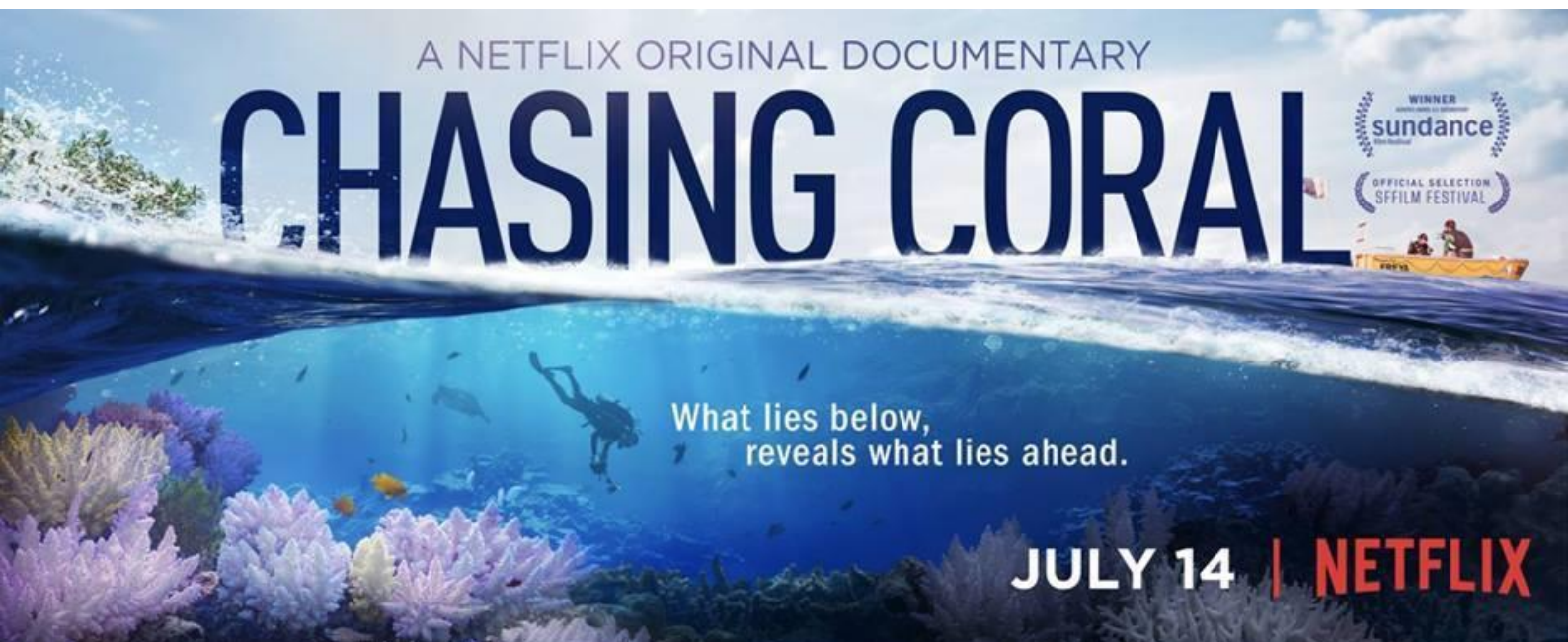


# Environmental Documentaries as Activism

*Rhetoric in Chasing Coral for the coalition of impact*



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## Synopsis

This thesis analyzes the rhetorical strength and activist impact of the 2017 environmental documentary *Chasing Coral*. In this documentary, a group of filmmakers and scientists set out to document the mass bleaching of coral reefs. Not only does *Chasing Coral* discuss the importance of coral reefs and the correlation between bleaching and climate change, but the film also focuses on the filmmakers' struggles in trying to communicate the issue.

The research determines what Bill Nichols defines as "rhetorical voice" of the film. Through its argumentation, the documentary attempts to persuade the viewer of the filmmaker's perspective that coral bleaching must be addressed. Nichols's voice is further divided into several additional theoretical concepts, of which style, arrangement and invention are discussed. The analysis tries to determine how information is shared with the viewer (style), how the central argumentation is structured (arrangement) and how the documentary attempts to persuade its viewer of the importance of the issue presented (invention).

Additionally, the analysis looks at how the documentary tries to turn its viewers into activists, both within the film itself and after the screening through the documentary's outreach campaign. The goal of the outreach campaign is raising awareness for coral bleaching, mobilizing activists and creating long-lasting, political change. The analysis examines five areas of impact in which the documentary contributes to the discourse around coral bleaching.

This research concludes that the narrative of *Chasing Coral* not only revolves around sharing information about the issue, but also elaborates on the feelings, motivations and struggles of the filmmakers during the production process. Furthermore, the documentary combines different strategies in order to enhance its rhetorical strength, by simultaneously providing logical arguments by experts and allowing the viewer to create emotional connections with the filmmakers. Finally, the film's outreach campaign offers many tools to maintain viewer interest after viewing the film. The viewer can take individual action by donating and sharing information on social media or organize a collective screening to spread the word in their community. By cooperating with activist organizations, the film has been able to assist in passing legislation in the United States, both at the state and the national level.

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## 1. Introduction

Cinematic texts influence and alter the way we experience the world around us and how we interact with it.<sup>1</sup> Nonfiction films make direct claims about reality, seek to provoke reactions from their audience and alter attitudes and assumptions about the viewer's relation to the world. Therefore, documentary films are often perceived as the most explicitly political form of cinematic text.<sup>2</sup> Documentaries offer a platform for scientists, politicians and activists to bring global issues to the attention of the public. As one of the biggest challenges of our time, climate change has been the subject of an increasing number of documentaries in the past decades. The climate change debate is as much a media debate as a political discussion. By addressing problems through documentary film, activist filmmakers hope to compel their audience to undertake action.<sup>3</sup>

In *Chasing Coral*, filmmakers and scientists try to capture coral bleaching, a phenomenon caused by global warming.<sup>4</sup> Although environmental documentaries such as my case study represent events that occur in the real world, documentaries are often subjective in nature, with clear (activist) intentions. Rhetorical strategies are commonly used to present arguments, demonstrate evidence and persuade the viewer of the importance of the represented issue.<sup>5</sup> Moreover, filmmakers are always faced with many choices to guide the documentary's argumentation: how shots are framed, which shots make the final cut, what information is left out, and how the narrative is constructed.<sup>6</sup> What is portrayed in documentaries is therefore always a mediated representation of reality.<sup>7</sup> Thus, when viewing and analyzing documentaries, one must remain critical of what is represented, since filmmakers actively construct reality to strengthen their arguments.<sup>8</sup>

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<sup>1</sup> Stephen Rust, Salma Monani and Sean Cubitt, "Introduction: Defining and Situating Ecocinema Studies," in *Ecocinema Theory and Practice*, edited by Stephen Rust, Salma Monani and Sean Cubitt (New York: Routledge, 2013), 2.

<sup>2</sup> Bill Nichols, "Preface," in *Representing reality: issues and concepts in documentary* (Bloomington: Indiana University Press, 1991), ix – xi.

<sup>3</sup> Jouko Aaltonen, "Claims of hope and disasters: rhetoric expression in three climate change documentaries," *Studies in Documentary Film* 8:1 (2014): 61.

<sup>4</sup> Davis Coombe, Vickie Curtis and Jeff Orlowski, *Chasing Coral*, Netflix Original Documentary, directed by Jeff Orlowski (Boulder: Exposure Labs, 2017).

<sup>5</sup> Aaltonen, "Claims of hope and disasters," 61.

<sup>6</sup> John A. Duvall, "Documenting the Environment," in *The Environmental Documentary: Cinema Activism in the Twenty-First Century* (New York: Bloomsbury Academic, 2017), 9 – 11.

<sup>7</sup> Duvall, "Documenting the Environment," 8.

<sup>8</sup> Aaltonen, "Claims of hope and disasters," 61.

Documentary theorists such as Bill Nichols and Carl Plantinga argue that it is useful to consider not only what information is conveyed, but also how this information is presented.<sup>9</sup> Following their example, I have conducted a rhetorical analysis of *Chasing Coral* in order to understand how knowledge is constructed and which persuasive techniques are employed within the film. Additionally, my approach focuses on how the convincing strength of the documentary is used by activists to create an impact on different levels, from heightening individual awareness to concrete, political change. My central research question is:

In what ways does the rhetorical voice of *Chasing Coral* enhance  
the documentary's value as a tool for climate activists?

In my three sub-questions, I determined the documentary's rhetorical voice by examining the presentation of information, the construction of the central argument and the persuasive techniques used to stress the importance of addressing the issue. Furthermore, I questioned the impact created by documentaries, from individual awareness to legislative change.

Which modes of representation are utilized to share knowledge in various ways?

Which rhetorical strategies construct and strengthen the central argumentation?

How does the documentary generate impact on different levels of activism?

My thesis falls within the interdisciplinary learning path of the Humanities Honours Programme. Documentaries are not solitary objects, but can create a lasting political, socioeconomic or cultural impact. Therefore, aside from conducting a detailed, textual analysis of the inner workings of the documentary's argumentation, I explored the broader societal functions that this documentary film fulfills. To accomplish this, I used interdisciplinary knowledge, mainly from political science, to examine how *Chasing Coral* operates in a broader, activist context for both individuals and organized groups. However, the documentary's function within the broader discourse around coral bleaching cannot be understood without knowing which strategies the film employs to persuade its viewers to act. Most texts focus on either textual or contextual analysis, whereas my thesis analyzes the same film on both a micro- and a macrolevel. Moreover, there has not been much research into the narrative structure and activist impact of this particular film.

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<sup>9</sup> Bill Nichols, "The Domain of Documentary," in *Representing reality: issues and concepts in documentary* (Bloomington: Indiana University Press, 1991), 17; Carl R. Plantinga, "Introduction," in *Rhetoric and Representation in Nonfiction Film* (Cambridge: Cambridge University Press, 1997), 4.

## 2. Literary Overview

In my theoretical framework, I consult several authors from various disciplines, which were selected because their analyses or claims are considered most useful for answering the central research question. Moreover, many play an important role within the academic discourses around nonfiction film, ecocinema and political impact.

One of the main authors used is Nichols, who founded the contemporary study of documentary film by developing an overview of documentary's specific styles, structures and strategies.<sup>10</sup> Many of the scholars used in my thesis draw from his theories. Plantinga is a cognitive film theorist that is often consulted to make claims on objectivity, reflexivity and truth-telling.<sup>11</sup> John Duvall's analysis of the most important environmental films of the 21<sup>st</sup> century and their impact on political and public debate, provides a modern perspective on the genre.<sup>12</sup> David Bordwell and Kristin Thompson's *Film Art* was consulted for a theoretical overview of the most important documentary film concepts.<sup>13</sup>

Natusch, Hawkins, Aaltonen and others offer some new information, but mostly build on the theoretical concepts provided by the authors mentioned above.<sup>14</sup> Since *Chasing Coral* revolves around an environmental issue, it is important to understand the specific characteristics of ecocinema. Paula Willoquet-Maricondi provides a helpful introduction to this area.<sup>15</sup> Political scientist David Whiteman expands on the problems of measuring the political impact of media texts.<sup>16</sup> Many scholars cite Whiteman's issue-centered coalition model as a useful method to understand a documentary's role within a broader network of audiences, activist groups and political organizations.<sup>17</sup>

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<sup>10</sup> Nichols, "Preface," ix.

<sup>11</sup> Carl R. Plantinga, "Exemplars and Expression," in *Rhetoric and Representation in Nonfiction Film* (Cambridge: Cambridge University Press, 1997), 30 – 31.

<sup>12</sup> Duvall, "Documenting the Environment," 8.

<sup>13</sup> Nichols, "The Domain of Documentary," 22- 25;

David Bordwell and Kristin Thompson, "Documentary, Experimental and Animated Films," in *Film Art: An Introduction* (tenth edition), (New York: McGraw-Hill Education, 2015), 351 – 355.

<sup>14</sup> Aaltonen, "Claims of hope and disasters," 61;

Barry Natusch and Beryl Hawkins, "Mapping Nichols' Modes in Documentary Film: *Ai Weiwei: Never Sorry and Helvetica*," *The IAFOR Journal of Media, Communication and Film* 2:1 (2014): 105.

<sup>15</sup> Paula Willoquet-Maricondi, "Introduction: From Literary to Cinematic Ecocriticism," in *Framing the World: Explorations in Ecocriticism and Film*, edited by Paula Willoquet-Maricondi (Charlottesville: University of Virginia Press, 2010), 2;

<sup>16</sup> Larry M. Bartels, "Messages Received: The Political Impact of Media Exposure," *The American Political Science Review* 87:2 (1993): 267;

David Whiteman, "Documentary Film as Policy Analysis: The Impact of *Yes, In My Backyard* on Activists, Agendas and Policy," *Mass Communication and Society* 12:4 (2009): 458 – 460.

<sup>17</sup> David Whiteman, "Out of the Theaters and Into the Streets: A Coalition Model of the Political Impact of Documentary Film and Video," *Political Communication* 21:1 (2004): 66 – 67.

### 3. Theoretical Framework

In this section, I will outline the theoretical concepts necessary to analyze my case study. First, I will explain the “rhetorical voice” of documentary film and closely examine three aspects of voice: style, arrangement and invention. Then I describe the discipline of eco-cinema studies, before summarizing the theories of various authors concerned with documentary film impact.

#### 3.1 Documentary Voice

Nichols uses “voice” to describe the specific perspective from which the filmmaker presents the information in the documentary.<sup>18</sup> The voice of a documentary consists of more than simply spoken words, but also concerns composition, editing and music. Therefore, voice is present in all audiovisual elements and within the strategies used to convince the viewer of the filmmaker’s standpoint. The goal is that the viewer will eventually take on the same perspective.<sup>19</sup>

Plantinga interprets voice as a discourse that reflects the filmmaker’s perspective on the represented events, which is separate from the physical film text.<sup>20</sup> Moreover, Plantinga states that the choices made by the filmmaker in organizing sounds and images into a discourse are always intentional.<sup>21</sup> Nichols, on the other hand, argues that even though filmmakers exercise control over certain variables (camera position, editing), others are often outside the filmmaker’s control (setting, lighting, behavior of the subjects).<sup>22</sup> Since it is impossible to determine the amount of control the filmmaker was able to exercise in the final film, my analysis does not differentiate between conscious and unconscious decisions. I will use Nichols’s definition of voice in my analysis.

Nichols argues that the three dominant types of voices are rhetorical, narrative and poetic. Elements from all three voices may be present in a single documentary, but often the voice will predominantly make an argument (rhetorical), tell a story (narrative) or appeal to the viewer’s senses (poetic).<sup>23</sup> *Chasing Coral*’s voice is rhetorical, since the film presents arguments to convince the viewer of the importance of preserving coral reefs. Plantinga broadly

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<sup>18</sup> Bill Nichols, “What gives documentaries a voice of their own?” in *Introduction to Documentary* (third edition), (Bloomington: Indiana University Press, 2017), 50.

<sup>19</sup> Nichols, “What gives documentaries a voice of their own?” 48.

<sup>20</sup> Carl R. Plantinga, “Nonfiction discourse,” in *Rhetoric and Representation in Nonfiction Film* (Cambridge: Cambridge University Press, 1997), 85 – 86.

<sup>21</sup> Plantinga, “Nonfiction discourse,” 85.

<sup>22</sup> Nichols, “The Domain of Documentary,” 13.

<sup>23</sup> Nichols, “What gives documentaries a voice of their own?” 55 – 58.



defines rhetoric in documentary film as the explicit use of strategies and structures in the creation of argument.<sup>24</sup> Not only spoken language, but all means used to influence an audience are regarded as rhetoric.<sup>25</sup>

Since documentaries are often quite open about their goal of convincing the audience of their standpoint, the information presented is certainly not always objective truth.<sup>26</sup> According to Bordwell and Thompson, the subjectivity of documentaries contrasts with the common assumption that documentaries present objective facts about people, places and events that exist or have existed in the historical world.<sup>27</sup> Nonfiction film does not merely document the real world, but constructs meanings, norms, and values. Filmmakers actively use their power to present, interpret and evaluate the evidence to construct a particular view of social reality which reinforces their objectives.<sup>28</sup>

Narrative principles can be exploited to achieve the film's greater rhetorical goal of convincing the viewer of something. Plantinga states that narrative is indeed a common method of organizing nonfiction films, simply because the audience is already familiar with the fundamental use of narrative in presenting explanations or history, for example in news broadcasts and feature films. This familiarity will make it easier for a viewer to comprehend the arguments presented.<sup>29</sup> Stories are an effective way to tap into people's emotions, which will be discussed in more detail later in chapter 3.5.<sup>30</sup>

According to Nichols, all three types of voice are composed of five elements: style, invention, arrangement, memory and delivery.<sup>31</sup> My analysis focuses on style, arrangement and invention, since these components determine the presentation of information (style), the structuring of the argumentation (arrangement) and the strategies used to make the arguments seem convincing (invention).

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<sup>24</sup> Carl R. Plantinga, "Voice and Authority," in *Rhetoric and Representation in Nonfiction Film* (Cambridge: Cambridge University Press, 1997), 104 – 105.

<sup>25</sup> Aaltonen, "Claims of hope and disasters," 62.

<sup>26</sup> Nichols, "The Domain of Documentary," 22- 25.

<sup>27</sup> Bordwell and Thompson, "Documentary, Experimental and Animated Films," 351.

<sup>28</sup> Bill Nichols, "What makes documentaries engaging and persuasive?" in *Introduction to Documentary* (third edition), (Bloomington: Indiana University Press, 2017), 78.

<sup>29</sup> Plantinga, "Voice and Authority," 104.

<sup>30</sup> Bordwell and Thompson, "Documentary, Experimental and Animated Films," 355.

<sup>31</sup> Nichols, "What gives documentaries a voice of their own?" 58.

