previous years' interviewees, friends, family, and the Indonesian Consulate. The Indonesian Consulate also connected us with their community of Indonesian immigrants. Dina received responses from more than fifty people from all different areas of Indonesia about their interest in participating in our project. Our participant network that developed in the Indonesian community in Melbourne would not have been as simple or trouble-free without Subik and Dina's assistance.

Dina played an important role as a cultural ambassador on our team. She is a student at the University of Victoria as well as a born and raised Indonesian. She helped us establish an immediate and strong connection with our interview subjects, something that we could not do due to a language and cultural barrier. With Dina's assistance, our work seemed more credible to the interviewees which helped the participants gain confidence and trust in the production team during the interview. Dina also helped us interpret and identify key Indonesian terms in our footage to help us better understand our interviewees. Having a liaison between us, Americans, and the Indonesian community in Melbourne was essential to our project's success.

4.2.3: Our Sponsor's Vision

Receiving advice, feedback, and support from our sponsor, Subik Baso, was extremely helpful and contributed greatly to our production of high-quality videos with essential content on Indonesian culture and climate. From Subik's experience with working with several WPI project groups on the Indonesian Village for the past few years, he has developed a vision and expectations of what he envisions the climate stories videos to be. During our initial meetings, Subik provided us with specific topics and Indonesian terms we should mention during our interviews. He emphasized on creating positive videos that educate and inspire those who watch it. Furthermore, he provided us with direction to local organizations and movements in Indonesia that are fighting climate change and sponsoring sustainable efforts. Without his guidance, our videos would not have included the content needed to truly show the world how much local communities in Indonesia have implemented and achieved in their journey of cleaning and protecting the environment.

4.2.4: Effective Techniques

Interviewing skills are formed through practice and experience. From our research, we learned that the most important part of interviewing is establishing a connection with your interviewee. After completing thirty-five interviews, we noticed several techniques that worked for us and made our production successful. These tips and techniques include:

- Arriving to the interview location site early
- Researching and building knowledge about Indonesia
- Planning what topics to touch upon
- Starting a pre-interview conversation
- Knowing how to handle technical difficulties that come up
- Understanding how to guide and build on the conversation
- Listening and reacting without making a sound
- Knowing how to conclude an interview

We noticed that it was imperative to arrive to an interview site at least thirty minutes before the interview. The production team needed to account for the time it takes to scout suitable locations, set up equipment, and contact the interviewee with the exact location. Once the interviewee arrived, we needed to allocate time to position the framing of the camera and complete a sound test. While three members of the team worked on the technicalities, we found it helpful for the investigator to start a pre-interview conversation with the interviewee. Many interviewees seemed nervous after seeing the filming setup and that initial conversation made a difference. It helped us better connect with the interviewee and encourage them to comfortably share their personal stories.

Every member of the team studied the geography of Indonesia in case they needed to cater an interview to a specific location or build upon a particular topic of conversation. Our interviewees came from all over Indonesia and it was important to keep in mind that not everyone had the same experiences. Another significant skill that we all developed after a few interviews was knowing how to guide a conversation to elicit positive memories without forcing a specific response. It is easier to recollect negative memories first, so we built on those stories and asked questions about how people responded to help each other and their actions in the aftermath.

During an interview, having strong teamwork was very important. Knowing how to communicate with each other and understanding how each equipment worked was significant in handling technical difficulties that arose. For example, if the person in charge of holding the boom mic accidentally moved into the camera frame, the person on camera duty needed to know how to discreetly signal to reposition the boom mic without distracting the interviewee. Furthermore, if the person handling audio noticed a noise disruption such as a helicopter in the background, they needed to signal the investigator to pause the interview after the last response from the interviewee. When we normally converse, we tend to say "mhm" and "yeah" as an indication of active listening. During interviews, we needed to keep in mind to keep eye contact with the participant and nod as an action of listening instead, in order to not interfere with the recording.

Lastly, the production team needed to know how to wrap up an interview. Our team wrapped each interview by asking what kind of message each interviewee had to say about Indonesian culture and climate. We also checked in with each other to make sure all our questions and curiosities were answered. These interviewing techniques greatly contributed to making our interview process smooth and successful.

4.3: Production and Post-Production Timelines

Our team was very successful at completing tasks related to filming (pre, during, and post) in a timely manner. A production checklist, as shown in Table 5, lays out all the 'checks' the team had to complete before, during, and after filming. On the next page, we display a pie chart which shows how long each major task took. Travel time is not included on this list, as it varied on a day-to-day basis. Travel could take anywhere from 1 – 3 hours per day, depending on the location of our interviewees.

Table 5: Production Checklist

Production Checklist		
#	**Name**	**Check**
Pre-Filming		
1	Canon 5D Mark III (camA)	Battery Level, Focus, Framing, Start Recording
2	Nikon Z 6 (camB)	Battery Level, Focus, Framing, Start Recording
3	Tascam DR-40	Battery Level, Audio Gain, Cable Securely Fastened
4	RØDE NTG2	Wind Filter Affixed (If Outside)
5	RØDE Boom pole	Ensure the pole/mic is not in camera frame
6	XLR Cables	Untangled, and not kinked
7	Bose Quiet Comfort 35	Noise Cancelation Enabled
8	RØDE Fur Wind Shield (WS6)	Affixed to NTG2
9	RØDE Shock mount	Affixed to Boom Pole
10	Zomei Tripod (Z699)	Locked and Level
11	Manfrotto Tripod	Locked and Level
12	Saramonic UWMIC9 RX9+TX9	Battery Level, Attached to Interviewee, Wires Hidden
13	Spare Batteries	Ensure spares are charged and packed
14	Memory Cards	Ensure enough free storage on memory cards for entire day
15	Consent Form	Review consent form with interviewee
Filming		
16	Cameras (camA & camB)	Maintain Focus and Framing (Adjust if necessary)
17	Audio	Monitor Audio Levels (Adjust if necessary)
Post-Filming		
18	Cameras (camA & camB)	Copy Files to External Hard Drive, Organize Files, Charge Batteries
19	Audio	Copy Files to External Hard Drive, Organize Files, Charge Batteries
20	Equipment	Test all equipment, clean, and pack for the next day's shoot

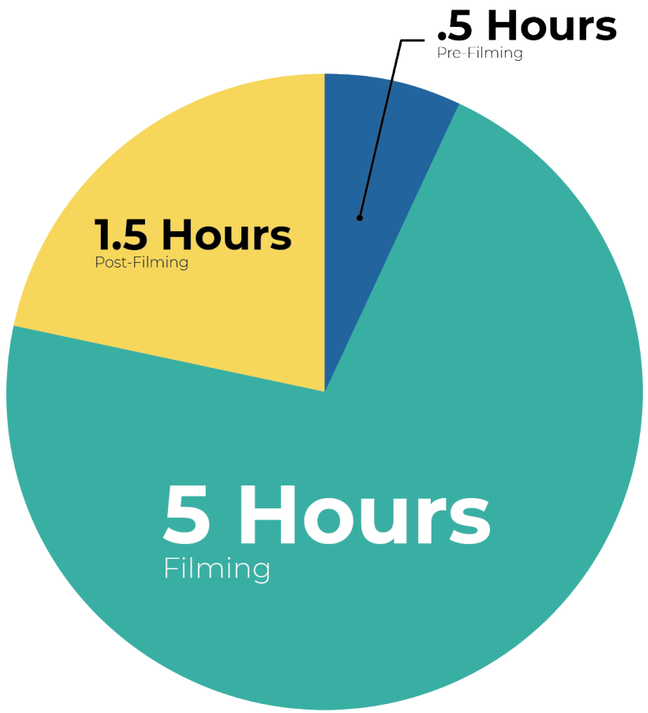

Figure 27: Typical daily time breakdown

Production took about two weeks to complete. Post Production took about five weeks to complete. The daily time breakdown in Figure 27 shows how the team spent their time during the first two weeks. During the post-production stage, the team split up to work individually on each video topic. Our post-production timeline is shown below in Figure 28.

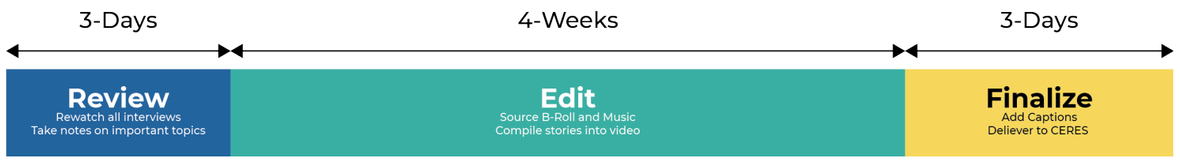

Figure 28: Post-Production timeline

5 RECOMMENDATIONS

5.1: Recommendations to CERES

After compiling four climate videos about Indonesian culture and environment, we developed the following recommendations for CERES regarding implementation of the videos. Since CERES's initial goals for these videos were to install them along a path in the Indonesian Village, we recommend our videos to be put in the order of:

1. Air Pollution
2. Rubbish Disposal
3. Flooding
4. Climate Change (General)

The air pollution video starts off with the notion that people are changing towards more climate friendly practices. The following videos show how people are changing regarding each topic. Rubbish should be the second video because it touches upon how rubbish contributes to air pollution and water pollution. The general climate change video should be last as it discusses the bigger sustainable solutions Indonesians have begun to implement. Furthermore, regarding the longer video that encompasses all four topics, we recommend that to be posted on CERES' website where people can gain the same educational experience without physically being at the Environment Park.

