Stop Moving So Fast: Reframing the Environmental Narrative through Photography

By

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Abstract

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Environmental photography has been a valuable asset for portraying what is going on around the world. Pictures of a lone malnourished polar bear on a drifting piece of ice, wildfires raging through forests, air pollution engulfing cities, and pollution in waterways are what people are shown to represent that there are environmental problems around the world. People become numb to this chaos because they see these kinds of pictures over and over. What if instead of a negative narrative of the environment through photography, there was a positive narrative captured through photography? I took pictures around Allegheny College's campus with a digital camera to capture images someone may not see on a daily basis. The pictures captured get the viewer to look closer and slow down. So maybe this way, people will respond better to saving the environment and slowing down climate change. There were 14 pictures in the end. The images were displayed in 2 frames: a larger one 27"x40" and a smaller one 4"x6". Further research will need to be conducted in order to assess whether this kind of photography actually does get people to react differently to the environment.

Introduction

Freak storms, wildfires, abnormal temperature highs and lows, glaciers melting, and sea levels rising (Banholzer et al., 2014; Van Aalst, 2006; Nerem et al., 2018). What do all of these have in common? The simple answer is that the world is changing and experiencing climate change (Maibach et al., 2014; Trenberth, 2018). Humans cause the speeding up of climate change through their activities. Human kind creates pollution and throws it out into the world (Ballew et al, 2019; Landrigan, 2020;). Air pollutants, such as emissions, are speeding up these processes of the Earth and are the main reasons for these abnormal freak events occurring more often (Kinney, 2018; Xu et al., 2020).

Although these natural disasters and pollution are not always in our faces or can be seen by the naked eye there are always pictures that remind us about what is happening to this earth that link these extreme events to climate change (Beckage et al., 2018). These events portray a negative narrative of the world and to try and get people to change their ways to save the planet by using their fears about climate change against them (Hickman et al., 2021). But after seeing all the pictures of the extreme events over and over again, the motivation to save the planet can be stripped away with enough negative imagery. The images portray a doomed and depressed feeling leading us to feel like there is nothing that we can do to change the negative forces taking earth captive (Cianconi, 2020). In this day in age, technology is one of the main ways to educate, persuade, and reach out to an audience because such a large audience uses it (Perrin, 2015; Al-Deen & Hendricks, 2011). If you were to look up on Google “environmental problems” and click on the images tab images of deglaciation, forest fires, tsunamis, rising sea levels, pollution, and more would come up. All of these negative environmental effects are factors in global environmental problems the world is facing today. So what do these pictures look like and how do they portray these negative events?

Many people have seen the picture of the malnourished, lone polar bear on a drifting piece of ice whether it be in an educational setting such as the classroom or in a personal setting such as the use of social media. This image shows us the effect that environmental changes are having on animals, and in this case, the polar bear. It is the face of climate change. It shows the consequences of the path that we are on and it silently begs for us to change.



Fig 1. A polar bear clinging onto a piece of ice. (Agency Staff, 2013)

Another scene that people are familiar with, but is much warmer, is the tropical rainforest. Rainforests are one of the biggest producers of oxygen and more importantly one of the biggest absorbers of carbon dioxide. They play a crucial role in maintaining the global carbon budget by sucking up 2.4 billion metric tons of carbon each year (Kintisch, 2015). They are home to a vast amount of wildlife and vegetation. Rainforests are also great suppliers for produce, lumber, and even act as the world's thermostat, regulating temperatures and weather patterns (Rainforest Alliance, 2017). Although rainforests provide many resources for humans, they receive almost nothing in return. It is just a lot of taking without giving back. More than 90 percent of tropical forests are managed poorly or not at all (Mongabay, 2012). So who is ensuring that the trees that are being cut down are being replenished? Along with humans constantly taking from the rainforest, they are also one of the main reasons for the amount of rainforests declining. Climate change leads to forest degradation. Once sufficiently degraded, forests will lose their ability to generate their own rainfall, thereby preventing the rainforest ecosystem from being able to exist at all (Pink, 2018). Instead of leafy forests full of wildlife, the Amazon would be a desolate expanse of shrublands which plays into the vulnerability to wildfires.



