



ENSIKLOPEDIA TRILOGI

Seri 1

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CHAPTER 13

ANIMATED DESIGN ABOUT WASTE HAZARD TOWARDS CONSERVATION OF TURTLE

By *Khairur Rizki*⁴², *Vidya Kharishma*⁴³, and *Ratih Mahardika*⁴⁴

Abstract

The Sea turtle is an iconic species that complement the diversity of marine life in Indonesia. According to the IUCN, sea turtles are included in the Red List of Threatened Species. The final project entitled "Animated Design About Waste Hazard Towards Conservation of Turtle" aims to be used by conservation agency volunteers and parents to be able to educate children of elementary school age about the dangers of littering plastic waste. According to Anitah (2009: 6) in the journal Learning Strategies in elementary schools, the use of audio-visual educational media suitable for elementary school students, one of which is cartoon animation, so the audio-visual media to be made in this design is an animated video. The design of this final project uses a process method of making animation from data collection, observation, pre-production, production to post-production. The data source used is a literature study to find data in the form of journals and scientific articles, and media determination is done by sending a questionnaire to the community of turtle conservation activists in Indonesia. This research uses iconography and iconology approaches. All visual assets are turned into icons in the form of illustrations which are then turned into short 2-minute animated videos.

13.1. Introduction

13.1.1. Background

Sea turtles are an iconic species that complement the diversity of marine life in Indonesia. Of the seven species of sea turtles in the world, six of them are in Indonesia with less than proper environmental conditions. Because according to the IUCN, sea turtles are included in the Red List of Threatened Species. As a species whose breeding period is quite long and there are only a few hatchlings that become adult turtles after hatching, the sea turtle population is currently increasingly threatened by increasing human activity which destroys turtle habitat and nesting sites, which causes plastic pollution. Its large volume threatens the existence of turtles. Plastic forms that resemble jellyfish are often considered food by turtles. In a recent study, it was even explained that this plastic waste kills 1,000 sea turtles every year. This research was conducted by researchers from the University of Exeter, UK. (Kompas.com, 24 Mei 2019).

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Marine pollution in Indonesia is now even a world concern. Many factors affect marine pollution in Indonesia, one of which is the use of plastic materials that are thrown away carelessly so that they end up in the sea. Many do not know that garbage that is thrown away or not reprocessed will end up in the open oceans, damaging the marine ecosystem. According to Government Regulation Number 19 of 1999 concerning Control of Marine Pollution and / or Destruction, Marine pollution is defined as the entry or inclusion of living things, substances, energy, and/or other components into the marine environment by human activities. Components that cause marine pollution such as chemical particles, industrial waste, mining waste, agricultural and residential waste, noise, or the spread of invasive (foreign) organisms in the sea that have the potential to have harmful effects. As well as in Chapter III article 9 where every person or person in charge of a business and / or activity is prohibited from committing an act that can cause sea pollution. Where the damage to Indonesia's marine nature is currently no longer heeding existing regulations. Currently, Indonesia, as the host for 6 of the 7 species of turtles, is also awarded the second title as the largest contributor to marine debris in the world (Ocean Conservancy), which makes the status of turtles in Indonesia is currently in a state of extreme threat.

Quoted from CNNIndonesia.com's interview with Mirza Dikari Kusri, a turtle expert from the Bogor Agricultural Institute stated that currently various rescue or conservation efforts have been made. With the establishment of turtle egg hatcheries on various beaches in Indonesia and legally protecting turtles. In Indonesia, all types of turtles have been protected in the form of Government Regulation Number 7 of 1999 concerning Conservation of Plant and Animal Species. Educational activities from various conservation organizations and nature observers are also being carried out intensively. According to the manager of the SAYANG community (Friends of Loang Turtles) in NTT, Polikarpus Bala Roning Pukai, the implementation of education about turtles has often been carried out on the beach and in nearby schools. However, the educational media is still minimal due to the lack of audio-visual media that can support the educational activities of volunteers in the Sahabat Penyu Loang community.