### 3.2 Style: modes of representation

The first element of voice is style, which refers to the distinctive creative choices made by filmmakers in structuring the film.<sup>32</sup> In documentaries, style is used to support the unfolding of the evidence that constructs an argument.<sup>33</sup> Stylistic decisions help the filmmaker in setting a distinctive voice, through which the arguments are presented.<sup>34</sup> Duvall argues that it is crucial to be aware of how a film conveys its messages to the public in order to gain an understanding of the difference between what is represented and how this information is represented.<sup>35</sup> The recounting of a situation by a commentator is not an objective reconstruction of “truth”, but a personal experience told from a person’s specific point of view.<sup>36</sup> The way in which individuals express their thoughts, feelings and emotions determines to what degree a viewer perceives the strength and severity of an argument.<sup>37</sup> Additionally, even in the most objective documentary styles, the filmmaker is forced to make decisions on where to put the camera, how to frame a shot and which images will be part of the final film after editing.<sup>38</sup>

To analyze style, Nichols has introduced “modes of representation”, which serve to differentiate between different approaches to represent the historical world in documentaries. They structure the argument and distribute knowledge in a particular way and thus represent reality in distinctive ways.<sup>39</sup> Although each voice is unique, a filmmaker’s style will have shared qualities with other filmmakers. Therefore, the modes can be utilized to distinguish or assemble different types of documentaries that make use of corresponding stylistic conventions.<sup>40</sup>

Different stylistic conventions can be clustered together in the six modes of representation: expository, observational, participatory, reflexive, poetic and performative.<sup>41</sup> Since there are few rules to creative expression, filmmakers are not bound to one particular mode: the framework of a documentary is often a mixture of multiple modes.<sup>42</sup> According to Nichols, this fluidity must be celebrated, as it allows documentary film form to dynamically

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<sup>32</sup> David Bordwell and Kristin Thompson, “Summary: Style and Film Form,” in *Film Art: An Introduction* (tenth edition), (New York: McGraw-Hill Education, 2015), 308.

<sup>33</sup> Nichols, “The Domain of Documentary,” 22.

<sup>34</sup> Nichols, “What gives documentaries a voice of their own?” 66.

<sup>35</sup> Duvall, “Documenting the Environment,” 10 – 11.

<sup>36</sup> Nichols, “The Domain of Documentary,” 21.

<sup>37</sup> Nichols, “What gives documentaries a voice of their own?” 49.

<sup>38</sup> Duvall, “Documenting the Environment,” 10 – 11.

<sup>39</sup> Nichols, “The Domain of Documentary,” 23.

<sup>40</sup> Bill Nichols, “How can we differentiate among documentary models and modes? What are the poetic, expository and reflexive modes?” in *Introduction to Documentary* (third edition), (Bloomington: Indiana University Press, 2017), 113.

<sup>41</sup> Nichols, “What gives documentaries a voice of their own?” 53.

<sup>42</sup> Nichols, “How can we differentiate among documentary models and modes?” 108.

evolve over time and creates the possibility for various interpretations of documentary films.<sup>43</sup> Since *Chasing Coral* does not employ the observational and poetic modes, I will not explain these concepts further.

The main purposes of the expository mode are providing information and advancing the argument.<sup>44</sup> In this mode, the documentary's voice is very explicit, since the viewer is addressed directly by a "voice-of-authority" (through voice-over, talking heads and interviews with experts).<sup>45</sup> Images primarily serve a supporting role as evidence or to illustrate the commentary, while editing supports the argument's continuity.<sup>46</sup>

In the participatory mode, the filmmaker's presence in the documentary is explicitly emphasized through voice-over and face-to-face interactions with the subjects.<sup>47</sup> This mode gives room to the filmmaker to speak about what they experience and question how a situation alters as a result of their bodily presence at the scene.<sup>48</sup>

Thirdly, the reflexive mode questions the relationship between viewer and filmmaker.<sup>49</sup> These films investigate the production of the film as well as the filmmaker's interaction with both subject and viewer.<sup>50</sup> Reflexive documentaries ultimately attempt to create a heightened self-awareness of a viewer's relation to documentary film. Reflexivity can either take place on a formal level (raising questions about the documentary's techniques, conventions and persuasive qualities) or from a political perspective (questioning our assumptions and expectations about how the historical world is represented within a media text).<sup>51</sup>

Finally, films in the performative mode draw attention to the subjectivity of knowledge. In the performative mode, knowledge is not considered universal and factual, but is treated as situated, embodied and affected by personal experience and memory. Knowledge is acquired from emotional involvement with a situation instead of obtained from a rational perspective. Thus, performative documentaries try to be rhetorically compelling through affection, rather than persuasion.<sup>52</sup>

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<sup>43</sup> Nichols, "How can we differentiate among documentary models and modes?" 104.

<sup>44</sup> Nichols, "Documentary modes of representation," in *Representing reality: issues and concepts in documentary* (Bloomington: Indiana University Press, 1991), 34 – 38.

<sup>45</sup> Nichols, "What gives documentaries a voice of their own?" 53.

<sup>46</sup> Nichols, "How can we differentiate among documentary models and modes?" 122 – 123.

<sup>47</sup> Nichols, "Documentary modes of representation," 44.

<sup>48</sup> Bill Nichols, "How can we describe the observational, participatory and performative modes of documentary film?" in *Introduction to Documentary* (third edition), (Bloomington: Indiana University Press, 2017), 137 – 140.

<sup>49</sup> Nichols, "How can we differentiate among documentary models and modes?" 125.

<sup>50</sup> Nichols, "Documentary modes of representation," 57 – 60.

<sup>51</sup> Nichols, "How can we differentiate among documentary models and modes?" 128 – 130.

<sup>52</sup> Nichols, "How can we describe the observational, participatory and performative modes of documentary film?" 149 – 150.

### **3.3 Arrangement: structure of information**

A second aspect that constitutes a documentary's voice is arrangement. Nichols defines arrangement as "organizing the parts of a rhetorical film to maximum effect".<sup>53</sup> The filmmaker orders information in accordance with their rhetorical strategy, emphasizing arguments that are deemed important and ignoring others.<sup>54</sup> This order is crucial in determining how viewers comprehend and interpret the arguments presented. Plantinga argues that the introduction and ending have the most potential for influencing the viewer. Information presented at the beginning determines the frame through which the viewer interprets the rest of the argumentation, while the ending sums up the essential information, fills in gaps and determines the final interpretation of the documentary.<sup>55</sup>

### **3.4 Invention: rhetorical strategies**

With invention, the third aspect of voice, Nichols refers to evidence or proof presented within a rhetorical documentary that strengthens arguments. Invention entails the distinct approach of each filmmaker to employ rhetorical strategies, which must persuade their audience of their perspective. The evidence within a documentary can be divided into artistic and inartistic proofs. Inartistic proofs are pieces of factual evidence that lie outside the filmmaker's power to create. However, the filmmaker can interpret or evaluate the evidence in their own way. Artistic proofs are created by using rhetorical techniques to appeal to the audience's feelings. All artistic proof seeks to persuade the viewer of the argument's legitimacy, whether this is a single argument or the overarching voice of the documentary. Nichols, Plantinga and many other documentary scholars draw from Aristotle's philosophical concepts of logos, ethos and pathos to differentiate between various kinds of artistic proofs.<sup>56</sup>

Logos attempts to strengthen the argument by giving the impression of rational or apparent reasoning.<sup>57</sup> An audience will be more inclined to accept an argument when a standpoint is logically ordered and connected to other arguments. A documentary may use figures, statistics, graphics, maps, computer images and animations to illustrate complex arguments. Since these kinds of figures are traditionally associated with science, arguments may appear more objective than testimonies given from a personal standpoint.<sup>58</sup>

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<sup>53</sup> Nichols, "What gives documentaries a voice of their own?" 64 – 66.

<sup>54</sup> Plantinga, "Nonfiction discourse," 87 – 88.

<sup>55</sup> Plantinga, "Nonfiction discourse," 90.

<sup>56</sup> Nichols, "What gives documentaries a voice of their own?" 58 – 59.

<sup>57</sup> Nichols, "What gives documentaries a voice of their own?" 59.

<sup>58</sup> Aaltonen, "Claims of hope and disasters," 66.

Ethos validates the credibility of the subjects within the documentary, the filmmaker and the film as a whole.<sup>59</sup> This includes all elements that focus explicitly on creating a relationship with the audience and legitimizing the authority, expertise and ethics of the person conveying the information. Viewers are more inclined to believe the statements that are made by a person who is considered an authority figure or expert.<sup>60</sup> The same is true for characters that are presented as being of good moral character.<sup>61</sup>

Pathos refers to the different methods and aesthetic elements employed by the filmmaker to evoke an emotional reaction from the audience. Establishing an emotional connection invigorates the argument and proves the importance and relevance of the issue.<sup>62</sup> The documentary uses “affective persuasion” by employing different styles and aesthetics in order to evoke an emotional response, which determines whether an audience will accept a line of argumentation. This includes using dramatic music, images that provoke fear (a classic method of propaganda) and humor (pleasure leads to an audience being more open to receiving messages). Images of crashing icebergs, floods and drying lakes are often associated with climate change and can therefore evoke emotions. Similarly, images of children are frequently used to create an emotional effect and refer to future generations.<sup>63</sup>

While watching the documentary, the viewer weighs the evidence and determines whether they are convinced by the film’s arguments. Persuasive documentaries can effortlessly embed and effectively combine rhetorical strategies in their line of reasoning. For instance, they might create an implicit “visual logic” by juxtaposing two images that may not be rhetorically convincing on their own. Arguments may appear more convincing when they are delivered by an authority figure and the combination of images and music can simultaneously speak to one’s logical and emotional perception.<sup>64</sup>

One must, however, always stay critical of the documentary’s active construction and interpretation of social reality.<sup>65</sup> The filmmaker chooses which arguments are given prominence, what images support the evidence and what is left out.<sup>66</sup> Additionally, the filmmaker may partially leave behind data or give a false impression of proof, in order to make the argumentation appear stronger and more logical.<sup>67</sup>

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<sup>59</sup> Aaltonen, “Claims of hope and disasters,” 64 – 65.

<sup>60</sup> Duvall, “Documenting the Environment,” 12.

<sup>61</sup> Nichols, “What gives documentaries a voice of their own?” 59.

<sup>62</sup> Aaltonen, “Claims of hope and disasters,” 64.

<sup>63</sup> Aaltonen, “Claims of hope and disasters,” 66.

<sup>64</sup> Duvall, “Documenting the environment,” 12.

<sup>65</sup> Nichols, “The Domain of Documentary,” 10 – 11.

<sup>66</sup> Duvall, “Documenting the Environment,” 10 – 11.

<sup>67</sup> Nichols, “What gives documentaries a voice of their own?” 59.

### 3.5 Ecocinema and environmental documentaries

Environmental films attempt to heighten awareness about a range of contemporary environmental issues.<sup>68</sup> These films facilitate a better understanding of climate change by visualizing the devastation brought onto natural environments.<sup>69</sup> For instance, time-lapse photography is often employed to document lengthy processes that occur over multiple days, months or years.<sup>70</sup> In my case study, the filmmakers attempt to document coral bleaching by designing special time-lapse cameras that can capture this change.

Willoquet-Maricondi separates environmental films from ecocinema, arguing that the latter not only wishes to educate the public about its relation to the natural world, but also has clear-cut activist intentions. Eco-cinema texts explicitly encourage the audience to realize their responsibility in taking action to address these issues.<sup>71</sup> Moreover, eco-cinema texts are open about their objectives of spurring personal and political reflection, which must result in concrete changes within the viewer's daily life and local and global societies.<sup>72</sup>

Environmental films may have similar effects, but the activist call is more implicit. They are not specifically aimed at preserving ecosystems or ensuring the survival of species in the way that eco-cinema texts are. Such films are also prone to greenwashing: exploiting the environmentalist label in order to increase its appeal and value.<sup>73</sup>

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<sup>68</sup> Willoquet-Maricondi, "Introduction," 2.

<sup>69</sup> Rust, Monani and Cubitt, "Introduction," 8.

<sup>70</sup> David Ingram, "The aesthetics and ethics of eco-film criticism," in *Ecocinema Theory and Practice*, edited by Stephen Rust, Salma Monani and Sean Cubitt (New York: Routledge, 2013), 43.

<sup>71</sup> Paula Willoquet-Maricondi, "Shifting Paradigms: From Environmentalist Films to Ecocinema," in *Framing the World: Explorations in Ecocriticism and Film*, edited by Paula Willoquet-Maricondi (Charlottesville and London: University of Virginia Press, 2010), 45.

<sup>72</sup> Ingram, "The aesthetics and ethics of eco-film criticism," 43.

<sup>73</sup> Willoquet-Maricondi, "Shifting Paradigms," 43 – 44.

### 3.6 A coalition for impact

Environmental documentaries are increasingly used to communicate climate issues to wide-ranging audiences in unique ways. Visual imagery, compelling narratives and music can emotionally engage viewers, while the use of authority figures and scientific data allows the documentary to provide facts.<sup>74</sup> Many scholars try to understand the potentially far-reaching implications of these kinds of media texts on audiences.<sup>75</sup> It has become increasingly clear that (environmental) documentaries do not only function to passively convey information and entertain the public. Instead, they should be considered important actors within in a larger effort to spark debates over social issues, shape public opinion and build activist networks.<sup>76</sup>

Whiteman therefore proposes an “issue-centered” coalition model, which includes activists organizations, social movements, decision makers and political elites in the calculation, to assess how they might exploit a documentary to advance their objectives and gain support for their cause.<sup>77</sup> In this holistic model, a social-issue documentary is not an isolated entity, but is embedded in a larger, complex and ongoing network of activist and policymakers that concern themselves with the issue presented in the documentary. The greater the cooperation between the production company and other actors, the greater the potential for social and political impact.<sup>78</sup> The “coalition” in Whiteman’s model thus stems from the mutually beneficial feedback loop established between filmmakers, subjects, grassroots screeners, audiences and political decision makers and activist groups. The film is not the final product, but a point of connection that allows activists to intervene in existing social and political processes.<sup>79</sup> Whiteman argues that the predominant impact of social-issue documentaries lies in educating and recruiting new activists and stimulating, shaping public debate and setting or reframing policy agendas.<sup>80</sup>

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<sup>74</sup> Ashley Bieniek-Tobasco, Sabrina McCormick, Rajiv N. Rimal, Cherise B. Harrington, Madelyn Shafer and Hina Shaikh, “Communicating climate change through documentary film: imagery, emotion, and efficacy,” *Climate Change* 154 (2019): 4.

<sup>75</sup> Bartels, “Messages Received,” 267.

<sup>76</sup> Matthew C. Nisbet and Patricia Aufderheide, “Documentary Film: Towards a Research Agenda on Forms, Functions and Impacts,” *Mass Communication and Society* 12:4 (2009): 450.

<sup>77</sup> Whiteman, “Documentary Film as Policy Analysis,” 458 – 460.

<sup>78</sup> Whiteman, “Documentary Film as Policy Analysis,” 459.

<sup>79</sup> Christensen, “Political documentary, online organization and activist synergies,” 82.

<sup>80</sup> Whiteman, “Documentary Film as Policy Analysis,” 475 – 476.

### 3.7 Encouraging activism

The Fledgling Fund, a foundation that offers funding and guidance for social impact documentaries, has identified five areas in which documentaries can carry out impact. On the individual level, the film itself can evoke emotion by engaging the audience with the issue through a compelling narrative storyline.<sup>81</sup> Rhetorical strategies are employed to persuade the audience of the filmmaker's standpoints, but their essential goal is to construct viewer identification.<sup>82</sup> The viewer is invited to trust, admire and identify with compelling, heroic characters and allow themselves to be persuaded of the character's standpoints.<sup>83</sup> Viewers must relate to the stories shared in the documentary and identify with the person telling them, in order to be persuaded to act.<sup>84</sup> The audience must believe that the views and beliefs shared in the film overlap with their own because then, approving of the film's message means approving of themselves.<sup>85</sup> Eco-cinema texts are most persuasive when they succeed in emphasizing collective identity among viewers and make them believe that unified action can overcome any environmental problem.<sup>86</sup> In the second area of impact, documentaries can obtain public awareness by shedding light on issues that have not gained much attention before.<sup>87</sup>

However, a film's true impact is not determined by the strength of its rhetoric, but by the way it is used to pursue activist objectives. Social impact does not simply occur when audiences watch a documentary, but must be actively produced by activists.<sup>88</sup> The impact of the documentary is largely determined by how well the film fits into objectives, needs and viewpoints of the social movement and whether the social movement incorporates the documentary into its strategies.

In the third area of impact, public engagement transforms the passive viewer into active contributors to the social movement. This transformation can most effectively be accomplished right after the film ends, when the documentary's emotional impact is still fresh in the viewers'

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<sup>81</sup> Beth Karlin and John S. Johnson, "Measuring impact: the importance of evaluation for documentary film campaigns," *A Journal of Media and Culture* 14:6 (2011): 5 – 6.

<sup>82</sup> Mark Minster, "The Rhetoric of Ascent in *An Inconvenient Truth* and *Everything's Cool*," in *Framing the World: Explorations in Ecocriticism and Film*, edited by Paula Willoquet-Maricondi, (Charlottesville and London: University of Virginia Press, 2010), 36.

<sup>83</sup> Willoquet-Maricondi, "Shifting Paradigms," 50.

<sup>84</sup> Minster, "The Rhetoric of Ascent in *An Inconvenient Truth* and *Everything's Cool*," 26.

<sup>85</sup> Ashli Quesinberry Stokes, Rachel L. Holloway, "Documentary as an Activist Medium: The Wal-Mart Movie," in *Rhetorical and Critical Approaches to Public Relations II*, edited by Robert L. Heath, Elizabeth L. Toth and Damion Waymer, (Routledge: New York and London, 2009): 351 – 352.

<sup>86</sup> Minster, "The Rhetoric of Ascent in *An Inconvenient Truth* and *Everything's Cool*," 37.

<sup>87</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>88</sup> Kate Nash and Josh Corner, "Strategic Impact Documentary: Contexts of Production and Social Intervention," *European Journal of Communication* 31:3 (2016): 230.



minds and audiences are most willing to invest their time and money to make a difference.<sup>89</sup> A film's outreach campaign supports the viewer in their desire to take constructive action. Maintaining the viewer's interest outside the screening context has become easier with the arrival of the Internet. Through Facebook, websites and blogs, activists can communicate their objectives in an easy, affordable way.<sup>90</sup> These platforms suggest specific actions people can take, such as connecting to local leaders, educating more people or signing up for newsletters.<sup>91</sup> Simultaneously, the audiences can extend their viewing experience by increasing their knowledge, expressing their personal views, interacting with like-minded people and building a collective identity around a specific issue.<sup>92</sup>

In the fourth area of impact, the film's outreach campaign is used as a tool to mobilize individuals or cooperate with existing groups.<sup>93</sup> Organized, collective screenings must be accompanied by lectures and debates providing additional information and efforts to maintain activist efforts once the screenings are finished.<sup>94</sup> On the Internet, decentralized networked technologies become sites of action and change and constitute a more complex, dynamic view of society than the homogenous messages of one-to-many mass media.<sup>95</sup> Online social movements have overcome physical barriers and are able to organize across national, cultural and geographic boundaries that have restricted social movements in the past. Additionally, the Internet is a platform on which content can easily be produced and distributed, both by professional activist organizations and individual viewers.<sup>96</sup> The constitution and continuity of the social movement thus depends partly on individual contributions.<sup>97</sup>

The fifth and final objective of social-issue documentaries is long-term, systematic social change through policy or legislative decisions. In this final stage, the impact of the documentary's campaign moves beyond social movements into the public and political domain and causes shifts in public dialogue and behavior. Moreover, it can influence the media coverage and agenda-setting around the represented issue.<sup>98</sup>

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<sup>89</sup> Meg McLagan, "Imagining Impact: Documentary Film and the Production of Political Effects," in *Sensible Politics: The Visual Culture of Nongovernmental Politics*, edited by Meg McLagan and Yates McKee (New York: Zone Books, 2012), 310.