Fig 2. Brazil's Amazon rainforest on fire. (Taylor, 2021)



Fig 3. Smoke rising from the Amazon forest in northwestern Brazil. (Rosen, 2019)

Other well known images that display environmental problems are pictures of emissions and smoke stacks. This world revolves around the use of fossil fuels as a source of energy, but at what cost of the environment? The use of fossil fuels is a big part in driving climate change and releasing harmful toxins into the environment. These pictures portray that everyday life contributes to climate change.



Fig 4. Car emissions being released from motorized vehicles. (Avellar, 2020)



Fig 5. Smoke stacks coming out of a factory. (Epstein, 2011)

There are multitudes of pictures that display the amount of trash that is polluting the world. It suffocates animals, blocks waterways, and harms human health. These pollution pictures are everywhere whether it be displayed digitally like through social media and the news or even in someone's own neighborhood.



Fig 6. A turtle with a plastic bag around its neck. (Lavars, 2021)



Fig 7. Pollution covering the beach and surrounding body of water. (Monge & Jungwiwattanaporn, 2022)



Fig 8. Children covering their faces with cloth and a haze in the background. (Purelogic Labs India, 2018)

Images such as the ones above carry strong messages, but utilize no words. The saying that a picture is worth a thousand words really carries through in these images. Although silent and lacking text, there is a message that carries a deeper meaning that calls us to look at what is going on in the world and hopefully change it. These pictures use negativity to try and motivate people to make a change to save the world. After people see these pictures in their younger educational journey such as middle school and highschool science classes, onto college, and all over social media, news outlets, advertisements, and commercials throughout their lives, they can become overwhelmed, depressed, and hopeless (Golding, Gatersleben, & Cropley, 2018; Kalmus, 2021; Maran & Begotti, 2021; Zang & Wu, 2021). Instead of using negative reinforcement such as the negative picture above, what if instead positive reinforcement was used such as pictures that show a positive view of the environment?

There are many photographers out there that have goals that align with the idea of showcasing the world in a positive manner such as showcasing the beauty and goodness instead of the bad that humans are usually bombarded with when it comes to the environment. Here are photographers whose goals/missions are to do just that, showcase the beauty and treasures that are not always seen. They capture images that someone, in their day to day life, would not see all

the time. Tim Laman has been working all around the world, documenting even the most remote corners of it (Laman, 2022). He has even been published in several feature stories in National Geographic magazine and worked on films with Netflix and British Broadcasting Company (BBC). What really caught my eye in his pictures, was the way he captures the animals in their natural habitats. The focus is solely on the animals because the backgrounds are almost uniform in color scheme. The animals immediately draw your attention.