Based on the problems obtained, audio-visual media is needed that can educate elementary school-age children about the dangers of littered plastic waste. According to Anitah, in the journal *Learning Strategies in Elementary School*, the use of audio-visual educational media suitable for elementary students, one of which is cartoon animation. "Cartoons are depictions in the form of paintings or caricatures of people, ideas, or situations designed to form student opinions. Cartoons have benefits in learning activities to explain a series of material contents in a logical order and contain meaning in an easy, interesting, and quick way to read by students." So that the audiovisual media that will be created in this design is an animated video. Later this animation can be used by conservation agency volunteers and parents to educate children aged 6 to 10 years in Indonesia.

However, the limitations on the use of devices for children under 13 years old are only allowed to use the device for a maximum of 2 hours a day. According to dr. Jenny Radesky, from Boston Medical Center, USA (Rizqi, November 2018), the animation video is only a short animation duration.

13.1.2. Problem Formulation

Based on the background above, the problem formulations that have been made are as follows:

- a. How do you convey a social campaign by combining traditional animation techniques and motion graphics?

- b. How to design a 2-dimensional animation with an image style suitable for children aged 6-10 years?
- c. How to make audiovisual media that is simple and easy to understand in a short animation video with a duration of approximately 2 minutes?

13.1.3. Limitation of the Problem

The boundaries that will be discussed are around designing animation as a campaign medium that conservation agency volunteers and parents can use to educate children aged 6 to 10 years in Indonesia with a duration of approximately 2 minutes.

13.1.4. Purpose

Based on the formulation of the problem above, the objectives in writing this paper are as follows:

- a. Delivering social campaigns by combining traditional animation techniques and motion graphics.
- b. Design 2-dimensional animation in an image style suitable for children aged 6-10 years
- c. Create animations about the dangers of junk to the preservation of audio-visual turtle with a simple and easy duration lasts approximately 2 minutes

13.2. Method

13.2.1. Observation Research Sites

Research Sites beginning to get visual data about the turtle and its kind at SeaWorld, Taman Impian Jaya Ancol, North Jakarta.

13.2.2. Data Collection

In researching to obtain data and information, the methods used in the data collection process are as follows:

- a. Study literature to find data in the form of journals and scientific articles.
- b. Determining the media is done by sending a questionnaire to the turtle conservation activist communities in Indonesia.

13.3. Research Approach

This research uses iconography and iconology approaches. All visual assets become icons in the form of illustrations. The depiction of turtles and their environment was deepened again through a comparative study using the following works:

- a. Rang Tan (Tahun 2018)
Tells the story of an Indonesian orangutan who was forced out of his house by humans due to forest logging for the development of illegal coconut oil plantations. This video aims to end forest destruction due to illegal palm oil.