<sup>90</sup> Christensen, "Political documentary, online organization and activist synergies," 82 – 83.

<sup>91</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>92</sup> Christensen, "Political documentary, online organization and activist synergies," 82 – 83.

<sup>93</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>94</sup> Christian Christensen, "Political documentary, online organization and activist synergies," *Studies in Documentary Film* 3:2 (2009): 80.

<sup>95</sup> Leah Lievrouw, "Getting People on the 'Street': Mediated Mobilization," in *Alternative and Activist New Media* (Malden: Polity Press, 2011): 149 – 152.

<sup>96</sup> Lievrouw, "Getting People on the 'Street'," 172.

<sup>97</sup> Lievrouw, "Getting People on the 'Street'," 157.

<sup>98</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

### **3.8 Questioning impact**

According to Nichols, although documentaries have the ability encourage viewers to act, one must not overestimate their actual impact. Firstly, although documentaries help gain new perspectives on the world, they are not bound by journalist ethics.<sup>99</sup> Filmmakers can freely interpret evidence or leave out pieces of data that weaken their arguments, thus creating a subjective view on the represented issue. Lack of objectivity is often why documentaries are critiqued and dismissed.<sup>100</sup> Secondly, the views represented are those of passionate individuals dedicated to a particular principle of social justice. However, these voices often lack a common political base to form an mobilized, organized movement to create substantial and long-lasting social change.<sup>101</sup> Finally, the success of a documentary is often measured by hits, purchases and donations, instead of the impact on state policies and public debate, since this is much harder to measure directly and empirically.<sup>102</sup> In order to receive funding and collect higher viewership numbers, documentaries therefore refrain from presenting perspectives that directly challenge the dominant ideology, thus limiting their maximal political impact.<sup>103</sup>

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<sup>99</sup> Bill Nichols, "The political documentary and the question of impact," in *Introduction to Documentary* (third edition), (Bloomington: Indiana University Press, 2017), 221.

<sup>100</sup> Duvall, "Documenting the Environment," 10 – 11.

<sup>101</sup> Nichols, "The political documentary and the question of impact," 222.

<sup>102</sup> Nichols, "The political documentary and the question of impact," 222 – 225.

<sup>103</sup> Nichols, "The political documentary and the question of impact," 226 – 227.

## 4. Method

In my analysis, I examine how the theoretical concepts described above are applied within *Chasing Coral*, focusing predominantly on information conveyed through spoken word and the images supporting these claims. The method used to analyze the modes of representation is derived from Natusch and Hawkins, whereas I mainly consulted Aaltonen's article to analyze the use of rhetorical strategies. In the last part of my thesis, I deviated from textual analysis of the film itself to gain insight into how the documentary operates within a broader context by examining the documentary's website. To analyze the political and activist impact made by the documentary, I used Whiteman's issue-centered model of measuring impact and the five areas of impact identified by the Fledgling Fund. I first created several schematic overviews to gain a better understanding of the structure and inner workings of the film. Using these appendixes, rhetorical arguments and specific aspects of modes of representation were isolated from the rest of the film and analyzed separately.

Appendix 1 is a schematic overview of the sequences in the documentary, that offers a better understanding of the general structure of the film. The sequences divide the documentary into sections that form a narrative or argumentative unit. The sequence overview lists the duration of each sequence, describes the audiovisual information provided and the dominant mode of representation. For the rhetorical strategies, three columns describe who is present, how the documentary legitimizes their authority and which elements are exploited to evoke emotions.

Appendix 2 lists the subjects, their functions and the sequences they appear in. The viewer is most familiar with the characters that appear most, so this appendix gives insight into which characters are most likely to create viewer identification. Other subjects with less appearances serve a supporting role. This was helpful for the analysis of pathos (ch.5.3).

Appendixes 3–6 offer a categorical overview of the four modes of representation. The ordering of the schemas was derived from Natusch and Hawkins' article, in which they argue that a detailed, micro-level analysis of the modes can be used to gain a better understanding of a documentary's underlying framework and expressive power.<sup>104</sup> The subcategories of each mode are partially based on Natusch and Hawkins' division and Nichols's description of the modes' characteristics, but adapted to the specific way in which the modes are used in *Chasing Coral*. Examples for each subcategory with corresponding screenshots illustrate the specific

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<sup>104</sup> Natusch and Hawkins, "Mapping Nichols' Modes in Documentary Film," 105 – 106.

characteristics of that mode. Whereas appendixes 3–6 were used to understand how the modes operated separately, the schematic overview of the modes in appendix 7 was helpful for gaining insight into the relationships between the four modes used in the documentary (ch.5.1).

Appendix 8 is a schematic overview of the argumentative structure of the film and was used in the analysis of the second sub-question. This appendix was particularly useful to determine the progression of the central arguments and when and how the four lines of argumentation are connected. The overview played a central role in the analysis of arrangement and invention (ch.5.2, 5.3).

In the analysis of style, arrangement and invention, I gave a description of how each aspect of voice takes form within *Chasing Coral* along with relevant examples. Then, I tried to describe how the particular use of the modes, arrangement and strategies helps the filmmakers accomplish their objectives. I outlined the relationships between the modes, how the arrangement in four lines of reasoning strengthen the central argumentation and how the three rhetorical strategies are used to persuade the viewer of the legitimacy of the central argument.

To answer the third sub-question, I analyzed the activist power of the documentary using the five areas of impact described in the theoretical framework. The first two areas of impact take place within the film itself and overlap with the analysis of the rhetorical voice. For the last three areas of impact, I searched for examples of how the documentary's website stimulates public engagement, mobilizes viewers into collective action and has created legislative change. In line with Whiteman's issue-centered coalition model, I explored the role the documentary takes in pursuing activism within the coral bleaching discourse (ch.5.4).<sup>105</sup>

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<sup>105</sup> Whiteman, "Documentary Film as Policy Analysis," 459.

## 5. Analysis

### 5.1 Style: Modes of representation

Different categories and examples of the occurrence of the expository, participatory, reflexive and performative modes in *Chasing Coral* are listed in appendix 3–6. In this chapter, the numbers in brackets refer to the examples of mode categories from these appendixes. Appendix 7 offers a schematic overview of the modes of representation per sequence.

#### Expository mode

The main objective of the expository mode is continuing the rhetorical argument. Images do not offer a coherent narrative in terms of temporal and spatial continuity, but are organized to best support the argumentation made by the voice-over (3.1, 3.2).<sup>106</sup> Although voice-over narration is often used to give the impression of objectivity, the commentary commonly reflects the filmmaker's particular perspective on the displayed images. *Chasing Coral's* voice-over is done by Vevers, which creates a more limited, but personal angle on the issue.<sup>107</sup> Environmental documentaries often use this strategy to evoke viewer identification with the activist goals of the protagonist.<sup>108</sup> During the sequences in the expository mode, Vevers takes on the role of an expert and joins the marine biologists to explain various issues related to coral bleaching and global climate change (3.4).

Both Vevers and the different experts are aware of the audience's presence: they look directly into the camera and explain complex processes in a simple and accessible way (3.5, 3.6). This direct address makes the expository mode ideal for conveying information. When this is done by authoritative experts, the arguments will seem legitimate and objective.<sup>109</sup> The supporting images illustrate what is being said, which confirms what is being said by the experts and makes the information more comprehensible (3.3).

Archival and news footage is used to make arguments seem more objective, since this kind of evidence is not created by the filmmaker themselves. However, the filmmaker is still free to edit the information from this footage in a way that confirms their argumentation.<sup>110</sup> Archival footage gives more credibility to the experts' statements, by placing it within ongoing

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<sup>106</sup> Nichols, "How can we differentiate among documentary models and modes?" 122 – 123.

<sup>107</sup> Nichols, "How can we differentiate among documentary models and modes?" 124.

<sup>108</sup> Duvall, "Ecological Perspectives," in *The Environmental Documentary: Cinema Activism in the Twenty-First Century* (New York: Bloomsbury Academic, 2017), 28 – 29.

<sup>109</sup> Nichols, "How can we differentiate among documentary models and modes?" 124.

<sup>110</sup> Nichols, "What gives documentaries a voice of their own?" 59.

academic research on the effects of global warming on corals (3.7). News footage represents a broader, institutional source of authority, while the realist associations with “the news” make the central argument seem more legitimate and important (3.8).<sup>111</sup>

Similarly, the use of animations, graphics and titles contributes to the sense of credibility of the arguments presented. *Chasing Coral* uses animation to visualize complex information given by the experts (3.3), while graphics are used to illustrate an ongoing trend, in this case ocean temperature projections (3.5, 3.9). Finally, titles are used to state facts about the disappearance of corals, but also increase the authority of subjects by showing their name and function (3.6, 3.10).

### **Participatory mode**

In the participatory mode, pursuing viewer identification through the personal story of the subjects is considered the most effective way to achieve an activist response from the viewer.<sup>112</sup> Vevers meets with several academics, explores dive sites and shares his feelings. Through his eyes, the viewer slowly uncovers the causes and enormity of the issue of coral bleaching. The filmmaker does not simply observe the subjects from behind the camera but interacts and collaborates with them and is physically present in the expert’s research environment (4.1–4.3).<sup>113</sup>

Just as in the expository mode, the voice-over plays an important role in the participatory mode. Vevers shares his feelings about what he is learning and witnessing as he learns more about the subject (4.4–6). Furthermore, Vevers conducts interviews with nine researchers, predominantly marine biologists and several camera technicians (4.7–10). By including many individual voices (app. 2), the filmmaker intends to create a broader and more legitimate perspective on social and historical issues and shares multiple personal experiences.<sup>114</sup> By sharing their feelings and perspectives, the documentary makes the viewer aware of the existence of a large group of people that share the viewer’s values and beliefs about the issue presented, which inspires collective action.<sup>115</sup>

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<sup>111</sup> Nichols, “Documentary modes of representation,” 37.

<sup>112</sup> Duvall, “Ecological Perspectives,” 28 – 29.

<sup>113</sup> Nichols, “How can we describe the observational, participatory and performative modes of documentary film?” 137 – 140.

<sup>114</sup> Nichols, “How can we describe the observational, participatory and performative modes of documentary film?” 146.

<sup>115</sup> Minster, “The Rhetoric of Ascent in *An Inconvenient Truth* and *Everything’s Cool*,” 37.

### **Reflexive mode**

Reflexive documentaries ask the viewer to take a critical look at the documentary itself, rather than the represented historical world.<sup>116</sup> The reflexive mode questions the conventions, persuasive qualities and production process of documentary film (5.1–4).<sup>117</sup> Duvall states that in this case “the story of the film becomes the story of the *making* of the film”.<sup>118</sup> During the reflexive sequences in *Chasing Coral*, Vevers and the camera operators elaborate on their plans to document a coral bleaching event. They also talk about the productional, technical and emotional issues that affect their mission (5.5–8). The viewer gets an insight into the process of producing an environmental documentary and the hardships the filmmakers encounter along the way. Similarly, the documentary gives a behind-the-scenes look at Vevers preparing Rago for his presentation (5.9). The film allows the viewer to witness a snippet of Vevers’ relationship with his interviewees, implying a potentially substantial influence on how they behave in front of the camera.<sup>119</sup>

Finally, the reflexive mode draws attention to the relationship between viewer and filmmaker.<sup>120</sup> At the end of the documentary, Orłowski urges divers around the world to document coral bleaching in their region (5.10, 5.11). This reflects on the documentary not being a separate entity, but an actor in a larger activist discourse around coral bleaching and global climate change (further explored in ch.5.4).

### **Performative mode**

The performative mode emphasizes the active (emotional) participation of the filmmakers to question where knowledge comes from, rather than advancing a rational argument.<sup>121</sup> Performative sequences in *Chasing Coral* center around the personal stories of Vevers and Rago. In the beginning of the documentary, Vevers explains why the project he was working on before *Chasing Coral* was not effective in inspiring action, his reasons to quit his advertising job and his interest in diving (6.1–3).

Later, when Vevers’ role changes to sharing expertise knowledge and leading the project, the documentary’s focus shifts to Rago’s personal interest in the project. Whereas the performative sequences with Vevers concentrate on his personal and professional history, Rago

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<sup>116</sup> Nichols, “How can we differentiate among documentary models and modes?” 125 – 126.

<sup>117</sup> Nichols, “How can we differentiate among documentary models and modes?” 128.

<sup>118</sup> Duvall, “Ecological Perspectives,” 32.

<sup>119</sup> Natusch and Hawkins, “Mapping Nichols’ Modes in Documentary Film,” 122.

<sup>120</sup> Nichols, “How can we differentiate among documentary models and modes?” 125.

<sup>121</sup> Duvall, “Documenting the Environment,” 13.

develops himself during the production process. He shares his coral obsession, gets encouraging advice from his hero and decides to travel around the country to educate and inspire children about ocean life after filming *Chasing Coral* has ended (6.4–6). These sequences do not pursue an argument, but rather focus on where Vevers and Rago gained the motivation and knowledge to put effort into this project and how the documentary inspired them to change their careers. Therefore, the performative mode emphasizes the subjectivity of the documentary. All subjects present in the film have their own reasoning to devote their time into raising awareness about coral bleaching. This reasoning is not limited to simply wanting to share knowledge. Additionally, every piece of knowledge shared is the result of the unique experiences, emotional involvement and memory of every subject.<sup>122</sup> Rago’s knowledge stems from his obsession with corals since he was a child, while Vevers started researching the topic when he realized he wanted to do something more useful for the world (6.2, 6.4).

### **Relationships between modes**

After establishing how the expository, participatory, reflexive and performative modes are individually manifested in *Chasing Coral*, it is possible to determine how the modes relate to each other in the sharing of knowledge, representation of the historical world and strengthening the argument. The documentary mainly uses the reflexive (40%) and expository mode (27%). The performative (21%) and participatory mode (12%) are exploited less frequently and mainly serve to introduce the story and give context to the reflexive sequences, which gain prominence starting with sequence 10. However, this division is not absolute: influences from all modes are present in most of the sequences. In the rest of the analysis, the “s.” in front of the numbers in brackets refers to the sequences established in appendix 1.

**Table 1: table of sequences classified by modes (in percentages)**

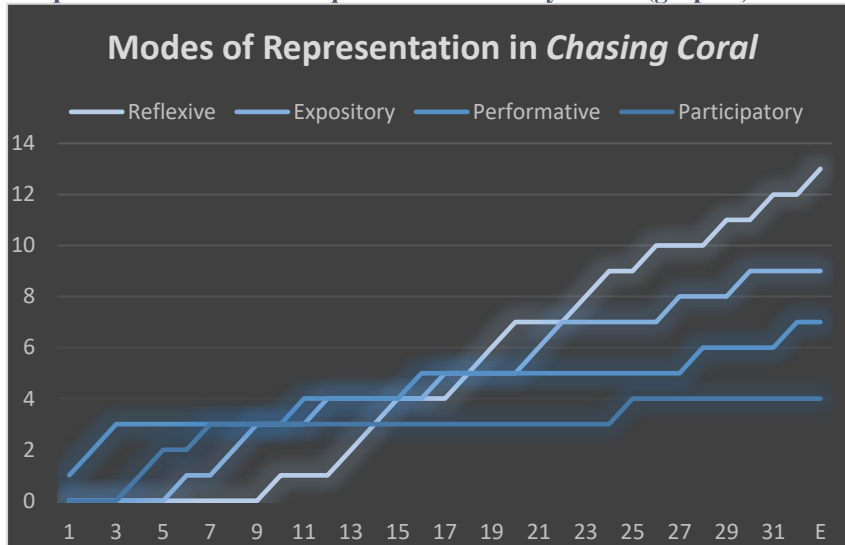
| <b>Modes</b>  | <b>Number of sequences</b> | <b>Percentage</b> |
|---------------|----------------------------|-------------------|
| Reflexive     | 13                         | 40%               |
| Expository    | 9                          | 27%               |
| Performative  | 7                          | 21%               |
| Participatory | 4                          | 12%               |
| <b>Total</b>  | <b>33</b>                  | <b>100%</b>       |

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<sup>122</sup> Nichols, “How can we describe the observational, participatory and performative modes of documentary film?” 150.



Graphic 1: cumulation of sequences classified by modes (graphic)



Three storylines are explored in the documentary. The dominant storyline is the crew's attempts to document a mass coral bleaching event, is predominantly told within the reflexive sequences and starts when Vevers and Orłowski join forces to capture coral bleaching (s.10). The story follows the crew as they travel to different locations (s.14), deal with technical issues (s.14, 18) and bad weather (s.23), are forced to relocate twice (s.19, 24), endure physical and emotional endeavors (s.24, 26) and are finally able to show their work at the International Coral Reef Symposium (s.29, 30). More than half of the remaining sequences (13 out of 24) from the moment this storyline commences, take place in the reflexive mode. The narrative of the crew's efforts to capture coral bleaching and the hardships they encounter to do so, does not provide the viewer with much factual evidence about the phenomenon. The overall story of their several attempts is meant to create emotional attachment to the subjects and, subsequently, the cause they are trying to create awareness for. If they are trying so hard to document this phenomenon, it must be important, and viewers might be encouraged to act themselves.

Two additional storylines explored are told in the performative and participatory mode and focus on Vevers and Rago's experiences and motivations during the production process. In the introductory sequences, Vevers gains awareness of the enormity and threat of coral bleaching and wants to undertake action, which sets off the reflexive storyline that dominates the remainder of the documentary. Vevers is still present in the rest of the documentary, but his personal story is not explored further. Instead, he joins the other experts in explaining the correlation between climate change and coral bleaching. The focus of Vevers' narration thus shifts throughout the film in different modes.