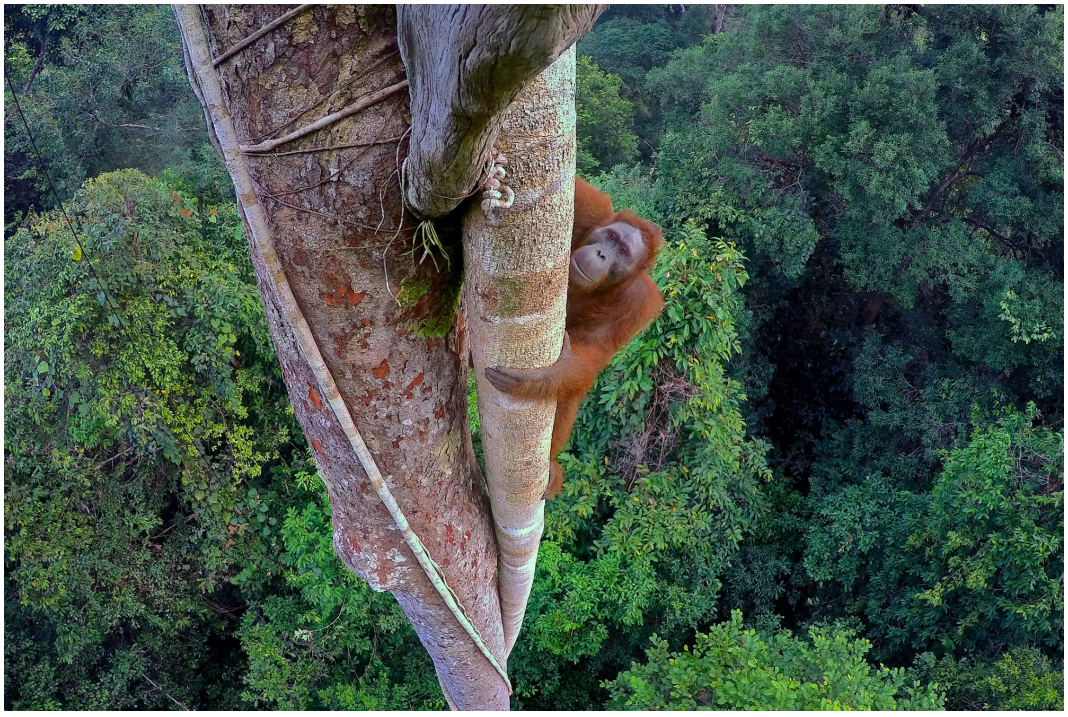


Fig 9. An orangutan on a tree.



Fig 10. Two Spix night monkeys in a tree.

Meg Farrar's method for taking pictures is "Experimentation, experimentation, and some more experimentation" (Farrar, n.d.). She endlessly tries new approaches until she finds the perfect shot. The results tell the "ignored perfection of nature" narrative which is part of her collection shown below. I love the way Farrar gets up close shots with blurred backgrounds. It puts the focus on the subject and draws your attention to it immediately.



Fig 11. A flower from Farrar's collection, "Ann's Garden".



Fig 12. Flowers from Farrar's collection, "Ann's Garden".



Fig 13. A jellyfish from Farrar's "Moments" collection

Matteo Andrei spends a lot of time taking shots while visiting the world, which somehow give the impression of unreal, yet highly satisfying, landscapes (Andrei, 2021 & Sitbon, 2017). He tries to capture what the eyes cannot see. A question he always keeps in the back of his mind is, "should art simply imitate nature, or try to improve it?". I could look for hours at his pictures because of the attention to details he captures. The landscapes and the colors please the eye and give the illusion the image goes on forever.



Fig 14. A valley between mountain ridges.



Fig 15. A body of water with surrounding rocks.



Fig 16. A vast landscape with the sun above.

Michael Yamashita is a great storyteller who uses his work to document the present history and the world we live in (The Photo Society, 2017). Yamashita is a distinguished photographer who has shot for National Geographic (Yamashita, 2017). His style is to capture smaller objects with a larger background. What I like about his pictures is the motion he

captures. Although the background looks like it is not moving you can there is movement. In the first picture you can see the camels' foot tracks, and in the second picture you can see the water is moving through the ripples that the people are creating.



Fig 17. Six camels walking in front of a sand dune.



Fig 18. People walking in the water.

Although these photographers all take different pictures, they all use their skills and creativity to build a connection between the viewer of these pictures and the environment within the pictures. These pictures portray the beauty of this world and not the negative forces at play within climate change. They are there to spread joy and hopefulness in the world instead of sending the repetitive message that the world is too far along to help and doomed for the future.

A piece from The Guardian by Rebecca Solnit, *Ten ways to confront the climate crisis without losing hope*, lists and goes into details about a "set of tools [she had] found useful both for the inward business of attending to [her] state of mind, and for the outward work of trying to do something about the climate crisis – which are not necessarily separate jobs" (2021). Point number 10 is, "Don't neglect beauty". The description of the point opens up with the quote, "Climate chaos makes us fear that we will lose what is beautiful in this world". But what about what is beautiful now and the fact that the earth is still here? Solnit then talks about how people hear stories about ice, coral reefs, and violent events to try and wake people up to the fact that the climate is changing. She now has a different fear now, "that this chaos will come to seem inevitable, and even normal, as war does to someone who has lived their life in wartime". Now needs to be told about how beautiful, how rich, how harmonious the Earth we inherited was, how beautiful its patterns were, and in some times and places still are, and how much we can do to restore this and to protect what survives. Pictures of how great this earth is even through all the chaos that is happening provides a way for us to celebrate everything around us "otherwise we might forget why we are fighting".

Just like how Solnit wants to tell and portray how beautiful the Earth is to restore and protect it, so do I through pictures. The research that I have done on all the photographers that I mentioned above plays a role in what I am trying to accomplish. I want to spread the message of how beautiful the Earth is instead of the environmental chaos that has become the norm. That is why I found photographers who align with what I am trying to accomplish. Although my pictures will not be taken from the top of a tall tree or in the ocean, I can still start somewhere which is at my college, Allegheny College.

