

Rochester Institute of Technology

## RIT Digital Institutional Repository

---

Theses

---

4-8-2024

### Blue Peace

Mengxuan Huang  
mh5677@rit.edu

Follow this and additional works at: <https://repository.rit.edu/theses>

---

#### Recommended Citation

Huang, Mengxuan, "Blue Peace" (2024). Thesis. Rochester Institute of Technology. Accessed from

This Thesis is brought to you for free and open access by the RIT Libraries. For more information, please contact [repository@rit.edu](mailto:repository@rit.edu).

**BLUE PEACE**

**by**

**Mengxuan Huang**

**A Thesis Submitted in Partial Fulfillment of the Requirements for the  
Degree of Master of Fine Arts in Visual Communication Design**

**School of Design  
College of Art and Design**

**Rochester Institute of Technology  
Rochester, NY  
April 8, 2024**

# Committee Approval

---

Mike Strobert Date  
Graduate Program Director, Visual Communication Design program/ Thesis Advisor

---

Adam Smith Date  
Associate Professor, Visual Communication Design program/ Thesis Advisor

## **Abstract**

In the face of escalating environmental degradation, the oceans stand as a testament to the profound impact of human activity on the natural world. This abstract delves into the transformative potential of visual design in communicating the changes wrought by human actions upon the oceanic ecosystem, while concurrently fostering public engagement and awareness to drive conservation efforts.

Visual design emerges as a dynamic medium for elucidating the multifaceted impacts of human intervention on ocean health. Through innovative techniques such as data visualization, infographic storytelling, and immersive digital experiences, designers can distill complex scientific findings into digestible narratives that vividly illustrate the extent of human-induced alterations to marine ecosystems. By visually juxtaposing pristine habitats with degraded environments, visual design effectively conveys the urgency of addressing issues such as pollution, overfishing, and habitat destruction, compelling viewers to confront the stark reality of oceanic decline.

Moreover, visual design serves as a powerful conduit for publicizing ocean knowledge in a manner that captivates and educates audiences. By crafting visually stunning educational materials, interactive exhibits, and engaging social media campaigns, designers can spark curiosity and inspire individuals to delve deeper into the intricacies of ocean science and conservation. Through compelling visual storytelling, audiences are empowered to connect with the ocean on a personal level, fostering a sense of stewardship and instigating positive behavioral change.

Ultimately, the convergence of visual design and ocean conservation holds immense promise in mobilizing collective action to protect marine ecosystems. By harnessing the communicative power of visual media to convey the gravity of human-induced changes to the ocean and disseminating ocean knowledge in an engaging and accessible manner, we can catalyze a global movement towards sustainable stewardship of our planet's most precious resource.

## **Keywords**

Visual, Graphic, Ocean, Pollution, information

This thesis introduces 'BLUE PEACE' as an exploratory venture into the use of visual media for ocean conservation. It seeks to discover how innovative design can transform public engagement and drive action. While the project showcases potential applications, it is primarily an exploration of how visual media can be effectively utilized in environmental activism, aiming to demonstrate its impact and efficacy in raising awareness and inciting action towards environmental conservation.

In recent years, the issue of marine pollution has escalated into a global crisis, posing a significant threat to the health of our oceans and the diverse ecosystems they support. Ocean area occupies 80% of the total area of the earth. But humans live on land, and we don't always care about ocean environment. The scourge of marine pollution exacts a heavy toll on ocean ecosystems, disrupting fragile marine habitats and jeopardizing the health and survival of countless species. Macroplastics, including discarded plastic bottles, bags, and fishing gear, pose a direct threat to marine life through entanglement and ingestion. Among the most insidious culprits are macroplastics and microplastics, pervasive pollutants that contaminate marine environments and endanger marine life. As awareness of the environmental repercussions of marine pollution grows, there is a pressing need for innovative approaches to engage and mobilize individuals in the fight to protect our oceans. I examine the role of visual media, specifically videos, posters, and interactive software, in communicating data on marine pollution and promoting environmental awareness. Through the lens of the BLUE PEACE initiative, I explore how harnessing the power of visual storytelling can catalyze action and inspire stewardship of our precious marine resources.