We also recommend CERES's project with the next group of WPI students supplement our videos with infographics and visual displays. Their goals can focus on how to physically implement our videos in the Indonesian Village, which may include creating QR codes that direct visitors to our videos on the CERES mobile application.

5.2: Global Lab & Academic Technology Center

Our team was chosen as the pilot team for the Global Lab's Transmedia Project Award. The goal of this award is to support an Interactive Qualifying Project team with demonstrated potential to complete a high-quality project involving transmedia storytelling by providing up to $200 per student to offset expenses related to the project. The award was developed after the team informally proposed travel to Indonesia to gain the perspectives of a wider demographic and gather scenic b-roll footage specific to the interview data collected. An initial proposal (Appendix B) was drafted to the Interdisciplinary and Global Studies Division (IGSD) office prior to establishment of the award and was ultimately rejected due to the institution's limited knowledge of the proposed region of travel.

Upon notification of receiving the Transmedia Project Award, our team explored the concept of traveling to Darwin, a city in Australia with a strong Indonesian community and similar climate. However, following extensive discussions with our advisors, sponsor, and within our own team, our team ultimately decided that the value of footage collected from this region did not justify the financial or logistical requirements of such an undertaking. While generous, the proposed aid from the Global Lab would not cover the total cost of airfare to this region for each team member, requiring that each individual cover the remainder of this expense, as well as all of those required for accommodation, transportation, and food while in the area. As the most valuable footage would not be located in centralized regions, the cost of transportation to these isolated areas alone would prove extremely costly, amounting to an estimated total cost of at least double the scholarship amount.

Despite the draw of potential travel, our team reached this decision with the best interest of our project and the Global Lab in mind. We did not feel that this was the most beneficial solution under the circumstances of our team so late in production, and did not want to take advantage of the generosity of this grant unless we felt that it was absolutely necessary.

We thus reached an alternative solution to obtain the b-roll that we felt our deliverables required. We proposed the use of a small portion of the initially proposed grant to purchase a 30-day royalty-free media package from Storyblocks, which included audio, photo, and video media that was used to supplement our interview footage. We decided that the remainder of this grant should be reserved for the benefit of future transmedia project teams.

In order to realize the grant's full potential for future project teams, we have a number of suggestions for how the process may be streamlined to exercise its benefits. As the grant was not introduced until after the start of our project term, we experienced challenges with developing such last-minute travel plans that required approval from various departments on the WPI campus. In order to be most effective, we believe that the grant should be awarded at the commencement of the project preparation term. Additionally, it would be helpful to introduce a pre-made travel proposal form with this award in order to shorten and clarify expectations for the approval process. Travel plans should be approved and secured prior to the students' departure for their project term to prevent the delays caused by transcontinental communication.

As personal financial feasibility also played a role in our decision not to exercise the award for travel purposes, it is our hope that this award may be increased for future project teams. It is our wish that the remaining funds from our award are combined with what may become annual funding for this award in order to collectively expand the next team's financial capabilities.

While ultimately infeasible due to safety concerns and the timeline of our team's proposal and award retrieval process, it is our team's hope that future teams may be able to travel to regions outside of their project center country. Our team ultimately came to an alternative solution that worked for our situation, but we feel that our deliverables would have been significantly enriched by direct cultural immersion and natural scenic footage obtained by our team. Not only would this allow future teams to gain a more complete appreciation for the population that they are representing, but would eliminate the added challenge of gathering royalty free content and contacting providers to avoid copyright infringement.

The CERES Project Team is extremely grateful to the Global Lab for the opportunity to represent the institution as the pilot team for this generous award, and hope that our recommendations will enable future teams to exercise the grant to its full potential.

We also recommend the Global Labs to create a YouTube channel to archive all WPI projects involving climate stories. It would serve as a database for future climate project teams who are looking for examples to study as well as provide to the public a central location for all educational climate videos created by WPI students.

5.2.1: Importance of Good Equipment

In order to achieve a video product of professional value, there are a number of technical equipment requirements, in addition to post-production software. The equipment utilized by our team is outlined in §3.5. This technology was essential to our operation as a video production team, as it enabled us to collect high quality video and audio data, often at multiple angles and with the flexibility of backup footage.

We used a maximum of three cameras during one interview. The two standard camera angles provided a medium shot of the individual speaking as well as a wide full-body shot of all participants in the interview. We occasionally utilized an optional third camera for tight focal shots and the collection of scenic b-roll footage.

Our audio retrieval method varied by interview. If there was only one participant, we would use the lavalier microphone attached to the Saramonic on Camera A. This gave us clean audio for a maximum of one participant, as we only had the one microphone. It may be helpful in future projects to supply the teams with more than one microphone, in order to utilize this more polished audio method with multiple interviewees at once. Assuming potential unanticipated technical failures, we also used the TASCAM boom microphone in scenarios with one participant, in order to collect backup audio. During interviews with multiple interviewees, this was the only means of audio collection.

With the exception of the Saramonic lavalier microphone, all of the previously noted equipment was provided by our team. A TASCAM was provided by the Academic Technology Center (ATC), which we carried in case of battery failure in the other TASCAM. We believe that while more than one Saramonic may be helpful, as noted above, in addition to a more extensive collection of boom microphone accessories, the audio technology provided is sufficient for a project of this type. However, in terms of video collection, we did not find that the equipment provided by the ATC would allow us to achieve deliverables of this quality. The ATC provided us a GoPro Hero 7 Black as well as a 360 Camera for our personal exploration. The GoPro does not have the depth, nor resolution capabilities to gather professional documentary footage.

The ATC was able to offer us one laptop with Adobe Premiere Pro video editing software, which we ultimately did not use, as each individual had their own video editing software installed on his or her personal computer.

It is our strong recommendation that future videography teams proceed with similar equipment as we used in our production. This may either be achieved by upgrading the ATC and Global Lab technology to make such equipment available for all videography teams, or by creating teams with their own video equipment and experience, as detailed to a great extent in the future passage.

5.2.2: Equipment Training

We completed both technical and soft skills trainings with the Global Lab prior to the project term. These trainings offered us a variety of skills that we utilized during production, particularly those involving interview strategies. However, we believe that there are many improvements that could be made to this program for future project teams, as we ultimately feel that this training would not have been sufficient in preparing us to produce professional work had we not had prior experience.

Generally speaking, we found the soft skills training to be extremely informative. This discussion, partnered by the input of ethnographic experts on campus, allowed us to establish a clear interview approach that was successful in the field. The conversations that we had with these specialists provided us with speaking skills that made our interviewees feel comfortable to share their stories freely in a conversational manner. We believe that this program may be further improved by incorporating more direct input from past videography teams, who can speak to their personal successes and challenges.

There are some improvements that may be made to the technical training in order to make this program successful for future project teams. The training had a primary focus on what equipment was available at the ATC, rather than the intricacies of this technology and how to use it beyond a basic level. We feel it is important to discuss the various settings and use of these devices in greater depth, particularly with commonly used functions such as zoom, exposure, and audio settings. As the training was centered around setup rather than use, we feel that a balance of these two production areas would be most effective when training future teams.

5.3: Importance of Having a Production Schedule Before IQP

Developing a participant list during the pre-production process is very useful for creating film that involves interviews. Our intern of CERES environment park, Dina, scheduled these interviews and organized a participant list with interview dates spanning two weeks. It prevented scheduling conflicts and was a simple way to keep track of your participants.

Table 6: Excerpt of Participant List

Tuesday, March 12 – Participant List		
Name	Location	Time:
Luh Putu Pandu Phala Sukma Dewanti	Fed. Square	12:30 PM
Syahrudin	Fed. Square	1:00 PM
Nur Endah Ramayanti Muslim	Fed. Square	1:30 PM
I Gede Sukma Adisatria Sukadana	Fed. Square	2:00 PM
Fanaldi Fedrizal	Fed. Square	2:00 PM
Esa Saadatul Asbandiyah	Fed. Square	2:00 PM
Rizky Noor Ichwan	Fed. Square	5:30 PM
Rio Hadyan Arddha	Fed. Square	5:30 PM
Caesario P. Sutoyo	Fed. Square	5:30 PM
Ashanti Putri Permatasari	Fed. Square	6:00 PM
Siti Lailan Vonny Rasida	Fed. Square	7:00 PM
Ben	Fed. Square	7:30 PM

Developing a participant list during the pre-production process is very useful for creating film that involves interviews. Our intern of CERES environment park, Dina, scheduled these interviews and organized a participant list with interview dates spanning two weeks. It prevented scheduling conflicts and was a simple way to keep track of your participants.