The performative sequences focus on Rago's enthusiasm about the project and the viewer bears with him as the camera equipment is flooded (s.15), the footage is out of focus (s.18) and the decay of the corals has a hefty emotional impact on Rago (s.26). These performative sequences give context and emotional weight to the reflexive storyline, thus serving the greater rhetorical goal of the documentary.

Similarly, factual knowledge shared in the expository mode supports the other three modes. Through Vevers' storyline, the viewer learns more about how corals work and how coral bleaching is caused, which gives weight and importance to the start of the reflexive storyline (s.6, 8, 9). In latter sequences, expository sequences are used to communicate more information about corals, before the results of the crew's attempts are shared in the subsequent reflexive sequences (app.7). The information provided gets more severe as the documentary unfolds. During the first attempt, experts share how corals sustain life and are important for humans (s.17). During the second attempt, the importance of the ocean in absorbing CO<sup>2</sup> is shared along with the story of how Hoegh's warnings about the consequences of climate change for coral reefs (s.22). After the third attempt, details are shared about how the collapse of coral reefs could have far-reaching impact on human life (s.27). Although this information is all presented as factual knowledge, these sequences are meant to stress the severity of the issue and persuade people that inaction can have deadly consequences. Expository sequences thus serve to strengthen the rhetorical power of the other modes, by giving factual background information that helps a viewer understand why the filmmakers and experts consider coral bleaching a cause worth fighting for.

## **5.2 Arrangement: structure of information**

The structure of information organizes all elements and arguments within a media texts to serve the rhetorical objective as effectively as possible.<sup>123</sup> This section explores the development of the central argument of *Chasing Coral*, which revolves around the importance of the issue of coral bleaching (app.8). In the introductory sequences, the viewer gets to know Vevers' background story and motivation for investing his time into raising awareness for the ocean. Four lines of reasoning are set out in the introduction, which are further explored in the sequences that follow. These serve to prove the central argument that coral bleaching is indeed a very urgent issue that needs to be addressed.

### **Importance of reefs**

In the introduction, a news anchor states that reefs are a source of life, food and income for animals and humans (s.2). In the following sequences – all told in the expository mode – various experts elaborate on this statement. As mentioned in 5.1, these sequences start out relatively straightforward and descriptive: explaining how corals and coral bleaching works and highlighting the advantages of healthy coral reefs for both humans and animals (s.6, 9, 17). However, as the filmmakers encounter more difficulties in capturing the phenomenon, the information presented becomes more pessimistic too. The scientists elaborate on the ocean's function of trapping heat from human emissions (s.22) and describe the ecosystem collapse that would occur if reefs disappeared (s.27). This, in turn, adds weight to the reflexive sequences which document the filmmakers attempts. The audience acquires more knowledge of the importance of the filmmakers' mission to raise awareness about bleaching, as they are informed of the consequences for human and ocean life in case the mission of addressing the issue fails.

### **Bleaching and climate change**

The second line of argumentation explores the causes of coral bleaching and its correlation with global climate change. Although Vevers is the first person in the documentary to present this connection (s.8), the line of argumentation goes back in time to the roots of this discovery as the film progresses. The animation from the National Oceanic and Atmospheric Administration (NOAA) of current ocean surface temperatures provides some correlation (s.13), and the coral cores show that bleaching is not a natural phenomenon (s.21). The viewer

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<sup>123</sup> Nichols, "What gives documentaries a voice of their own?" 64 – 66.

learns that Hoegh was the first to warn the scientific world about the effects of climate change on coral reefs in the 1980s. He was long ridiculed by his peers, but the correlation between climate change and coral bleaching is now well established in the academic world (s.22). The efforts of the filmmakers and the knowledge provided by the scientists in the documentary demonstrate that he is no longer alone in trying to raise awareness for coral bleaching. Like the first line of argumentation, the information about coral bleaching constructs a better understanding of the filmmakers' mission to document this phenomenon. Both lines of argumentation provide mostly factual evidence and stress the enormity and complexity of the problem and its connection to the even bigger, global issue of climate change.

### **Communicating the issue**

The third line of argumentation addresses the problems of communicating the issue. These sequences provide less facts but contextualize the knowledge that the viewer has learned in the first two lines of argumentation. Because of the knowledge acquired on bleaching, the viewer understands why communicating the issue is important. The camera technicians must design a new camera that is resistant to ocean currents and saltwater (s.10). Then, they need to determine where bleaching will most likely take place and overcome many other problems during their several attempts (s.14). The argumentation emphasizes why raising awareness is relevant. Although the academic world has finally been convinced of the relationship between bleaching and climate change (s.22), the broader public is still oblivious to this problem, which prevents substantial change from happening to prevent further bleaching (s.25).

### **Action must be taken**

The first three lines of reasoning establish that reefs are important sources of life for human and animal life but are threatened by coral bleaching. However, the broader public is not aware of this threat. The fourth and final line is interwoven with the other three: the other arguments provide reasons why action must be taken to address coral bleaching. As the audience is introduced to the problem, the viewer starts to understand why the documentation of bleaching is so important and the reasoning behind the filmmakers' commitment (s.3, 4, 5, 10, 17, 22). As the documentary progresses, the viewer is more explicitly addressed. Initially, the idea of taking action is personified by the scientists' and filmmakers' mission to capture bleaching. Later, the filmmakers directly address the audience, urging them to document bleaching reefs, contact local decision makers and visit the documentary's website (28, 31, E).

## **Ending**

After three attempts, the filmmakers can show their results at the International Coral Reef Symposium (s.29, 30). These sequences conclude the four lines of argumentation. Firstly, the images serve as proof that the collapse of an important ecosystem is already underway, which will have effects on the quality of human life. Moreover, the images serve as visual proof to support the claim that coral bleaching is indeed caused by global warming. This change has never been so clearly documented in the wild. Thirdly, visual documentation of bleaching will make it easier for scientists, activist organizations and filmmakers to raise awareness of the issue. Finally, the images show that bleaching is already happening and that we must take the necessary steps to further prevent the reefs from dying. In short, the conclusion of each of the lines of argumentation is that concrete action must be undertaken immediately, thus affirming the central argument that coral bleaching is important and must be addressed. The filmmakers and scientists were already convinced of this standpoint in the beginning of the documentary and now the viewer understands why.

The final sequences contain hopeful messages to conclude the four lines of argumentation. Firstly, Veron expresses that he wishes he had done more, but Rago (and implicitly, the viewer that identifies with Rago) still has a chance to preserve this important source of life (s.28, 32). Secondly, the scientists can use the visual evidence obtained by the filmmakers to reinforce their research on the correlation between global climate change and coral bleaching (s.29). Thirdly, the documentary has shown the hardships, importance and possibilities of communicating the issue, now Orłowski addresses other divers to follow the filmmaker's example and document coral bleaching in their environment. They have received an overwhelming response, expanding the library of visual proof of the issue (s.31). Finally, the documentary reveals what the Vevers and Rago have been up to after finishing the documentary and suggests ways in which the viewers can act themselves (s.32, E). Although the documentary revolves around the severity of a phenomenon that is hard to prevent, it ends on a positive note of hope. Several countries and US cities have committed to clean energy. The filmmakers have done what they can to document the issue, now it seems to be up to the people to take further action.

### 5.3 Invention: Rhetorical Strategies

This section explores the use of three rhetorical strategies (logos, ethos and pathos), which reflect different approaches to make the evidence provided in the central argumentation (outlined in ch.5.2 and app.8) seem stronger and more convincing.

#### Logos

A strong argument is logically ordered, connected to other arguments and gives of the impression of objectivity.<sup>124</sup> A central, logical standpoint in *Chasing Coral* is the claim that coral bleaching is a direct effect of global climate change. Since this phenomenon and its causes are relatively unknown outside the scientific world, the filmmakers cannot expect the audience to believe this statement immediately. The argument must be developed throughout numerous sequences, include multiple perspectives, and requires cooperation with other rhetorical strategies.

Evidence for the correlation between bleaching and climate change is provided by the NOAA-graphs showing rising surface temperatures (fig.1) and coral cores showing evidence of past mass bleaching events (fig.2). Since the statements made in these sequences are supported by graphs and other scientific evidence, these proofs seem more objective and logical, and thus the overall argument appears to be stronger.

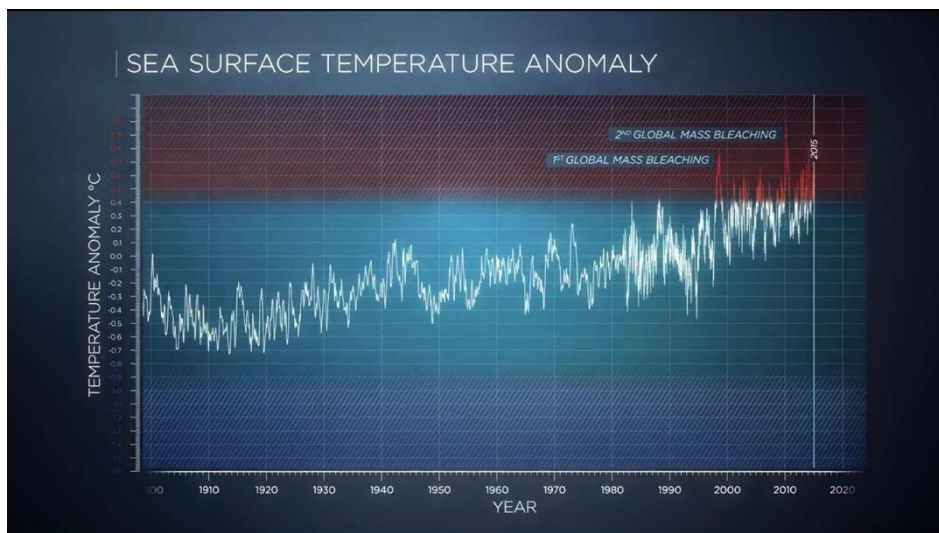
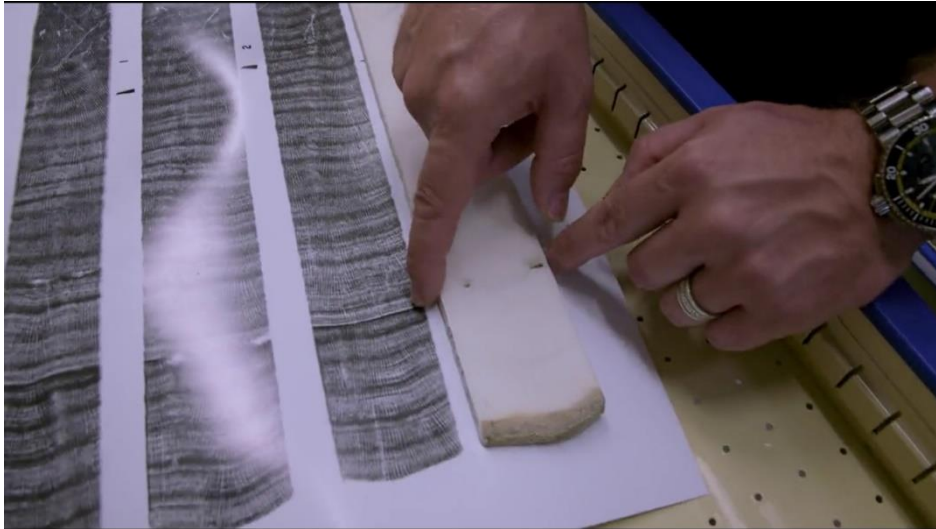


Figure 1: Graph of sea surface temperatures and mass bleaching

<sup>124</sup> Aaltonen, "Claims of hope and disasters," 66.



*Figure 2: Marshall shows evidence of a past bleaching event on a coral core (s.21).*

These arguments are connected to other lines of argumentation. For instance, the statement that bleaching is caused by warming sea temperatures, is followed up by an explanation about how coral bleaching works from the first line of reasoning (s.8,9). Additionally, the data of rising sea surface temperatures is used in the third line of reasoning (communicating the issue) when the filmmakers must decide at which locations bleaching will most likely take place (s.13, 14).

The final piece of evidence is given by Hoegh, who explains the function of oceans to absorb CO<sup>2</sup>-emissions (s.22). This prevents the average surface temperature on Earth from rising by 35,6 degrees but has deadly consequences for the corals. If this claim had been made at the start of the documentary, the argument would appear less logical and viewers would be less inclined to believe Hoegh. However, the documentary allowed multiple voices to offer knowledge and evidence and the filmmakers' decisions have been based on this evidence. Since the viewer has gained much more context and knowledge about the bleaching phenomenon throughout the documentary, Hoegh's final statement seems logical and strong.

## **Ethos**

Secondly, ethical proof is used to validate the authority of the subjects making claims, the filmmaker and the film itself.<sup>125</sup> Many of the subjects in *Chasing Coral* are marine biologists, who share their knowledge on different aspects of coral reefs and bleaching. Information seems more credible when provided by what the viewer acknowledges as experts.<sup>126</sup> As explained in the expository mode (ch.5.1), scientific-looking animations supporting Gates' explanation of coral organisms, make the arguments appear objective and thus strengthen Gates' authority within the documentary. Archival footage of Hoegh's warning for the consequences of global warming for reefs strengthens his authority, since the documentary emphasizes that he has been researching the issue for a long time (s.22). Similarly, Veron is introduced as an authority figure through archival footage before he appears in person (s.28). His status as an authority figure is enhanced even more because Rago shares his admiration for Veron's accomplishments (s.16). Because of the viewer's emotional connection with Rago (further explained in pathos), the viewer will be more open to coincide with Rago's perspectives and thus recognize Veron's authority.

The filmmakers also serve as authority figures within the film. For instance, Vevers explains that Orlowksi directed a similar documentary. Mendelow works on designing the required technology and later helps Rago in repairing the flooded camera (s.10, 15). Their authority status functions less to verify facts and predominantly justifies the importance of their mission to capture coral bleaching. Viewers will be more inclined to believe bleaching is a cause worth addressing if they acknowledge the authority of those trying to communicate the issue.<sup>127</sup>

Vevers' authority plays a double role throughout the documentary. Initially, he represents the viewer's point-of-view as a layperson on the bleaching issue. As Vevers acquires more information, he gains the authority to provide the viewer with further information on climate change and the importance of reefs (s.8, 17, 21). At the same time, his authority as a filmmaker allows him to comment on the production process and the importance of communicating the issue (s.10, 14, 18, 20, 25). The only person in the documentary who has a similar double role is Rago, whose expert perspective is validated because of his status as a "coral nerd" (s.12). However, Rago's role as an expert is much more limited than Vevers' and only occurs in a limited number of sequences (s.11, 12, 16).

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<sup>125</sup> Aaltonen, "Claims of hope and disasters," 64 – 65.

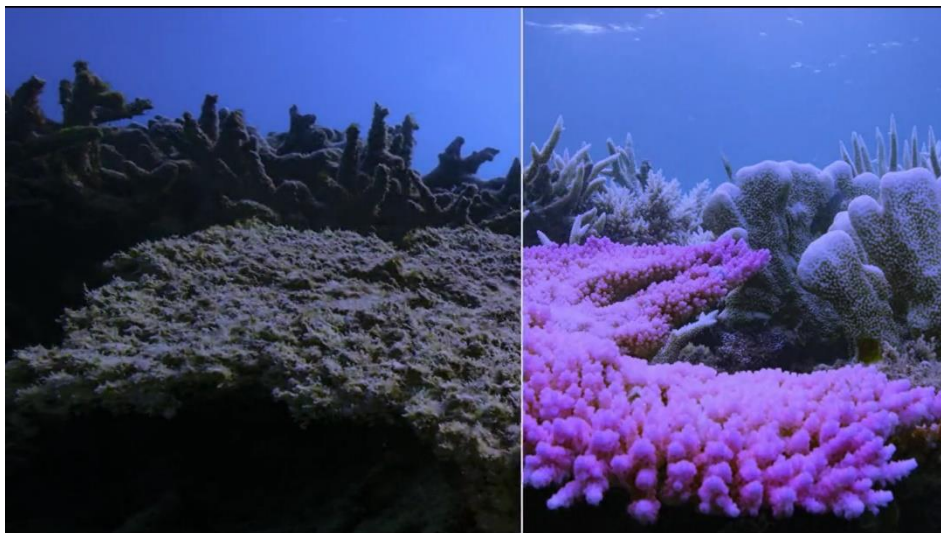
<sup>126</sup> Duvall, "Documenting the Environment," 12.

<sup>127</sup> Duvall, "Documenting the Environment," 12.



### **Pathos**

Pathetical proof employs “affective persuasion” to evoke an emotional response from the viewer, by creating emotional connections with the subjects in the film.<sup>128</sup> An example of visual pathetical proof in *Chasing Coral* is the before and after images of bleaching and decayed reefs (s.29, 30, fig.4). Although the images in themselves might already provoke an emotional response, the emotional weight increases because of the supporting dramatic music, emotional reactions from the audience at the ICRS (fig.5) and a text on screen accompanied by Vevers’ voice-over stating that 29% of the corals on the Great Barrier Reef died in 2016. This fact is not primarily intended to educate the audience, but rather to give the viewer an impression of the damage done during the mass bleaching event. These sequences form both the emotional highpoint (the filmmakers have succeeded) and low of the film (there is visual proof of the massive devastation caused by coral bleaching). Joshua Schuster discusses that the before and after shots in *Chasing Coral* represent the audience’s changed relationship to knowledge about the issue and, subsequently, their responsibility to preserve the fragile coral ecosystem.<sup>129</sup> In the sequences that follow, the documentary urges the viewer even harder to commit to the survival of coral reefs (s.31, E). The emotional impact of the previous two sequences and the hopeful message that dominates the last three sequences, might compel a viewer to believe that they are able to make a difference themselves.



*Figure 3: before and after shots of bleaching (r.) and dead (l.) coral (s.29)*

<sup>128</sup> Aaltonen, “Claims of hope and disasters,” 64 – 66.

<sup>129</sup> Joshua Schuster, “Coral Cultures in the Anthropocene,” *Cultural Studies Review*, 25:1 (2019): 95 – 96.