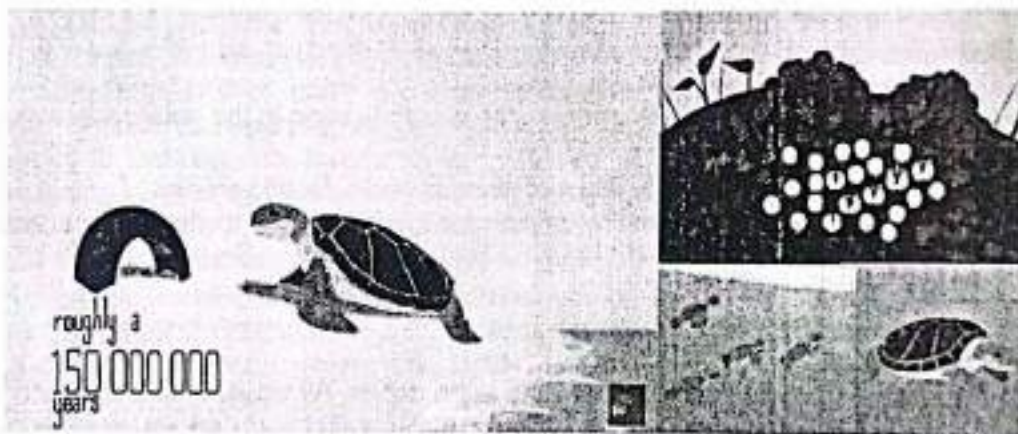
Figure 13.1. Illustration of RangTan



Source: Euronews, November 2018

- b. Biwar (Tahun 2016)
"BIWAR" 2D Animation. The story is inspired by traditional folklore from Indonesia, to be precise from Papua, "Biwar The Dragon Slayer". This is the final project of Wastana Haikal ITB 2016.
- c. The Survival of the Sea Turtle (Tahun 2012)
Animated "The Survival of The Sea Turtle" - TED-Ed. About the journey cycle of a turtle, starting from laying eggs, then hatching the eggs and the small turtles returning to sea with various challenges that must be faced such as predators and natural destruction.

Figure 13.2. Illustration of The Survival of The Sea Turtle



Source: Ted-ed, July 2012

13.4. Pre-Production

13.4.1. Needs Analysis

From the data obtained from the turtle conservation community, campaign media in the form of audio-visuals are very difficult to obtain, so that so far, they only use print media and verbal

campaigns. The lack of available media has also influenced the spread of turtle conservation campaigns in Indonesia.

13.4.2. Concept

In designing this animation, several concepts are made based on the needs and the results of observations that have been made, the concepts include:

a. **Concept of Narrative**

This video provides information about the existence of pollution in the sea, so that people know how dangerous the impact of marine debris is for turtles in Indonesia's oceans.

b. **Visual Concept**

- **Character**

The visual style used in character creation is more of a 2-dimensional digital image with minimalist coloring and color adjustments to the character.

- **Environment**

For turtle habitat, a more diverse color scheme will be conceptualized, depicting marine conditions with illustrations of rubbish and coral.

13.5. Production

13.5.1. *Traditional 2-dimensional Animation Design Concepts*

Making images are done one by one frame by frame for some parts in this animation.

13.5.2. *The Concept of Designing Motion Graphic Animation.*

A movement that can be more flexible and dynamic using the concept of motion graphics.

13.5.3. *Software*

Some software that are used for design and editing are:

a. **Adobe Photoshop**

The use of Adobe Photoshop software in this design as a medium for creating visual assets and frame by frame movement.

b. **Adobe Animate**

Adobe Animate is used to compile frame by frame visual assets that have been created in Adobe Photoshop for later export into pieces of video

c. **Adobe After Effect**

The animated part of the visual assets has been created in Adobe Photoshop and then moved and compiled using motion graphic techniques using Adobe After Effects and then exported into video pieces.

d. **Adobe Premiere**

The final stage of making this animation uses Adobe Premiere to combine pieces of video that have been made using Adobe Animate and Adobe After Effects. Then given additional effects and included background and narration voices.

13.6. Post Production

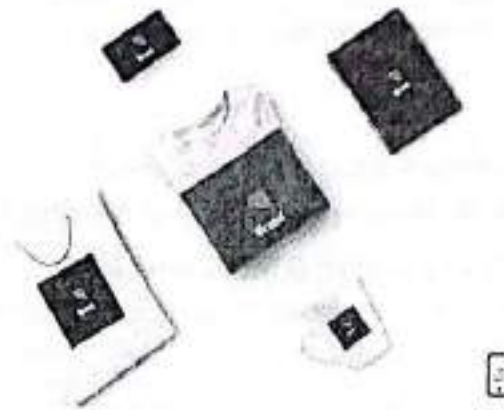
13.6.1. Time Usage Media

The final result of this animated video will be 2 minutes long. This media will be used in the implementation of counseling for turtle rescue volunteers and environmental activists as well as educational media at home with the guidance of parents.

13.6.2. Campaign Supporting Media

The use of animation media as a campaign tool for turtle conservation has not been able to fully assist volunteers in educating them. The need for supporting media to raise information on animated videos such as books about turtles, x banners, souvenirs, and other supporting media as attractions.