Table 6 shows a sample of our participant list from our second day of production. Prior to the start of our project term, Dina was able to call and schedule thirty-five interviews with forty-nine participants two weeks prior to our arrival in Melbourne. This saved a great deal of time for our team. Having a prepared production schedule before IQP allowed us to start conducting interviews early on the first week we were on site at the Project Center. We had more time to produce quality videos, review, and edit based on feedback during post-production.

Scheduling interviews can be a difficult task without direct contact with potential interviewees in a different country or from a different culture. As an intercultural communicator, Dina was able to assist us in establishing connections with possible interviewees. It is highly recommended for future projects to have a liaison at the project center who has established connections with the target group.

5.4: Recommendations to IGSD

Videography projects take preparation, skills, and creativity. Our project would not have been possible without the experienced members of the current team. We recommend that to achieve high quality videos, future teams should have at least two students who have knowledge regarding camera equipment, audio equipment, and editing software. In order to get the highest probability of students with videography experience at a specific project center, we recommend IGSD to notify students of a videography opportunity and request for students with prior experience during the application process for global projects. Furthermore, the logistics of these projects, such as travel plans that can benefit the quality of the video projects, should be considered, fully discussed, approved, and planned before students leave for their IQP.

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APPENDIX A: SAMPLE INTERVIEW QUESTIONS

1. What is your name and where are you from?
    a. Can you describe the environment of your hometown?
2. What memories do you have of your childhood home?
    a. Have you returned to your childhood home recently?
    b. How has it changed?
3. Have you experienced any natural disasters/events?
    a. How often were these disasters/events?
    b. What did you community do after the event?
    c. How did your community prepare for similar future events?
4. What kind of changes are the government, organizations, or local communities implementing currently for the environment?
5. How does Melbourne compare to your hometown?
    a. Was there a weather/climate difference you had to adjust to?
    b. How do the neighbourhoods differ?
6. What do you miss about home?
7. If you had one message to say about the environment or culture of Indonesia, what would you say?

APPENDIX B: PROPOSED TRAVEL FORM

CERES Project Team Travel Proposal

Team Members: Tahvorn George, Molly O'Connor, Jarod Romankiw, and Michelle Zhang
Advisors: Professors Althea Danielski and Susan Jarvis
ID2050 Instructor: Stephen McCauley
Melbourne, Australia D'19

February 17, 2019

Interdisciplinary and Global Studies Department
Project Center, 2nd Floor
Worcester Polytechnic Institute
100 Institute Road
Worcester, MA 01609

To Whom it May Concern,

During our project experience in Melbourne, Australia this upcoming D Term, the CERES Project Team intends to enrich the learning experience of visitors at CERES environmental park by producing cultural "climate stories" of Indonesians living in Melbourne through a series of ethnographic interview-style videos. In order to achieve this goal, we have arrangements to interview students residing in Melbourne, who originate from urban areas of Indonesia, about their perceptions of the environment. The preceding CERES project team, tasked with the same objective, experienced challenges in portraying the expanse of climate mitigation and adaptation. However, a similar project conducted in Iceland during this past A Term attributed their success in sharing a wealth of diverse stories spanning all facets of climate change to their ability to travel around to various regions where these impacts were felt most directly.

Our team has recently been exploring the potential for a trip to Indonesia during our project term in order to introduce a richer cultural perspective to our footage. We hope to gain the narratives of individuals from rural communities and to enhance the impact of our collective interviews with scenic footage of the country. Feedback from the prior CERES team's presentation with the Indonesian consulate in Melbourne suggested that our team take a more positive and all-encompassing stance on environmental impact and action in Indonesia. We believe that this may be achieved through the first-hand expression of Indonesia's rich biodiversity and the people who presently inhabit it.

Our partner at CERES, Subik Baso, was raised in Indonesia, still visiting often for work. We have reached out to him regarding his suggestions for our travel. Additionally, we recognize the concerns that may be associated with independent student travel to Indonesia, and have conducted extensive background research regarding potential risk factors. While Indonesia, on a national scale, is ranked as a level two travel threat according to the United States Department of State's Bureau of Consular Affairs, this is characteristic of seven other WPI project sites, in addition to numerous other countries where our students vacation outside of their project nation. Furthermore, we have concluded that the island of Bali, Indonesia will be a secure region for our team's travel, as it not only fulfills the specifications for our project, but is considered a tourist region, where we will be likely to encounter less of a language barrier and maximum overall safety. In addition, we are prepared to receive any recommended vaccinations prior to departure.

According to the estimated project expenses for travelers to the Melbourne Project site, each individual member on our team is expected to be held responsible for $150 worth of project expenses, resulting in a total team budget of $600. In proposing this concept to our ID2050 instructor, Professor McCauley, he suggested a proposed institutional aid of $200 per student, equaling $800 of financial compensation for the team as a whole. The budget below comes to a total of $1683.56, making each student responsible for $220.89 if a compensation of $800 is accepted.

Thank you for the opportunity to expand the influence of our project work and your consideration of our proposal. We are pleased to present the following travel documentation for your review and look forward to hearing from you regarding a decision.

Best Regards,

Tahvorn George, Molly O'Connor, Jarod Romankiw, and Michelle Zhang
CERES Project Team Melbourne D'19

APPENDIX C: CONSENT FORM

Informed Consent Agreement for Participation in

Ethnographic Film Study of Indonesian Culture and Climate

Investigators: Tahvorn George, Molly O'Connor, Jarod Romankiw, Michelle Zhang
Email Contact: gr-ceres-d19@wpi.edu
Sponsor: CERES Community Environment Park
You are being asked to participate in a research study. Before you agree, however, you must be fully informed about the purpose of the study, the procedures to be followed, and any benefits, risks or discomfort that you may experience as a result of your participation. This form presents information about the study so that you may make a fully informed decision regarding your participation.
Purpose of the study
The purpose of this study is to enrich the learning experience of visitors at CERES environmental park by producing cultural "climate stories" of Indonesians living in Melbourne through a series of ethnographic interview-style videos.
Procedure to be followed
The participant will be required to complete approximately a 30-minute interview with the investigators to share their stories about their life in Indonesia. The interview will be recorded, and the footage may be used to create videos that document their experiences in relation to climate change. The participant will be contacted when videos are complete to ask for their approval of accuracy and appropriate depiction of both the culture and participant. Once the participant has reviewed and approved the videos, they will be integrated into the Indonesian cultural village experience at CERES and other platforms including: YouTube, Climate Stories Project, and WPI.
Risk to study participants
Some questions may evoke memories that may bring discomfort to the participant. The participant has the right to decline any question and request to move on to a new topic of discussion.
Benefits to research participants and others
This project will benefit CERES in its expansion of its Indonesian cultural village exhibit and in its ability to teach the community about the impact of climate change on life in Indonesia. It will also benefit those of the communities being interviewed, as it will provide a platform for them to share their stories.
Record keeping and confidentiality
The recordings from this study will only be available to the staff at CERES and to the group conducting this project unless given permission to do otherwise. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) have the right to inspect and have access to confidential data that identify you by name.
Compensation and treatment in the event of injury
We do not believe that participation in this project will involve risk of injury or harm, but if something of that nature does occur, we will not be held liable for such injury or harm. You do not give up any of your legal rights by signing this statement.
For more information about this research or about the rights of research participants, or in case of research-related injury, contact: If more information about this project is required, please contact the investigators with the contact information on the first page of this document. In addition, if further communication is needed, the IRB Chair at WPI (Professor Kent Rissmiller, Tel. 508-831-5019, Email: kjr@wpi.edu) and the Human Protection Administrator (Gabriel Johnson, Tel. 508-831-4989, Email: gjohnson@wpi.edu) can aid in any more information related to this study.
Your participation in this research is voluntary
Your refusal to participate will not result in any penalty to you or any loss of benefits to which you may otherwise be entitled. You may decide to stop participating in the research at any time. The project investigators retain the right to cancel or postpone the experimental procedures at any time they see fit.
Initial each statement you agree with:
_____ I give permission for my name and other personal information (including hometown, age, and occupation) collected during the study to be used in the videos.
_____ I give permission for my face to be shown in the videos.
_____ I give permission for this video to be published on public platforms including: CERES visitors app, CERES YouTube channel, Climate Stories Project, and Worcester Polytechnic Institute.
By signing below, I acknowledge that I have read and understand the explanation provided to me. I have had all of my questions answered to my satisfaction and consent to be a participant in the study described above. I am also entitled to a copy of this agreement.