*Figure 4: Emotional reactions from the audience while seeing the before and after images (s.29).*

The documentary not only attempts to provoke emotional reaction through aesthetics, but also by creating emotional connections with the subjects in the film. If viewers can relate to a subject in the documentary, they will feel more inclined to take the subject's side in an argument or accept a line of argumentation more easily.<sup>130</sup> In the introductory sequences, Vevers explores the mechanisms of corals and the challenges the reefs face. Here Vevers represents the viewer's perspective, who is most likely to have limited knowledge of the basic details of coral reefs. Most viewers will not be able to speak with different experts and go into the field to personally observe the problems up close. By showing Vevers' experiences, the documentary allows the viewer to acquire basic knowledge on corals and the challenges they face (s.4, 5, 7).

Once Vevers is established as an authority figure, however, the focus shifts to Rago's experiences during the production process. Although the documentary makes it clear that Rago is also very knowledgeable about the subject (s.12, 16) and has authority as a professional camera technician (s.10, 15), the film focuses on the emotional struggles he faces during the production process. Rago shows a lot of emotions when the camera is flooded (s.15), the first images are out of focus (s.18) and the physical and mental hardships of manually filming every day during the third attempt (s.24, 26). Although Vevers also shares his feelings during the production process, he does so in a more neutral and informative tone. Rago does not hide his frustration and anger when things do not work out (fig.5, 6). In the final sequences the viewer sees Rago meeting Veron, speaking at the ICRS and educating children (s.28–30, 32, E).

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<sup>130</sup> Aaltonen, "Claims of hope and disasters," 66.

These sequences attempt to establish an emotional connection between Rago and the viewer. The effect is that the viewer feels empathy towards Rago and is rooting for him to get a happy ending. Additionally, the emotional sequences give more weight to sequences that focus on sharing facts. As the viewer slowly realizes why the stakes of the survival of coral reefs are so high, they simultaneously better understand Rago's reactions to setbacks during the production process.



*Figure 5: Rago is frustrated that the camera is flooded (s.15).*



*Figure 6: Rago is emotional from watching the reef die before his eyes (s.26).*

## 5.4 Activist Impact

Since its release on Netflix in July 2017, *Chasing Coral* has become part of a larger, complex network of grassroots activists, professional organizations, audiences and policymakers.<sup>131</sup> The next section analyzes the documentary's social impact based on the five areas of impact composed by the Fledgling Fund.

### Engaging audiences

The first area of impact is sparking the individual viewer's interest in the issue by presenting a compelling narrative storyline within the documentary itself.<sup>132</sup> Rhetorical strategies are used within the film to persuade the viewer of the importance of addressing coral bleaching. In order to constitute viewer identification and compel viewers to take action, audiences must recognize that their personal views and beliefs overlap those of the subjects in the film.<sup>133</sup> Viewer identification is established through the telling of the personal stories of Vevers and Rago (ch.5.3).

### Creating public awareness

The second area of impact of a documentary is constituting public awareness by focusing on issues that are underrepresented in public debate.<sup>134</sup> Various modes of representation are used to provide the viewer with knowledge on the causes and consequences of coral bleaching (ch.5.1). The documentary's central objective is capturing visual proof of bleaching and raising awareness for the issue, in order to stimulate further action and legislative measures to protect coral reefs (ch.5.2).

### Stimulating public engagement

In the third area of impact, the documentary tries to latch on to the viewer's newfound activist desire by creating an outreach campaign.<sup>135</sup> Minster argues that eco-cinema texts are most effective when they emphasize that ecological crises can be overcome if we all contribute.<sup>136</sup> The film's final hopeful sequences stress the idea that coral bleaching can be reduced if we collectively take action. Orlowski urges divers to follow the film's example and document the

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<sup>131</sup> Whiteman, "Documentary Film as Policy Analysis," 459.

<sup>132</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>133</sup> Quesinberry Stokes and Holloway, "Documentary as an Activist Medium," 351 – 352.

<sup>134</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>135</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>136</sup> Minster, "The Rhetoric of Ascent in *An Inconvenient Truth* and *Everything's Cool*," 37.



bleaching in their local reefs, in order to obtain more visual proof of the phenomenon (s.31).

Therefore, passive viewers must be transformed into active contributors to the social movement. This transition is most effectively accomplished when the emotional effects of the film are still fresh in the viewer's mind.<sup>137</sup> Vevers and Rago, with whom the documentary has created viewer identification, are still working on the issue and the viewer is invited to follow their example by visiting the documentary's website (fig.7). This suggests that it is now up to the public to take what they have learned from the documentary and generate concrete change to preserve coral reefs.

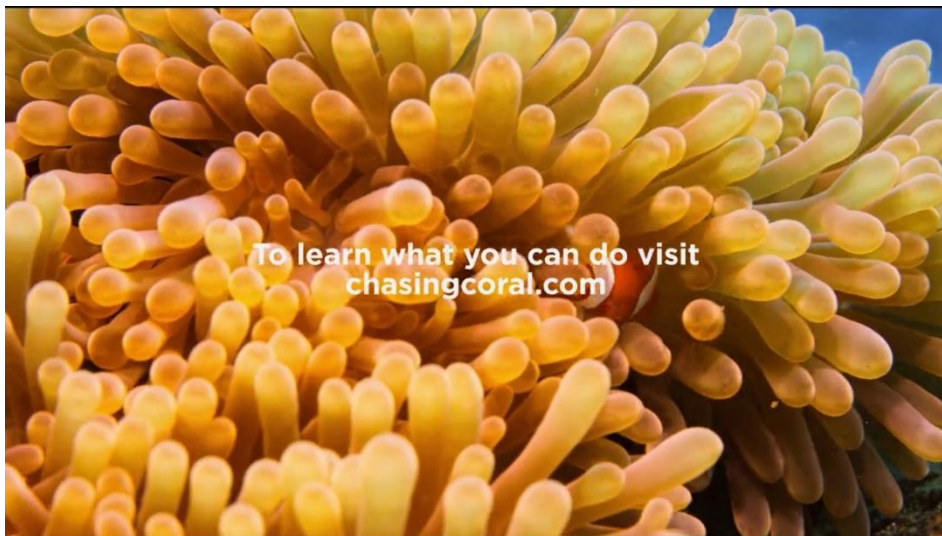


Figure 7: the documentary encourages the viewer to visit its website (s.E).

The documentary's outreach campaign moves beyond the film itself and focuses on taking action to combat the issue represented in the documentary.<sup>138</sup> Some ways in which an individual viewer can take action according to the website are donating to the campaign and spreading the word through social media (fig.8).<sup>139</sup> More tips can be found in the Action Guide, which focuses on creating clean energy communities locally and support coral reef preservation globally.<sup>140</sup> According to new media scholar Leah Lievrouw, online social movements depend on content contributions by individual viewers on social media platforms for their survival.<sup>141</sup>

On the documentary's website, a Social Media Toolkit can be found that suggests how individual viewers can share the film's message with their network, for instance sharing the

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<sup>137</sup> McLagan, "Imagining Impact," 310.

<sup>138</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>139</sup> "Take Action," Chasing Coral: An Exposure Labs Production, accessed on May 28, 2020, <https://www.chasingcoral.com/take-action/>.

<sup>140</sup> "Quick Action Guide," Chasing Coral: An Exposure Labs Production, accessed on May 28, 2020,

<sup>141</sup> Lievrouw, "Getting People on the 'Street'," 172.

film's trailer, time-lapse footage and infographics. The Toolkit contains sample texts that can directly be posted on a viewer's Facebook or Twitter, and images and infographics to accompany the text (fig.9).<sup>142</sup>

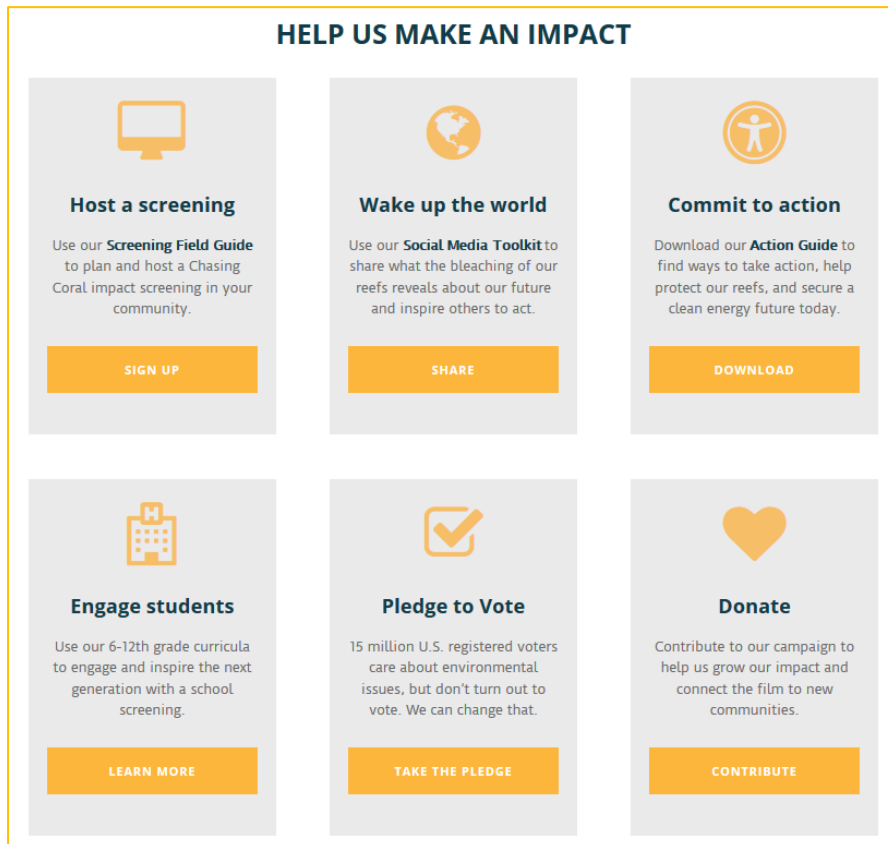


Figure 8: ways the viewer can take action (Chasing Coral website).

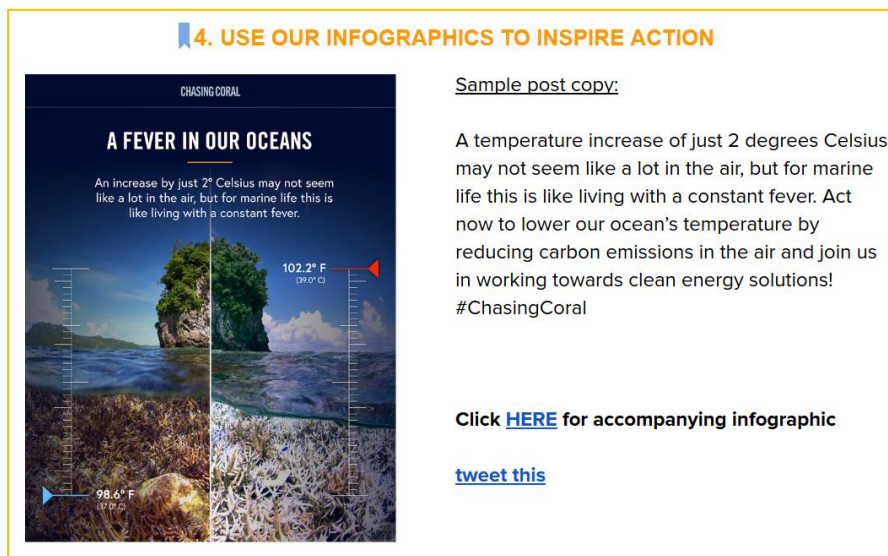


Figure 9: sample post that can be posted directly onto the viewer's Facebook or Twitter (Social Media Toolkit).

<sup>142</sup> “Chasing Coral – Social Media Toolkit,” Chasing Coral: An Exposure Labs Production, accessed on May 28, 2020, [https://docs.google.com/document/d/19MeXWzAqKrh7nY8xYJsHJp8UGrYg82va\\_vGN7eYmuS4/edit#](https://docs.google.com/document/d/19MeXWzAqKrh7nY8xYJsHJp8UGrYg82va_vGN7eYmuS4/edit#).

### **Mobilizing social movements**

The documentary is not the final product, but a point of connection between audiences and activist groups that concern themselves with the issue presented in the documentary.<sup>143</sup> Its content sparks the viewer's interest and the outreach campaign provides the tools to connect individual viewers to a larger activist network, which is the fourth area of impact.<sup>144</sup>

For those wishing to spread the word within their community, the documentary's website provides a step-by-step guide on how to organize a free screening of the film, boosting attendance and promoting the event.<sup>145</sup> Much of the work is already laid out for the individual organizer: posters, film stills, infographics and bleaching photos are easily accessible, as well as sign-in sheets, a discussion guide, a slideshow with coral facts and a music playlist.<sup>146</sup> However, simply showing the film will not convince the audience to join a social movement. Social impact must be actively created by the activists organizing the screening.<sup>147</sup> This can be accomplished by organizing lectures and debates once the screening is finished.<sup>148</sup> Thus, the screening guide also suggests inviting speakers to connect the film to local issues, and includes tips on reaching out to potential speakers and sample questions for moderating the conversation.<sup>149</sup> Since one of the ways in which the documentary wishes to create an impact is inspiring the next generation, there are also educational tools available for classroom screenings and lesson plans for all ages.<sup>150</sup>

In July 2019, two years after the documentary's release, over 155.000 screenings had taken place in over 100 countries. Over 500 screenings had taken place in schools around the world. The website gives the Miami Youth Climate Summit as an example, in which a screening of the film was accompanied by presentations from several coral conservation programs and Rago.<sup>151</sup>

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<sup>143</sup> Whiteman, "Out of the Theaters and Into the Streets," 66 – 67.

<sup>144</sup> Karlin and Johnson, "Measuring impact," 5 – 6.

<sup>145</sup> "Chasing Coral x Planning Guide: A step-by-step for planning your event," Chasing Coral: An Exposure Labs Production, accessed on May 28, 2020, <https://docs.google.com/document/d/1XT2sQkvBdWF4hfaTke0WKgunumxtVuMgrryLwLG1Fvs/edit#>.

<sup>146</sup> "Screening Toolkit," Chasing Coral: An Exposure Labs Production, accessed on May 28, 2020, <https://www.chasingcoral.com/screening-toolkit/>.

<sup>147</sup> Nash and Corner, "Strategic Impact Documentary," 230.

<sup>148</sup> Christensen, "Political documentary, online organization and activist synergies," 80.

<sup>149</sup> "Chasing Coral x Planning Guide."

<sup>150</sup> "Screening Toolkit."

<sup>151</sup> "Chasing Coral Turns 2!" Chasing Coral: An Exposure Labs Production, accessed on May 28, 2020, <https://www.chasingcoral.com/2019/07/25/chasing-coral-turns-2/>.

The film also tries to make an impact by bringing communities together and stimulating creative solutions. The website states that the “1000 Mermaids Artificial Reef Project” was set up after being inspired by the documentary. The project entails the construction of an artificial reef made up of 1000 handmade body sculptures, which allows infant corals to grow on it. The project will raise awareness and support for the ocean as a site of eco-tourism and research opportunities.<sup>152</sup>

### **Systematic change**

The final stage and ultimate goal of a documentary is establishing long-lasting, systematic change through policy or legislative decisions.<sup>153</sup> The donation of 86 million dollars for coral reef conservation by Bloomberg Philanthropies is an accomplishment that will create lasting impact. The money was donated to the 50 Reefs Initiative, which was founded by Vevers during the filming of *Chasing Coral* and will be used to help healthy reefs survive the impact of climate change and repopulating affected reefs.<sup>154</sup>

Political impact has been accomplished in the United States on both the state and national level. The documentary was used to raise awareness around clean energy in South Carolina, after which the Energy Freedom Act was passed. The film was screened during the annual Capital Hill Ocean Week and a day later, the House of Representatives passed four bills addressing ocean acidification.<sup>155</sup> Although there may not be a directly measurable correlation between the screening of the documentary and the passing of legislation, the documentary was clearly used as an activist tool for raising awareness and accomplishing political change.

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<sup>152</sup> “About Us & What We Do!” The 1000 Mermaids Artificial Reef Project, accessed on May 28, 2020, <https://1000mermaids.com/about-us-and-what-we-do>.

<sup>153</sup> Karlin and Johnson, “Measuring impact,” 5 – 6.

<sup>154</sup> “50 Reefs Initiative: A Huge Win for Coral Reef Conservation,” The Ocean Agency, accessed on May 28, 2020, <https://theoceanagency.org/50reefs/>.

<sup>155</sup> “Chasing Coral Turns 2!”, “Committee Members Celebrate House Passage of Ocean Acidification Legislation,” Committee on Science, Space and Technology, accessed on May 28, 2020, <https://republicans-science.house.gov/news/press-releases/committee-members-celebrate-house-passage-ocean-acidification-legislation>.



## 6. Conclusion

### 6.1 Sub-questions

#### **Which modes of representation are utilized to share knowledge in various ways?**

The modes of representation help differentiate between various approaches to convey knowledge and activist messages. Knowledge in *Chasing Coral* is not only of factual nature, but the modes of representation are also employed to explain the motivations of the filmmakers and stress the severity of the issue. The stylistic choices made by the filmmaker have resulted in the dominance of the reflexive sequences. The other modes serve the reflexive sequences, by helping the viewer understand the filmmakers' motivations (performative/participatory) and explaining the importance of coral reefs (expository). Since the expository sequences are tactically placed before sharing the results of the filmmakers' attempts (reflexive), the viewers gain more realization that inaction might have deadly consequences and why the filmmakers must succeed in capturing bleaching.

#### **Which rhetorical strategies construct and strengthen the central argumentation?**

The central argument in *Chasing Coral* is that coral bleaching is an important issue that must be addressed. The central argument is explored through four lines of argumentation, which are interwoven throughout the documentary and conclude once the filmmakers have succeeded in documenting coral bleaching. Persuasive documentaries can embed rhetorical strategies into the film's arrangement and alternate between and combine different rhetorical strategies. The documentary uses different kinds of proof to strengthen the central argumentation. Logical proof is used to explain the correlation between bleaching and global warming through various expert testimonies. Graphics and archival footage not only make arguments seem more objective, but also increases the ethical authority of the experts giving explanations. Both Vevers and Rago have a double role, alternating between providing information and demonstrating their commitment to the production process. Pathetical proof creates viewer identification with the subjects in the film, which makes it easier for the audience to accept the central argumentation. The knowledge gained throughout the documentary gives emotional weight to the before and after shots of bleached coral.