So, the problem is how to talk about ocean changed by human and publicize ocean knowledge in an interesting way to achieve the goal of protecting ocean. As a design student, I have always believed that vision can reflect some problems more intuitively. For some topics and social issues that I am not interested in, if they are presented to me in a visual way, I will be more willing to understand and pay attention to them.

'BLUE PEACE' employs a palette of vibrant colors and graphical layouts to illustrate the severity of marine pollution. This section of the thesis will elaborate on how these design choices are rooted in color theory and environmental graphic design, specifically created to draw attention and provoke responses. In the visible light spectrum, purple is the least intense and most easily overlooked color. Ocean pollution caused by overfishing is also one of the most easily forgotten items. So, I want to use purple to represent plastic pollution through fishing. But I chose a very bright purple, even a little neon, to show this color clearly. For green, it usually makes people think of environmental protection. But a lot of pollution comes from human activities on land. So, I want to show it ironically. Then I use worldwide latitude shape to visualize data. I chose to use a blue color similar to the ocean to represent the position of the plastic pollution, because almost all of them are on the ocean surface. And used circles to present the ripples of the ocean in a way like annual rings, creating a sense of flow. To better match the theme, I designed the blue line into the shape of marine life. Based on the location, I use purple and green to represent the reason of this pollution. Purple means plastic from fishing activities, green means plastic from Land-based activities. For the texture I used, I add material to the fonts to show the flow of sea water. To show the concentration of plastic pollution. I use the form of the rotating sphere and the different colors to indicate the concentration per square kilometer based on the location of plastic pollution.

Blue peace logo is made up of a circle and three wavy lines. Blue peace publishes global ocean data, so the circles represent earth and the wavy lines represent ocean waves. In dynamic version. Logo consists of three water shapes from the beginning.

The creation of 'BLUE PEACE' data visualizations were created to translate complex scientific data into understandable and engaging visual stories. This section will outline how and why these graphics create

an immersive experience. To heighten viewers' empathy, I employed After Effects to transform the flat earth map into a dynamic three-dimensional representation. This interactive visualization rotates alongside marked plastic pollution areas, synchronizing their movement with the earth's rotation. This technique aims to immerse audiences in the environmental narrative, fostering a deeper understanding and emotional connection to the urgency of plastic pollution.

Visual media possesses a unique ability to transcend language barriers and convey complex concepts in a compelling and accessible manner. Videos, with their dynamic audiovisual elements, have the power to evoke emotional responses and foster empathy towards environmental issues. Posters, on the other hand, serve as powerful visual aids, distilling key messages into succinct and visually arresting formats. Interactive software offers an immersive and participatory experience, enabling users to explore data and gain insights into the intricate dynamics of marine pollution. By harnessing the persuasive potential of visual media, environmental communicators can effectively engage diverse audiences and inspire meaningful action towards ocean conservation.

Because social media is one of the main tools for information dissemination now, I created some app interfaces and videos to make it more convenient for users to view marine plastic pollution anywhere at any time. Some short videos will appear on TikTok or Instagram. Use interesting visuals to get people's attention. People can touch to explore to see more content or share it with friends. Users can pause it at any time and touch any point on the earth to see the specific location and source of the pollution. Users can also share with others through the share button.

At the heart of BLUE PEACE's mission lies a commitment to creating visually stunning content that resonates with audiences and drives meaningful engagement. Videos produced by BLUE PEACE leverage cinematic storytelling techniques to convey the urgency of marine pollution issues and inspire action. Posters are meticulously designed to capture attention and communicate key messages succinctly, employing vibrant colors and compelling imagery to leave a lasting impression. Interactive software developed by BLUE PEACE offers users an immersive and educational experience, allowing them to explore data on marine pollution and discover actionable insights. By harnessing the power of visual storytelling, BLUE PEACE empowers individuals to make informed choices and advocate for policies that protect our oceans for future generations.