_____ _____
Participant Signature Date

_____
Participant Name (please print)

_____ _____
Investigator Signature Date

APPENDIX D: CODED INTERVIEW DATA

Interview Data Sheet

Folder Name:	20190312-CERES-interview01	
Interviewee ID	**Name**	**Hometown**
a	Tahvorn George	Antigua
b	Jarod Romankiw	Jakarta

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
This is just a general note about what we're going to learn when we review the footage.	A	01	18:12 - 25:01	X		X	X	
This is just a general note about what we're going to learn when we review the footage.	B	01	16:00 - 18:00		X			X

Folder Name:	20190312-CERES-interview01	
Interviewee ID	Name	Hometown
a	male	Jakarta
b	female	Jakarta

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
“How is it Different, MEL vs INDO” Talks about public transport.	A	02	4:05 - 5:00					
“What’s the air quality like” Talks about how in the morning the air is clean, but by 6am the air is dirty. “Any improvements efforts?” He says no.	A	02	5:00 - 6:36					X
Talk about train system. Public transport. Talks about the air getting hotter.	A	02	7:00 - 8:30		X			X
Talks about a plan to help solve	A	02	8:40 - 10:00					X

environmental issues. Everything is affected by cars. *Provides a solution to air quality issues. Reduce the number of people driving cars.*								
Not very good waste management systems in Jakarta. It smells.	A	02	10:00 - 11:36				X	
Plastic Bags *Awareness has been growing over the past few years.*	A	02	11:40 - 12:30				X	
Accords to build modern waste management systems are in place.	A	02	12:45 - 13:30				X	
Learned about recycling when coming to Melbourne	A	02	13:45 15:00				X	
We need to educate the people, and provide the people with the means of proper disposal.			15:28 -16:30				X	

Folder Name:	20190312-CERES-interview02	
Interviewee ID	**Name**	**Hometown**
a	Male (Naldi)	Combaro, Sumatra
b	Female (Elsa)	Jakarta

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
His father works in oil.	A	01	2:22 - 2:37					
Talks about pollution from cars.	A	01	3:18 - 18:33					X
They reduce the plastic by changing to organic paper. They don't sell plastic bags to customers.	A	01	4:03 – 5:33				X	
There are hazing issues from the forest burning. Government declared "Emergency of State" due to the forest fires. Because of the haze, all the flights were canceled.	A	01	4:53 – 6:53	X				
How to improve pollution? *She talks about river pollution, government pays the people to burn rubbish.*	A	01	8:33 - 9:38				X	

People need to do a better job, it is getting better. The government is working towards a good goal.(the rubbish)	A	01	11:10 – 11:43				X	
We need to share our experiences about environment here and bring them to Indonesia.			15:13 – 15:30					

Folder Name:	20190312-CERES-interview03							
Interviewee ID	**Name**				**Hometown**			
a	Female (Orange Shirt)				(Sookma) Bali			
b	Female (Maroon Shirt)				East Kalimantan			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Everything plastic has been stopped. People don't realize how important being clean is. Making sure people are aware is important.	A	01	3:10 – 4:00				X	
Praying to god and to the land, they are supposed to clean, but since people come from other regions, they don't understand about the cleanness, and what that	A	01	5:15 - 6:00				X	

means to the culture.								
We need to use public transportation so that people don't pollute the air with personal vehicles.	A	01	7:45 – 7:56		X			X
Talks about an activist about cleaning the beaches in bali. It's making a big impact. Every Monday, boys and girls from the schools go and clean the beach	A	01	11:06 – 11:33				X	
She talks about creating awareness about taking care of the environment is most important.	A	01	15:00 – 15:33					

Folder Name:	20190312-CERES-interview04	
Interviewee ID	**Name**	**Hometown**
a	Rizk	Sumaren, Central Java
b	Rio	Malong, Java

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
The city always floods. There are two parts of the city, uptown, and downtown. Downtown was lower in altitude, so it always floods. Government is building a new infrastructure to reduce floods.	A	01	3:50 – 4:35			X		
Talks about how when he was a kid he would go to his Grandmas and help remove the buckets. People would rather stay together then move because of water.	A	01	6:36 – 7:30			X		
Government is creating green-areas to create public spaces. Government is taking good action towards it. *Other cities are taking action from this example.*	A	01	8:50 – 9:55		X			
People don't understand not using	A	01	11:20 – 12:30					

plastic. It is not everyone's top priority. *There is a program on Sunday mornings to help clean the neighborhood of trash.*								
Family is the first people that teach us about things.	A	01	16:50 – 17:40		X			

Folder Name:	20190313-CERES-interview05								
Interviewee ID	**Name**					**Hometown**			
a	Henry					Java, Central Jakarta, Indonesia			
Notes on Video									
Description		Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Talks about how he's not from a big city, and air pollution isn't that big of an issue. Talks about how air pollution affects the agriculture.		A	01	2:10 - 4:46		X			X
Talks about his research, and how a village can become self-sufficient. The way to do that is through agriculture. *They need to make sure what they do doesn't impact the environment.* Also mentions how people just 'burn fields' and goes into how in order to teach people not to do bad things to the environment, they have be slowly taught.		A	01	5:00 - 7:05	X	X			X
"Why do I have to care about climate change		A	01	8:30 – 8:45		X			

Typhoons never used to happen, and now they do. Also, people don't understand the concept of global warming.	A	01	9:20 – 10:51		X			
Talks about when something hits the country, it's like "god is testing us". *The community will help each other.*	A	01	11:10 – 12:37		X			
Talks about the different types of communities in Indoensia, and how they help each other	A	01	12:40 – 13:45					
He talks about his reasearch in teaching students how to be entrpenours.	A	02	1:00 – 5:45					
A friend of him, is changing the system the farming to more sustainable farming. He really gives insight to how farming works in Indonesia.	A	02	6:30 – 8:00		X			

Folder Name:	20190313-CERES-interview06								
Interviewee ID	**Name**					**Hometown**			
a	Rio Hedin Arda					Jakarta, Indonesia			
Notes on Video									
Description		Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Talks about a massive flooding issue, lots of rain (for a week..) At 5:35, he talks about how the government puts pumps in important parts which need the water to be removed. Also discusses how the government-built water dams, and how it is getting better.		A	01	4:18 - 7:20		X	X		
Discusses how the community reacts to a flood coming.		A	01	8:30 – 10:00			X		
Talks about the yellow group which goes out and clean up the rivers, dams, and rubbish.		A	01	10:59				X	
Talks about environmentalists who go and help people during floods.				14:45 – 15:50			X		

Folder Name:	20190313-CERES-interview08								
Interviewee ID	**Name**					**Hometown**			
a	Panda Kuyune					Bali, East Java			
Notes on Video									
Description		Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
In Bali, since January 1, they try to ban all the plastic bags.		A	01	3:45 – 4:20		X		X	
Things she would do in Indonesia *No Straws* *Plastic Bottles* *Separate the Trash*		A	01	5:16 -5:36		X		X	
People need to feel the responsibility to take care of the trash.		A	01	6:00 – 6:25				X	

Folder Name:	20190313-CERES-interview09								
Interviewee ID	**Name**					**Hometown**			
a	Efi Sina					Papua			
Notes on Video									
Description		Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
There is a new policy from the government to ban plastic bags. People need more awareness to do more action.		A	01	4:45 – 6:00		X		X	
Talks about the Palm Oil Industry				6:35 – 7:00		X			

Folder Name:	20190313-CERES-interview10							
Interviewee ID	Name				Hometown			
a	male				Jakarta			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
"How is it Different, MEL vs INDO" The seasons are different	Tascam	02	1:22 - 1:33					
"Has the traffic in Jakarta affected you" Never had issues driving in Jakarta but is bad compared to Melbourne	Tascam	02	2:33 - 2:44					X
The air pollution in Jakarta is very bad. Pedestrians have to wear masks. A lot of dust	Tascam	02	2:58 - 3:22					X
Odd and even car plates	Tascam	02	3:35 - 3:58					X
More public Transport, buses, trains etc.	Tascam	02	4:00 - 4:15					X

“Has flooding ever affected you” Yes, my house was flooded and trash was everywhere because the river was flooded	Tascam	02	4:27 - 4:48			X	X	
Block the water from going in to our houses and afterwards we try to clean the houses because the river was dirty.	Tascam	02	5:02 - 5:29			X	X	
The river is dirty because people wash their clothes in the river, throw garbage etc.	Tascam	02	5:38 - 5:52			X	X	
His family, they donate the recyclable items to people to make them into products	Tascam		6:17 - 6:51				X	
Could be clothes, mug or things from decorations	Tascam		6:55 - 7:05				X	
I hope everyone realizes the environment is important and you should care for it.	Tascam		8:44-9:07					

Folder Name:	20190313-CERES-interview11	
Interviewee ID	Name	Hometown
a	female	Jakarta
b	female	Jakarta
c	female	Jakarta

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
"How is it Different, MEL vs INDO" The weather is hot and humid, when it rains in Jakarta, it rains heavily and the traffic is bad"	B	02	1:00 - 1:18		X			X
The air is not as good as Melbourne, rare to see blue sky	B	02	1:22 - 1:35					X
One time going back home, I got sick immediately when I haven't gotten sick in a year in Melbourne	B	02	1:44 - 2:05					X
The government has been doing a great job, trying to reduce the air pollution by encouraging people	B		3:30-3:52					X

to use public transport								
The biggest reasons for pollution is that everyone is using their own transport and public transport is really bad *but the government is trying to change that*	B	02	3:53 - 4:16					X
Regulation about needing 3 or more persons in your car for you to drive in a lane	B	02	4:16 - 4:35					X
Odd and even plate numbers	B	02	4:37 - 4:57					X
While on an internship had to commute a lot. Tried best to do public transport. Gojek to public shuttle	B	02	5:13-5:39					X
Ways to raise awareness	B	02	8:12 - 8:36		X	X		
Public transportation has gotten a lot better over time	B	02	8:53 - 9:02					X
Infrastructure has gotten better. Tsunami came in Sumatra and it did not affect them greatly	B	02	9:03 - 10:07		X	X		
There's more awareness among the youth about reducing plastic waste. Using reusable straws and tote bags as well as supermarkets	B	02	10:34 - 10:57		X		X	