### **How does the documentary generate impact on different levels of activism?**

On the individual level, the documentary tries to engage and encourage the viewer to take action, through a compelling narrative told by interesting subjects that reflect the viewer's personal standpoints. Secondly, the documentary aims to increase awareness about coral bleaching, an issue that is not well-known among the broader public. In the third and fourth area of impact, the activist filmmakers hope to respectively stimulate public engagement and mobilize viewers-turned-activists, by creating an outreach campaign that maintains interest in the issue beyond the viewing of the film. The last area of impact is establishing long-lasting legislative change. The initiative that Vevers founded during the filming of the documentary, recently acquired a donation of 86 million dollars to preserve and repopulate reefs. The documentary was used as an activist tool in the United States to raise awareness on both state and national level.

## 6.2 Central research question

Using the three sub-questions, the central research question can now be answered as well.

In what ways does the rhetorical voice of *Chasing Coral* enhance the documentary's value as a tool for climate activists?

*Chasing Coral* is a clear example of an eco-cinema text: it explicitly addresses the viewer to take their responsibility to address coral bleaching. Thus, the documentary's voice is rhetorical because it uses persuasive strategies and narrative structures to convince the viewer of its central argumentation.

The film's rhetorical voice is most powerful in the first two areas of impact. The documentary engages the viewer by offering a compelling narrative (arrangement) with objective arguments (logos), expert authorities (ethos) and interesting, relatable characters (pathos). Secondly, various modes of representation are used to share knowledge and raise public awareness about coral bleaching (style).

However, the documentary has an even further use as an activist tool. The film is not the final product, but a connection point between the viewer and the activists that wish to spread the word about coral bleaching. The true power of the documentary lies in its ability to create an impact within the larger discourse around the issue of coral bleaching, as an actor within a broader network of activists, filmmakers and political organizations. The film's rhetorical voice can create impact by stimulating public engagement, the third area of impact. The film text itself encourages viewers to visit the documentary's website and take action, by donating to the cause and spreading the word through social media. In the fourth area of impact, the online outreach campaign caters the viewer's desire to stay connected to the social movement, even after the emotional effects of the film have worn off. The outreach campaign provides the viewer-turned-activist with the tools to organize a public screening, during which more people will be engaged by the film's narrative. Finally, the film can be used to raise awareness about the issue and bring people together in political campaigns constitute legislative change, as was done in South Carolina.

Thus, the rhetorical voice of the documentary can create impact on all five levels, which makes it a powerful tool for activist groups concerned with various environmental issues, such as coral bleaching, preserving and rebuilding reefs, clean energy and ocean acidification. However, influence within the discourse must be actively produced by stimulating audience engagement after the film has ended. The greater the cooperation between the production company and other actors within the larger activist network, the greater the film's impact.

### 6.3 Reflection

In my thesis, I tried to analyze how *Chasing Coral* operates both on a sequence-based micro-level and on a broader, macro-level within a larger activist network. The main focus was on the spoken arguments made by the subjects about the issue and the accompanying images. Further research can emphasize the emotional effect of editing, music and *mise-en-scène*. Why did the filmmakers choose to let the subjects speak about the issue in their personal environment, instead of conducting studio-interviews with identical background and lighting for everyone? How does this choice affect the credibility and authenticity of the speakers?

Secondly, aside from Nichols, none of the authors used in my research expressed their reservations about the impact of documentaries. Although filmmakers have access to a range of rhetorical tools, one must not overestimate the actual effects of documentary film. For the majority of the viewers, the film's rhetorical force will not reach further than the second area of impact (providing knowledge about an relatively unknown issue). Thus, one could examine the precise role the documentary played in raising awareness and bringing about change, within one of the examples from the website, such as the campaign in South Carolina.

Additionally, although *Chasing Coral* has had some substantial impact in raising awareness and bringing about legislative change, it would be fruitful to concentrate on the film's role within the broader bleaching discourse. Due to time and resources available, the conclusions drawn in my research about the film's impact were predominantly based on the material found on the documentary's website. Further research could include the other actors in Whiteman's issue-centered model and analyze the role of grassroots screeners, distributors, activist groups and politicians as well, to construct a more complete overview of the discourse and the documentary's role within it.

Furthermore, it would be helpful to analyze the rhetorical voice of other eco-cinema films using the same theoretical concepts and a similar method. Such research could determine whether the rhetorical strategies in these films are used in a way that is distinctive for eco-cinema texts. Similarly, it could demonstrate whether there is a difference between the use of rhetorical strategies and modes of representation in strongly rhetorical eco-cinema films and environmental films that do not have such explicit, activist intentions.

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## Overview of images used

| Location                  | Source/timecode      | Description                              |
|---------------------------|----------------------|--|
| Chapter 5.3 (figure 1)    | 00:28:38             | Graph of ocean temperatures              |
| Chapter 5.3 (figure 2)    | 00:48:57             | Bleaching shown in coral cores           |
| Chapter 5.3 (figure 3)    | 00:33:26             | Rago frustrated over flooded equipment   |
| Chapter 5.3 (figure 4)    | 01:04:34             | Rago sad about seeing the coral dying    |
| Chapter 5.3 (figure 5)    | 01:16:01             | Before and after shots of dying coral    |
| Chapter 5.3 (figure 6)    | 01:16:34             | Emotional reactions at the ICRS          |
| Chapter 5.4 (figure 7)    | 01:24:20             | Encouraging viewer to visit website      |
| Chapter 5.4 (figure 8)    | CC Website           | Suggested ways a viewer can take action  |
| Chapter 5.4 (figure 9)    | Social media toolkit | Sample post for a viewer's social media  |
| Appendix 3 (example 3.1)  | 00:13:55             | Species of corals                        |
| Appendix 3 (example 3.2)  | 00:13:59             | Species of corals                        |
| Appendix 3 (example 3.3)  | 00:12:31             | Image/animation of how coral works       |
| Appendix 3 (example 3.4)  | 00:17:23             | Vevers diving on reef                    |
| Appendix 3 (example 3.5)  | 00:17:45             | Vevers explaining warming oceans         |
| Appendix 3 (example 3.6)  | 00:37:32             | Marshall comparing reefs to cities       |
| Appendix 3 (example 3.7)  | 00:50:41             | Archival footage of Hoegh                |
| Appendix 3 (example 3.8)  | 00:48:02             | Vevers giving an interview               |
| Appendix 3 (example 3.9)  | 01:07:01             | Graph of ocean temperature predictions   |
| Appendix 3 (example 3.10) | 01:17:19             | Text stating facts about mass bleaching  |
| Appendix 4 (example 4.1)  | 00:06:51             | Vevers and Dustan on a boat              |
| Appendix 4 (example 4.2)  | 00:08:23             | Vevers and Dustan diving                 |
| Appendix 4 (example 4.3)  | 00:10:41             | Vevers looking through microscope        |
| Appendix 4 (example 4.4)  | 00:09:54             | Vevers and Porter talking                |
| Appendix 4 (example 4.5)  | 00:15:16             | Vevers diving at bleaching Airport Reef  |
| Appendix 4 (example 4.6)  | 01:00:33             | Vevers diving at floating restaurant     |
| Appendix 4 (example 4.7)  | 00:11:34             | Vevers and Gates talking                 |
| Appendix 4 (example 4.8)  | 00:16:09             | Hoegh about climate change and bleaching |
| Appendix 4 (example 4.9)  | 00:09:42             | Porter expresses his sadness             |
| Appendix 4 (example 4.10) | 00:17:04             | Testing corals in warming water          |
| Appendix 5 (example 5.1)  | 00:20:16             | Melting glaciers in <i>Chasing Ice</i>   |
| Appendix 5 (example 5.2)  | 00:20:49             | Orlowski talking about the project       |
| Appendix 5 (example 5.3)  | 00:29:25             | Working on the camera                    |
| Appendix 5 (example 5.4)  | 00:30:25             | Animation of filming locations           |
| Appendix 5 (example 5.5)  | 00:29:59             | Luggage is too heavy at airport          |
| Appendix 5 (example 5.6)  | 00:33:16             | Camera equipment is flooded              |
| Appendix 5 (example 5.7)  | 00:42:54             | Images are out of focus                  |
| Appendix 5 (example 5.8)  | 01:04:18             | Rago is struggling with his emotions     |
| Appendix 5 (example 5.9)  | 01:12:35             | Vevers gives Rago tips for his speech    |
| Appendix 5 (example 5.10) | 01:18:19             | Orlowski asking people to help           |
| Appendix 5 (example 5.11) | 01:19:22             | Responses from divers worldwide          |
| Appendix 6 (example 6.1)  | 00:06:34             | Vevers' previous project                 |
| Appendix 6 (example 6.2)  | 00:04:31             | Vevers in an empty hallway               |
| Appendix 6 (example 6.3)  | 00:05:19             | Vevers' favorite animal                  |
| Appendix 6 (example 6.4)  | 00:23:19             | Rago talking about his coral obsession   |
| Appendix 6 (example 6.5)  | 01:09:40             | Rago talking to Veron                    |
| Appendix 6 (example 6.6)  | 01:22:08             | Children "diving" through VR-glasses     |



## Appendix

### Appendix 1: sequence overview of *Chasing Coral*

*E* = expository mode      *Pa* = participatory mode

*R* = reflexive mode      *Pe* = performative mode

| # | Time                      | Name                          | Visual information   | Audio information   | Mode                             | Who    | Authority  | Emotions   |
|---|---------------------------|-------------------------------|--|---|----------------------------------|--------|--|--|
| O | 00:00:00<br>–<br>00:00:19 | Opening credits               | n/a  | n/a   | n/a                              | n/a    | n/a  | n/a  |
| 1 | 00:00:19<br>–<br>00:02:42 | Vevers' passion for the ocean | Vevers checks his camera and diving equipment and starts diving. He photographs the coral and follows a turtle.  | In voice-over, Vevers tells what draws him to the ocean. There is an unexplored, almost alien world full of life underwater.                    | Pe<br><br>(Personal history)     | Vevers | Narrator, viewer does not know who he is yet.                    | Vevers is passionate about the beauty and mystery of the ocean.                      |
| 2 | 00:02:42<br>–<br>00:04:25 | Vevers' project//             | Divers documenting the reef. Footage from news programs about Vevers' project.<br><br>Website recording of Seaview. Link between real life footage of seals to images of seals in Seaview. | News anchors explain Vevers' projects and interview him.<br><br>News anchor says that reefs are important as a source of food, income and life. | Pe<br><br>(Professional history) | Vevers | Vevers' project has gotten attention from several news programs. | The anchors explain why reefs are so important as a source of food, income and life. |

|   |                           |                      |  |  |  |        |   |  |
|---|---------------------------|----------------------|--|--|--|--------|---|--|
| 3 | 00:04:25<br>–<br>00:06:38 | Vevers' past journey | <p>Talking head of Vevers explaining his past.</p> <p>Vevers diving. Images of sea dragons, which he explains is his favorite animal.</p> <p>Aerial footage of the Earth, clouds, waves.</p> | <p>Vevers explains his past in advertising and why he quit.</p> <p>He realized one of the biggest issues with the oceans is that it's completely out of sight for most people, and that essentially is an advertising issue.</p> <p>The ocean is important: "without a healthy ocean, we do not have a healthy planet."</p> <p>It is hard to communicate these issues, because people do not realize it is happening.</p> <p>The Seaview Survey revealed the oceans through virtual dives, but people did not understand that there is a problem that needs to be addressed.</p> | Pe<br><br>(Professional/<br>personal<br>history) | Vevers | <p>Vevers gave up his successful career to focus on the oceans. He understands where the problem lies in communicating the issue.</p> | <p>Vevers saw his favorite animal disappear. He realized he had to do something. He gave up his career to focus on the oceans.</p> |
|---|---------------------------|----------------------|--|--|--|--------|---|--|

|   |                           |                             |  |   |   |                       |   |  |
|---|---------------------------|-----------------------------|--|---|---|-----------------------|---|--|
| 4 | 00:06:38<br>–<br>00:08:51 | Florida Keys transformation | <p>Vevers and Dustan are talking on a boat and going for a dive. Dustan shows him images of Florida Keys from 1971.</p> <p>At home, the images shot are compared to images from 1971.</p> <p>Text on screen: in the last 30 years, we have lost 50% of the world's corals."</p>  | <p>Dustan explains that almost all of the elkhorn coral has disappeared in Florida Keys (only 0.01% is left).</p> <p>Vevers states that he had no idea these issues were so advanced. 80 to 90% of corals in Florida has been lost.</p>                                     | Pa<br><br>(Interaction with subjects)   | Vevers, Dustan        | Dustan has been researching Florida Keys for over 30 years. He gives photographic evidence of the disappearing coral. | Shocking statistics and images of the loss of coral.                       |
| 5 | 00:08:51<br>–<br>00:11:50 | Scientific work on corals   | <p>Vevers is in a car to meet Porter, who has been photographing the changes in the reefs for years.</p> <p>Vevers getting of a boat, asking people for Ruth Gates.</p> <p>Vevers is in the Hawai'i Institute of Marine Biology, walking with Gates. He looks through a microscope at a piece of coral and is surprised. Gates laughs at his reaction.</p> | <p>Vevers explains Porters work.</p> <p>Vevers explains his positive outlook (as opposed to pessimistic scientists) because of his past in advertising</p> <p>No one has ever explained to Vevers what a coral is, Gates tries to do this but Vevers is still confused.</p> | Pa<br><br>(Interaction with subjects/ voice-over by filmmaker/ interviews: represent broad historical and social issues/ multiple voices) | Vevers, Porter, Gates | Porter and Gates are both biologists who have been working on researching corals.                                     | Vevers' reaction to seeing the coral is funny. Gates makes a lot of jokes. |

|   |                           |                              |   |   |   |               |   |   |
|---|---------------------------|------------------------------|---|---|---|---------------|---|---|
| 6 | 00:11:50<br>–<br>00:14:35 | What are corals?             | <p>Explanation is supported by images and animations of the insides of a coral, with arrows pointing at the different areas (mouth, stomach, tentacles). Time lapses of growing corals.</p> <p>Images go bigger: very close up of coral, to one coral, to coral structures under water, to coral on top of water, to images of Great Barrier Reef from space.</p> | Gates explains to the viewer what a coral is made of and how it grows.  | E<br><br>(Fragmented montage/ images supporting claims/ explanation by expert/ use of animation and graphics)   | Gates         | <p>Gates has enough scientific knowledge to give this explanation.</p> <p>Her explanation is supported by animations of the insides of a coral.</p> | <p>Beautiful images of coral.</p> <p>Corals are very complex, intelligent organisms.</p>                            |
| 7 | 00:14:35<br>–<br>00:16:29 | Discovery of coral bleaching | <p>Vevers is in American Samoa, at a reef that is turning white. He takes pictures to compare them with previously taken pictures at the same place.</p> <p>He shows images of December and six months later.</p>   | <p>Vevers explains what is happening in American Samoa.</p> <p>Hoegh explains to Vevers how much coral is lost due to the phenomenon of coral bleaching.</p> <p>Vevers states he did not have the knowledge to process this. Hoegh says this is the first time Vevers saw the enormity and the threat of the problem.</p> | Pa<br><br>(Directly encountering surrounding/ sharing feelings about experience/ interviews: represent broad historical and social issues/ multiple voices) | Vevers, Hoegh | <p>Hoegh's PHD on coral bleaching was influential.</p>  | <p>Vevers sees the enormity of the problem for the first time.</p> <p>The reef has changed a lot in six months.</p> |

|   |                           |                                |   |   |  |               |   |   |
|---|---------------------------|--------------------------------|---|---|--|---------------|---|---|
| 8 | 00:16:29<br>–<br>00:17:48 | Bleaching and climate change   | <p>Archive footage of diving in the 80s.</p> <p>Vevers explains the effects of climate change on oceans, supported by graphic on screen of rising body temperature (which he compares to warming oceans).</p> | <p>Hoegh explains the discovery of coral bleaching in the 80s and how this is caused by rising the temperature of the oceans by 2 degrees Celsius.</p> <p>Vevers states that bleaching relates to the current problem of global climate change and the warming of the oceans.</p> | E<br><br>(Explanation by expert/ archival and news footage/ use of animation and graphics /direct address) | Vevers, Hoegh | <p>Vevers has learned throughout this process and now gives information on climate change.</p> <p>A graphic supports his explanation.</p> | Warming oceans is compared to warming body heat.  |
| 9 | 00:17:48<br>–<br>00:19:42 | Explanation of coral bleaching | <p>Microscope images of corals and images of (Vevers filming) bleached coral.</p>   | <p>Gates explains how coral bleaching is caused.</p> <p>Vevers explains that the white you see is the skeleton of the coral.</p> <p>Gates explains how you can see if a coral is dying (bright white) or dead (fuzzy algae).</p>  | E<br><br>(Explanation by expert/ direct address/ use of graphics)  | Vevers, Gates | <p>Gates and Vevers have previously been established as authority figures.</p>  | <p>Images of dying/dead corals. Viewer understands how the bleaching process works.</p> |

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|----|---------------------------|---------------------------|--|--|---|----------------------------------|---|--|
| 10 | 00:19:42<br>–<br>00:22:55 | Capturing coral bleaching | <p>Vevers looks at images of bleached coral.</p> <p>Vevers is pushing luggage at the airport.</p> <p>Vevers is meeting with Orłowski, who also directed <i>Chasing Ice</i>.</p> <p>Footage of Rago and Mendelow in the workshop, the sea, animation of how the camera works.</p> <p>Mendelow consults with another technician about how many volts to use.</p> | <p>Vevers states that coral bleaching is difficult to communicate to the broader public.</p> <p>Vevers talks about watching <i>Chasing Ice</i> and meeting Orłowski.</p> <p>Orłowski states that: “If you can document that change, you can reveal this to the public in a powerful way.”</p> <p>Orłowski talking about the time lapse technology they need to film coral bleaching.</p> <p>Rago and Mendelow talk about the camera they designed and the struggles they faced.</p> <p>Orłowski, Mendelow and Rago talk about the complexity of the cameras and that many parts had to be custom made.</p> | R<br><br>(Reflexivity: conventions/persuasive qualities/techniques) | Vevers, Rago, Orłowski, Mendelow | <p>Orłowski has made another film about disappearing glaciers, which is similar to this project.</p> <p>Vevers reached out to him.</p> <p>Rago and Mendelow know a lot about designing cameras.</p> | The filmmakers are hopeful about making a change and believe that the cameras will work. |
|----|---------------------------|---------------------------|--|--|---|----------------------------------|---|--|