Methods

I took walks anywhere that I walked around on Allegheny College's campus. I took pictures of whatever I felt like taking pictures of. There were not really any rules or guidelines for what I took pictures of. The way I took pictures was to spot an object or scene that I would not have noticed on my day to day. I looked a little closer at everything around me, and that is what I took pictures of. The biggest thing that I had to remind myself of was that if the picture did not turn out the way I wanted it to, then not to get discouraged. There is beauty all around us.

Once I took the pictures that I wanted for the day, I took the Secure Digital (SD) card out of the camera and looked at the pictures on a computer. I figured out which ones I liked and did not like. I wrote down image numbers that I liked, and kept track of what I liked about the picture. Then, I would go out and shoot some more by getting different angles of the images that I liked, and I captured new images in locations that I previously had not been. The whole process of how I took pictures was to shoot, next observe, and then shoot again. What I was looking for while observing the pictures was a list of things that I personally answered, but questions and answers will change because humans are unique.

1. Was the picture blurry or clear overall?
    a. Blurry = deleted the picture
    b. Clear = moved onto the next question

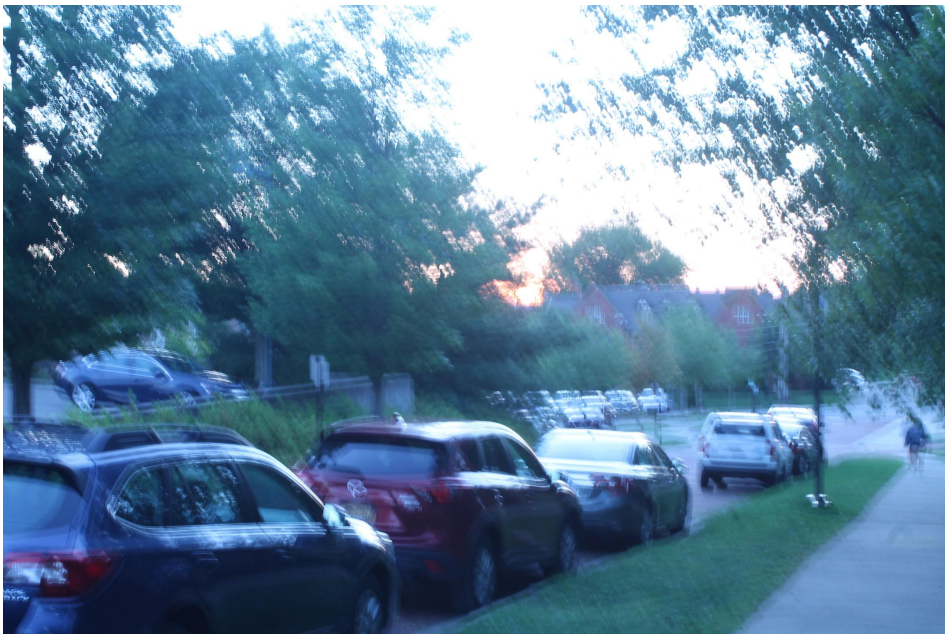


Figure 19. An example of blurriness.

2. Is the picture underexposed or too overexposed?
    a. Too dark or exposed = deleted the picture
    b. Balanced level of dark/exposed = moved on the next question



Figure 20. This picture is underexposed.



Figure 21. The subject is too overexposed.

3. Do I overall like the shot?
    a. Yes = Looked at and mentally kept track of what I liked about the picture for guiding how I take my future pictures, and moved onto the next picture I took

b. Maybe = Go out and shoot the same subject/landscape from different eye angles and restart the process of going through this list
c. No = Figured out what I did not like about the picture and kept that in mind while taking pictures that followed, and then restarted the process of going through this list

Once I had collected over 500 pictures, I chose twenty-five pictures that I liked the most from that collection, and showed it to a small audience that was made up by my comp group to get their feedback. I asked them to look at these pictures as I clicked through them and to tell me what message they received or what story they saw after viewing the pictures. I received comments about what they personally liked about the pictures, what stood out to them, and advice I could use to take future pictures. From there, I went out to shoot more images with a focus on capturing very up close images of objects, and then slowly moved the framing of the image outwards, in a more zoomed out perspective. I then went through to find pairs of pictures that I liked the best, then presented it to my comp group again. From their feedback and my personal opinion, I picked 7 pairs of pictures. One picture was very zoomed in and detailed, and the other picture was zoomed out, taking in the whole landscape. I did minor editing such as color adjustments using Adobe Photoshop. The last step I took was printing out the pictures to be put into frames. The zoomed out pictures were put in 5x7 inch frames, and the zoomed in pictures were put in 27.4x39.4 inch frames to be put on display.