Indonesia is diverse, people in different cities are so different	B	02	12:17 - 14:19					
Infrastructure is the key to improvement. We as a people can help to reduce pollution	B	02	14:35 - 15:30					
Indonesians usually blame the government for small things but they need their own accountability	B	02	15:33 - 15:48					

Folder Name:	20190313-CERES-interview12[Bad audio]	
Interviewee ID	Name	Hometown
a	female	Jakarta
b	female	Jakarta
c	female	Jakarta
d	female	Jakarta

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Has to use an inhaler when back home	B	02	5:02 - 5:19					X
Skin reacts when back home	B	02	5:26 - 5:38					X
Carpooling to reduce pollution	B	02	8:18 - 9:03					X
Odd and Even Days	B	02	9:15 - 9:40					X
Farmers burn the land because it is easier to clear the land	B	02	14:26 - 15:07	X				
Government tries to put bins to encourage recycling but people aren't aware enough	B	02	16:27-16:49				X	

Folder Name:	20190313-CERES-interview13							
Interviewee ID	Name				Hometown			
a	male				Bandu			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Bandu is not that polluted but in the center of the city it's bad because of cars. There are floods sometimes cause of trash	A	02	0:29-1:00					
My house has been in a flood	A	02	1:02-1:11			X		
After the flood there was trash in his house			1:18-1:38			X		
We have to move the trash outside and the government sends people to clean the area			1:46-2:20			X	X	
His family moved because of floods			3:34-3:48			X		
Volcano erupted and it polluted the city			4:04-4:14					X
The government gave out masks to help from the eruption			5:44 - 5:58					X

If there are organizations that help the environment, they aren't prevalent			6:30-6:54		X			
When I was a kid, I used to play in a park but now we can't, a lot of trash			7:35 - 8:02		X		X	
If you have trash, bring it with you. Take care of the trash. People in indonesia don't know how to separate trash			8:10 - 8:40				X	
School taught us but we don't practice			8:44 - 8:53				X	
The school teaches us what to recycle, but we don't do it outside of school			10:56 - 11:25				X	
In Mel, the air is fresh and you can drink tap water and learned a lot about recycling			11:37 - 12:00				X	X
I'll take everything back to indonesia except tap water			12:09 - 12:16					
It is your responsibility to throw trash away			12:32 - 13:00				X	

Folder Name:	20190313-CERES-interview14	
Interviewee ID	Name	Hometown
a	female	Kalimantan
b	female	Sulawesi

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Mel vs Indonesia ***The awareness of people are different and there's a lot to learn in terms of urban planning***	B	01	2:41 - 3:28					
Her hometown is quite urbanized now, the gap isn't there between semi-urban and urban	B	01	4:00 - 4:38					
Here we can see it's blue skies and white clouds but in jakarta, due to pollution, it's different	B	01	5:19 - 5:55					X
In Java, she had to wear masks but in rural areas it's different.	B	01	6:00 - 6:25					X
What concerns her is the flooding, they can't predict the flooding	B	01	6:40 - 8:01			X		
Most of the areas that used to be	B	01	8:07 - 8:43			X		

farms are now housing areas which causes flooding								
It's not a bottom up approach, there needs to be a top down approach with policy as well as awareness with people	B	01	8:53 - 9:27					
When she was a child I could see monkeys and bears but now she can't see them	B	01	9:39 - 10:18	X				
There were small environmental groups on creating clean villages	B	01	13:47 - 14:33	X				
You cannot just rely on policy, you have to educate from the bottom	B	01	14:50 - 15:34					
We have to develop country from the village, minimize the gap	B	01	15:35 - 17:08					
There is sunlight every day so it is useful as well as hydro power and geothermal	B	01	17:22 - 18:07					
Only 7-9% renewable energy	B	01	18:11 - 18:27					
Australia has the highest usage of solar energy, VIC 45%	B	01	18:37 - 19:15					
Solar payback period(2vs20 yrs)	B	01	19:20 - 20:16					
I am studying as an urban	B	01	20:36 - 21:05					

planner, I will apply what I learned at school								
I will apply what I learned at school, Indonesia needs an energy audit.	B	01	21:08 - 21:46					
Lived in palm oil plantation in Southeast Sulawesi, no utilities. Palm oil was banned in europe but we need it. Half of islands are palm oil but it is from private sector, all about mone. They damage the soil so nothing can be grown	B	02	00:31 - 2:42	X				
They burn anything, they clear the forest to get plantation space	B	02	2:50 - 3:03	X				
Deforestation is a bad thing because they can't see animals and bush fires are a bad thing and it affects other countries	B	02	3:08 - 3:42	X				
Palm oil is like the visa for indonesia. Government doesn't take the people seriously	B	02	3:45 - 4:22	X				
Many people rely on the palm oil company	B	02	4:26 - 4:47	X				
To make palm oil more sustainable, use bio energy and	B	02	5:00 - 6:00	X				

other sustainable methods, but, since the EU banned palm oil, it is difficult for indoensia								

Folder Name:	20190313-CERES-interview15	
Interviewee ID	Name	Hometown
a	male	Java
b	male	Sumatra

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Since working in an electric company for so many years, I can change something	B	01	2:43 - 3:32					
Would like to join an NGO to push towards renewable energy	B	01	4:14 - 5:06					
The electricity business plan changes every year and the numbers will change but there needs to be a drive.	B	01	5:17 - 6:13					
Energy retailers in australia vs monopolizer in Indonesia	B	01	6:45 - 7:32					
Very impressed with melbourne and the air is its cleanest right now because of emissions restrictions and how indonesia can follow with participation	B	01	7:33 - 9:55					X

There is a wind farm in indonesia and some solar farms but not connected to the grid. And Sumbaya being a 100% renewable energy	B	01	10:30 - 11:55					
Joint project between Indonesian government to make island 100% renewable	B	01	12:07 - 13:00					
Why a smaller island/ rural area is best to work towards 100% renewable energy	B	01	13:13 - 15:19					
Companies working towards renewable energy in the city	B	01	15:20 - 15:52					
The upfront cost is big on renewable but in the long run is better vs fossil fuel	B	01	17:00 - 18:12					
Because of the demand of renewable energy, it is incomparable to fossil fuel. There needs to be government act	B	01	18:30 - 19:18					
Every country has their own time frame to shift to renewable energy and Indonesia's plan for electricity distribution	B	01	22:47 - 25:00					
Indonesia's goal for 2020 to have a renewable energy goal of 20%	B	01	25:10 - 26:37					

and makes young engineers like the excited								

Folder Name:	20190313-CERES-interview16							
Interviewee ID	Name				Hometown			
a	male				Java			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Work in a non-profit organization to install solar panels in rural areas	A	01	3:59 - 5:05					
5 solar projects in health clinics to help power health instruments such as incubators, serving more than 20,000 people	A	01	5:15 - 6:22					
Project has been 3 years and provides enough power to supply the instruments	A	01	8:05 - 8:50					
Government plans for 25 years on electricity	A	01	9:30 - 10:15					

Folder Name:	20190313-CERES-interview17							
Interviewee ID	Name				Hometown			
a	male				Klaten			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Melbourne is this really clean city that came up from a small city vs indonesia with all these villages, a sporadic country	A	01	2:50 - 4:10					
Using google maps and getting stuck	A	01	4:16 - 5:04					
Why these new roads are built. Means to urbanization	A	01	5:14 - 5:52	X	X			
Rice fields being replaced by houses, can't see his grandfather's rice fields. Selling their land to housing developments	A	01	6:10 - 7:47	X				
Aside from roads, there isn't a difference in urbanization.	A	01	7:58 - 8:38					
There is still flooding due to sedimentation	A	01	8:45 - 9:30	X		X		

Java holds 60% of indonesia population and is the smallest island and the houses being built aren't built in good areas	A	01	9:38 - 10:33			X		
The population growth makes the city unsustainable. Traffic and how it's getting worse	A	01	10:43 - 11:56					X
It's a political battle to fix Jakarta's traffic	A	01	12:00 - 13:05					X
When the airplane cockpit opens, you can open the smell when you arrive in indonesia	A	01	13:10 - 13:51					X
They tried to reduce the number of cars and also use biodiesel in public transport in indonesia.	A	01	14:00 - 14:35					X
You can see the smoke rising from 5-6am	A	01	14:38 - 15:00					X
People usually live in small pockets so you don't really notice the smell a lot. The dutch canals are filled with rubbish. People throwing rubbish in it	A	01	15:15 - 16:22				X	X
Recycling isn't implemented in Jakarta because of people being so used to it	A	01	16:30 16:45				X	