Figure 13.3. Merchandise



13.7. Result and Discussion

13.7.1. Result of Analysis of Observation

The research observations were carried out in Dufan, Taman Impian Jaya Ancol, North Jakarta. These observations were made to obtain visual data on marine ecosystems in their original form. Including looking for data on turtle species in Indonesia. From the observations made, they can be grouped into:

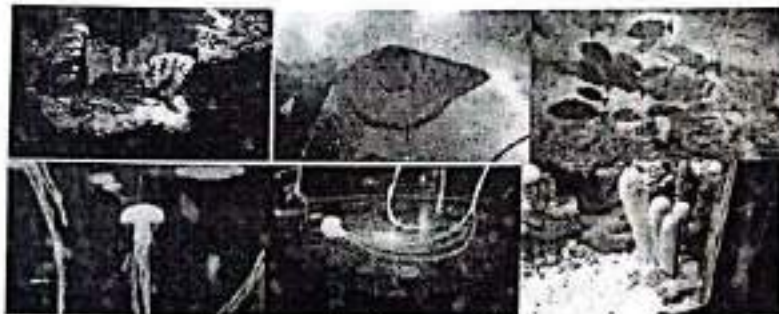
- a. The visual data of turtles, photos containing the types of sea turtles in Indonesia, and photos of examples of turtle species at SeaWorld. The type of turtle in SeaWorld is a type of green turtle which is used as a character reference.
- b. Visual data on underwater biota, containing marine life that is associated with turtle life, such as stingrays, reef fish, coral reefs as habitat, and also jellyfish as turtle food.
- c. Visual data on underwater biota, containing marine life that is associated with turtle life, such as stingrays, reef fish, coral reefs as habitat, and also jellyfish as turtle food.

Figure 13.4. The Visual Data Of Turtles



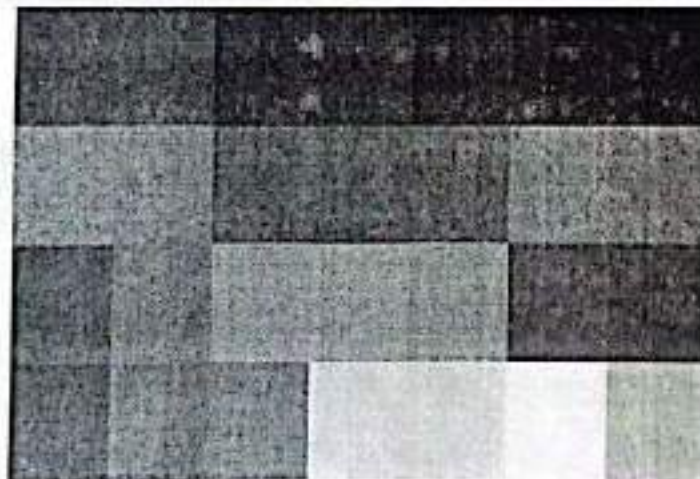
Source: author's personal doc

Figure 13.5. The Visual Data of Turtle's Habitat



Source: author's personal doc

Figure 13.6. Color Palette References



13.7.2. Analysis of the Results of the Questionnaire

The research questionnaire was given to the Loang Turtle Sahabat (SAYANG) community from NTT and was responded to by the community administrator, Polikarpus Bala Roning Pukai.

The data obtained from the volunteers of the turtle conservation community, in addition to the lack of campaign media in the form of audio-visuals, the education carried out by the Loang Turtle Friends is also an effort to foster people's love for the sea and its biota. Then from the results of this questionnaire analysis in addition to determining the media, it is to make the people involved in the Loang Turtle Friends community as characters in the animation.

13.7.3. Comparative Study Analysis

From the existing comparative study data, some things can be concluded from several parts, namely:

- a. The illustration style used in the 3 comparative studies is digital painting and vector illustration.
- b. The animation technique used is a combination of traditional, motion graphics, and 3-dimensional animation.
- c. Using instruments as background sound and narration as an information reader and narrator.

From the conclusion, this animation will be made in the style of digital painting illustration with traditional 2-dimensional animation techniques and motion graphics and the use of a narrator as a storyteller.