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|----|---------------------------|-------------------------|---|--|---|--------------------------------|---|--|
| 11 | 00:22:55<br>–<br>00:24:29 | Rago's coral obsession  | Talking heads of Rago and Mendelow.<br><br>Rago is in an aquarium and can name all kinds of coral.  | Rago explains that he is a coral nerd and where his obsession came from.<br><br>Mendelow comments on Rago's obsession.   | Pe<br><br>(Personal interests)                | Rago, Mendelow                 | Rago is really interested in corals and can name a lot of species.  | Rago has been passionate about corals since he was a child.  |
| 12 | 00:24:29<br>–<br>00:26:06 | Symbiosis               | Images of clownfish and anemone. Images of coral.   | Rago explains what symbiosis is and compares clownfish and anemone to how the symbiont is incorporated in the coral organism.  | E<br><br>(Explanation by expert/voice-over)   | Rago                           | It has been established that Rago knows a lot, so he can give this information. Images support this.  | Showing beauty of corals. Rago is very passionate about corals.  |
| 13 | 00:26:06<br>–<br>00:29:15 | Rising sea temperatures | Gates, Vevers and Mendelow sit together in Gates' office and speak with each other.<br><br>Vevers and Eakin are calling. Eakin looks at coral bleaching on his computer.<br><br>Graphic of sea surface temperature. Vevers looks at the NOAA data. In many places, it is much hotter than it should be. | Gates and Mendelow discuss different kinds of corals that are present in the area. This will be the first time that the bleaching will be documented in the wild.<br><br>Sea surface temperatures are rising and mass bleaching events are more frequent. Everywhere it's much hotter than it should be. | R<br><br>(Reflexivity: production techniques) | Vevers, Gates, Mendelow, Eakin | Gates and Mendelow know a lot about different kinds of corals.<br><br>Eakin's data on rising sea temperatures is used to determine where to film. | Gates is very excited about the fact that this will be the first time bleaching is documented in the wild. |

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|----|---------------------------|--------------------------|--|---|--|----------------------------------|--|--|
| 14 | 00:29:15<br>–<br>00:32:30 | The first attempt        | <p>Rago and Mendelow work on the cameras. The equipment is brought to the airport and is too heavy.</p> <p>Animation of the Earth (with hotspots in the seas). Pinpoints of where the cameras are being places (Hawaii, Bermuda, Bahamas).</p> <p>Placing of the cameras in the three locations.</p>                                   | <p>Vevers explains that this is their opportunity to capture this bleaching event and communicate it to the public</p> <p>Vevers explains where the cameras are being put down, based on the data from NOAA.</p> <p>Ackerman, Rago, Orłowski and Vevers explain how the installation works and what the problems are.</p> | R<br><br>(Reflexivity: persuasive qualities/ production techniques/ production issues) | Vevers, Rago, Orłowski, Ackerman | The cameramen know how to install the cameras underwater and operate it from the boat.                     | Vevers is hopeful about their chance to communicate the issue to the public. |
| 15 | 00:32:30<br>–<br>00:35:14 | Flooded camera equipment | <p>One of the boats drifts away and Rago jumps into the water with some of the equipment. Back on the boat the technology is flooded and Rago is upset.</p> <p>In the hotel Rago tries to fix it. Mendelow tries to help Rago to fix it through a Skype call.</p> <p>The cameras are installed and working in different locations.</p> | <p>The technology is flooded.</p> <p>The cameras are installed without further problems.</p>  | R<br><br>(Reflexivity: technical issues)   | Rago, Orłowski, Mendelow         | <p>Rago has knowledge on how to fix the flooded camera.</p> <p>Mendelow helps Rago to fix the problem.</p> | Rago is very upset that the camera is flooded.                               |



|    |                           |                       |  |   |  |   |   |  |
|----|---------------------------|-----------------------|--|---|--|---|---|--|
| 16 | 00:35:14<br>–<br>00:36:39 | Coral taxonomy        | Rago diving on the reef. Childhood pictures of Rago. Footage of Veron’s coral program. | Rago explains his interest in coral taxonomy and how Veron inspired him. He calls him the godfather of coral reef science. He was the first person to catalog coral.  | Pe<br><br>(Personal interests/ history)  | Rago, Veron (archival footage), Gates           | Veron has discovered more than 20% of the world’s coral species.                          | Rago shares personal information about his youth.  |
| 17 | 00:36:39<br>–<br>00:40:45 | Coral reefs as cities | Footage of coral structures and animals living on it.                                  | Gates, Marshall, Kleypas talk about how corals compare to cities, with high-rise, neighborhoods, traffic and jobs.<br><br>Vevers, Eakin and Porter talk about the importance of coral reefs for both humans and animals (for food, medicine, protection). | E<br><br>(Fragmented montage/ images supporting claims/ explanation by expert/ direct address) | Vevers, Gates, Marshall, Kleypas, Eakin, Porter | All of the speakers have been established as experts.<br><br>Images support their claims. | Corals are not just beautiful to see, but are intricate structures which sustain many lifeforms, including humans. |

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|----|---------------------------|----------------------------------|---|---|---|---|---|---|
| 18 | 00:40:45<br>–<br>00:43:53 | Out of focus                     | <p>Rago goes into the water to collect the cameras after two months. He looks at the footage and is disappointed, because the footage is out of focus.</p> <p>In Hawaii, Mendelow also looks at the footage.</p> <p>Mendelow and Orłowski are talking and look at the footage.</p> <p>Another camera removal.</p> | <p>Rago hopes there is enough footage and is very disappointed. He hopes the cameras worked elsewhere.</p> <p>The other footage is also out of focus.</p> <p>Mendelow explains the footage is useless and Orłowski says he has never heard of manual focus changing over time.</p> <p>Vevers explains the bleaching in Hawaii was the worst it has ever been, but they didn't manage to capture it.</p> | R<br><br>(Technical issues)                   | Vevers,<br>Rago,<br>Orłowski,<br>Mendelow | <p>Orłowski and Mendelow have already been established as authority figures.</p> <p>They discuss what they have to do now and what might have caused the problem.</p> | Rago is very disappointed that the cameras have not worked, even though there has been a massive bleaching event. |
| 19 | 00:43:53<br>–<br>00:44:55 | Changing the camera and location | <p>Vevers and Hoegh look at NOAA footage showing that Australia is likely going to bleach.</p> <p>Rago and Mendelow are working to improve and test the camera system.</p>  | <p>Australia is warmer than it's been for quite a while and will keep warming.</p> <p>Rago explains the changes they made and that he is confident it will work this time.</p>  | R<br><br>(Reflexivity: production techniques) | Vevers,<br>Rago,<br>Hoegh,<br>Mendelow    | Rago and Mendelow have made changes to the cameras.   | Rago is hopeful that the cameras will work this time.   |

|    |                           |                          |  |   |  |   |   |  |
|----|---------------------------|--------------------------|--|---|--|---|---|--|
| 20 | 00:44:55<br>–<br>00:47:52 | The second attempt       | <p>Archival footage of Veron's program.</p> <p>Rago and Orlowski see the GBR from a plane.</p> <p>Animation of the Earth with warming seas, showing where the two teams are going to be located.</p> <p>The cameras are being placed in different locations.</p> <p>Rago walks on the beach.</p> | <p>Veron explains the enormity of the Great Barrier Reef</p> <p>Rago shares that seeing the Great Barrier Reef has always been his goal.</p> <p>Orlowski and Rago are going to Keppel Island and Ackerman is going to Heron Island.</p> <p>They now have to wait for warm water.</p>  | R<br><br>(Reflexivity: production techniques)                                | Vevers, Rago, Orlowski, Veron (archival footage), | The cameramen have created a new plan.  | Rago was inspired by Veron's TV-program, now he is excited and emotional to finally see the GBR. |
| 21 | 00:47:52<br>–<br>00:49:16 | Waiting and interviewing | <p>Images showing corals and interviews with Vevers.</p> <p>Archival footage of drilling for coral cores.</p> <p>Antin shows what coral cores look like.</p>   | <p>News anchors reporting on the mass bleaching event and Vevers giving interviews.</p> <p>Vevers explains that bleaching is not a natural phenomenon, but a sign of global warming.</p> <p>Marshall explains coral cores are similar to growth rings in trees. Looking back in time through the cores, we can see that bleaching is not a natural fluctuation.</p> | E<br><br>(Archival and news footage/ explanation by experts/ direct address) | Vevers, Marshall, Cantin news anchors             | <p>Vevers is important enough to be interviewed by multiple news stations.</p> <p>Marshall has done research on growth rings on corals.</p> | The viewer is curious to learn the results of the second attempt.                                |

|    |                           |                   |   |  |   |                |   |   |
|----|---------------------------|-------------------|---|--|---|----------------|---|---|
| 22 | 00:49:16<br>–<br>00:51:32 | Hoegh's warning   | <p>Animation of the Earth and how most of the heat trapped by CO<sup>2</sup> emissions is absorbed by the oceans.</p> <p>Archival footage of Hoegh at a conference and on the reef.</p> | <p>Hoegh explains that 93% of the heat that is trapped by CO<sup>2</sup> is absorbed by the ocean. Otherwise, the average surface temperature would be 35,6 degrees Celsius higher.</p> <p>In the archival footage, Hoegh warns that the reefs will suffer from global climate change.</p> <p>Vevers explains that he was ridiculed and being seen as an alarmist.</p> | E<br><br>(Archival footage/ explanation by experts/ direct address/ use of animation) | Vevers, Hoegh  | <p>Hoegh was ridiculed for his warnings but he was right all along.</p> <p>His explanation is supported by archival footage and animations.</p> | <p>Hoegh cannot look at the reef and see its beauty anymore, he only sees the problems. He is also sad that people don't seem to listen.</p>      |
| 23 | 00:51:32<br>–<br>00:52:37 | Hurricane Winston | <p>The documentary switches from Hoegh on Keppel Island in 2002 to Orłowski and Rago in the same place in 2016.</p> <p>CNN Weather reporter talking about the cyclone.</p>              | <p>Rago explains that storms and cloud coverage determine whether they will be able to capture the footage they want.</p> <p>The storm that is coming is the strongest cyclone every recorded in the Southern Hemisphere.</p> <p>Hurricane Winston causes cold water and rain and the corals will not bleach.</p>  | R<br><br>(Reflexivity: production issues)   | Rago, Orłowski | <p>Rago and Orłowski have been established as narrators.</p>  | <p>On the one hand, Rago is happy the corals will survive the bleaching event. On the other hand, they have not managed to capture bleaching.</p> |

|    |                           |                   |  |  |   |                                    |  |  |
|----|---------------------------|-------------------|--|--|---|------------------------------------|--|--|
| 24 | 00:52:37<br>–<br>00:57:30 | The third attempt | <p>Orlowski and Rago look at other parts of the GBR which are getting hotter.</p> <p>The crew checks the cameras.</p> <p>Animation of the new locations.</p> <p>The plane arrives on Lizard Island.</p> <p>Footage of the coral, which is already bleaching.</p> <p>Rago jumps back in to retrieve some plastic floating on the surface.</p> <p>Rago and Orlowski diving in several spots and shooting footage.</p> <p>Time lapse footage of the surrounding area and Rago and Orlowski at a campfire.</p> | <p>They are going to move to New Caledonia and Lizard Island, but moving the time lapse cameras will take too much time.</p> <p>Ackerman explains the new plan: abandon the camera systems, move to a new location and manually film every day.</p> <p>The water is really hot (35 degrees Celsius).</p> <p>Besides coral bleaching and global climate change, plastic consumption is another large problem for the oceans.</p> <p>The divers explain how they will shoot the footage without their time lapse cameras, at 60 sites per day.</p> | R<br><br>(Reflexivity: production techniques) | Rago, Orlowski, Mendelow, Ackerman | The divers are putting a lot of effort into filming the same images every day. | <p>Rago thinks the reef is amazing, but already demolished.</p> <p>Rago talks about the problems of this logistical nightmare: spending four hours a day underwater is very tiring and they are bleeding a lot. They are manually doing what the time lapse cameras were designed to do.</p> |
|----|---------------------------|-------------------|--|--|---|------------------------------------|--|--|

|    |                           |                    |  |  |  |                  |   |   |
|----|---------------------------|--------------------|--|--|--|------------------|---|---|
| 25 | 00:57:30<br>–<br>01:01:23 | Fluorescing corals | <p>Vevers is photographing the reef in New Caledonia from a helicopter.</p> <p>He makes photos underwater.</p> <p>Vevers gets out of the water and walks on the floating restaurant.</p>   | <p>The corals in New Caledonia were fluorescing to protect themselves from the heat, which has never been seen before.</p> <p>Vevers and Ackerman have to dive from a floating restaurant.</p>   | Pa<br><br>(Voice-over/<br>sharing feelings/<br>direct encounter) | Vevers, Ackerman | <p>Vevers knows what is happening, while the people on the boat are oblivious.</p>  | <p>Vevers is frustrated that one of the rarest events in nature is happening, and everyone is just oblivious to it.</p> |
| 26 | 01:01:23<br>–<br>01:05:28 | Emotional impact   | <p>Rago is diving on a reef that is slowly dying. Images of algae and dead corals. Underwater, Rago shows the tissue of the coral that is rotting away and breaks loose from the skeleton.</p> <p>Rago shows a sign that says “this is the hardest dive I’ve ever had to do.”</p> <p>Back on the boat, he is very upset.</p> | <p>The time lapse was designed so the project could be done without emotions, but getting in the water every day and seeing the decay is very hard.</p> <p>Rago didn’t prepare himself for how hard it would be for him emotionally.</p> | R<br><br>(Emotional attachment)                                  | Rago             | <p>Rago shows dying reefs to the camera.</p> <p>He is diving every day and putting a lot of effort in manually making a time lapse.</p> | <p>Rago is seeing things die every day, which he finds very difficult.</p>  |

|    |                           |                    |  |  |  |  |   |  |
|----|---------------------------|--------------------|--|--|--|--|---|--|
| 27 | 01:05:28<br>–<br>01:08:26 | Ecosystem collapse | <p>Images of people on the beach.</p> <p>Talking heads of scientists.</p> <p>Animation of the “tree of life” with an entire branch disappearing because of a collapse of the ecosystem.</p> <p>Graphic of ocean temperature projections.</p> <p>Diving on a dead coral reef.</p> | <p>Corals are part of a big ecosystem: when the coral dies, you lose the little fish, then the big fish. Humans can be seen as one of the big fish. The entire ecosystem can disappear.</p> <p>Hoegh and Gates explain that it is projected that coral reefs will disappear because of rising ocean temperatures.</p> <p>Because everything on Earth is connected, everything will collapse.</p> | E<br><br>(Explanation by experts/ direct address/ voice-over/ use of animations) | Hoegh, Gates, Marshall, Porter, Dustan | The scientists who have previously been established as experts, share their predictions on what will happen if the reefs disappear. | The disappearing reefs will most likely cause problems for humans. |
| 28 | 01:08:26<br>–<br>01:12:02 | Meeting Veron      | Rago is in a car talking about Veron. He is very excited to be in his house and interviews him.  | <p>Rago is on his way to meet Veron.</p> <p>Veron talks about how times have changed and how he didn’t think anything could affect the GBR because it’s so big.</p> <p>Rago shares his experience of being on Lizard Island. Veron encourages him to not give up and influence people.</p>   | Pe<br><br>(Personal development/ inspiration)                                    | Rago, Veron                            | Veron has been shown in archival footage before. Rago looks up to him a lot.  | Rago is meeting his hero. Veron gives him advice.                  |

|    |                           |                                    |  |   |                                       |                       |   |  |
|----|---------------------------|------------------------------------|--|---|---------------------------------------|-----------------------|---|--|
| 29 | 01:12:02<br>–<br>01:16:41 | International Coral Reef Symposium | <p>Footage of Hoegh talking at the International Coral Reef Symposium. Rago and Vevers arrives at the convention center.</p> <p>Many of the scientist featured in the documentary are present.</p> <p>Vevers gives a speech and Rago shows the images they have captured.</p> <p>The audience is shaking their heads and have tears in their eyes.</p> | Vevers gives Rago advice for his speech.  | R<br><br>(Preparation before filming) | Vevers, Rago, Hoegh   | <p>Vevers has given a lot of speeches and is now giving Rago advice.</p> <p>The divers have managed to capture the decay of dying corals.</p> | The audience is reacting very emotionally to the footage.  |
| 30 | 01:16:41<br>–<br>01:18:03 | Before and after                   | <p>Before and after images of bleaching and dead reefs.</p> <p>A text on the screen says: “29% of the Great Barrier Reef died in 2016.”</p>  | Vevers says this was a massive bleaching event, and that 29 percent of the corals on the GBR alone have died. | E<br><br>(Use of titles/ voice-over)  | Vevers, Rago, Kleypas | The divers have managed to capture the decay of dying corals.   | A lot of coral has died and this will happen more frequently in the future. There is not much we can do to prevent it. |