If you're caught littering, you can be jailed. If caught though	A	01	16:50 - 17:15				X	
Government has to pay another island to dump garbage and now the garbage is piling up because they didn't pay	A	02	00:27 - 01:33				X	
Things happen from yourself, small things can happen	A	02	3:28 - 3:40					
Bali eliminated plastic bags from the island because two small girls made a petition	A	02	3:45 - 4:23		X		X	
People made plastic bags out of cassava. Although implemented it's not very big because the government isn't as big. And REALLY GOOD speech ***dibs on speech - Tahvorn***	A	02	4:36 - 6:35		X		X	

Folder Name:	20190313-CERES-interview18							
Interviewee ID	Name				Hometown			
a	male				Sumatra/Jakarta			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Comparison between Jakarta as a child vs now (environment)	A	01	00:15 - 1:55					
Coming back to hometown, everything changed. Consequences of development	A	01	02:48 - 3:48					
Air quality depends on how large the area is and the number of trees to absorb the carbon	A	01	3:55 - 4:18					X
How air quality affected people now because they can't do as many outdoor activities	A	01	4:36 - 5:37					X
The government's efforts to curb traffic such as public transport and his troubles through traffic	A	01	5:55 - 7:33					X
Regular earthquake and floods but can be managed if we create	A	01	13:50 - 14:30					

more awareness								
Create awareness for kids through the school system, Melbourne is a good example	A	01	15:40 - 17:18					
Ways to raise awareness about flooding, minimizing about the impact	A	02	1:35 - 2:10					
Things must start from the people to raise awareness. Not just social media but the schools' curriculum	A	02	4:52 - 6:30					

Folder Name:	20190315-CERES-interview19	
Interviewee ID	**Name**	**Hometown**
a	Primaa Sastrawiria	Jakarta

Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
“How have you seen Jakarta transform” Talks about how the trees and parks have reduced since the population density has increased	A	01	0:58 - 2:27	X				
“How have people planned for flooding” *Construction projects have to meet technical requirements to prevent flooding, but can be bought off*; talks about frequency of flooding every five years	A	01	3:46 - 5:20			X		
Talks about public awareness of littering and recycling	A	01	5:20 - 6:13			X	X	
“How can government encourage	A	01	6:13 - 7:23				X	

low-income people to not litter” *More litter bins needed, educate about which bin to put things in*								
Expansion of plastic bag ban to Java from Bali	A	01	8:04 - 9:00				X	
Cassava bag usage, drawbacks, and pros	A	01	9:20 - 10:02		X		X	
Using waste to create art and other products (recycled fashion carnival)	A	01	10:27 - 11:17				X	
“Are people still encouraged to farm in Bali?” *Subak system---calls it something else in this clip; still a lot of farming*	A	01; 02	12:20 - 13:13; 07:18 - 8:27		X			
Even and odd license plates to reduce traffic expanding; public transit being developed	A	01	13:30 - 15:37					X
Other traffic regulations regarding motorcycles	A	01	15:38 - 16:48					X
Carpool requirements (3 in 1); phased out as even and odd brought in	A	01-02	17:53 - end; start - 0:56					X

More air pollution evident upon arriving to Jakarta; respiratory problems and discussion of air quality	A	02	3:27 - 4:32					X
Need to change perception of need for private vehicles; need to impose higher tax for ownership; *already being implemented*	A	02	4:50 - 6:32					X
Sustainability education	A	02	8:56 - 9:48		X		X	

Folder Name:	20190315-CERES-interview20	
Interviewee ID	**Name**	**Hometown**
a	Alfons Sroyer	Papua

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
“Have you seen how the environment has changed in the past several years?” Talks about the effects of climate change globally on economy, health, and agriculture	A	01	2:50 - 4:45		X			

Severe weather patterns that have occurred and the high impact of climate change already	A	01	5:00 - 6:44		X			
Flooding in Jakarta due to unpredictable weather patterns; lack of concern for environment in city	A	01	6:50 - 8:30			X		
Programs to replace trees that are cut and promote plant growth	A	01	8:40 - 10:26	X				
Preserving the land as part of the community's mentality and way of life/values	A	01	10:40 - 12:12	X	X			
Programs to prepare for environmental impacts; protecting individuals rather than the earth, since this is automatic	A	01	12:30 - 14:00		X			
Plastic waste substitutes: Noken	A	01	14:05 - 16:42		X		X	
Cassava use and exporting rubbish from Papua	A	01-02	16:45 - end; start - 0:40		X		X	
Implementation of cassava in the future	A	02	0:45 - 1:20		X		X	
Papuan culture	A	02	1:25 - 7:00					
Environment and religion	A	02	7:06 - 8:13					
Quotes about environment	A	02	8:15 - 9:27					

Folder Name:	20190315-CERES-interview21	
Interviewee ID	**Name**	**Hometown**
a	Adelia Rachma Shakuntala	Small city central Java, Lampon, Jakarta

	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
How waste is disposed of in Java	A	01	1:00 - 1:20				X	
Weather and seasons changing in Java	A	01	2:00 - 3:15		X			
Flooding in Jakarta	A	01	3:17 - 3:37			X	X	
Flooding/ heavy rain influencing job as flight attendant and airports	A	01	3:40 - 4:31		X	X		
Air quality in Indo vs.Melb	A	01	6:52 - 7:20					X
Even and odd plates	A	01	7:45 - 8:12					X
Recycling in Indonesia initiatives to ban plastic bag	A	01	8:14 - 9:01				X	
More crowding and plastic use in Jakarta	A	01	9:20 - 9:46				X	
Importance of sustainability	A	01	10:35 - 10:58		X		X	

education and how this education works in Melbourne								

Folder Name:	20190315-CERES-interview22	
Interviewee ID	**Name**	**Hometown**
a	Lery Butar Butar	Need translation

	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
"Has the environment changed at all since you grew up?" Talks about the length and timing of seasons changing	A	01	0:40 - 0:50		X			
How farmers are affected by the climate changing	A	01	1:19 - 1:54		X			
"Has the community done anything to help that?" *Talks about government aid*	A	01	1:58 - 2:25		X			
Subak system development jobs	A	01	3:01 - 3:45		X			
Flooding experiences as a child	A	01	4:06 - 4:39			X		
How the flooding is managed by	A	01	4:56 - 5:28			X		

the government								
Moving to higher ground during flood	A	01	5:35 - 5:56			X		
Migration because of tsunami	A	01	6:27 - 6:56			X		
Lack of recycling in Indonesia	A	01	7:06 - 7:41				X	
Sustainability education in Indonesia and student projects to preserve environment	A	01	7:52 - 09:30				X	
Positives of urbanization (not really related to climate)	A	01	10:40 - 12:07					
Why it's important to preserve the environment	A	01	13:13 - 13:53					

Folder Name:	20190315-CERES-interview23	
Interviewee ID	**Name**	**Hometown**
a	Millatina Salma	Jakarta

	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Climate of Jakarta vs. Melbourne; better public transit	A	01	0:58 - 01:55					X

Public transit/driving in Indo	A	01	2:19 - 2:48					X
Traffic jams and getting around far distances	A	01	2:56 - 03:52					X
3 in 1 vs. even/odd plate systems	A	01	04:18 - 05:10					X
Traffic improving/ public transit improving	A	01	06:26 - 07:09					X
Flooding frequency and experience	A	01	07:25 - 09:27			X		
Lack of evacuation plan in Jakarta	A	01	09:30 - 10:27			X		
The severity of flooding in some areas	A	01	10:30 - 11:18			X		
People putting trash in the rivers; more awareness so it's improving	A	01	11:32 - 12:12				X	
Government efforts to clean the rivers now	A	01	12:36 - 12:56					
Not too late to start caring about the environment and shifting habits	A	01	13:13 - 13:43		X			

Folder Name:	20190315-CERES-interview24	
Interviewee ID	**Name**	**Hometown**

a	Annisa Dina Amalia	??, Jakarta
b	Nya?	South of Jakarta?