Camera Overview

I took pictures with a Canon EOS T3 and a Canon EOS T7, but any camera could be used. The Secure Digital (SD) card was the memory of a camera that was placed within the camera on the bottom. The SD card was what was holding all the photographs I took. If my SD card filled up to its storage capacity, then I would have to switch it out for a SD card that had storage on it. I had my camera shooting settings set to capture both raw and jpeg images. Raw images were the file types that could be uploaded to Adobe photoshop to edit because they contained the image information captured by the digital camera's sensors, completely uncompressed. Jpeg images were compressed and processed through the camera. I also shot in

auto ISO so it adjusted automatically to whatever I was taking pictures of. These are the camera settings that I had been mostly using:

- **Aperture** controls how much light is being let into the camera
    - I held in the aperture button, and used the control dial on the top of the camera to change the aperture.



Figure 22. Aperture button



Figure 23. Control dial

- The icon that you will look for on your display screen will be the f/#.# to see the level of f stops you are using.



Figure 24. Aperture icon

- When I was capturing low-light images, I would use a lower aperture to let more light into the camera.
    - A lower aperture also created a shallow depth of field which means the background was blurry.



Figure 25. Shallow depth of field

- A higher aperture means that less light is entering the camera.
    - This setting is used to capture an image where I wanted everything in my shot to be in focus and detailed which was a deep depth of field.



Figure 26. Deep depth of field

- **Shutter speed** is the speed at which the shutter of the camera closes and controls the exposure which is the amount of light the camera takes in
    - I used a faster shutter speed to create a shorter exposure which would capture motion but keep the motion that is happening in the picture clear.
        - I aimed for a shutter speed of 1/250 or higher to capture motion freeze which is what the picture below is showing.



Figure 27. Motion freeze

- I used a slower shutter speed to create a longer exposure that would capture motion but keep the motion that is happening in the picture blurry.
    - I aimed for a shutter speed of 1/60 or lower. I had to use a tripod to capture motion blur, which is what is shown in the picture below, to keep the camera steady.



Figure 28. Motion blur

- When I was not sure if my settings were where they should be and needed a little help adjusting them, I would look at the exposure compensation icon on the display screen to get the little ticker in the middle of the bar to ensure my exposure was at the right level.



Figure 29. Exposure compensation icon

  - If the camera was picking up that the image I was trying to capture was too dark, the ticker would be to the left.

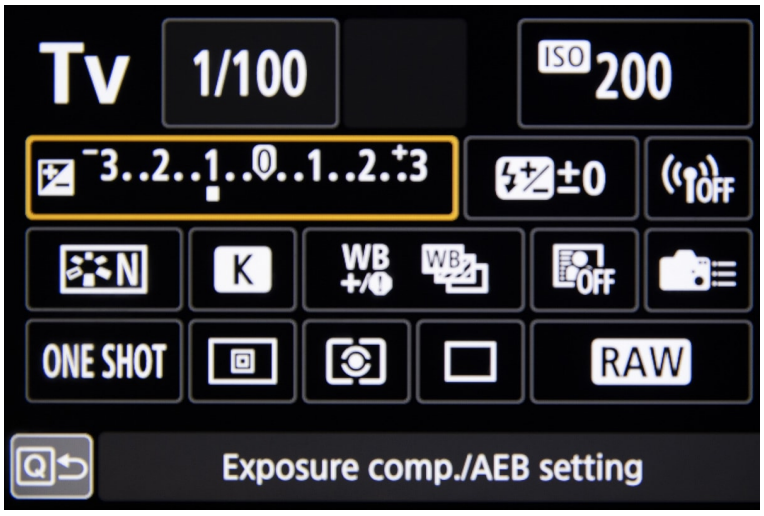


Figure 30. Exposure compensation ticker indicating underexposure



Figure 31. Image underexposed

- If the camera was picking up that the image I was trying to capture was too light, the ticker would be to the right.