13.7.4. Pre-Production Concept

In designing this animation, several concepts are made based on the needs and the results of observations that have been made, the concepts include:

- a. Visual concept
 - Moodboard
The use of mood boards in this design is as an initial reference for the illustration style in animation.

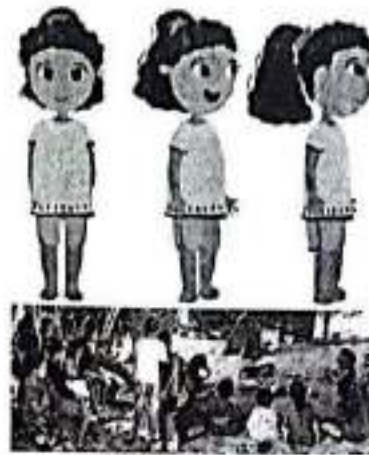
Figure 13.7. The Illustration Style's Moodboard



- Characters
Characters are made based on the population of eastern Indonesia and are taken from activists of the SAYANG community and one of the turtles in Indonesia. The characters in this animated video consist of:

- i. **Little Girl**
The main human character in this animation is an 8-year-old girl who lives on the coast.
The reference to the illustration of the little girl is taken from residents around the reading park of the Sahabat Penyu Loang (SAYANG) community, which is located in East Nusa Tenggara, precisely in Lembata district. With dark skin and curly hair.

Figure 13.8. Illustration of a Little Girl and References



- ii. **Uncle**
Another character is a 35-year-old reading garden guard who also cares about turtle habitat. The reference to the uncle's character is the main resource person as well as the administrator of the Loang Turtle Friends community, Polikarpus Bala Roning Pukai also plays a role as a figure who cares deeply about the sustainability of turtles in his hometown.

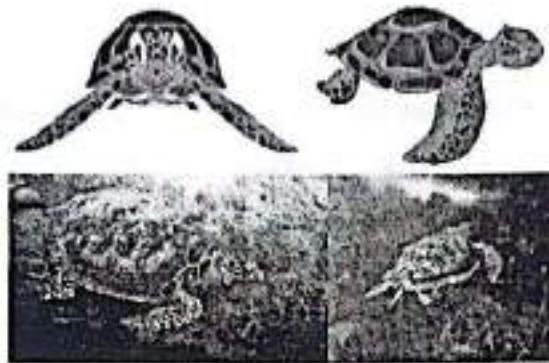
Figure 13.9. Illustration of Uncle and References



iii. Green Turtles

Green turtles are the most widely distributed turtles in Indonesia and represent the overall status of endangered turtles in Indonesia

Figure 13.10. Illustration of Green Turtles and References

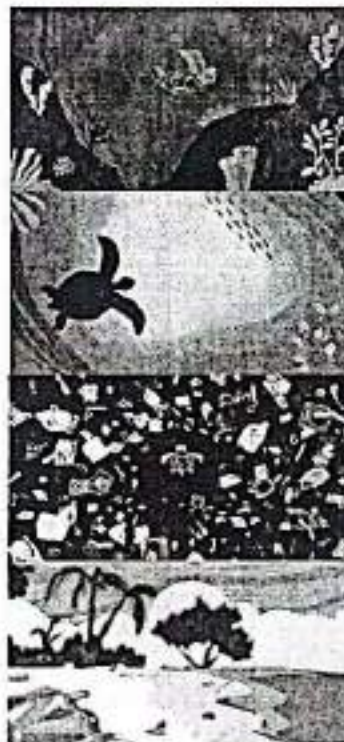


• Environment

For the turtle environment is conceptualized with more diverse colors, depicting polluted coastal and deep-sea conditions with illustrations of marine habitats such as coral and pollution in the form of garbage such as:

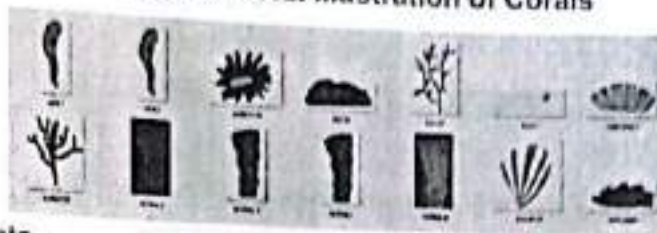
i. Habitat

Figure 13.11. Illustration of The Deep-sea and The Beach Environment



ii. Coral reefs and marine biota

Figure 13.12. Illustration of Corals



iii. Waste

Figure 13.13. Illustration of Garbages



13.8. Production

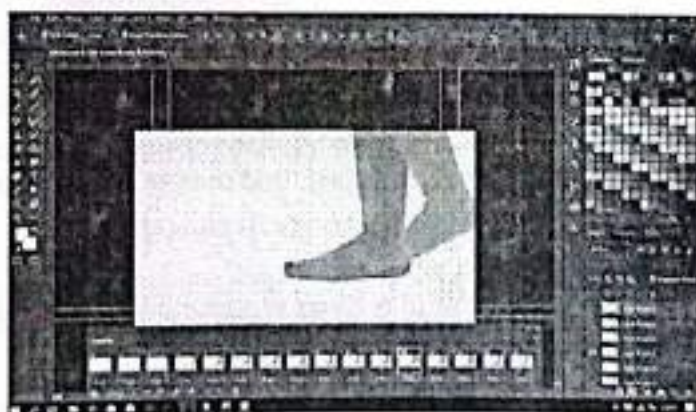
13.8.1. Design Concept Traditional 2-Dimensional Animation

Some parts of animation use the traditional 2-dimensional animation concept. Using Adobe Photoshop and Adobe Animate software with techniques such as frame by frame animation, classic motion tween, and shape tween.

a. Frame by Frame

Draws movements one by one with a speed of 24 frames per second, which means that there are 24 frames in 1 movement or at least 12 frames to become 1 second of video clips like the movements of a little girl's steps.

Figure 13.14. Frame by Frame



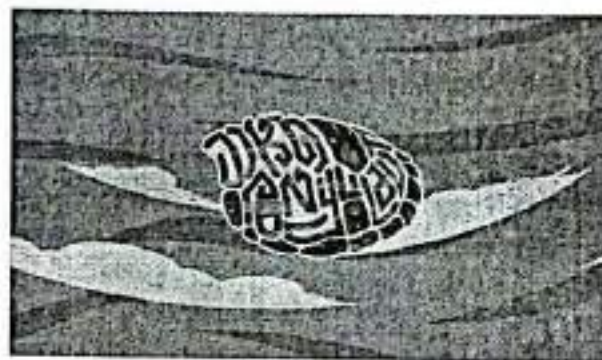
- b. **Classic Motion Tween**
Moves the image from one position to another on the part of the flying bird.

Figure 13.15. Classic Motion Tween



- c. **Classic Shape Tween**
Converts one plane shape to another so that the beach wave motion in the video looks smoother.

Figure 13.16. Classic Shape Tween



13.8.2. Motion Graphic Animation Design Concept

The use of graphic motion in this design is intended for parts with simple movements and techniques, such as position, scale, opacity, masking, and puppet pins, as well as additional effects in the form of wave warp.

- a. **Position**
Moves the object from one point to another in some parts of the object movement in the animation video.
- b. **Scale**
Change and distort the size of the object so that it makes the turtle characters appear closer to or away from the screen.

- c. **Opacity**
Opacity is used to change the color of the object to be faded or transparent which is used when the logo appears at the end of the video.
- d. **Masking**
Cover some objects by using other object shapes. Makes the transition effect smoother when the turtle appears at the beginning.
- e. **Puppet Pin**
Only moves some parts of the object we want, such as the turtle's fin waving when it turns around.
- f. **Wave Warp**
Creates a wavy or fluttering effect to make objects in the sea in the video like following the movement of water.