	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Environment of Indo vs. Melb; traffic jams in Jakarta; less public parks	B	02	2:30 - 4:55				X	X
How air quality affected them; needed to wear masks	B	02	5:00 - 6:08					X
Palm oil plantations' impact on air	B	02	6:30 - 7:25					X
Palm oil plantation ban	B	02	7:35 - 8:33					X
Flooding in Jakarta twice a year; experience; *pumping system improving it;* trash	B	02	09:22 - 10:42			X		
Not environmentally aware, responsibility towards nature	B	02	10:45 - 12:16		X		X	
Plastic bag ban in Bali	B	02	12:42 - 13:03				X	
Charging for plastic bags; not super effective; law enforcement is a major issue; need government support	B	02	13:13 - 15:18		X		X	

Folder Name:	20190315-CERES-interview25	
Interviewee ID	**Name**	**Hometown**
a	Patrick Bryan Nugraha	Jakarta

	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Flooding increasing with the weather but the government is trying to help; flooding experience	A	01	01:48 - 02:33			X		
Cleanup by individuals following a flood	A	01	03:00 - 03:15			X		
Air quality in Jakarta vs. Melb	A	01	03:20 - 04:00					X
New public transportation system	A	01	04:10 - 04:44					X
Charging for plastic bags	A	01	07:00 - 07:37				X	
Cassava bags	A	01	08:15 - 08:36		X			

Folder Name:	20190315-CERES-interview26	
Interviewee ID	**Name**	**Hometown**

a	Sri Dean	Semarang

	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Story about urbanization and limited parks in the area now	A	03	02:20 - 03:40	X	X			
Parks created in different areas in the modern age, Indo and Melb	A	03	04:27 - 05:30		X			
Traffic issues in Indonesia	A	03	07:06 - 07:52					X
Environmental organizations in communities; greenhouse competition	A	04	01:31 - 03:24	X	X		X	
Greenhouse competition continued	A	04	04:08 - 04:48	X	X			
Recycling; selling the recyclables to sell	A	04	05:07 - 06:23				X	
Littering in Indonesia	A	04	06:39 - 07:50				X	
Some initiatives and advertisements to prevent people from littering	A	04	08:00 - 08:25				X	
Reduction of areas for shellfish farming	A	04	09:00 - 10:08		X			
Subak System; how it ties to their	A	04	10:27 - 11:42		X			

religion as well								
Advice to Indonesia; change is ongoing	A	05	0:00 - 0:53		X			

Folder Name:	20190318-CERES-interview27	
Interviewee ID	**Name**	**Hometown**
a	Eunike Agung	Kupang

	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Water scarcity with the summer	A	01	02:44 - 03:22		X			
Waste management problems in Indo	A	01	04:25 - 04:56				X	
Lack of recycling in Indo vs. Melbourne; *improvements to recycling with new government; fees*	A	01	05:00 - 05:47				X	
Explanation of some public transportation in the area	A	01	06:50 - 07:15					X
Typhoons in the area; never happened in the past	A	01	08:33 - 09:10		X			

What government did to respond to event	A	01	09:20 - 09:33		X			
Need for education programs to positively influence climate	A	01	10:46 - 12:27		X			

Folder Name:	20190318-CERES-interview28	
Interviewee ID	**Name**	**Hometown**
a	Siti Lailan Vonny Rasida	Jakarta (suburbs), family is from all over Indonesia
b	Ben	Jakarta (urban but family is in outskirts), family is from Lombok

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Differences in culture between Australians and Indonesians	B	01	02:12 - 02:23					
Weather in Indonesia	B	01	02:41 - 02:49 03:10 - 03:17		X			
Not a lot of parks maintained in Indonesia	B	01	03:20 - 03:28	X				
Government doesn't put a lot of funding into care for parks	B	01	03:59 - 04:30	X				
Not a lot of sustainable action because communities are used to the way things are	B	01	04:46 - 05:02		X			
There are small local populations care about the environment and	B	01	05:55 - 06:41 12:35 - 13:02		X			

take action								
Businesses care more about money than preserving the environment	B	01	08:04 - 08:26					
Mining regulations: after clearing the land and mining, they have to replant or else they will be fined Not 100% restoration though and not strongly enforced	B	01	09:30 - 09:57	X				
Efforts from government to clean rivers, clear drainages	B	01	11:01 - 11:29			X	X	
Experience with major floods	B	01	11:40 - 11:57			X		
Locals are used to floods	B	01	13:03 - 13:36			X		
Noticed that weather has gotten hotter; believes it's caused by increase in population	B	01	14:16 - 15:02 15:06 - 15:26		X			
More traffic now, more pollution	B	01	16:16 - 16:37					X
Initiatives: light rail transport system and mass rail transport	B	01	16:52 - 17:22					X
Main goal of current president is building new infrastructures	B	01	17:37 - 18:05			X		X
Would love if public transportation improves in Jakarta	B	01	20:48 - 20:56					X

Bring recycling back to Indonesia	B	01	21:05 - 21:46				X	

Folder Name:	20190319-CERES-interview29							
Interviewee ID	**Name**				**Hometown**			
a	I Gede Pandu Wirawan				From Bali but born and raised in Makassa (South Sulawesi Province)			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Problems in Indonesia: people throw garbage everywhere	B	01	00:50 - 00:56				X	
Describes Makassar's beach	B	01	01:26 - 01:36					
Problem is caused by habit, but *people are more concerned about the environment now*	B	01	01:37 - 01:59				X	
Youth organizations that campaign for the environment	B	01	02:23 - 02:39				X	
70% of Makassa covered by a	B	01	03:24 - 03:28			X		

recent flood (2 months ago)								
Flooding is a once in five year natural event	B	01	03:36 - 03:42			X		
Flood experiences	B	01	04:00 - 04:44			X		
No warning about floods; it's an unexpected event in Makassa	B	01	05:05 - 05:25			X		
His friends experience with most recent flood: NGO's couldn't help because airports were destroyed, government covered expenses for people to obtain food from flooded supermarkets	B	01	06:12 - 07:14			X		
Noticed changes in temperature	B	01	07:48 - 08:00		X			
Noticed less fish, changes in landscape because of new infrastructure	B	01	08:10 - 08:59	X				
Memories of Makassa	B	01	09:20 - 10:02 10:31 - 10:54					

Folder Name:	20190319-CERES-interview30	
Interviewee ID	**Name**	**Hometown**
a	Ela Nurhayati	West Java originally but moved to Lombok (West Nusa Tenggara)

Notes on Video

Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Talks about weather in Indonesia	A	01	02:30 - 02:43		X			
Not a lot of environmental regulation in Indonesia	A	01	02:55 - 03:12					
Saw environmental posters	A	01	03:32 - 03:52				X	
People continue to throw rubbish anywhere they can	A	01	03:53 - 04:16				X	
Plastic bag regulations in Bali and Bandung	A	01	04:22 - 04:39				X	
Plastic bags are still cheap and convenient to buy	A	01	04:42-04:58				X	
Noticed increase in traffic within the past 10 years	A	01	05:53 - 06:46					X
Noticed decline in public space	A	01	06:47 - 07:06	X				
Number if cars and motorbikes have increased significantly	A	01	07:44 - 07:51					X

Increase in population and new infrastructures taking public spaces	A	01	08:03 - 08:39	X				
People have adapted to frequent earthquakes	A	01	09:06 - 09:35					
NGO's disaster risk management	A	01	09:44 - 10:32		X	X		
What can improve the preparedness of people? Raising awareness in schools and communities	A	01	11:16 - 11:47					
People already have a certain mindset because they've survived so maybe school education can be spread to student's families	A	01	11:49 - 12:34					
Many different risk managements due to the many disasters in Lombok; there is a focus on earthquake, floods, and eruptions	A	01	12:48 -13:24			X		
Flooding in Lombok	A	01	13:42 - 14:16			X		
Not enough funding for all the earthquake victims	A	01	14:30 - 15:34					
There is an app that provides daily updates on natural events	A	01	16:35 - 16:56					
Spreading updates through social	A	01	16:57 - 17:11					

media								
7.6 earthquakes from a few months ago destroyed a lot of buildings	A	01	17:33 - 17:43					
Not a lot of news on local earthquakes because the government is afraid it will affected tourism which leads to less disaster relief donations and funding	A	02	00:18 - 01:32					
Impacts of earthquake are still affecting locals	A	02	01:32 - 02:10					
Last message: those who have learned new things in other countries should inspire their communities and help with planning better strategies	A	02	02:28 - 03:27		X			

Folder Name:	20190319-CERES-interview31	
Interviewee ID	**Name**	**Hometown**
a	Miftahul Jannah	East Kalimantan, raised in Samarinda

Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Weather in Indonesia: very hot, unpredictable, rainy	A	01	01:32 - 02:01					
Heavy rain is the norm and it's unavoidable	A	01	02:45 - 03:00			X		
After floods, there are a lot of rubbish; people work together to clean up	A	01	03:10 - 03:26			X	X	
She doesn't believe government does a lot about frequent floods, she wishes there is a change to solve the problems	A	01	3:43 - 04:32			X		
People in the community work together to clean rubbish every week	A	01	05:42 - 06:12				X	
Young generation supports sustainable movement	A	01	08:37 - 08:45					
Plastic bag ban	A	01	09:14 - 09:40				X	
Noticed people following the plastic ban	A	01	09:52 - 10:17				X	
People prefer their vehicles rather than walking	A	01	11:20 - 11:35					X

Organization that promotes replanting trees through social media	A	01	12:36 - 12:50 12:59 - 13:06	X				
Message: people should care more about the environment to preserve it for the next generation	A	01	15:41 - 16:16		X			