Figure 32. Exposure compensation ticker indicating overexposure



Figure 33. Image overexposed

Results

These are the 7 pairs of pictures I selected for their ability to highlight the beauty of the environment on Allegheny College's campus (see Figures 34 - 47). The zoomed in picture is shown first to show the detail and give the viewer a personal sense of the object in the picture. The zoomed out picture is shown second to show where the upclose object is located within the larger image of the environment.



Figure 34. Nest in tree



Figure 35. Trees in front of brick buildings



Figure 36. Lichen



Figure 37. Three trees in front of brick buildings



Figure 38. Brown leaf



Figure 39. Brush in front of a brick building



Figure 40. Birch tree



Figure 41. Birch tree in front of brick building



Figure 42. Orange leaf on top of snow



Figure 43. Car with leaves on it, in front of a tree



Figure 44. Leaves on a bush with snow



Figure 45. Bush in front of brick building with snow



Figure 46. Treeline in the horizon



Figure 47. Brick building with snow on roof with a treeline in the horizon

This is how the pictures are displayed in their frames (see Figures 48 - 54). The drastic jump of scale from very zoomed in and very zoomed out made the viewer look closer to figure

out where the zoomed in picture was located, mimicking how one should slow down and take a closer look at the beauty around them.



Figure 48. Nest in tree and trees in front of brick buildings



Figure 49. Lichen and three trees in front of brick buildings



Figure 50. Brown leaf and brush in front of a brick building



Figure 51. Birch tree and birch tree in front of brick building



Figure 52. Orange leaf on top of snow and Car with leaves on it, in front of a tree



Figure 53. Leaves on a bush with snow and Bush in front of brick building with snow



Figure 54. Treeline in the horizon and Brick building with snow on roof with a treeline in the horizon

Discussion

People these days are numb to the environmental chaos around them that is portrayed through detrimental images of the environment such as Figures 1-8. A study done by Kellstedt et al. found that individuals who reported high exposure to information about global warming also reported feeling less able to effectively address the issue (2008). Negative imagery of the environment has left people feeling hopeless and fearful for the future of the world. But what if there was a way to expose people to positive imagery of the environment that gives them hope and optimism for the future? Exposure to nature increases positive mood and decreases negative mood (Tyrväinen et al., 2014; Ulrich et al., 1991). Evidence suggests that natural environments, and images of natural environments, can have beneficial effects on mood and help people (Berman et al. 2008; Velarde et al., 2007).

Taking those studies into account, I came up with the idea to use positive imagery. I wanted to answer the question, "How can my photography get people to appreciate Allegheny College's environment?" The result of this research provides the audience with seven pairs of pictures. One picture is zoomed in and the other picture is zoomed out. These pictures aim to reframe the environmental narrative through photography by getting people to slow down and look at what is in the environment surrounding them. I wanted the viewers of my pictures to slow down from their busy lives and actually look and realize what is around them, all down to the smallest details. The zoomed in picture makes the audience look at the subject up close without any context of where it was taken. The zoomed out picture takes the eyes away from the up close subject and forces the audience to look at all the surroundings of the initially zoomed in subject. The jump between the zoomed in picture and zoomed out picture accentuates the difference between taking the time to actually observe the upclose details of the environment and not noticing those details at first glance or at all.

Although the results of my comp were conclusive to seven pairs of pictures, I was not able to actually find out whether or not these kinds of pictures made a change or improvement of someone's opinion of the environment. So, the main limitation of my project was that I did not actually receive an answer of whether or not my pictures actually made people appreciate Allegheny College's environment. That is where further research will be needed in the future. Another limitation to my project was that it only took place on Allegheny College's campus. This means that these pictures may have a greater effect on those who are familiar to this

campus. So if this study was performed again, other pictures that are not limited to Allegheny College's environment should be used to reach a larger audience.

Capturing and displaying pictures of the environment in detail may make people slow down and actually appreciate the environment that we have now. Even though climate change is a thing and is happening now, that does not mean that we, as humans, have to give up on the Earth. Yes, we are bombarded with all the bad, detrimental events that are happening to the environment. Yes, some people are numb to this chaos because they have seen the same images over and over again. Some people are too fearful of the future or feel too doomed to do anything to help save the Earth. But the time to take action to save the planet is now and that is where my pictures of detail come into display.

References

Agency Staff. (13 August 2013). Ice and dire: Polar bear clings on tight as the iceberg he's resting on melts away. *Mirror*. https://www.mirror.co.uk/news/uk-news/polar-bear-clings-tight-iceberg-882963

Al-Deen, H. S. N., & Hendricks, J. A. (2011). Social media: usage and impact. Lexington books.

Andrei, Matteo. (2021). https://www.matteoandrei.it/

Avellar, Justin. (18 December 2020). Car emissions are a major source of pollution. *Lewis & Clark*. https://law.lclark.edu/live/blogs/156-car-emissions-are-a-major-source-of-pollution-

Ballew, M. T., Leiserowitz, A., Roser-Renouf, C., Rosenthal, S. A., Kotcher, J. E., Marlon, J. R., ... & Maibach, E. W. (2019). Climate change in the American mind: Data, tools, and trends. Environment: Science and Policy for Sustainable Development, 61(3), 4-18.

Banholzer, S., Kossin, J., & Donner, S. (2014). The impact of climate change on natural disasters. In Reducing disaster: Early warning systems for climate change (pp. 21-49). Springer, Dordrecht.

Beckage, B., Gross, L. J., Lacasse, K., Carr, E., Metcalf, S. S., Winter, J. M., ... & Hoffman, F. M. (2018). Linking models of human behaviour and climate alters projected climate change. Nature Climate Change, 8(1), 79-84.

Berman, M. G., Jonides, J., & Kaplan, S. (2008). The cognitive benefits of interacting with nature. Psychological science, 19(12), 1207-1212.

Cianconi, P., Betrò, S., & Janiri, L. (2020). The impact of climate change on mental health: a systematic descriptive review. Frontiers in psychiatry, 11, 74.

Epstein, Keith. (10 June 2011). Decades after Clear Air Act, most smokestacks still lack scrubbers. *The Center for Public Integrity*. https://publicintegrity.org/environment/decades-after-clear-air-act-most-smokestacks-still-lack-scrubbers/

Farrar, Meg. (n.d.). Home. https://www.megfarrar.com/

Golding, S. E., Gatersleben, B., & Cropley, M. (2018). An experimental exploration of the effects of exposure to images of nature on rumination. International Journal of Environmental Research and Public Health, 15(2), 300.

Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., ... & van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey. The Lancet Planetary Health, 5(12), e863-e873.

Kalmus, Peter. (4 November 2021). Climate depression is real And it is spreading fast among our youth. *The Guardian*. https://www.theguardian.com/commentisfree/2021/nov/04/climate-depression-youth-crisis-world-leaders

Kellstedt, P. M., Zahran, S., & Vedlitz, A. (2008). Personal efficacy, the information environment, and attitudes toward global warming and climate change in the United States. *Risk Analysis: An International Journal*, *28*(1), 113-126.

Kinney, P. L. (2018). Interactions of climate change, air pollution, and human health. Current environmental health reports, 5(1), 179-186.

Kintisch, Eli. (18 March 2015). Amazon rainforest ability to soak up carbon dioxide is falling.

Science. https://www.science.org/content/article/amazon-rainforest-ability-soak-carbon-dioxide-falling

Laman, Tim. (2022). *Wildlife Journalist*. https://www.timlaman.com/tim-laman-bio/

Landrigan, P. J., Stegeman, J. J., Fleming, L. E., Allemand, D., Anderson, D. M., Backer, L. C., ... & Rampal, P. (2020). Human health and ocean pollution. Annals of global health, 86(1).

Lavars, Nick. (2 August 2021). Plastic pollution is laying "evolutionary traps" for developing turtles. *New Atlas*. https://newatlas.com/environment/baby-turtles-plastic-pollution-evolutionary-traps/

Maibach, E., Myers, T., & Leiserowitz, A. (2014). Climate scientists need to set the record straight: There is a scientific consensus that human‐caused climate change is happening. Earth's Future, 2(5), 295-298.

Maran, D. A., & Begotti, T. (2021). Media exposure to climate change, anxiety, and efficacy beliefs in a sample of Italian university students. *International Journal of Environmental Research and Public Health*, *18*(17), 9358.

Mongabay. (27 July 2012). RAINFOREST LOGGING. https://rainforests.mongabay.com/0807.htm

Monge, Ernesto Fernández & Jungwiwattanaporn, Megan. (10 October 2022). Plastic Pollution Global Problem Demands a Global Solution. *PEW*. https://www.pewtrusts.org/en/research-and-analysis/articles/2022/10/10/plastic-pollution-global-problem-demands-a-global-solution

Nerem, R. S., Beckley, B. D., Fasullo, J. T., Hamlington, B. D., Masters, D., & Mitchum, G. T.

(2018). Climate-change–driven accelerated sea-level rise detected in the altimeter era. Proceedings of the national academy of sciences, 115(9), 2022-2025.

Perrin, A. (2015). Social media usage. Pew research center, 125, 52-68.

The Photo Society. (2022). *Michael Yamashita*. https://thephotosociety.org/member/michael-yamashita/

Pink, Jessica. (26 July 2018). 3 ways climate change affects tropical rainforests. *Conservation International*. https://www.conservation.org/

Purelogic Labs India. (20 August 2018). IMPACTS OF AIR POLLUTION ON HUMAN LIVES. *Medium.* https://medium.com/@pranaairmask/impacts-of-air-pollution-on-human-lives-d8e6b292fdab

Rainforest Alliance. (5 December 2017). Tropical Forests in Our Daily Lives. https://www.rainforest-alliance.org/everyday-actions/tropical-forests-in-our-daily-lives/

Rosen, Julia. (26 August 2019). The Amazon rainforest is on fire. Climate scientists fear a tipping point is near. *Los Angeles Times*. https://www.latimes.com/environment/story/2019-08-25/amazon-rainforest-fires-climate

Solnit, Rebecca. (18 November 2021). Ten ways to confront the climate crisis without losing hope. *The Guardian*. https://www.theguardian.com/environment/2021/nov/18/ten-ways-confront-climate-crisis-without-losing-hope-rebecca-solnit-reconstruction-after-covid

Sitbon, Jonathan. (27 July 2017). 10 Photographers That Change the Way We Look at Nature. *WixBlog*. https://www.wix.com/blog/2017/07/nature-photography/?utm_source=google&utm_medium=cpc&utm_campaign=12188669214^114296906861&experiment_id=^^5305958682

27^^_DSA&gclid=Cj0KCQiAyracBhDoARIsACGFcS73TfI0fFPIVMmZAwCtQacKaAKKPETIqho9bKHOoa7cJxAGiwaW7UEaAo72EALw_wcB

Taylor, Chloe. (19 November 2021). Deforestation in Brazil's Amazon rainforest hits 15-year high, data shows. *CNBC*. https://www.cnbc.com/2021/11/19/deforestation-in-brazils-amazon-rainforest-hits-15-year-high.html

Trenberth, K. E. (2018). Climate change caused by human activities is happening and it already has major consequences. Journal of energy & natural resources law, 36(4), 463-481.

Tyrväinen, L., Ojala, A., Korpela, K., Lanki, T., Tsunetsugu, Y., & Kagawa, T. (2014). The influence of urban green environments on stress relief measures: A field experiment. Journal of environmental psychology, 38, 1-9.

Ulrich, R. S., Simons, R. F., Losito, B. D., Fiorito, E., Miles, M. A., & Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. Journal of environmental psychology, 11(3), 201-230

Van Aalst, M. K. (2006). The impacts of climate change on the risk of natural disasters. Disasters, 30(1), 5-18.

Velarde, M. D., Fry, G., & Tveit, M. (2007). Health effects of viewing landscapes–Landscape types in environmental psychology. Urban forestry & urban greening, 6(4), 199-212.

Xu, R., Yu, P., Abramson, M. J., Johnston, F. H., Samet, J. M., Bell, M. L., ... & Guo, Y. (2020). Wildfires, global climate change, and human health. New England Journal of Medicine, 383(22), 2173-2181.

Yamashita, Michael. (2017). *Nat Geo*. https://www.michaelyamashita.com/Nat-Geo/National-Parks/1