13.8.3. *Cinematography*

In the making of this animated film, the following elements are used:

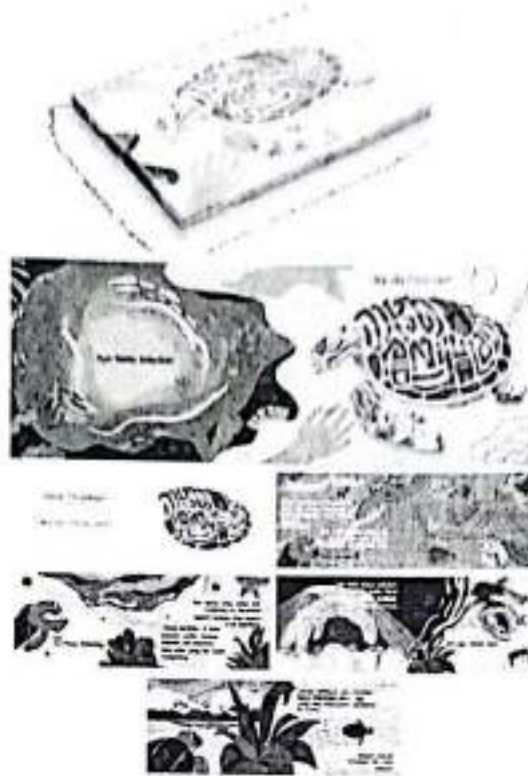
- a. **Framing (Type of Shot) or framing of images consisting of:**
 - Extra / Extreme Long Shot
 - Medium Long Shot
 - Close Up
 - Extreme Close Up
 - Point of View
- b. **Shooting angles about various camera positions that can be used to record the subject:**
 - High Angle
 - Low Angle
 - Very Low Angle
- c. **Composition, namely the placement of objects in an image frame that is made to look beautiful and attract the attention of the viewer**
 - Composition Color
 - Blocking
- d. **Camera Movement such as:**
 - Pan Camera movement left and right
 - Camera tilt motion up and down
 - Zoom Motion forward or backward
 - Camera motion tracking following the object

13.9. **Post Production Campaign Support Media**

There is also a need for supporting media for more detailed information about turtles in Indonesia and their threats. Therefore, some supporting media are made in the form of:

- a. **Book**
The animated companion media is a book about 6 species of sea turtles in Indonesia with different challenges they are currently facing in their habitat.

Figure 13.17. Part of Book



- b. X Banner
Contains data on marine pollution and an invitation to conserve turtle habitat through a simple event

Figure 13.18. X Banner for Campaign



c. Merchandise

This merchandise is used as a promotional media for animated videos, as well as supporting campaigns for the environmental conservation of turtles.

Figure 13.19. Merchandise Sample



13.10. Conclusion

This animated video about the dangers of garbage for the conservation of turtles is expected to give awareness to the public how damaging garbage is to the marine environment. In this video, there are two things to be conveyed, namely the negative impact of garbage on turtles and an invitation to clean the environment from the garbage. Information is conveyed in the form of a story which is arranged into a 2- dimensional animated video.

13.11. Reference

- Euronews, (November 2018). Iceland palm oil advert: petition launched for ban to be overturned. Retrieved from <https://www.youtube.com/watch?v=cA10-oZi4Xc>
- Government Regulation Number 19 of 1999 on Control of Marine Pollution and/or Destruction
- Government Regulation Number 7 of 1999 on Conservation of Plant and Animal Species
- Kompas.com, (May 2019). 6 dari 7 Spesies Penyu Langka Ada di Indonesia, Bagaimana Wujudnya? Retrieved from <https://sains.kompas.com/read/2019/05/24/153853523/6-dari-7-spesies-penyu-langka-ada-di-indonesia-bagaimana-wujudnya?page=all>

- Rizqi, V.L.P. (September 2018). *Panduan Penggunaan Gadget untuk Anak Sesuai Usia*. Retrieved from <https://www.motherandbaby.co.id/article/2018/11/12/11322/Panduan-Penggunaan-Gadget-untuk-Anak-Sesuai-Uusia>
- Ted-ed, (July 2012). The survival of sea turtle. Retrieved from https://www.ted.com/talks/scott_gass_the_survival_of_the_sea_turtle

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