Folder Name:	20190320-CERES-interview32							
Interviewee ID	**Name**				**Hometown**			
a	Toto Suprapto				North Sumatra, moved to Jakarta, then to Bali			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Culture of greetings in Indonesia	B	01	01:21 - 01:31 01:52 - 02:05					
In Indonesia, there is only one bin for trash	B	01	03:44 - 04:03				X	
Indonesia is still a developing	B	01	04:11 - 04:25					

country so they don't think about about ecosystem/environment								
In Bali, they implemented reusable bottles	B	01	04:30 - 04:47 06:11 - 06:19				X	
Bottle-to-bottle started 5 years ago; Exchange plastic bottles for food stamps	B	01	05:03 - 05:06 05:10 - 05:29				X	
European/American NGO's are the supports of bottle to bottle	B	01	05:39 - 05:49				X	
Tourism is one of the reasons for plastic waste in Bali	B	01	05:57 - 06:10				X	
Students who are educated follow these sustainable trends	B	01	06:29 - 06:36					
A lot of people in Indonesia are actually uneducated on environmental topics	B	01	06:36 - 06:55					
People end up destroying forests for palm oil in Borneo	B	01	06:57 - 07:36	X				
Indonesia is still a developing country so environmental goals come second to economic goals	B A	01 03	07:38 - 07:53 03:42 - 04:09					
Government is trying to get people to understand the importance of the environment	A	03	04:12 - 05:08					

through education so that the environment can be preserved for the next generation								
It takes 30-50 years to regrow palm trees	B	01	08:56 - 09:10	X				
Indonesia is already first in palm oil production so government should focus on protecting the trees	B	01	09:16 - 09:38	X				
Government tried to introduce fruit plantations because it's greener than palm oil plantations	B	01	10:08 - 11:14	X				
Advantages of fruit plantations They also absorb pollution	B	01	11:28 - 11:50 13:30 - 13:47	X				
Wet season and dry season has been changing and farmers have adapted to the changes; Global climate is changing	B	01	14:40 - 15:24 16:21 - 16:40		X			
New law in Jakarta, cars have to get tested on how emission they produce	B	01	17:09 - 17:45					X
Lots of people in Jakarta use motorbikes which contribute to pollution	B	01	18:57 - 19:10 21:33 - 21:39					X
If they can better manage public	B	01	20:52 - 21:04					X

transportation, it will be good for the ecosystem								
Not a lot of good preparation for flooding: not enough trees and rivers to absorb the water	B	01	22:37 - 23:24			X		
They use netting and soil to absorb water in Jakarta	B	01	23:49 - 24:15			X		
The rain in the rivers won't flow because of all the rubbish	B	01	24:23 - 24:37				X	
Now the government gives fines for throwing rubbish	B	01	24:37 -25:02				X	
Government helps clean up the trash but the trash just goes to a landfill	B	01	25:21 - 25:46				X	
"Community who lives together helps each other"	B	01	26:16 - 26:44 26:58 - 27:03					
He would trying to make people understand why recycling is helpful to the ecosystem	B	01	27:28 - 28:19				X	
Indonesian culture: belief in karma, provinces, islands, language	B B	01 02	29:32 - 29:42 00:00 - 00:23					
Urbanization in cities = less trees	A	03	01:23 - 02:04	X				
SUBAK SYSTEM: saves water	A	03	02:33 - 03:17					

Folder Name:	20190321-CERES-interview33							
Interviewee ID	**Name**				**Hometown**			
a	Harry Febrian				Jakarta			
Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Wants to bridge Australian and Indonesian relations	A	01	01:36 - 01:49					
People had a way of knowing when rainy season was but now the climate patterns are changing	A	01	02:51 - 03:47		X	X		
Flooding has become more frequent and a bigger issue	A	01	04:12 - 04:19 04:23 - 04:35 04:47 - 04:59			X		
Personal experience with flooding several times	A	01	05:13 - 05:39			X		
Flooding is expected so it's not a very big deal; they live with it People just move their things to	A	01	05:50 - 06:40			X		

the second level of their homes								
Even so, there are many victims from floods, the old and sick	A	01	06:42 - 07:05			X		
Lack of awareness for keeping a place clean; rely on government to clean	A	01	07:25 - 08:03 08:17 - 08:45 08:50 - 09:15				X	
Government cleans sewage, dig rivers so it contains more water	A	01	09:30 - 09:45			X	X	
People thought the haze was normal	A	01	10:36 - 11:04					X
Improvements in public transportation	A	01	11:40 - 11:57 12:22 - 12:32					X
Personally has been using public transportation more often	A	01	12:36 - 13:16					X
How seeing forests was different from what they read/learned in classrooms	A	01	13:49 - 14:00	X				
Indonesia is a wealthy nation in terms of forests and biodiversity	A	01	14:23 - 14:28	X				
Weren't taught to love and care for the environment	A	01	14:31 - 14:44	X				
His guide in the forest talked about the forests 10 years ago	A	01	16:18 - 16:50	X				

Noticed bridges flooded with garbage	A	02	01:22 - 01:44			X	X	
People try to clean daily but the garbage continues to pile up regardless	A	02	02:05 - 02:22 02:28 - 02:38				X	
Message: you can't take the environment and you need to guard it and bring awareness	A	02	02:59 - 03:14 04:11 - 04:27					
Talks about Indonesia's rich diversity	A	02	03:21 - 03:33	X				
It's scary to think what will happen in 10-15 years from now	A	02	03:55 - 04:00		X			
It's hard to talk about environmental issues	A	03	00:03 - 00:14 01:34 - 01:43		X			
The local people there depend on palm oil as their main income	A	03	02:50 - 02:56	X				
Orangutan lost their home from deforestation wandered into village	A	03	03:22 - 03:32	X				

Folder Name:	20190322-CERES-interview34								
Interviewee ID	**Name**					**Hometown**			
a	Celine S.					Bekasi (West Java)			
Notes on Video									
Description		Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
Lots of traffic; the pollution is bad		A	01	00:35 - 00:48 05:32 - 05:41					X
Bekasi is used as a landfill; *people look for plastic and other material to sell (source of income)*		A	01	00:53 - 01:44 02:20 - 02:31 02:38 - 02:40 02:54 - 03:24				X	
Smell of landfill affects the area		A	01	01:47 - 01:56				X	
Animals roam in the landfill		A	01	03:47 - 03:56				X	
River in Jakarta is black because of rubbish, factory disposal, people bathing, doing laundry		A	01	04:09 - 04:14 04:38 - 05:18			X	X	
Population growth in the city		A	01	05:59 - 06:32					X
Flood doesn't affect taller homes		A	01	09:24 - 09:39			X		
Personal experience with flood		A	01	09:56 - 10:15			X		
Flooding in a nearby shopping		A	01	11:31 - 11:54			X		

mall								
Weather in Indonesia: two seasons	A	01	12:42 - 12:51		X			
A government official who planted a lot of trees and another who protected marine life	A	01	15:20 - 16:08	X				
What would you bring back to Indonesia: babysteps, like no littering	A	02	00:02 - 00:20				X	
Try to implement tax/fees on pollution and better regulate waste	A	02	00:31 - 00:47				X	
People reusing bags for other purposes, arts and crafts	A	02	01:33 - 01:58				X	
Guy from Bali who made bags from cassava	A	02	01:58 - 02:11				X	

Folder Name:	20190322-CERES-interview35	
Interviewee ID	**Name**	**Hometown**

a	Ailsa Malinda Azizah				Went to school in Jakarta, lived in Tangerang (outskirts of Jakarta), from Sukabumi			

Notes on Video								
Description	Camera Angle	Clip #	Timestamp	Deforestation	Climate Change	Flooding	Rubbish	Air Pollution
How is your commute to Jakarta? Talks about commuting to school	A	01	00:31 - 00:51 00:55 - 01:14					X
Mass rapid transportation works in Jakarta	A	01	01:26 - 02:03					X
Talks about air pollution from traffic and why people prefer driving over walking in Jakarta	A	01	02:16 - 02:27 02:28 - 02:35 02:40 - 02:57 03:09 - 03:26					X
Government doesn't check how much exhaust comes from each car, so people don't check	A	01	04:03 - 04:13					X
Noticed the temperature has gotten hotter in Sukabumi	A	01	04:43 - 05:15		X			
People are not aware of their actions causing changes to the climate	A	01	05:41 - 05:58 06:09 - 06:23		X			
School kids are probably more informed	A	01	06:00 - 06:05 08:00 - 08:54					

Rubbish problems: locals throw garbage into paddy fields in Sukabumi	A	01	06:23 - 06:29 06:32 - 06:48				X	
Machine that takes garbage out from river in Jarkarta	A	01	07:20 - 07:25				X	
Raises importance of awareness	A	01	07:29 - 07:42					
Friends who create organizations to raise awareness in rural communities, clean cities, and create sustainable products	A	01 02	09:28 - 09:50 00:33 - 01:08				X	
Experience with flood	A	02	01:41 - 02:50 03:03 - 03:13			X		
How a local man reacted to the flood	A	02	03:34 - 3:51			X		
People clean waterways with government after flood	A	02	04:33 - 04:46			X		
Forest fires	A	02	06:19 - 06:45 07:13 - 07:34	X				
Last message: Indonesians need more awareness education and there needs to be change	A	02	08:18 - 08:56					