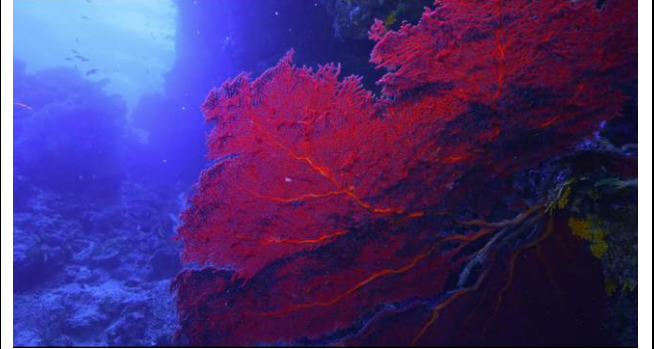

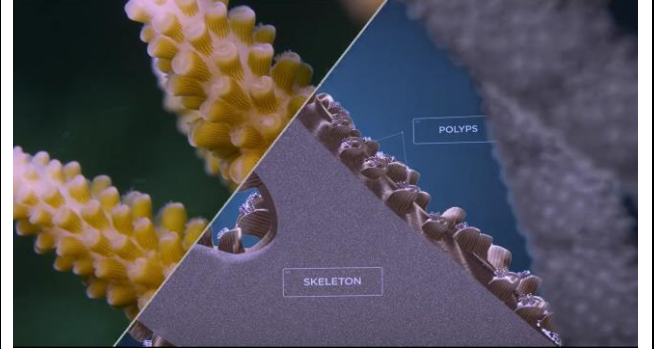


|    |                           |                        |   |   |  |                            |  |  |
|----|---------------------------|------------------------|---|---|--|----------------------------|--|--|
| 31 | 01:18:03<br>–<br>01:20:13 | Call-out               | <p>Orlowski is on a beach, directly looking into the camera.</p> <p>Animation of several places around the world, with images of reefs and the people that have responded to the call-out.</p> <p>More text on screen urges people to address the problem.</p>                                    | <p>Orlowski asks people that have access to reefs to capture what is happening.</p> <p>People around the world comment on what is happening in their region. Everywhere, coral is bleaching and dying.</p>  | R<br><br>(Relationship between filmmaker and viewer/reflexivity: persuasive qualities) | Orlowski                   | <p>Orlowski has directed <i>Chasing Coral</i> and <i>Chasing Ice</i>.</p> <p>Many people have responded to his call-out.</p>     | <p>It is sad to see that bleaching is happening all around the world.</p> <p>It is hopeful to see that many people are reacting to the call-out and trying to raise awareness.</p>                         |
| 32 | 01:20:13<br>–<br>01:23:57 | A great transformation | <p>Rago and Veron are diving together. The text on screen says this is one of the healthiest reefs remaining in the GBR.</p> <p>Rago and the school children are going on a “virtual dive”.</p> <p>Vevers is doing the same with adults.</p> <p>Images of what they are seeing to VR-glasses.</p> | <p>Veron thinks he didn’t do enough when he realized what was happening. He says Rago still has a chance to make a change.</p> <p>Rago wants to inspire kids.</p> <p>Vevers is seeing a big shift and is hopeful about climate change action.</p> <p>Hoegh thinks it is still possible to reduce the rate at which the climate is changing.</p> | Pe<br><br>(Personal development/inspiration)   | Vevers, Rago, Hoegh, Veron | <p>Because Vevers and Rago have put so much effort in capturing the bleaching, they are the right people to spread the word.</p> | <p>There are still healthy reefs that can be protected. We can still reduce the rate at which the climate is changing.</p> <p>Rago is inspiring children and Vevers is raising awareness among adults.</p> |




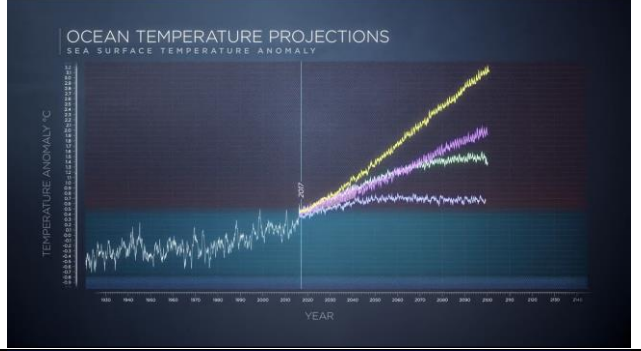
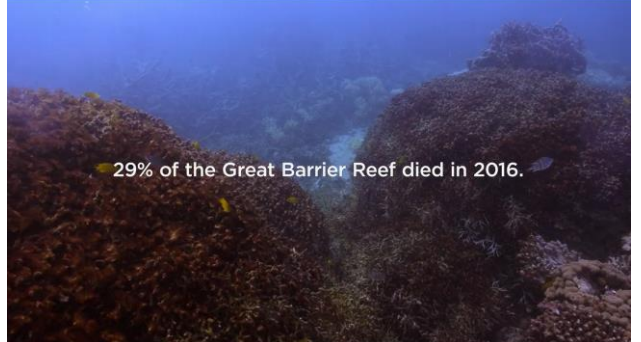
|   |                           |             |  |             |  |              |  |   |
|---|---------------------------|-------------|--|-------------|--|--------------|--|---|
| E | 01:23:57<br>–<br>01:28:51 | End credits | <p>List of countries and US cities that have committed to be powered by clean energy.</p> <p>“To learn what you can do visit <a href="http://chasingcoral.com">chasingcoral.com</a>.”</p> <p>Close-up of corals, beaches, oceans, turtles, fish, a whale shark, with credits on screen.</p> <p>Rago painting and driving a bus. Rago and Mendelow have converted a school bus into a coral reef classroom.</p> <p>Vevers showing people underwater reef view. Vevers and his team founded an agency dedicated to saving the oceans.</p> <p>The time lapse cameras were retrieved and worked.</p> | Title song. | R<br><br>(Reflexivity: persuasive qualities) | Vevers, Rago | Because Vevers’ and Rago’s personal lives have gotten attention throughout the documentary, it is shown what they are doing after filming has ended. | <p>The documentary ends on a hopeful note: many countries and US cities want to take action.</p> <p>The viewer can also see what is possible by visiting the website.</p> <p>The time lapse cameras worked and can be used to capture more bleaching.</p> |
|---|---------------------------|-------------|--|-------------|--|--------------|--|---|

**Appendix 2: list of characters and their appearances in *Chasing Coral***

| <b>Name</b>              | <b>Function</b>              | <b>Sequences</b>  | <b>Total</b> |
|--------------------------|------------------------------|---|--------------|
| Richard Vevers           | Underwater photographer      | 1, 2, 3, 4, 5, 7, 8, 9, 10, 13, 14, 17, 18, 19, 20, 21, 22, 25, 29, 30, 32, E | 22           |
| Jeff Orłowski            | Filmmaker/director           | 10, 14, 15, 18, 20, 23, 24, 31  | 8            |
| Zack Rago                | Underwater camera technician | 10, 11, 12, 14, 15, 16, 18, 19, 20, 21, 23, 24, 26, 28, 29, 30, 32, E         | 18           |
| Trevor Mendelow          | Underwater camera engineer   | 10, 11, 13, 15, 18, 19, 24  | 7            |
| Andrew Ackerman          | Underwater cinematographer   | 14, 24, 25  | 3            |
| Prof. Ove Hoegh-Guldberg | Coral Reef Biologist         | 7, 8, 19, 22, 27, 29, 32  | 7            |
| Dr. Ruth Gates           | Coral Reef Biologist         | 5, 6, 9, 13, 16, 17, 27   | 7            |
| Dr. John Veron           | Coral taxonomist             | 16, 20, 28, 32  | 4            |
| Dr. Phil Dustan          | Marine biologist             | 4, 27   | 2            |
| Dr. James Porter         | Marine biologist             | 5, 17   | 2            |
| Dr. Justin Marshall      | Marine biologist             | 17, 21  | 2            |
| Dr. Joanie Kleypas       | Marine biologist             | 17, 30  | 2            |
| Dr. Mark Eakin           | NOAA Coral Reef Watch        | 13, 17  | 2            |
| Dr. Neal Cantin          | AIMS Coral Core Archivist    | 21  | 1            |






**Appendix 3: sequences from *Chasing Coral* identified as expository mode categories.**


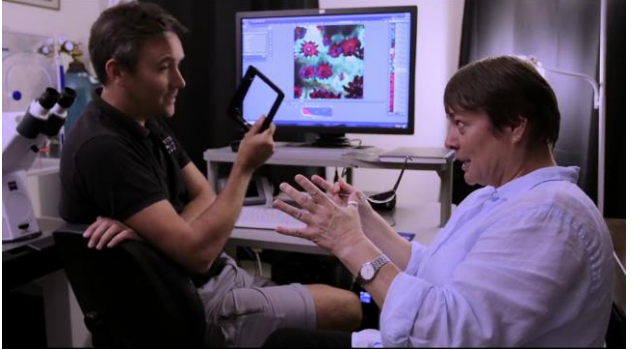


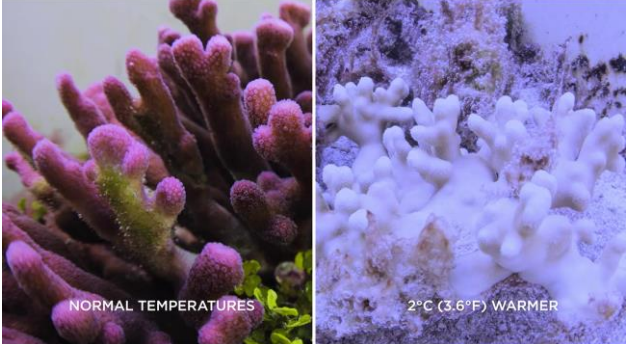
| Category                             | Example  | Corresponding image  |
|--------------------------------------|--|--|
| Fragmented montage: rhetorical frame | 3.1 Different species of coral from different places are shown consecutively (s. 6).   |    |
|                                      | 3.2 Different species of coral from different places are shown consecutively (s. 6).   |    |
| Images supporting claims             | 3.3 As Gates explains how corals work, an animation shows the different parts of the organism that she is describing (s. 6).                                     |   |
| Voice-over                           | 3.4 In a voice-over, Vevers explains the relationship the effect of 1 or 2 degrees Celsius on coral reefs: coral bleaching as a result of climate change (s. 8). |  |
| Direct address of viewer             | 3.5 Vevers looks directly into the camera as he compares the warming of the oceans to a rise in human body temperature (s. 8).                                   |  |

|                                      |             |  |  |
|--------------------------------------|-------------|--|--|
| <p>Explanation by expert</p>         | <p>3.6</p>  | <p>Marine biologist Marshall explains how coral reefs compare to neighborhoods and cities (s. 17).</p> |    |
| <p>Archival and news footage</p>     | <p>3.7</p>  | <p>Archival footage of Hoegh working on coral reefs (s. 22).</p>                                       |    |
|                                      | <p>3.8</p>  | <p>Vevers gives an interview on a news program (s. 21).</p>  |   |
| <p>Use of animation and graphics</p> | <p>3.9</p>  | <p>Graphic of predicted ocean temperatures, supporting commentary by Hoegh (s. 27).</p>                |  |
| <p>Use of titles</p>                 | <p>3.10</p> | <p>Text on screen stating facts about the mass bleaching event (s. 30).</p>                            |  |






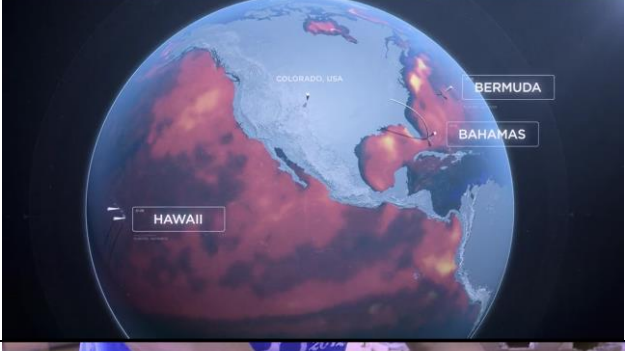

**Appendix 4: sequences from *Chasing Coral* identified as participatory mode categories.**

| Category   | Example  | Corresponding image  |
|--|--|--|
| Filmmaker and subject interact with each other   | 4.1 Vevers and Dustan look at images of the coral reef in Florida Keys from 1971, before going on a dive together (s. 4).  |    |
| Filmmaker directly encounters their surroundings | 4.2 Vevers is diving in Florida Keys with Dustan. While underwater, Dustan shows him the photographs from 1971 to compare it with how it looks now (s. 4).   |    |
|  | 4.3 As Vevers is visiting Gates, he looks at a piece of coral through a microscope, to understand how the organism works (s. 5).   |   |
| Voice-over by filmmaker                          | 4.4 As Vevers and Porter have an inaudible conversation, Vevers explains in a voice-over that he is not as pessimistic as many scientists (including Porter) (s. 5)  |  |
| Filmmaker shares feelings about experience       | 4.5 Vevers diving at Airport Reef. In a voice-over, he explains he was truly shocked by what he saw. At the same time, he shares that he did not have sufficient knowledge to process what he was seeing (s. 7). |  |



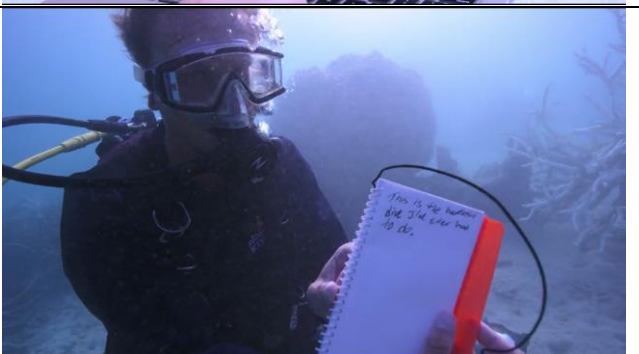


|   |      |  |  |
|---|------|--|--|
|   | 4.6  | Vevers shares his frustration about the dancing people on the floating restaurant, who do not notice what is happening (s. 25).            |    |
| Interviews: multiple individual voices                                | 4.7  | Vevers asks Gates questions about what a coral is (s. 5).  |    |
|   | 4.8  | Hoegh explains his work on the correlation between climate change and coral bleaching (s. 7).  |   |
| Interviews: represent broad social issues and historical perspectives | 4.9  | Porter explains that the places he once photographed and researched, no longer exist (s. 5).   |  |
|   | 4.10 | Hoegh explains that he started researching coral bleaching in the '80s and how they discovered that it is caused by global warming (s. 7). |  |




**Appendix 5: sequences from *Chasing Coral* identified as reflexive mode categories.**




| Category  | Example   | Corresponding image  |
|---|---|--|
| Formal reflexivity: conventions                   | 5.1<br>Vevers talks about watching <i>Chasing Ice</i> on the plane, the similarities between both projects and getting director Orłowski on board (s. 10).  |    |
| Formal reflexivity: persuasive qualities          | 5.2<br>Orłowski talks about the opportunity of revealing the issue in a powerful way to the public, once it is possible to capture coral bleaching (s. 10). |    |
| Formal reflexivity: filming/production techniques | 5.3<br>Rago and Mendelow work on the camera system (s. 14).   |   |
|   | 5.4<br>Animation showing sea surface temperatures and the three filming locations for the first attempt (s. 14).  |  |
| Issues during the filming process                 | 5.5<br>Production issues: the luggage is too heavy, so they have to cut off pieces of plastic from the equipment (s. 14)                                    |  |






|   |      |  |  |
|---|------|--|--|
|   | 5.6  | Technical issues: the equipment falls into the ocean. Once he is back on board, Rago lets out the water (s. 15)  |    |
|   | 5.7  | Technical issues: the footage from the first attempt is out of focus (s. 18).  |    |
|   | 5.8  | Emotional attachment: the time lapse cameras were designed so the project could be done without emotions, but Rago is struggling a lot because they have to film manually (s. 26). |   |
| Preparation before filming                | 5.9  | Before their presentation, Rago asks Vevers for advice (s. 29).  |  |
| Relationship between viewer and filmmaker | 5.10 | Orlowski asks people to help document coral bleaching (s. 31)  |  |

|  |  |  |
|--|--|--|
|  | <p>5.11 Divers from around the world have responded to the call-out (s. 31).</p> |  |
|--|--|--|

**Appendix 6: sequences from *Chasing Coral* identified as performative mode categories.**

| Category  | Example  | Corresponding image  |
|---|--|--|
| Personal perspective and active involvement of filmmakers | 6.1 Professional history: Vevers explains the project he was working on (s. 3).              |   |
|   | 6.2 Personal history: Vevers explains why he quit advertising (s. 3).                        |  |
|   | 6.3 Personal history: Vevers talks about diving in his youth and his favorite animal (s. 3). |  |

|  |   |   |
|--|---|---|
|  | <p>6.4 Personal interests: Rago talks about his youth and explains his obsession with corals (s. 11).</p>                       |   |
|  | <p>6.5 Personal development: Rago meets his hero and gets advice from Veron (s. 28).</p>  |   |
|  | <p>6.6 Inspiration: the project has inspired Rago to travel around the country to educate children about the ocean (s. 32).</p> |  |

**Appendix 7: schematic overview of modes of representation in *Chasing Coral***

| <b>Section</b>                        | <b>Timecode</b>     | <b>Sequence</b> | <b>Mode</b> | <b>Sequence name</b>               |
|---------------------------------------|---------------------|-----------------|-------------|------------------------------------|
| Opening credits                       | 00:00:00 – 00:00:19 | 0               | n/a         | Opening credits                    |
| Introducing Vevers                    | 00:00:19 – 00:06:38 | 1               | Pe          | Vevers' passion                    |
|                                       |                     | 2               | Pe          | Vevers' project                    |
|                                       |                     | 3               | Pe          | Vevers' past                       |
| Corals dying                          | 00:06:38 – 00:19:42 | 4               | Pa          | Florida Keys                       |
|                                       |                     | 5               | Pa          | Scientific work on corals          |
|                                       |                     | 6               | E           | What are corals?                   |
|                                       |                     | 7               | Pa          | Discovery of coral bleaching       |
|                                       |                     | 8               | E           | Coral bleaching and climate change |
|                                       |                     | 9               | E           | Explanation of coral bleaching     |
| Introducing other divers/ preparation | 00:19:42 – 00:26:06 | 10              | R           | Capturing coral bleaching          |
|                                       |                     | 11              | Pe          | Rago's coral obsession             |
|                                       |                     | 12              | E           | Symbiosis                          |
| Attempt 1                             | 00:26:06 – 00:43:53 | 13              | R           | Rising sea surface temperatures    |
|                                       |                     | 14              | R           | Attempt 1                          |
|                                       |                     | 15              | R           | Flooded camera equipment           |
|                                       |                     | 16              | Pe          | Coral taxonomy                     |
|                                       |                     | 17              | E           | Reefs as cities                    |
|                                       |                     | 18              | R           | Out of focus                       |
| Attempt 2                             | 00:43:53 – 00:52:37 | 19              | R           | Changing cameras and location      |
|                                       |                     | 20              | R           | Attempt 2                          |
|                                       |                     | 21              | E           | Waiting                            |
|                                       |                     | 22              | E           | Hoegh's warning                    |
|                                       |                     | 23              | R           | Hurricane Winston                  |
| Attempt 3                             | 00:52:37 – 01:08:26 | 24              | R           | Attempt 3                          |
|                                       |                     | 25              | Pa          | Fluorescing corals                 |
|                                       |                     | 26              | R           | Emotional impact                   |
|                                       |                     | 27              | E           | Ecosystem collapse                 |
| Raising public awareness              | 01:08:26 – 01:28:51 | 28              | Pe          | Meeting Veron                      |
|                                       |                     | 29              | R           | International Coral Reef Symposium |
|                                       |                     | 30              | E           | Before and after                   |
|                                       |                     | 31              | R           | Call-out                           |
|                                       |                     | 32              | Pe          | A great transformation             |
|                                       |                     | E               | R           | End credits                        |



**Appendix 8: overview of the central argumentation of *Chasing Coral***