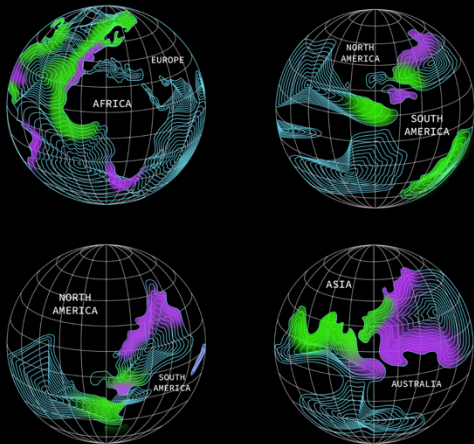
User feedback played a role in the iterative design of 'BLUE PEACE.' For example, initial user tests showed that the interactive ocean pollution map was too cluttered, leading to a redesign that simplified the interface while enhancing the visual impact of pollution data. Also, the initial layout of the icon looked a bit like a sponsor. So, I changed it to a clearer and more interesting layout.

Future designs of 'BLUE PEACE' could explore the incorporation of augmented reality to offer an even more immersive educational experience. By overlaying pollution data directly onto real world environments through AR, users could see the impact of pollution firsthand, potentially increasing engagement and empathy. As we confront the daunting challenges posed by marine pollution, let us heed the call to action embodied by BLUE PEACE and work together to preserve the precious marine ecosystems that sustain life on Earth.

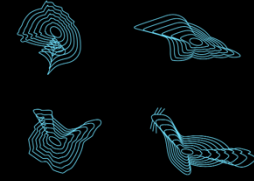
In conclusion, 'BLUE PEACE' showcases the powerful role of design and visual media in environmental education and activism. By employing compelling visual narratives, the project not only informs but also inspires action, creating the way for new methods of environmental communication that can help shape public conversations through better understanding.

## Appendix A:

### ELEMENTS OF MY DESIGN



### PLASTIC on ocean SURFACE

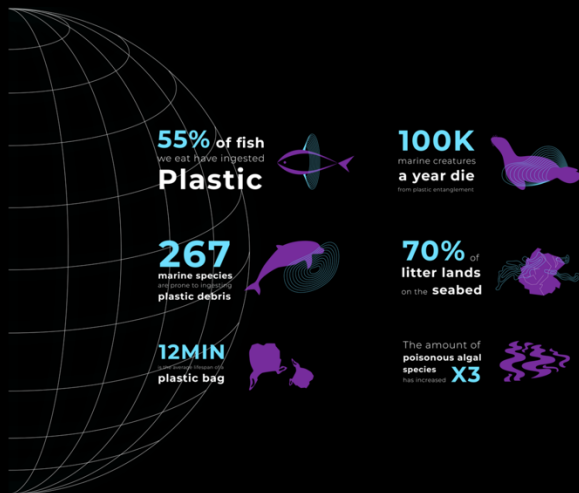


Fishing activities

Land-based activities

I use worldwide latitude shape to visualize data. The blue lines show the location of the plastic pollution, almost all of them on the ocean surface. In order to better match the theme, I designed the blue line into the shape of marine life. Based on the location, I use purple and green to represent the reason of this pollution. Purple means plastic from fishing activities, green means plastic from Land-based activities.

### RESEARCH



The biggest ocean pollution:

**Plastic**

## Appendix B: Bibliography and References

Helen Scales. 2022. *The Brilliant Abyss*. Grove Press

Callum Roberts. 2013. *The Ocean of Life: The Fate of Man and the Sea*. Penguin Publishing Group

David Adam. 2010. *How does climate change affect the ocean?*  
<https://chinadialogueocean.net/zh/2/77466/>

Joe Hinchliffe. 2024. *Great Barrier Reef's worst bleaching leaves giant coral graveyard: 'It looks as if it has been carpet bombed*. [www.theguardian.com](http://www.theguardian.com)

Emily B. Osborne. 2021. *Ocean Ecosystems and Marine Resources*.  
<https://nca2023.globalchange.gov/chapter/10/>

United States Environmental Protection Agency. 2013. *Climate Change Impacts on the Ocean and Marine Resources*. <https://www.epa.gov/climateimpacts/climate-change-impacts-ocean-and-marine-resources>

## Appendix C:

