

FINAL YEAR PROJECT REPORT

**“DOCUMENTARY ON
ENVIRONMENT POLLUTION BY PLASTIC”**

BY

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Multimedia and Creative Technology

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DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

OCTOBER 2020

APPROVAL

This Project titled “**Documentary on environment pollution by plastic**”, submitted by **Md. Rehanuzzaman (162-40-336)** to the Department of Multimedia and Creative Technology, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Multimedia and Creative Technology and approved as to its style and contents. The presentation has been held on 18th October 2020.

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I hereby declare that, this project has been done by me under the supervision of **Dr. Shaikh Muhammad Allayear, Associate Professor & Head, Department of MCT** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ACKNOWLEDGEMENT

First I express my heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete the final year project successfully.

I really grateful and wish our profound our indebtedness to **Dr. Shaikh Muhammad Allayear, Associate Professor & Head**, Department of MCT Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of “*Film & Media*” to carry out this project. His endless patience ,scholarly guidance ,continual encouragement , constant and energetic supervision, constructive criticism , valuable advice ,reading many inferior draft and correcting them at all stage have made it possible to complete this project.

I would like to express my heartiest gratitude to Mr. Md. Salah Uddin, and Head, Department of MCT, for his kind help to finish my project and also to other faculty member and the staff of MCT department of Daffodil International University.

I would like to thank my entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of my parents.

ABSTRACT

Pollution is the introduction into the natural environment of contaminants that cause adverse changes. Pollution, such as air pollution, water pollution, plastic pollution, sound pollution etc.

plastic pollution is the worst of century, because it takes 450 years to decompose. Plastic pollution is the accumulation in the Earth's Environment of plastic items and particles (e.g. plastic bottles, bags, and microbeads) that adversely affect ecosystems, wildlife habitats, and humans. Based on size, plastics which function as pollutants are categorized into micro or macro debris. Plastics are inexpensive and durable, and the amount of plastic human produce is high as a result.

To prevent and reduce plastic pollution, I have made this documentary on environment pollution by plastic. Take footages from polluted area “sadarghat” and “buriganga” river for background footage to show the pollution affect, composite it and edited it on premiere pro, and after effects also using adobe illustrator and Audacity. This documentary covered the evolution of plastic, how we polluting our environment with plastic, how much plastic we are producing and how much we are wasting, how plastic linked with us and what problem its creating. how we are polluting our environment with plastic, how we can prevent and reduce plastic, and what if we don't stop using plastic.

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CHAPTER 1

INTRODUCTION

1.1 Background

In the 19th century, plastic was invented and was initially used to substitute traditional materials such as ivory, rubber, and shellac. In 1947, plastic bottles were first widely used, but they remained relatively costly until the advent of high-density polyethylene in the early 1950s. Because of their lightweight design, relatively low production, and transportation costs compared to glass bottles, they quickly became popular with both producers and consumers. The greatest advantage plastic bottles have over their glass counterparts, however, is their superior breakage resistance, both in manufacturing and transport. The food industry has almost entirely replaced glass bottles with plastic bottles, except for wine and beer.

Only over a century old are plastics made from fossil fuels. After World War II, production and development of thousands of new plastic products intensified, so transforming the modern age will make life without plastics unrecognizable today. Plastics have revolutionized medicine with life-saving equipment, allowed space travel, lightened cars and jets, saved fuel and pollution, and saved lives with helmets, incubators, and clean drinking water equipment.

Plastic pollution has become one of the most important environmental challenges, as the world 's capacity to cope with them is overwhelmed by the increasingly growing development of disposable plastic items. In developing Asian and African nations, plastic waste is most noticeable, where garbage collection systems are either ineffective or non-existent.



Figure 1.1 Plastic polluted the local area

Single-use plastic became the worst enemy of the environment, single use plastic pollution affecting all of us. 99% of plastic causes environment pollution. Our city, our country, Our World, going through a difficult time. Because if we can't control and reduce the plastic pollution and if we can't recycle and if we don't reduce using single use plastic. By 2050, in the Ocean there will be more plastic than fishes. Marine animal is in danger, 1 million seabirds dying every year. We are eating plastic, ¼ of fish has plastic on their gut. We are drinking plastic, 83% of tap water samples contain plastic. We are breathing plastic; micro plastics are linked to air pollution. Plastic is polluting the community around the world.

This project “Documentary on Environment Pollution by Plastic” will focus the core of plastic, plastic evaluation to today's plastic, how plastic became popular, plastic production and plastic pollution, how we polluting plastic, plastic pollution problem we are facing, how we can control our plastic pollution. If we don't stop now pollution environment by plastic what will happen. This short infographics and mini documentary standard length in (between 2-25 min)

1.2 Motivation

A lot of infographics documentary or awareness film and project has been done by National Geographic, WWF International, United Nation.

But i Mostly motivated to these projects James Robert- A plastic wave; New Age Bd - Plastic Pollution threatens Bangladesh; National Geographic – Plastic 101 , how we can keep plastic out of the ocean; WWF International – Plastic Pollution.

I have researched the previous work and everywhere they discussed about a topic like plastic history, or plastic problem, or how we can keep plastic out from the environment. How we can control plastic pollution. But in my documentary infographics, I added footage of Buriganga River the most polluted river in Bangladesh and talk about all the criteria, added infographics , added animation video editing and create the documentary with sound mixing that create a thought about the future of plastic, to the young generation.

1.3 Objectives

It could take you less than five minutes to swig back the contents of a plastic bottle, depending on how thirsty you are. But it takes 450 years for the ocean to break down the plastic. Its sixteen generation, plastic killing marine animals, plastic polluting the ocean river. 99% of plastic causes climate change.

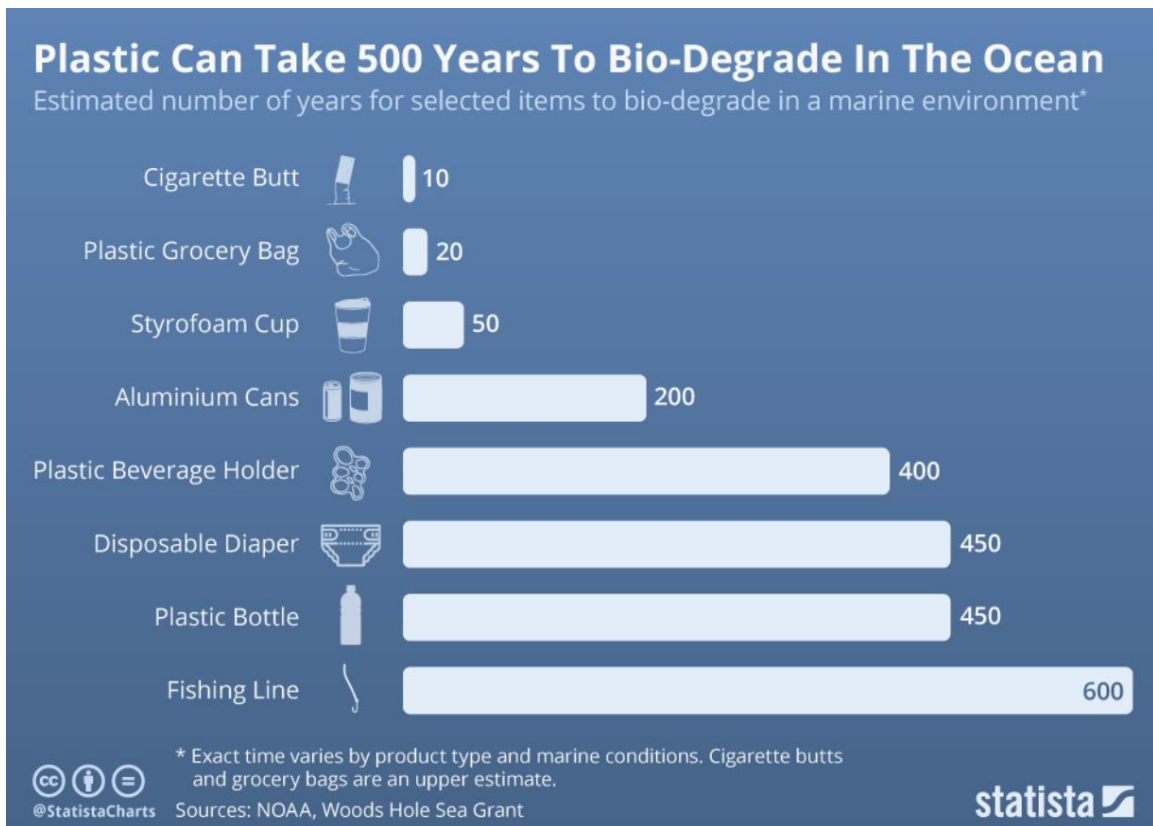


Figure 1.3 Plastic Bio-Degrade rate

According to the trade organization Plastics Europe, world plastic production has risen from approximately 1.5 million tons (approximately 1.7 million tons) per year in 1950 to an estimated 275 million tons (303.1 million tons) by 2010 and 359 million tons (approximately 396 million tons) by 2018; between 4.8 million and 12.7 million tons (5.3 million and 14 million tons) are disposed of annually by the countries in the oceans

The plastic wastages are growing every day, So we have to control plastic pollution by creating awareness through the all people mostly new generation, if they understand the problem and the solution and if they understand the affect of plastic pollution they will say no to single use plastic.

CHAPTER 2

RESEARCH

For creating this infographics documentary, I needed to research about the Plastic history to plastic pollution to plastic production and plastic wastages. I have visited the most polluted river in Bangladesh, Buriganga. I have look at the plastic how polluting the area, also visited Dhanmondi lake, Gabtoli Aminbazar landfall, an many more places, I have seen and read a lot of articles about plastic and plastic pollution. I have seen a lot of documentary and news articles plastic pollution and environmental affect.



Figure 2.1 Aminbazar landfall



Figure 2.2 Plastic Bio-Degrade rate

And this is what I found by researching –

Single-use plastic is plastic designed to be used only once until it is recycled or disposed of, as described by the UN Environment Report in 2018. Such single-use plastic items that are widely used are:

- Plastic bottles for drinking
- Caps and lids in plastic
- Straws: Straws
- Butts of Cigarette
- Material for food packaging / wrapping
- Containers for Take-away
- Grocery / sacks for shopping

The production of plastic has been reported to have risen three times since the 90s. Today, over 8 billion tons of plastic are manufactured every year. Half of them are single-use plastic that, once used, becomes garbage. The harm done to the environment, to human health, and to marine life is irreversible.

Surprisingly, only 9% of the produced plastic is recycled. Plastic stays there indefinitely after it is incorporated into the world. In smaller fragments, it breaks down. Toxic chemicals that can damage marine life are also released.

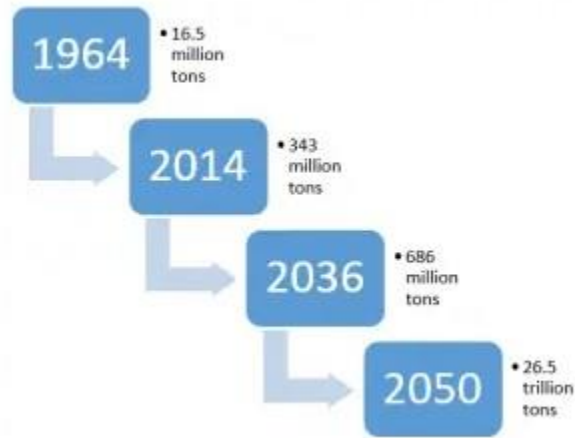


Figure 2.3 Plastic Waste Data

2.1 Plastic is so bad for the environment and consequently for people

- **Take hundreds of years to decompose plastics**

Plastic products such as bags and straws, especially disposable plastics, do not fully degrade and remain in the environment for hundreds (even thousands) of years. Many plastics break down slowly instead of completely rotting, tossing small bits of plastic into the atmosphere where animals can eat them. This adds to the pollution of sources of groundwater, as well as rivers and streams

- **Plastic affect our ocean**

A troubling aspect of the use of plastics is the damage to our oceans.

At present, there are approximately 150 million tons of plastic in the ocean and we produce more and more each year. The waste we throw away is stifling our oceans. The plastic strays floating in the water destroy the animals that inhabit the ocean. In general, fish and other animals living in the water mistake plastic for genuine

food. Sea life ingests plastic particles and the problem is only getting worse, as we manufacture more single-use plastics.

Years after being dumped into the sea, plastic can still be found washing ashore. As a substance, its longevity makes it virtually impossible to extract from the environment. This can have a striking effect on the pristine natural beaches and the overall climate. Plastic is 73 percent of all the pollution on beaches. That means, that around 165 million tons of plastic waste is floating around the ocean. It's like a trash truck filled with plastic being poured every minute into the ocean. And in 2019, the cost of eliminating plastic waste from the oceans has been estimated at \$2.5 trillion.

- **Plastic Never Goes Away**

A material that is made to last forever is plastic. Yet 33% of all plastic (water bottles, bags and straws) is used once and thrown away. They break down into smaller and smaller parts and plastic does not biodegrade.

- **Plastic Affects Human Health**

Plastic release toxic chemicals. These chemicals find their way through almost every human being's blood and tissue. Connections to cancer, birth defects, immune deficiency, endocrine disorders and other diseases are released when exposed to toxic chemicals.

- **Our Groundwater is Spoiled by Plastic**

In our landfills, the harmful chemicals found in the plastics flow and enter the groundwater, which flow into lakes and rivers.

- **Plastic Attracts Other pollutant**

The plastic chemicals that make them rigid and versatile (e.g. flame retardants, phthalates and other toxic chemicals) are oily toxins that do not absorb water and stick to products such as plastic waste that are dependent on petroleum. Toxic chemicals that are released from plastics may also accumulate in other plastics. A

serious cause of concern is the increasing amount of plastic waste that accumulates in the world's oceans.

- **Plastic Threatens Wildlife**

In plastic, wild animals get entangled. They eat it as food or mistake it and feed it to their descendants. In highly remote regions of the world, plastics are spread. Plastic waste alone exceeds zooplankton in our oceans at a ratio of 36:1.



Figure 2.1.1 Bird eating plastic as food



Figure 2.1.2 marine animal in danger for plastic



Figure 2.1.3 dead bird has plastic in his body

- **Plastic Accumulates in The Environment**

Annually 87,000 tons of single-use plastics, including plastic bags, bottles, cups, plates and straws are thrown away in Bangladesh, according to a study by the Environment and Social Development Organization. Americans discard more than 30 million tons of plastic a year and only 8% are recycled. The rest ends up in landfills, gets burnt or becomes garbage. In Canada, we use up to 15 billion plastic bags and 57 million straws yearly. 640,000 tons are abandoned and discarded every year.

- **Plastic Poisons Our Food Chain**

Even the plankton, the smallest creature in our oceans, eats micro plastics and absorb their dangerous chemicals. Small pieces of plastic displace the algae needed to maintain a larger marine life that feeds them.

We are eating plastic ¼ of fishes has plastic in their gut.



Figure 2.1.4 found plastic on fish gut

- **To Abate Plastic Cost Billions**

Due to plastic pollution, everything suffers (tourism, leisure, business, human health, animals, fish and birds). The permanently inflicted financial harm is priceless.

- **They're so cheap!**

plastic is so inexpensive that it is extremely hard to persuade producers to turn to alternative biodegradable containers. The cost of these alternatives may vary, but it may be 2 to 10 times more expensive to have biodegradable packaging than plastic.



Figure 2.1.5 single-use plastic

- **They Are Made From Non-Sustainable Products**

Products commonly used in the manufacture of plastics are petroleum, oil and natural gas. Public opinion on non-renewables in the energy and transport sectors is currently at its best. It is also fair to say that the majority of the population believes that the use of coal, oil and gas is unnecessary in the development of plastics.

- **They Are Unseen**

They are invisible, another explanation why plastics are bad. They are so small sometimes that you cannot see them without a microscope.

You may remember that in toiletries such as toothpaste, body scrubs and lotions, the British government banned micro plastics. sewers bring these micro plastics into marine environments and pose a high risk to local wildlife

2.2 With The Growing Trend of Plastic Production and Use, There Will Be More Plastic in The Ocean Than Fish!

It is believed that by 2050, there will be more plastic by weight than fish in the ocean. According to recent studies, all known species of sea turtles, 54% of marine mammals, and more than 50% of seabirds have been either entangled by plastic ropes and nets or have ingested plastic fragments and micro plastics. This is the reason behind the plastic impact on the world’s food supply by blocking the digestive tract of species resulting in starvation and death due to malnutrition.

The affected species include seals, whales, dolphins, sea lions, and many others.

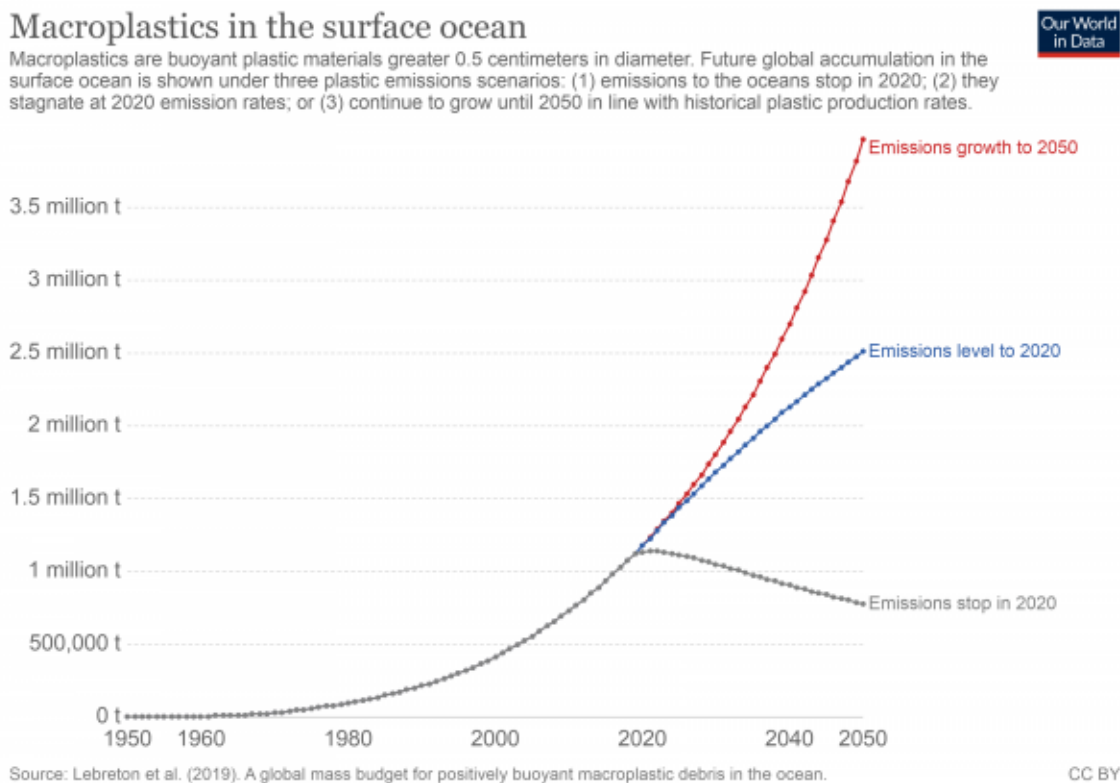


Figure 2.2 Micro plastic in the surface ocean

2.3 Animals Confuse Plastic With Food

Another reason urges us to stop plastic pollution, that over 99% of seabird species are predicted to have ingested plastic by 2050. You can imagine the growing rate of plastic ingestion in seabirds by the fact that it was found in the stomach of 5% of seabirds in 1960. In 2010, this raised to over 80%. More than one million seabirds are killed by plastic every year. Plastic bags are also a danger to mammals that are often mistaken by them for food.

One such example is sea turtles. Their favorite food is jellyfish. They have been reported to eat floating plastic bags instead of jellyfish.

2.4 Plastics Impact On Humans

It's time to face the fact. Humans seek the temporary benefit of plastic ignoring their long-term consequences. Every year, an average person consumes approximately 70,000 micro plastics. A study conducted in 2018 found that 93% of bottled water had micro plastics in it and the worst sample was of Nestle Pure Life. Contrary to its claim that the water is processed through a 12 step quality system. 83% of tap water samples contain plastic

2.5 Government Participation To Stop Plastic Pollution

The role of government in this matter is crucial. A number of countries including China, France, and, Italy have banned plastic bags and levied taxes. The government of Kenya has also introduced the law of four-month imprisonment and a fine of forty thousand dollars for citizens who produce, sell, or use plastic bags.

Bangladesh's government banned plastic bags when they found that plastic bags clog the drains and make floods more severe. But still 80% people use plastic bags, and its production still going.

Charging a purchasing fee on customers can also be a good option. A major 90% reduction in plastic bag usage was seen after introducing a tax of 15 cents in Ireland in a year. With the positive results, the government raised the tax to 22 cents.

After researching all that factor I summarized my documentary with these key point so that I can cover all the area. Here are they-

How much plastic we use

- We are producing 300 million of plastic every year.
- 50% of which is for single use purposes.
- 91% of plastic are not recycled
- So where are that 91% going?

Plastic production and Plastic Pollution

- Plastic creating a 450 year of problem.
- Plastic use as much fossil fuel as airline
- Every minute, 3 million of plastic bottles and bag are sold out.
- Since 1950, 9.2 Billion Tons of plastic produced every year its increasing the production.
- Half of worlds plastic comes from Asia.
- 40% of all garbage's has single use plastic
- Experts say every year we through away enough plastic that can circle the world four times.
- At this rate by 2050 the ocean will have more plastic than fish
- We are polluting our environment every day with plastic

How we polluting plastic

- We are not using recyclable trash bin. we are throwing plastic on the road.
- We are throwing plastic even in the tourist place.
- We are throwing plastic in the water.
- With plastic we are polluting our environment.

Plastic pollution problem

- 99% of plastic cause climate change
- Marine animals are under threat
- 1 million sea birds die every year for plastic
- Plastic ultimately affecting us.
- We are eating plastic, 1/4 of fish have plastic on their gut.
- We are drinking plastic, 83% of tap water samples contain plastic
- We are breathing plastic; micro plastics are linked to air pollution.
- Plastic is polluting the community around the world.

Solution of Plastic pollution

- We can reduce plastic pollution by some simple changes.
- We have to reduce the use of single-use plastic.
- Stop using single use plastic bottles instead use reusable bottle.
- Stop using plastic bag use reusable jute bag or use paper bag.
- We have to use our recyclable trash bins.
- We have to recycle our existing plastic products.
- Look for a plastic alternative.
- Use reusable shopping bags that replace paper and plastic. These are usually made from renewable resources.

What if we don't stop making plastic pollution?

If we don't stop now using plastic that we can't reuse. Our world our country our environment our air our water will be a disaster. Global warming and climate change will affect all of us. Sea level will be higher that can create a permanent flood.

Looking ahead, the end of 'plastic age' doesn't seem to be approaching any time soon. But we can help make the world plastic-free with combined efforts. We have a considerable amount of knowledge regarding environmental hazards and potential human health effects associated with plastic pollution. But, this is time to act.

CHAPTER 3

PROJECT WORKFLOW

In This chapter I will be discussing about the technic and the uses of different software and workflow of how I create the short infographics documentary. I have created a standard timing short or mini documentary that stands (2-25 min). as my projects documentary go with film and media section so I have to go through the pre-production, production and then post production.

Let's start from the core concept to final project with step by step.

3.1 Development

- Idea, plan and brainstorming done when I was researching about the plastic pollution.
- Script and script breakdown has been done after researching and made some category and information which I will put into the documentary.
- My Target audience are almost all age, but younger generation 10-30y are my main audience, so that they can create self-awareness to this pollution by plastic, and they will try to prevent and research more about plastic how killing our nature and how it's becoming dangerous for human being.
- This is a individual project so all work here I have to complete by myself.

3.2 Pre-Production

- Developing the project scene by scene with writings and infographics
- Budget 2000 taka for travel and taking shot at buriganga, sadarghat.
- The location I choose for shooting based on buriganga, sadargaht, and alsoI have collected some footage from worldwide to create the documentary
- Shot List- Environmental shot, close shot, mid shot, long shot, tilt down shot, tilt up shot, diagonal dhot.

- Gear I used here Canon 1200d camera with 18-55mm lens and another lens I take is 35mm

3.3 Production

- Camera set-up and setting done with ISO 400 because of sunlight. tripod gives us support to make the shot static and dynamic.
- I have filmed the shot from different are of sadarghat. Using the technic and shot list from development stage.
- I have done voice over recording at home using mobile default sound recorder.

3.4 Post- Production

For post-production editing and adding infographics and motion graphics with some 2d animation I have used added audio and mixed the audio. Now I will go step by step how did I have done my final project.

Step1: At first I have rearranged the footages I have taken on premiere pro 2020

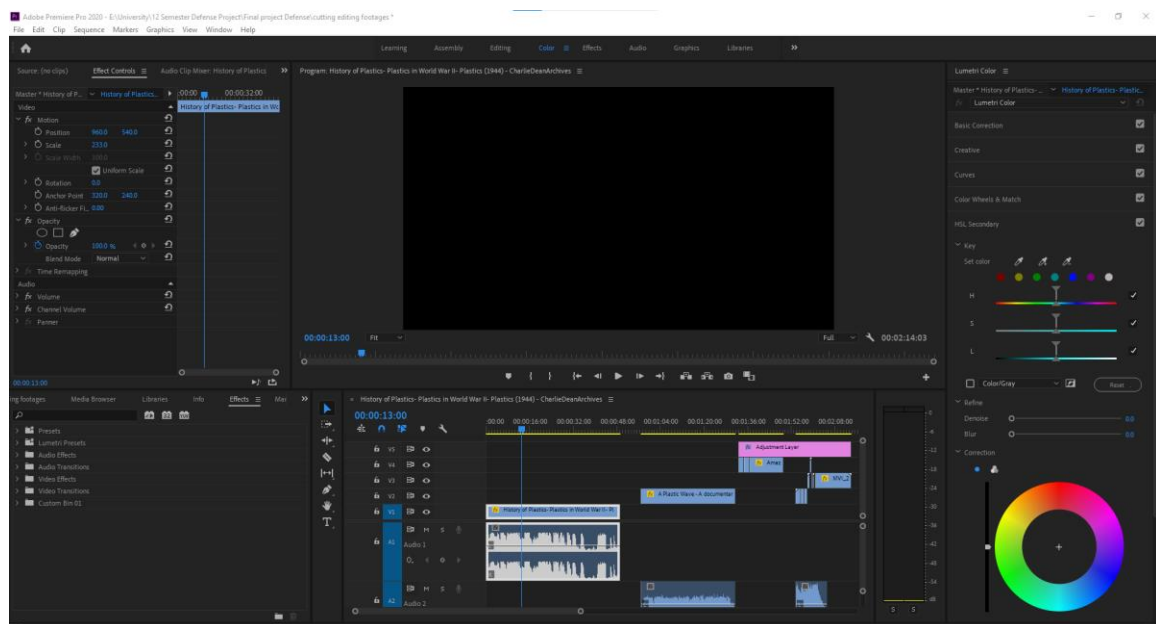


Figure 3.4.1 Premiere pro footage import

I have imported the footages from media browser. To timeline

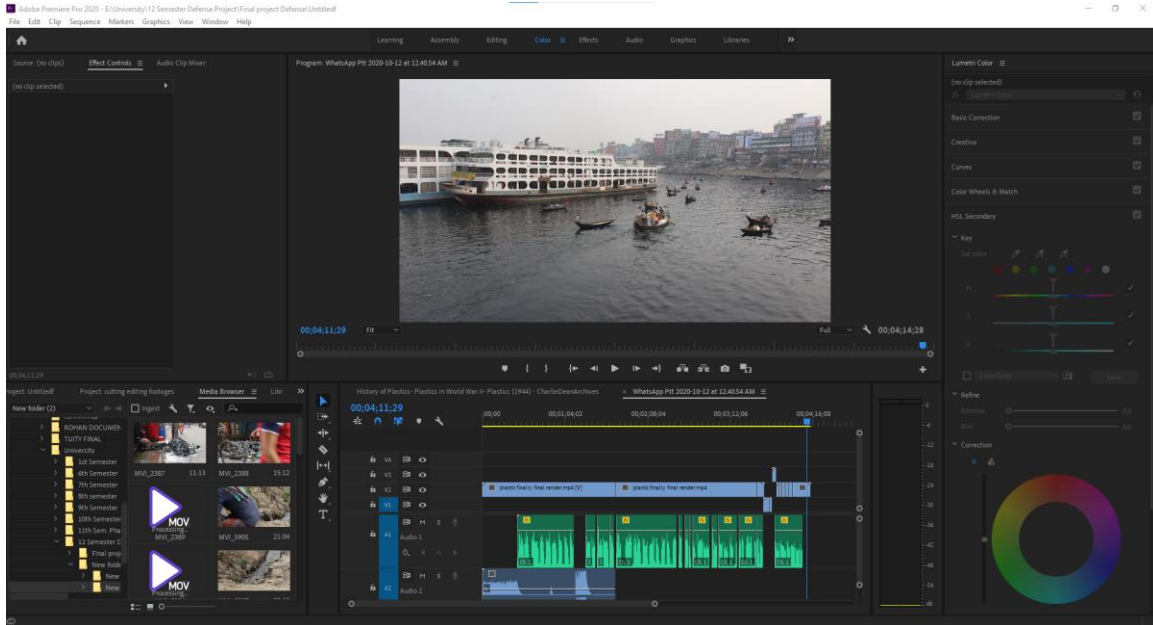


Figure 3.4.2 Premiere pro footage cut

Step 2: I have cut the footage in premiere pro timeline with Razor tool. And rearrange the footage following my script and shot list

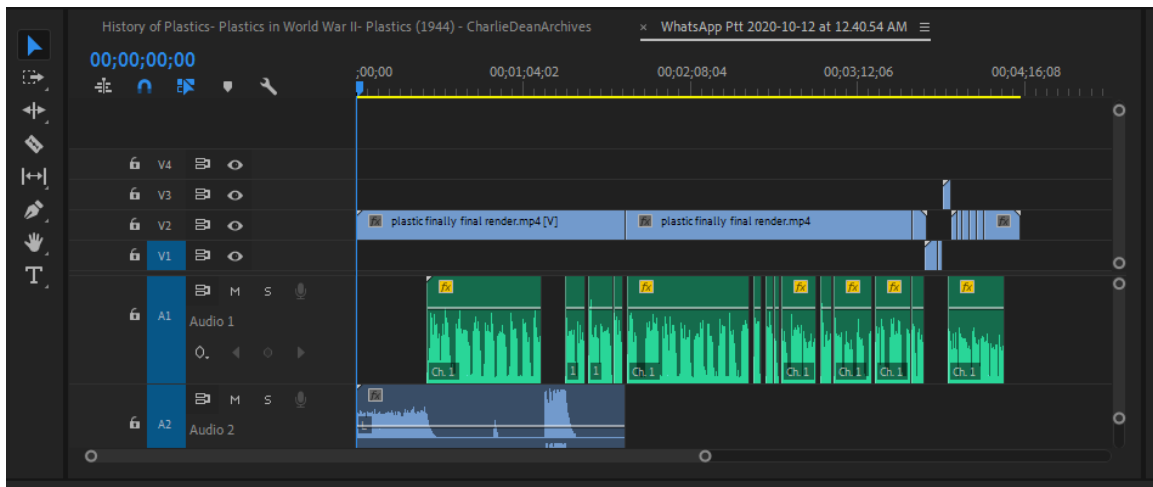


Figure 3.4.3 Razor tool work

The I have cut the unnecessary footage and made a composition video editing with music.

I have collected an old video footage of 1950s about the evaluation of plastic I have cut that scene and synchronized with shopping mall footage then I have created a blank space for two infographics text animation that I will add in after effects.

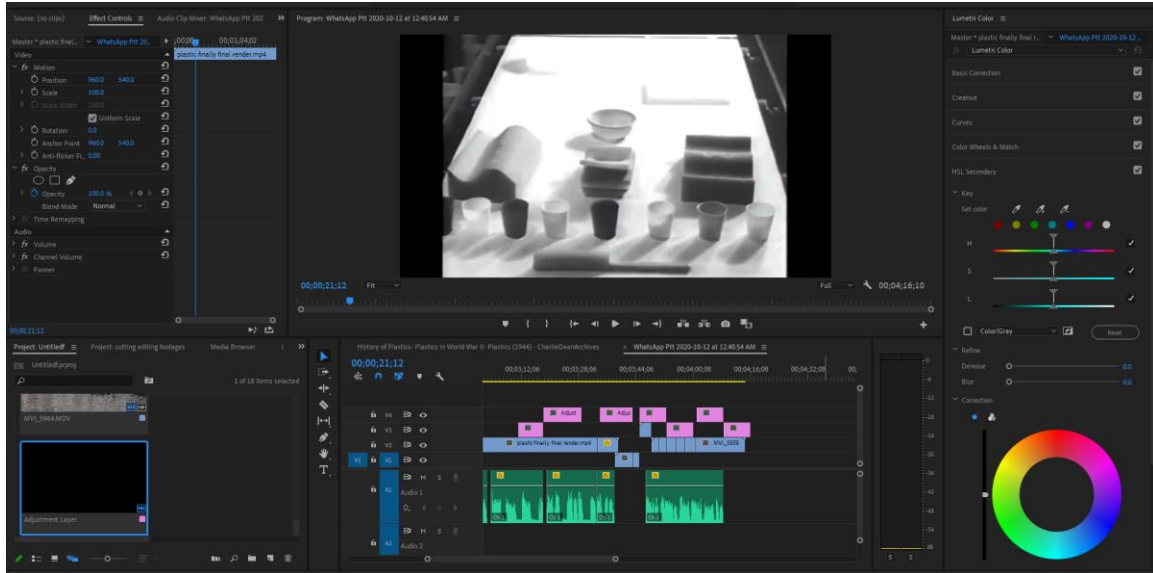


Figure 3.4.4 1950s footage on plastic

Step 3: Then added sadarghat and aminbazar and other footages on the time line following my script and cut and color correct them as I wanted. And added my voice over to mass other work and elements for after effects.

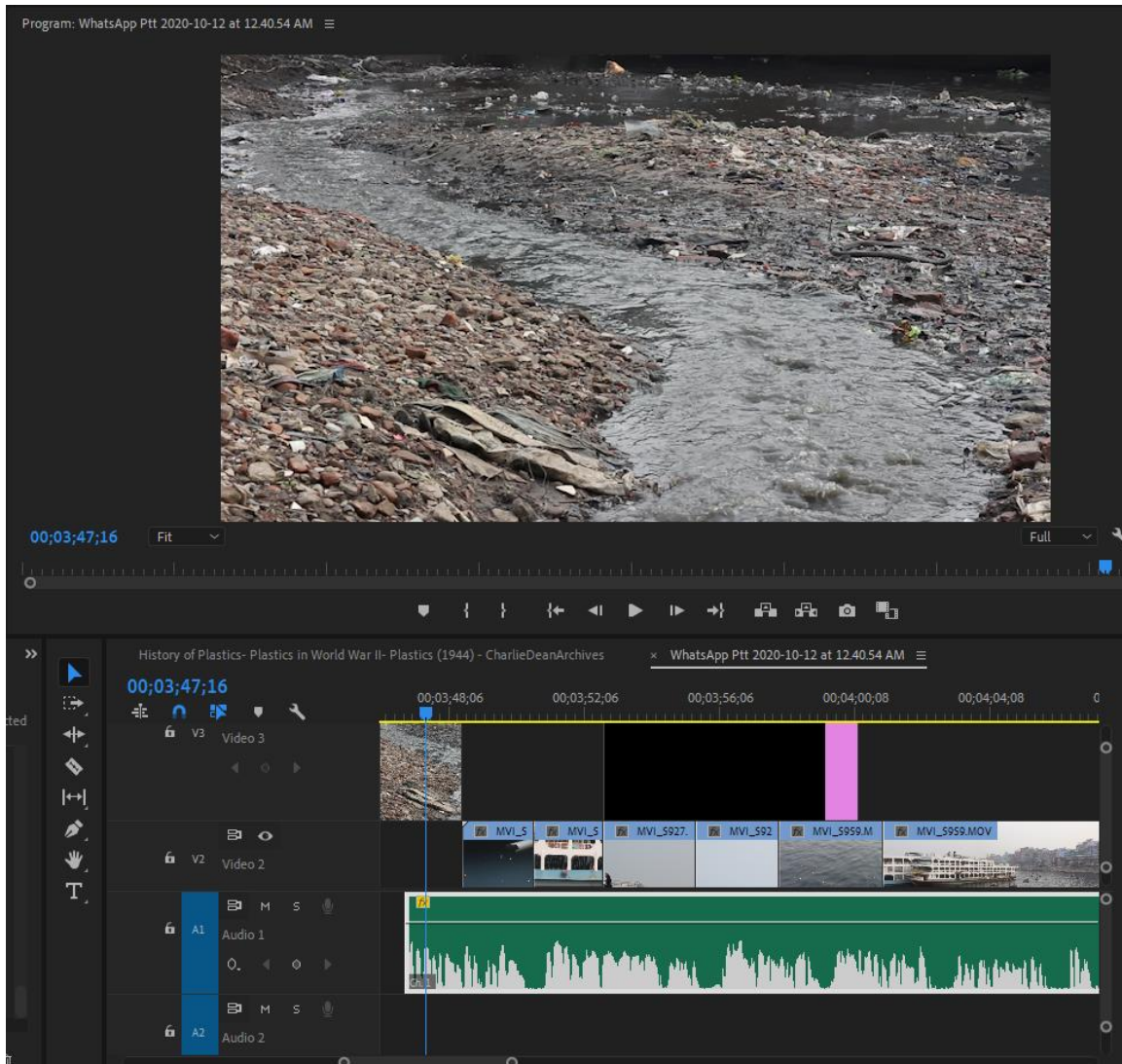


Figure 3.4.5 footage rearranging

Step 4: I have done color correction from effect > Video Effects> Red Gaint Magic Bullet color correction plugin Colorista IV

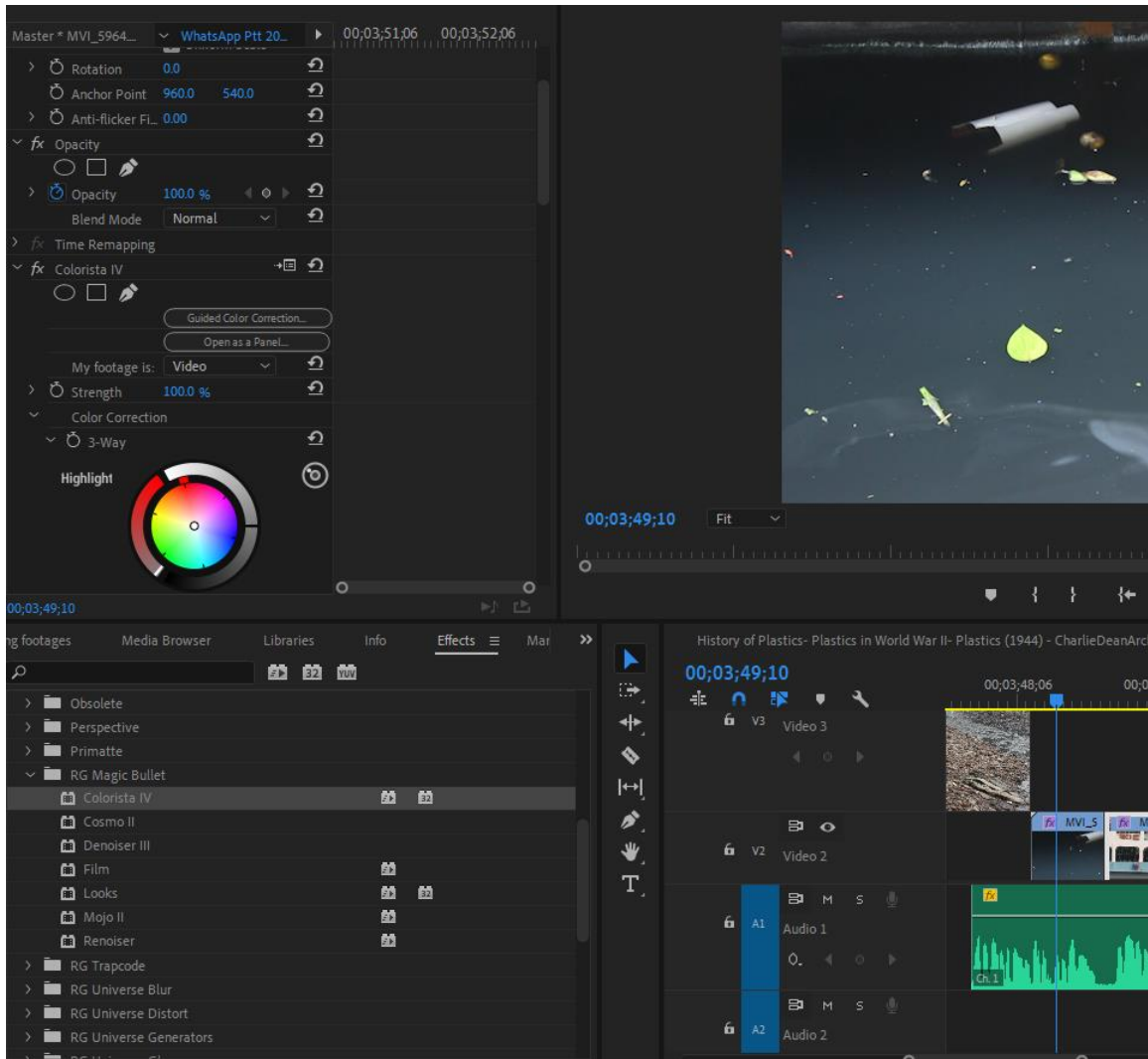


Figure 3.4.6 footage color grading tool

And Then I have used Guided color correction from the colorista IV, then color corrected the footage as it wants and change the strength to 70%. Did some color correction with highlight, black level, white level, contrast and saturation.

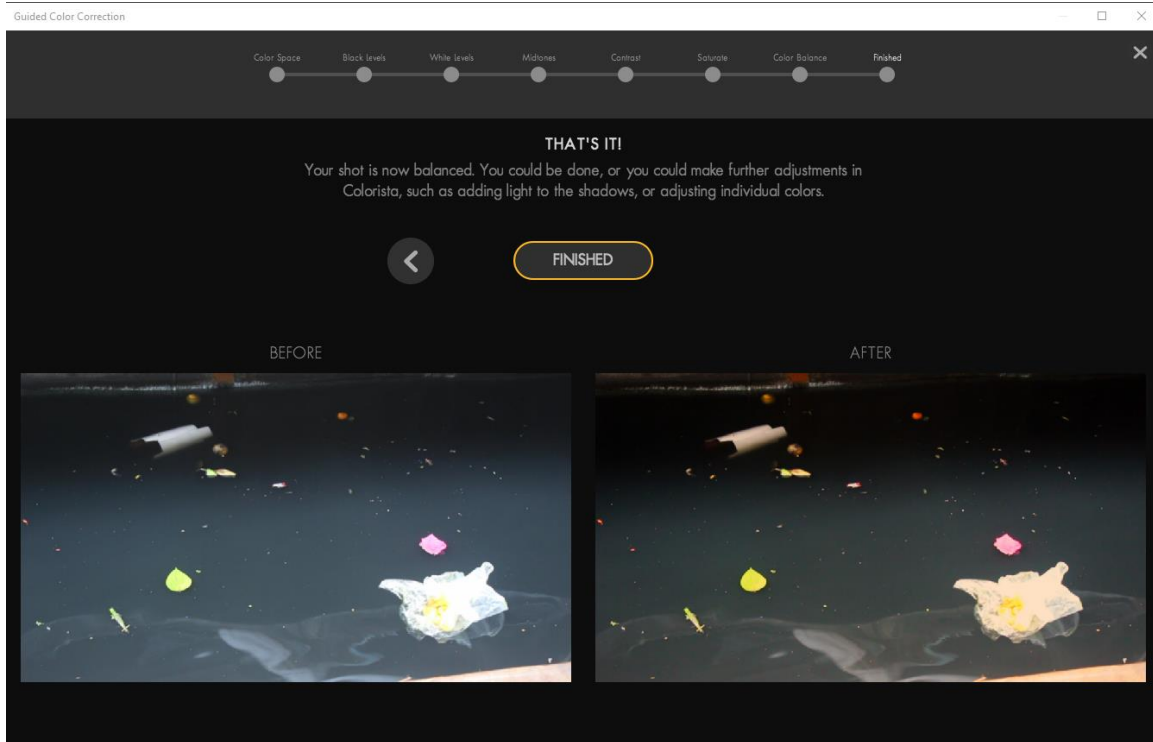


Figure 3.4.7 Colorista iv

Step 6: Before rendering the footage from premiere pro I have checked the resolution and frame rate so that frame gap doesn't occur and I can work on the same frame rate each time Resolution 1920*1080p Full HD, Frame rate 29.97 Standard frame rate for film now a days for HD most of them use 25 frame .

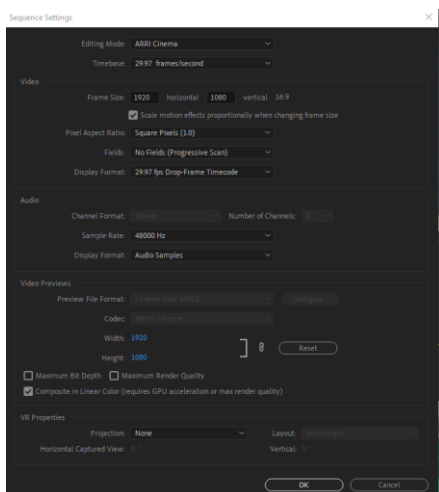


Figure 3.4.8 Render Setting

Then I have exported the cut file from premiere pro, for further work I need to add text animation infographics 2d animation and motion graphics on after effects.

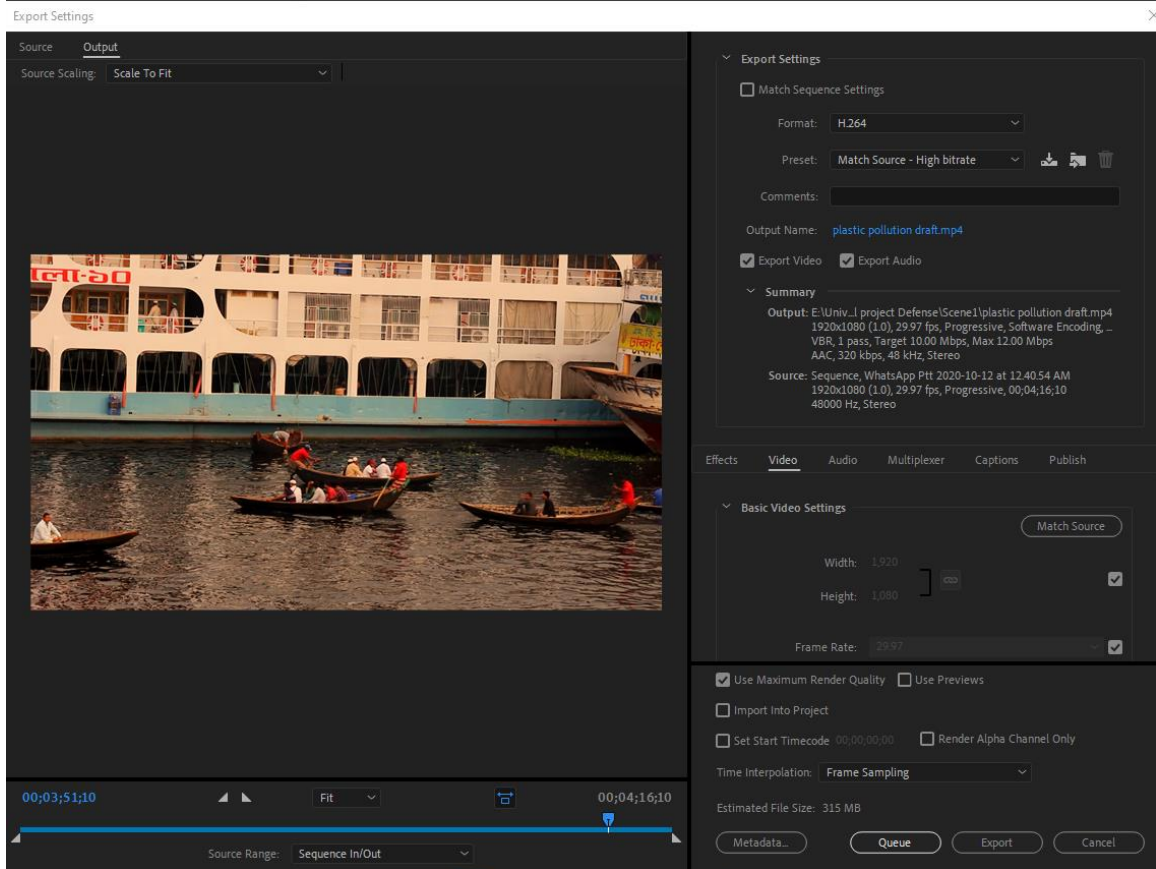


Figure 3.4.9 Export setting

Step 7: I have created a new composition o after effect with the same size and frame rate.

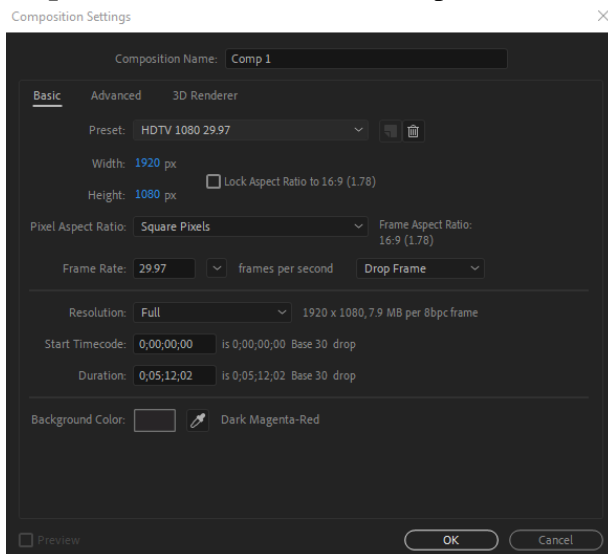


Figure 3.4.10 composition setting

Step 8: imported the footage that I exported from premiere pro on after effects. And started doing motion graphics , transition and animation.

First I animated the 1st two text with a mask transition and using opacity and position “In 1947 plastic bottles were first used commercially ,In 1950 high density polyethylene were introduced” use AEViewer extension and script plugin to create smooth animation with Motion tolls 2.jsxbin

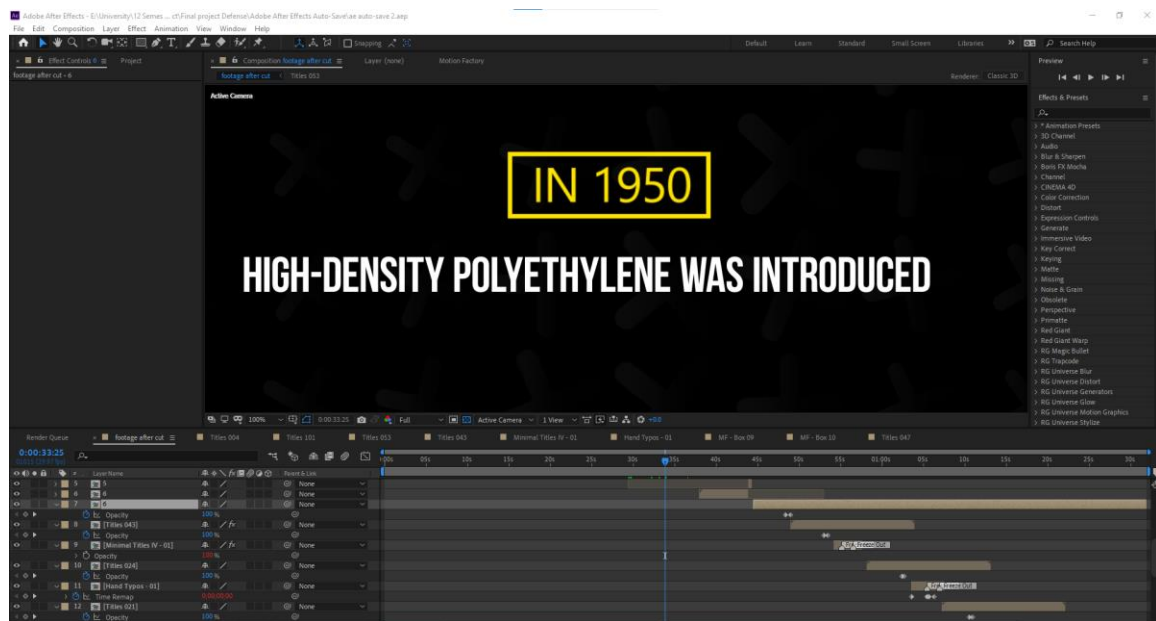


Figure 3.4.11 Title animation 1

Step 9: “they quickly became popular with both manufactures and customer because of their lightweight nature” For this title I have used mask, scale, position, and alpha channel for masking . shape to indicate masking by parenting both. Used AEViewer extension. With motion tool.

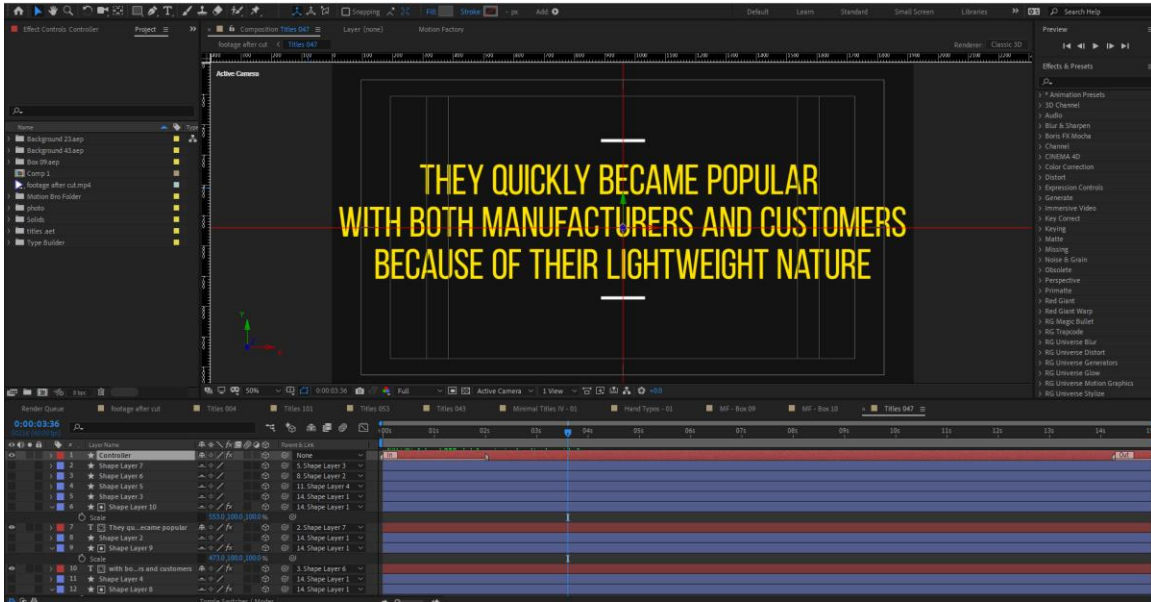


Figure 3.4.12 Title animation 2

Step 10: “Since then people rapidly started using plastic” for this title used two box and two color yellow, to indicates the rapidly increasing vibe.

Shape layer, mask, position, scale, key frame used to create this title. Used AEViewer extension plugin for this title animation.

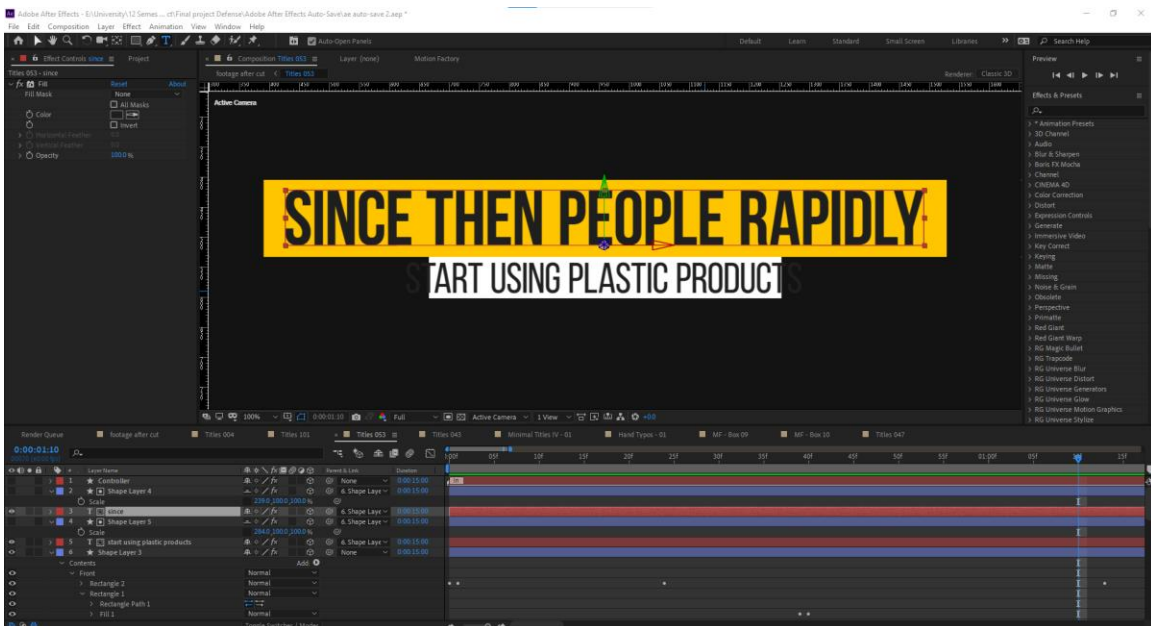


Figure 3.4.13 Title animation 3

Step 11: For this text animation I used mask with shape transition. Did scale of the shape mask in the x axis. To reveal the text.

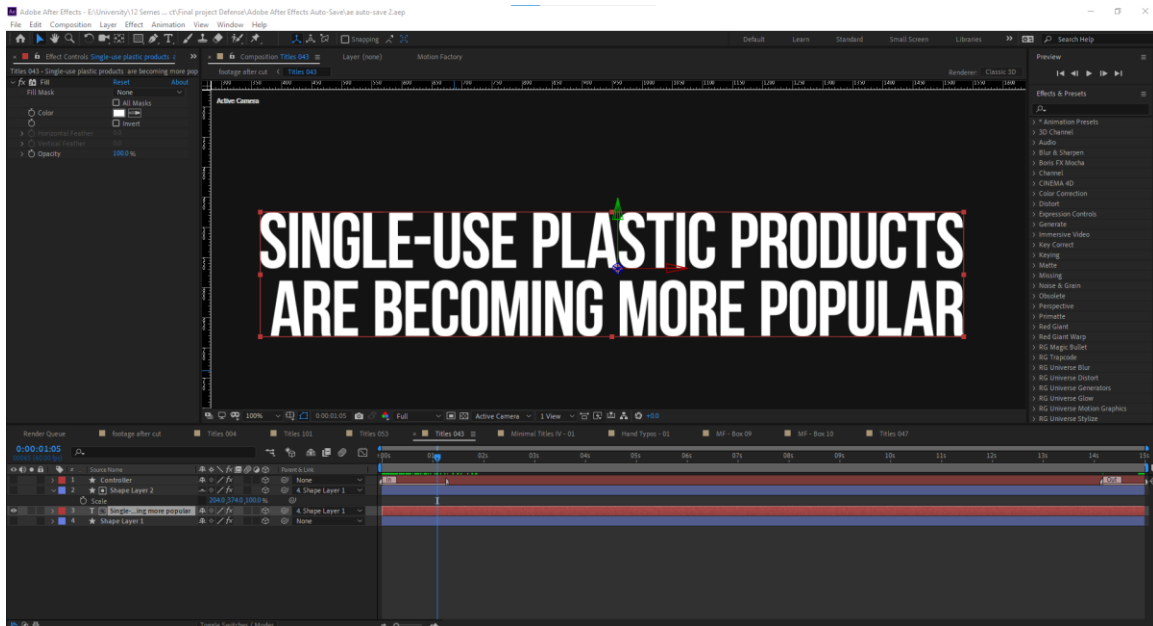


Figure 3.4.14 Title animation 4

Step 12: “We are producing 300 million of plastic every year.” For this create two text and then two shape and alpha inverted mask. Then position and reveal the text.

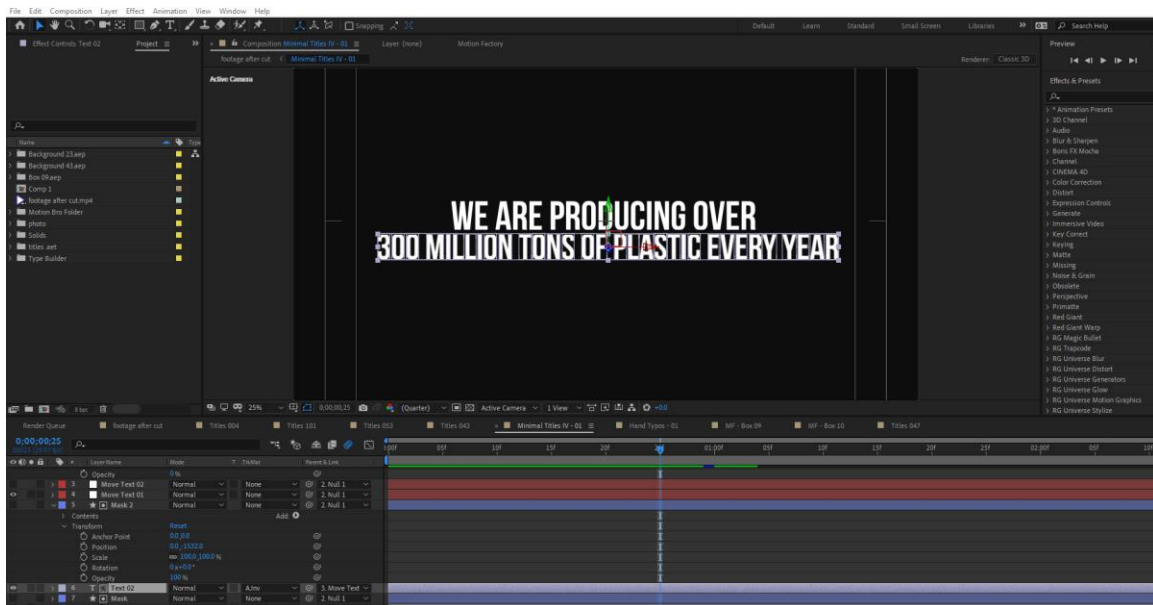


Figure 3.4.15 Title animation 5

Step 13: “50% of which is for single use purposes.” For this text created 4 mask with shape tool and the reveal by using scale and position from the mask

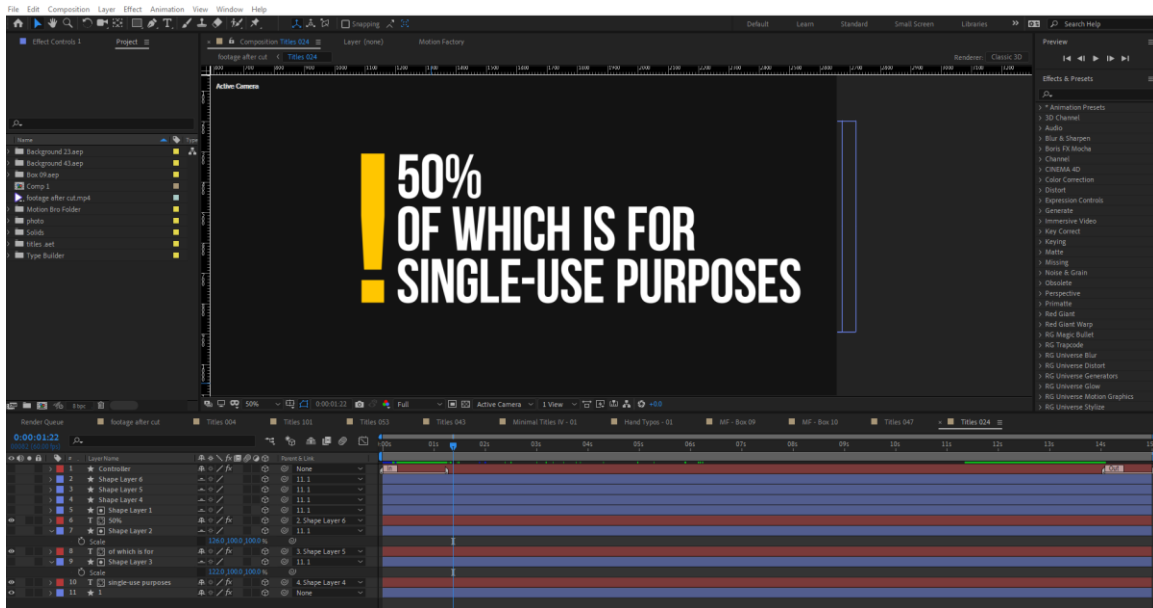


Figure 3.4.16 Title animation 6

Step 14: “91% of plastic are not recycled” for this text used hand illustration and animation extension from motion factory (premium extension for AE) text builder. For hand animation used puppet tool here. And position up and position down for the transition

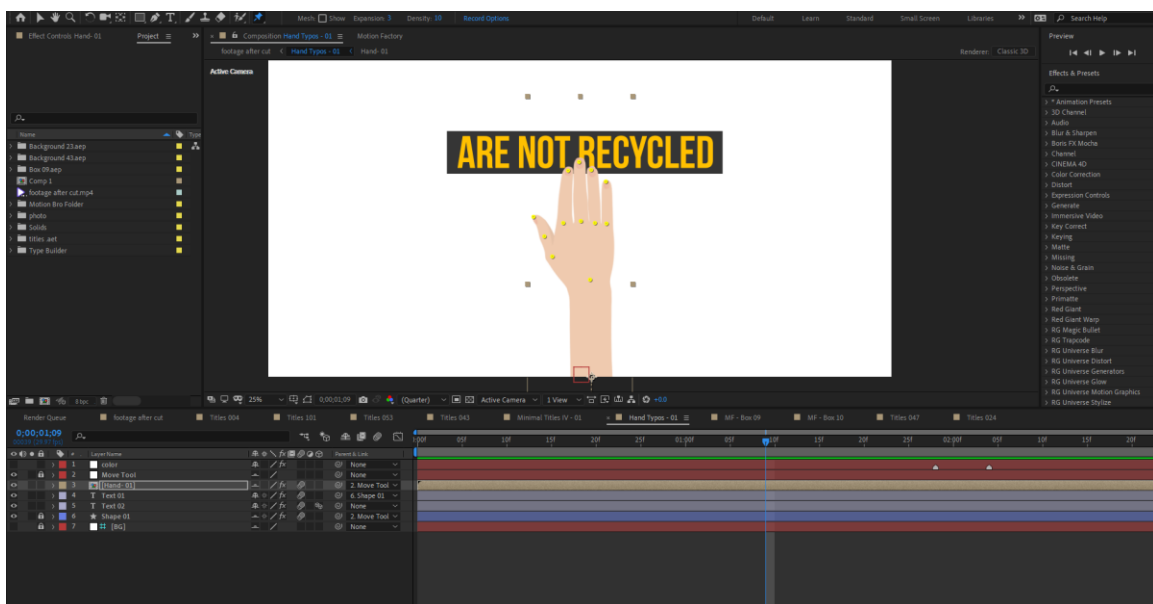


Figure 3.4.17 Title animation 7

Step 15: “So where are that 91% going?” created this with 5 mask and a question mark transition using AEViewer.

But I didn’t give any voice over here. Because, I wanted to create the feel into my audience I want them to ask with themselves by reading where are that 91% going. To create the feel I do not give any voice over there.



Figure 3.4.18 Title animation 8

Step 16: “Plastic creating a 450 year of problem” for this animation I have used motion factory type builder. Masking and revealing with position. Red color indicates the violation and pollution and sign for harmful object

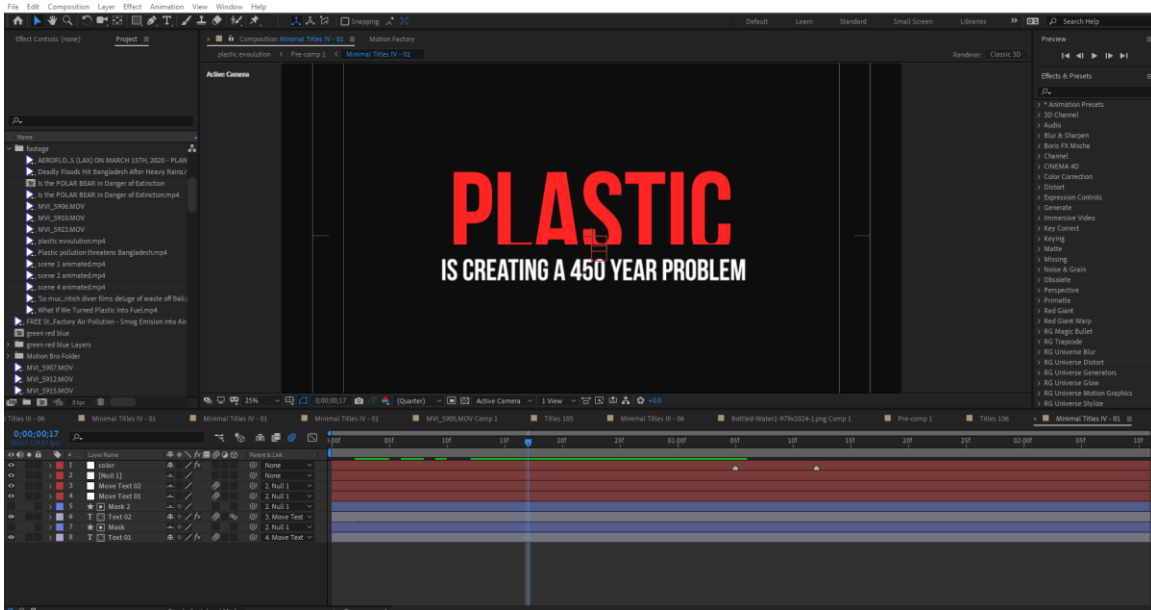


Figure 3.4.19 Title animation 9

Step 17: “Plastic use as much fossil fuel as airline” for this animation I have used motion factory type builder. Masking and revealing with position.



Figure 3.4.20 Title animation 10

Step 18: “Every minute, 3 million of plastic bottles and bag are sold out.” for this animation I have used motion factory type builder. Masking and revealing with position.

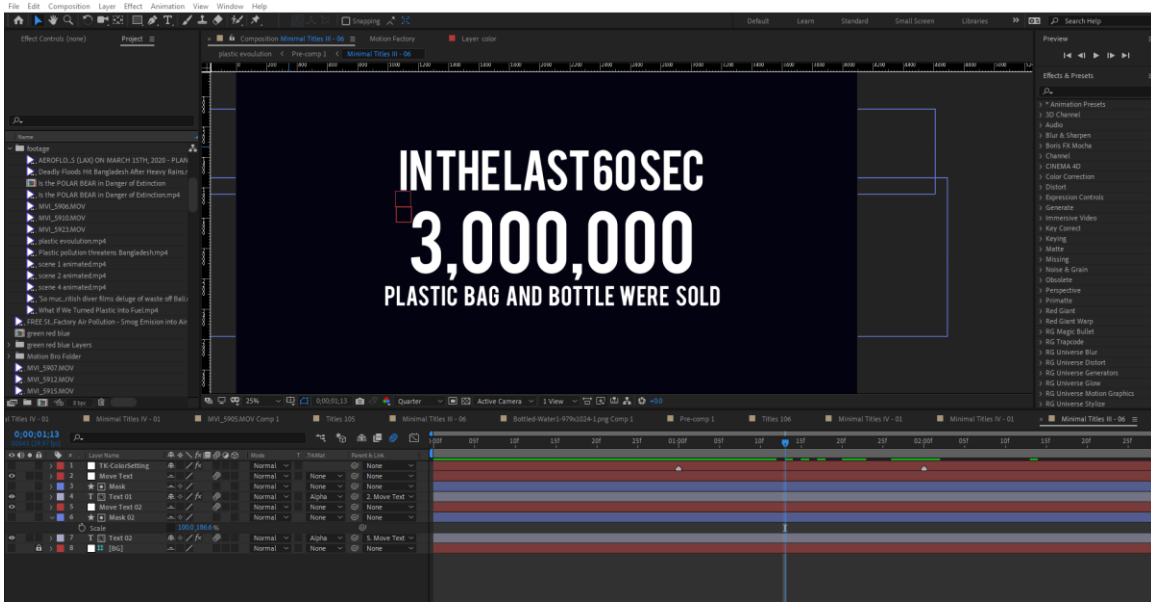


Figure 3.4.21 Title animation 11

Step 19: “Since 1950, 9.2 Billion Tons of plastic produced every year its increasing the production.” Used position scale, masking and type builder by motion factory extension.



Figure 3.4.22 Title animation 12

Step 20: “Half of worlds plastic comes from Asia.” For this scene I have downloaded Asia vector map from freepik.com and then edited that on Adobe illustrator then imported it to AE and did zoom in animation.

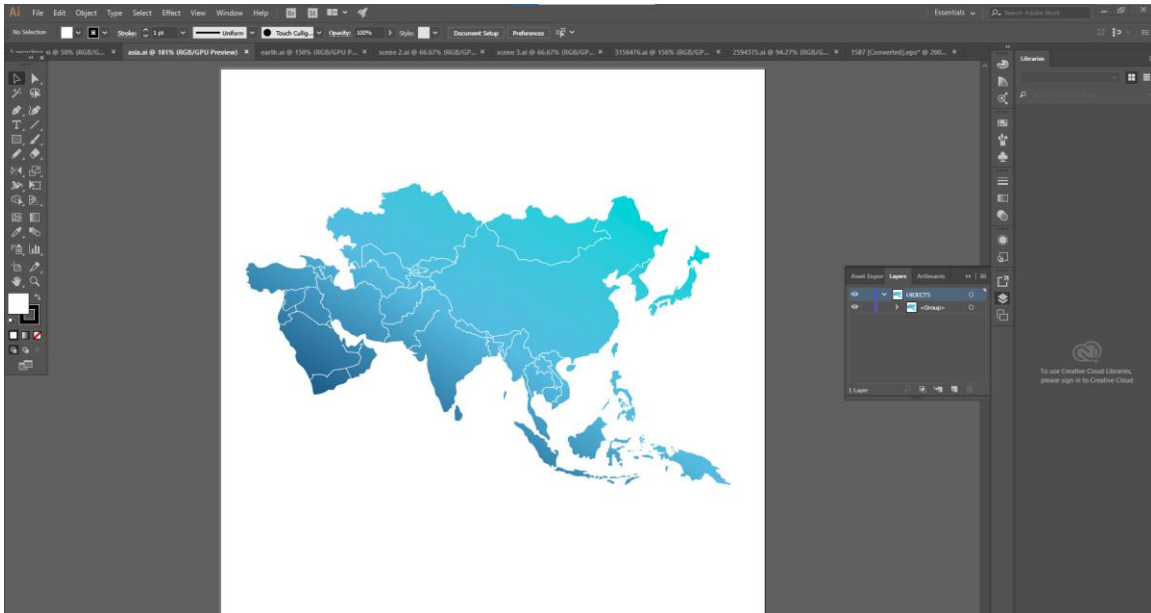


Figure 3.4.23 Illustration of Asia

And for the text used type builder and masking transition.

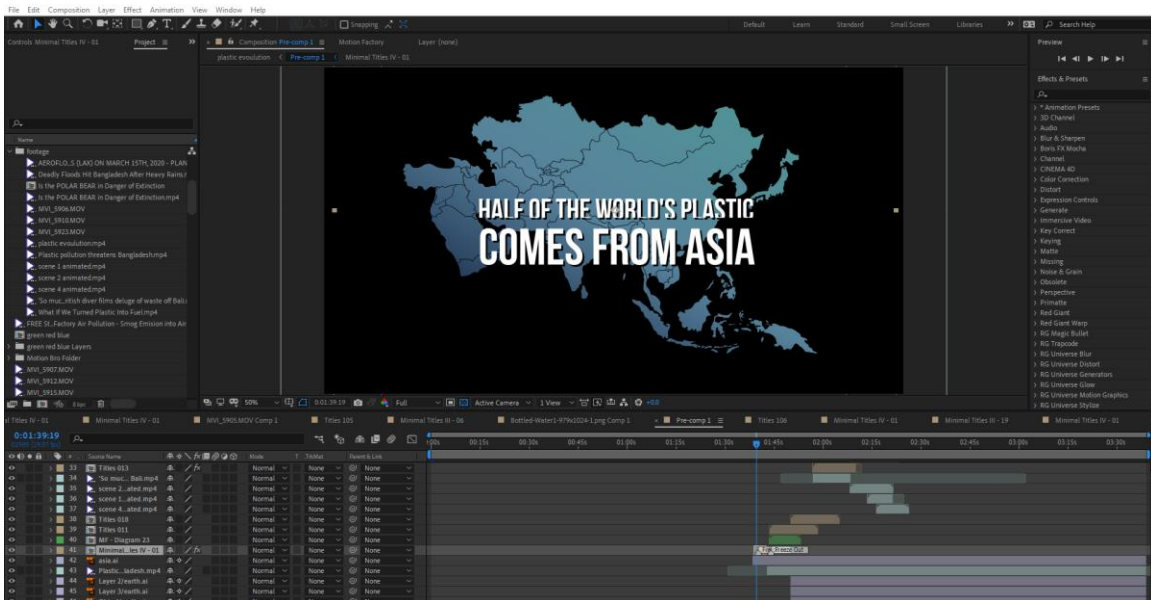


Figure 3.4.24 Title animation 14

Step 21: “40% of all garbage’s has single use plastic” for this I have used motion factory diagram builder extension.

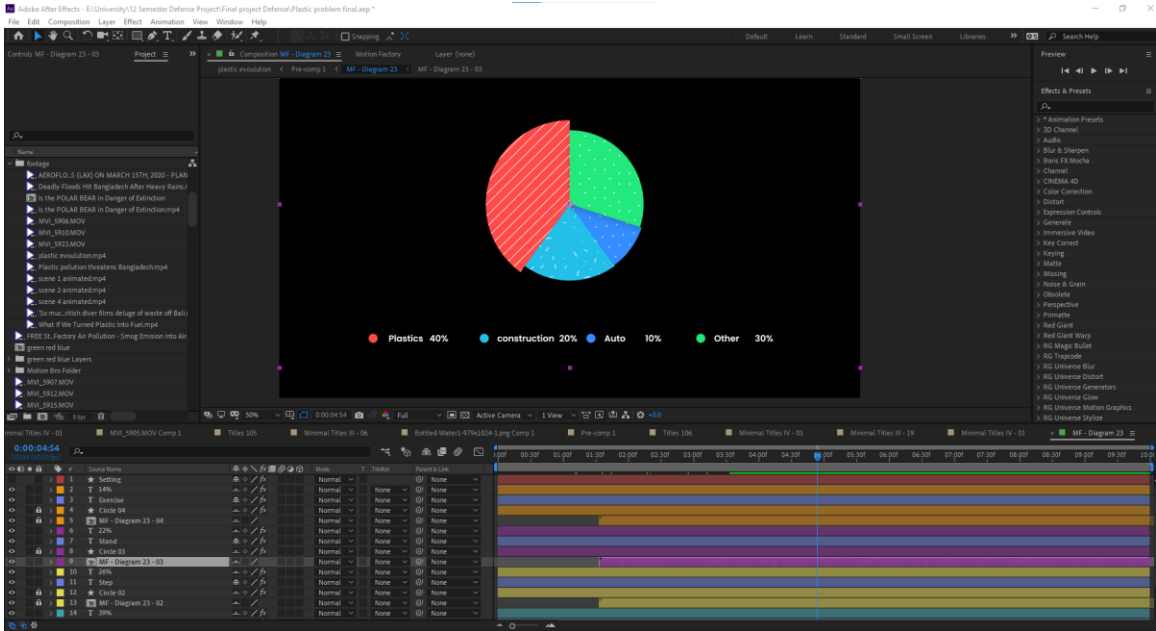


Figure 3.4.25 Diagram

Step 22: “Experts say every year we through away enough plastic that can circle the world four times.” For this I have download asset of world map modified it added trash bottle under it. And animated in after effects using type builder for the text, and animation rotate transform transition.

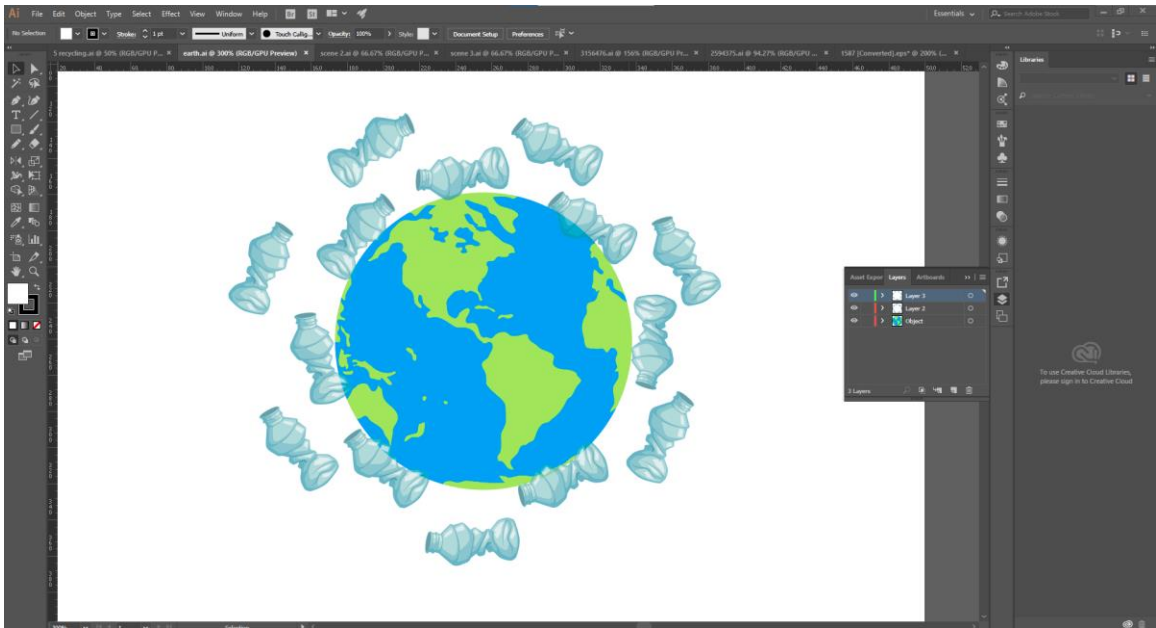


Figure 3.4.26 World with plastic illustration

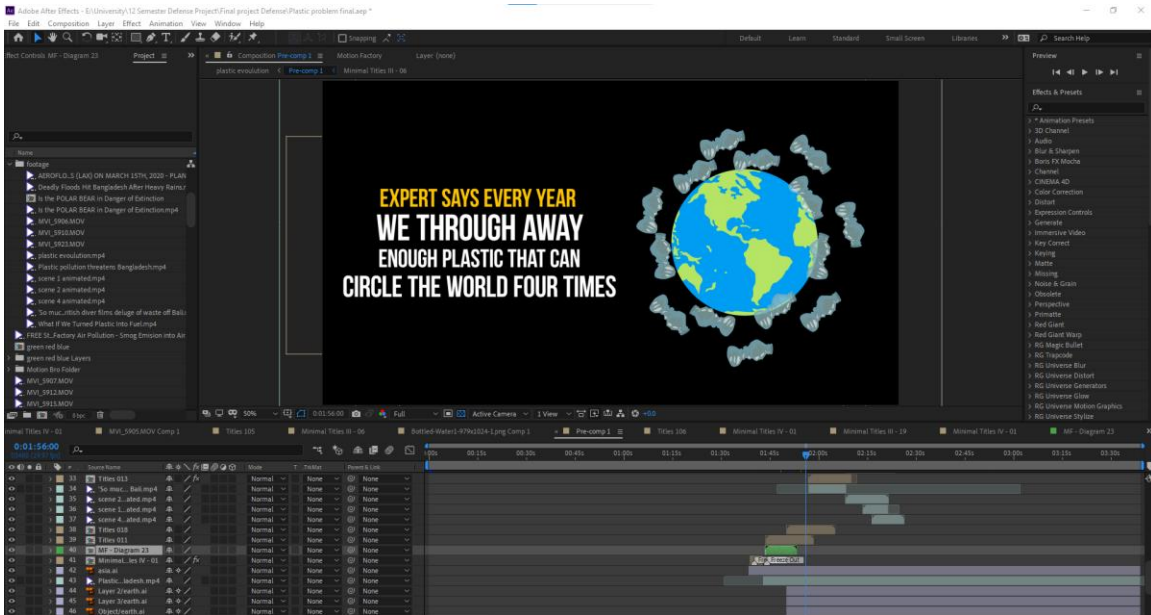


Figure 3.4.27 World with plastic animation

Step 23: “At this rate by 2050 the ocean will have more plastic than fish” Used position scale, masking and type builder by motion factory extension. Red Color to Indicate the danger and huge problem.



Figure 3.4.28 title animation 15

Step 24: “We are polluting our environment every day with plastic” Used position scale, masking and type builder by motion factory extension.

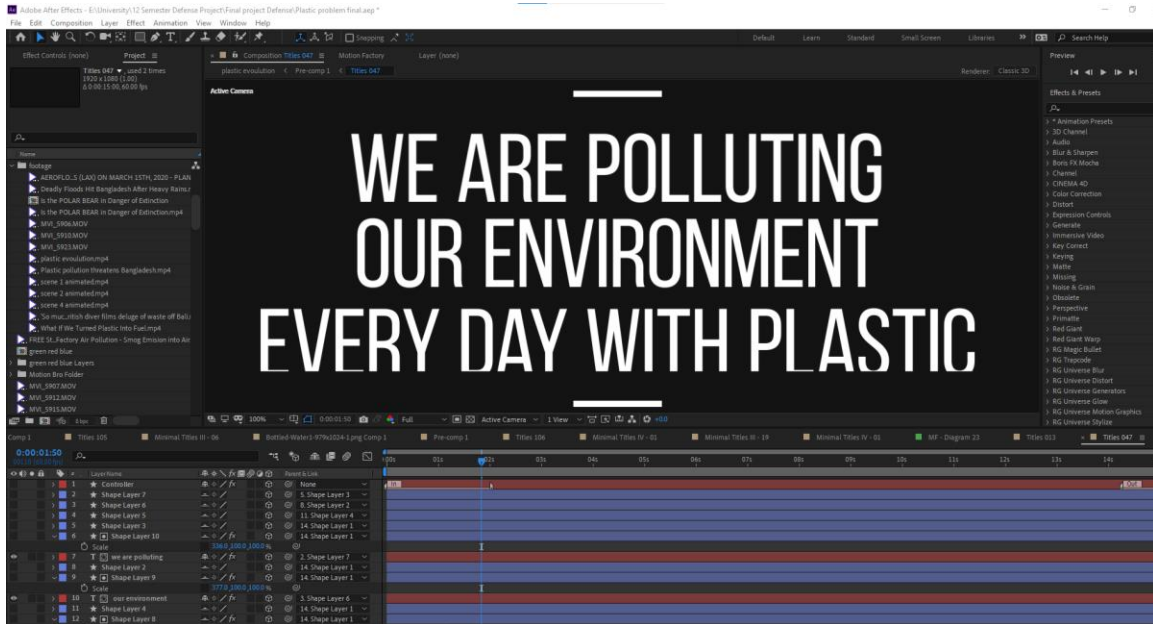


Figure 3.4.29 title animation 16

Step 25: “We are not using recyclable trash bin. we are throwing plastic on the road.” For this scene I have downloaded character and background asset from freepik.com. composite them on Adobe illustrator for animation.

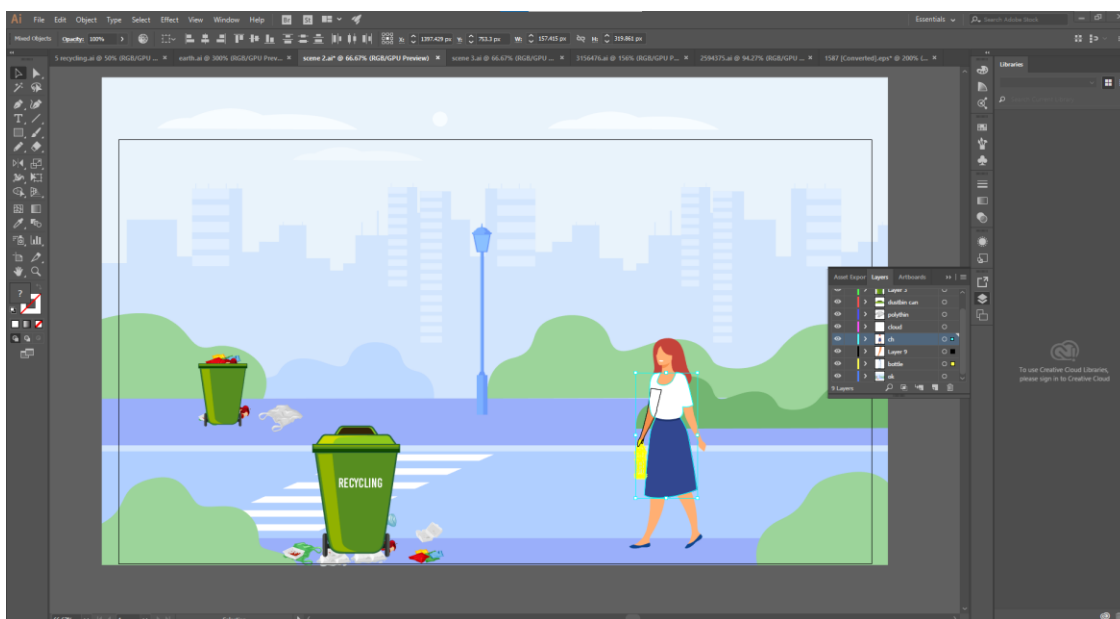


Figure 3.4.30 Character illustration

Then I animated it using puppet tool for character and position it and animated the bottle for the sequence using position transform. And one script loopOut(“cycle”);

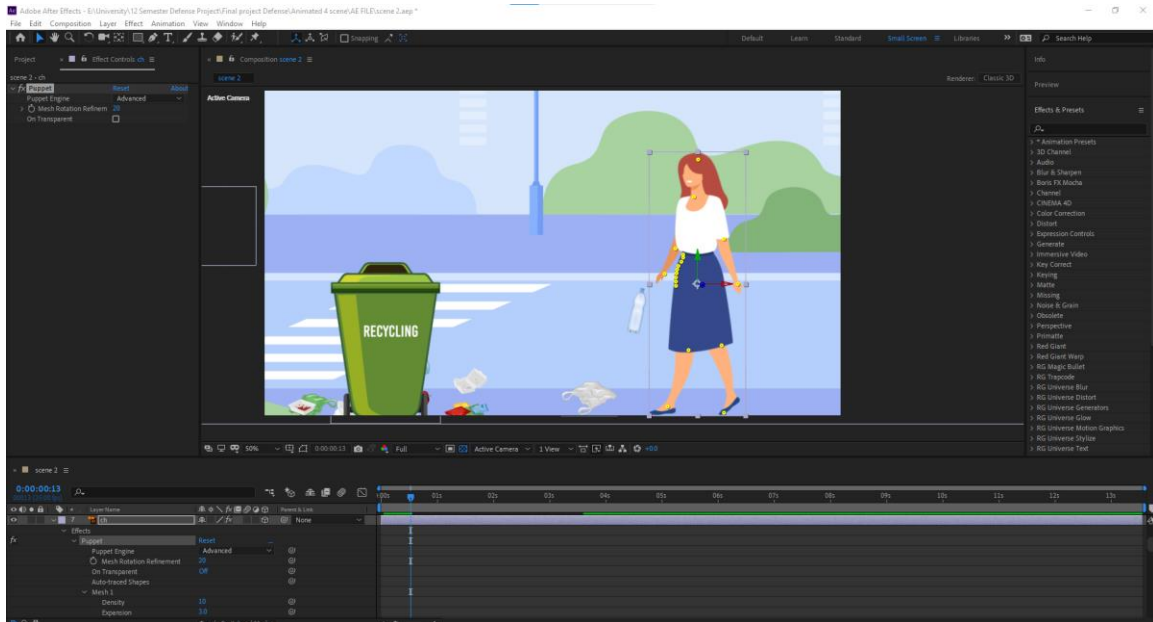


Figure 3.4.31 Character animation

Step 26: “We are throwing plastic even in the tourist place.” For this scene I have downloaded character and background asset from freepik.com. composite them on Adobe illustrator for animation. Then I animated it using puppet tool for character and position it and animated the bottle for the sequence using position transform. And one script loopOut(“cycle”);

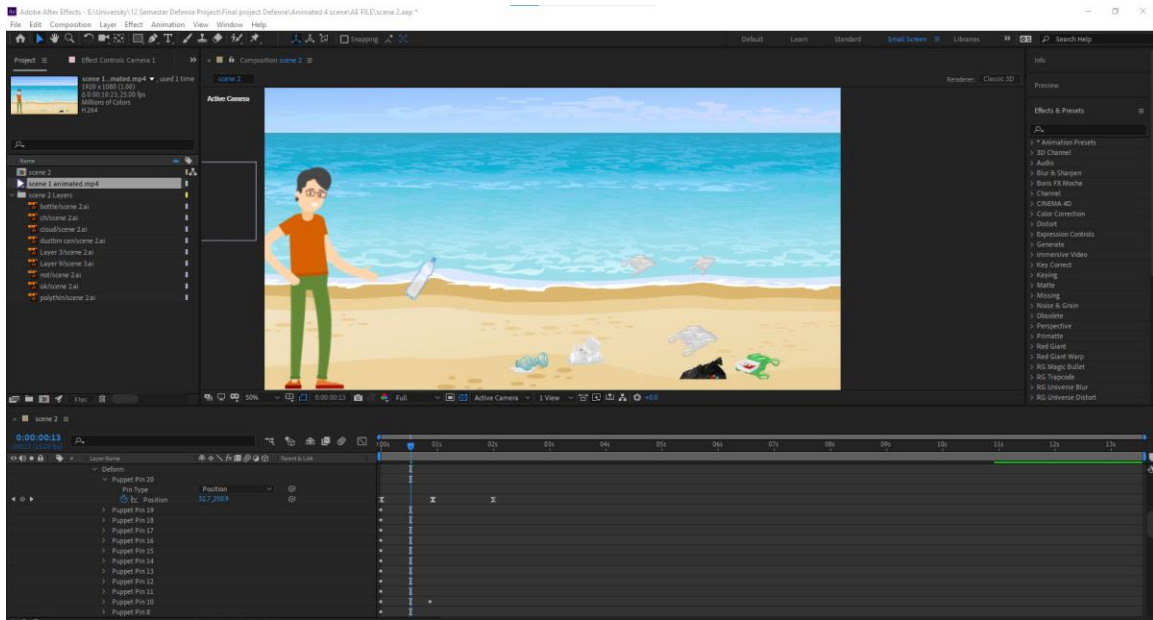


Figure 3.4.32 Character animation man at tourist place

Step 27: “We are throwing plastic in the water.” For this I have downloaded asset from freepik then modify it and take it to after effects.

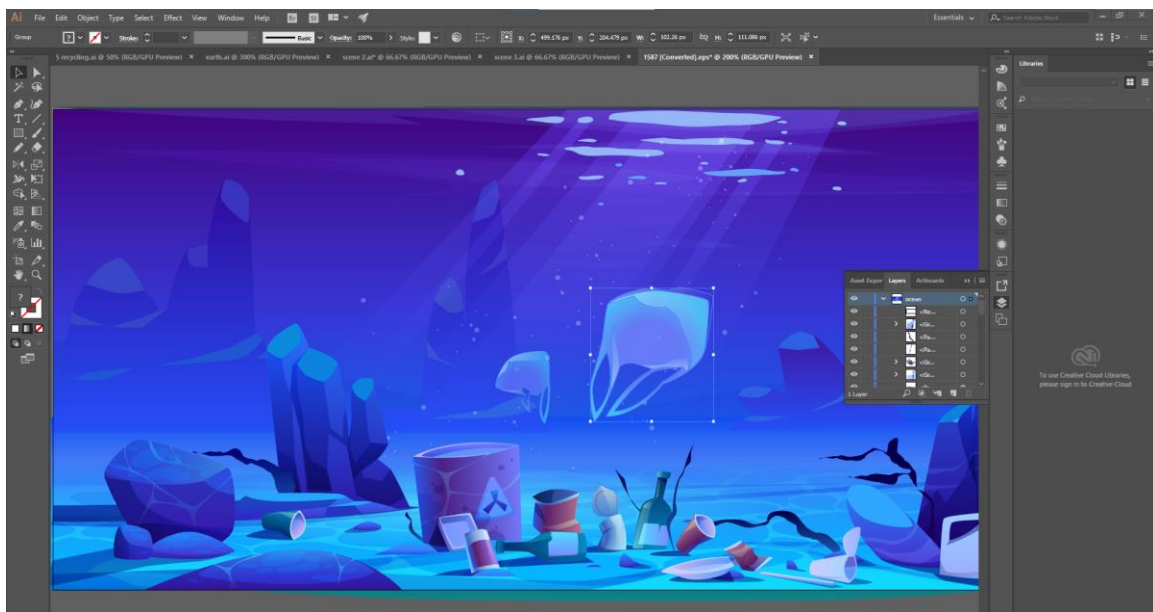


Figure 3.4.33 Illustration under ocean plastic

Then I animated it using puppet tool for character and position it and animated the bottle for the sequence using position transform. And one script loopOut(“cycle”); added green screen fish and composite with the file.

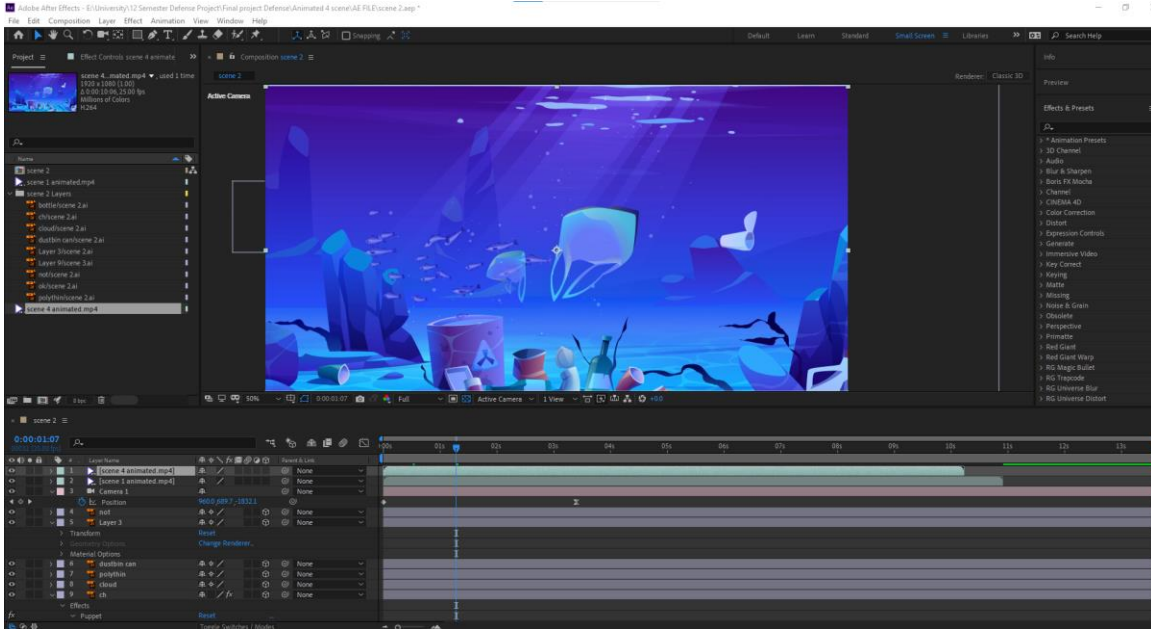


Figure 3.4.34 plastic under ocean animation

Step 28: With plastic we are polluting our environment. Used position scale and opacity and mask for this transition, using motion factory type builder.

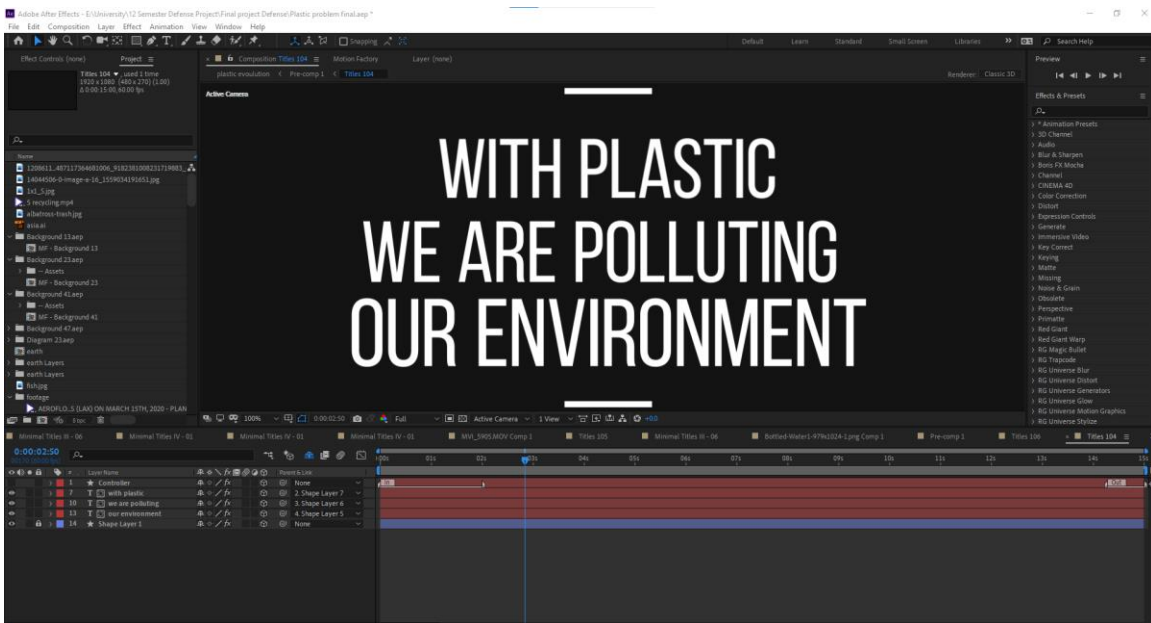


Figure 3.4.35 Title animation 17

Step 29: “99% of plastic cause climate change. Marine animals are under threat.1 million sea birds die every year for plastic, Plastic ultimately affecting us. We are eating plastic, ¼ of fish have plastic on their gut. We are drinking plastic, 83% of tap water samples contain plastic, we are breathing plastic; micro plastics are linked to air pollution. Plastic is polluting the community around the world. We can reduce plastic pollution by some simple changes. We have to reduce the use of single-use plastic.” For this used type builder motion graphics technic with scale mask with shape alpha map and position and opacity



Figure 3.4.36 Title animation 18

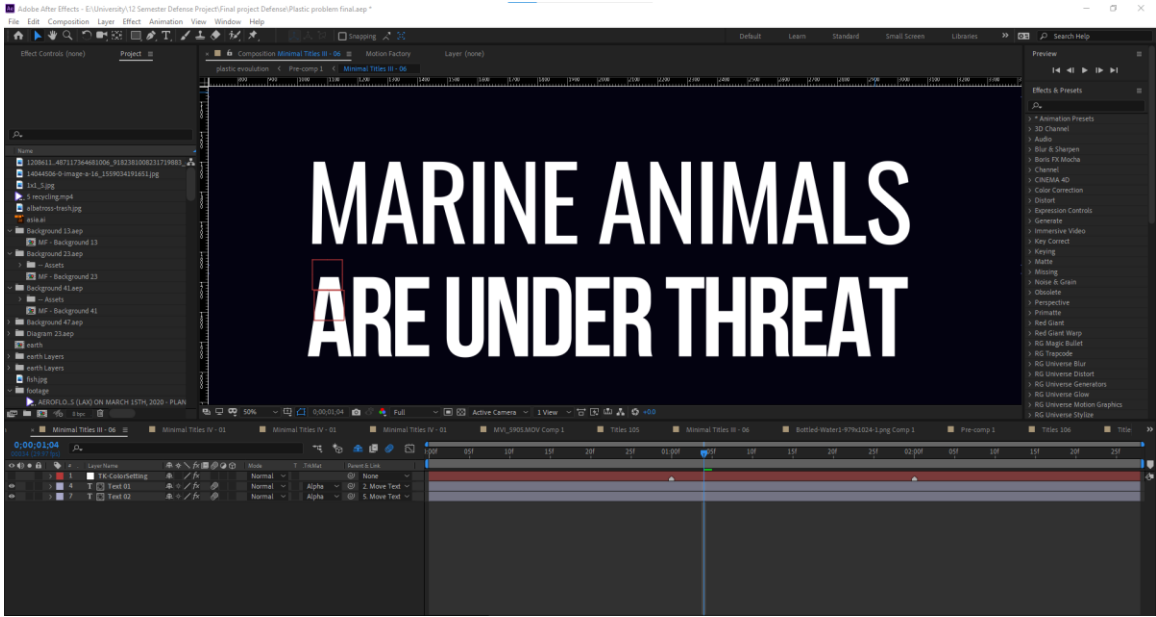


Figure 3.4.37 Title animation 19

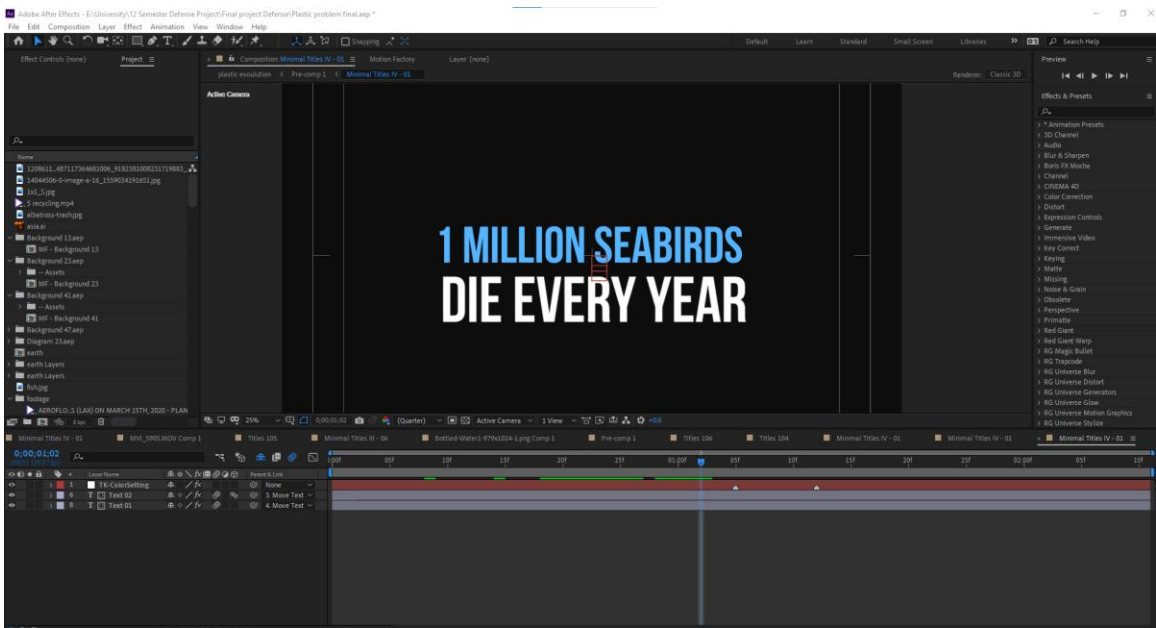


Figure 3.4.38 Title animation 20

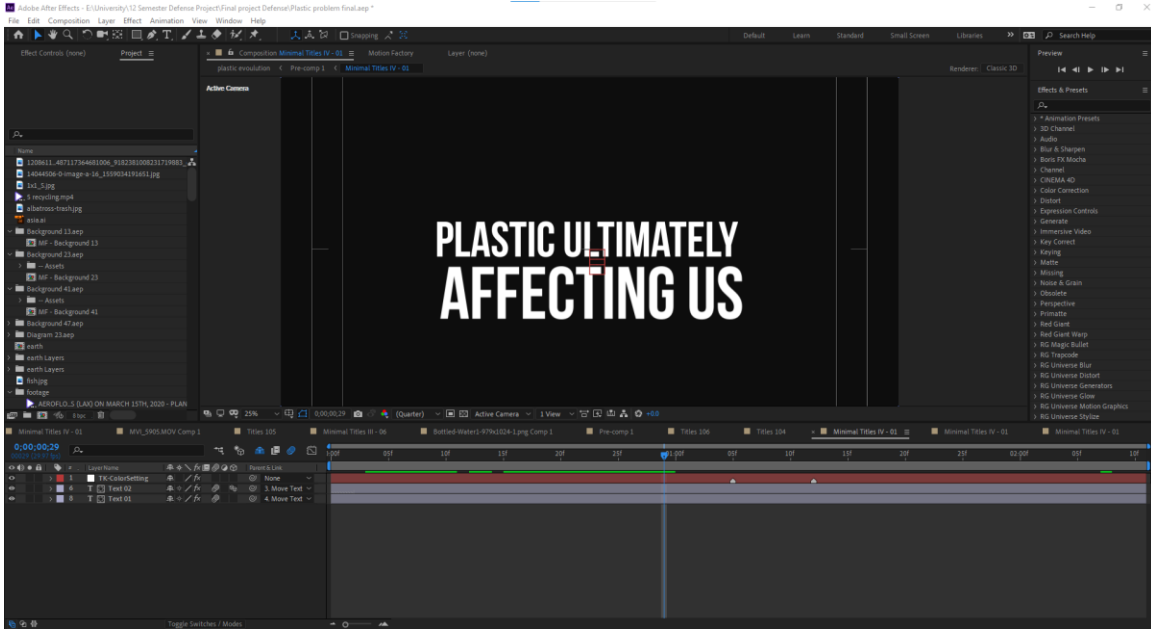


Figure 3.4.39 Title animation 21



Figure 3.4.40 Title animation 22

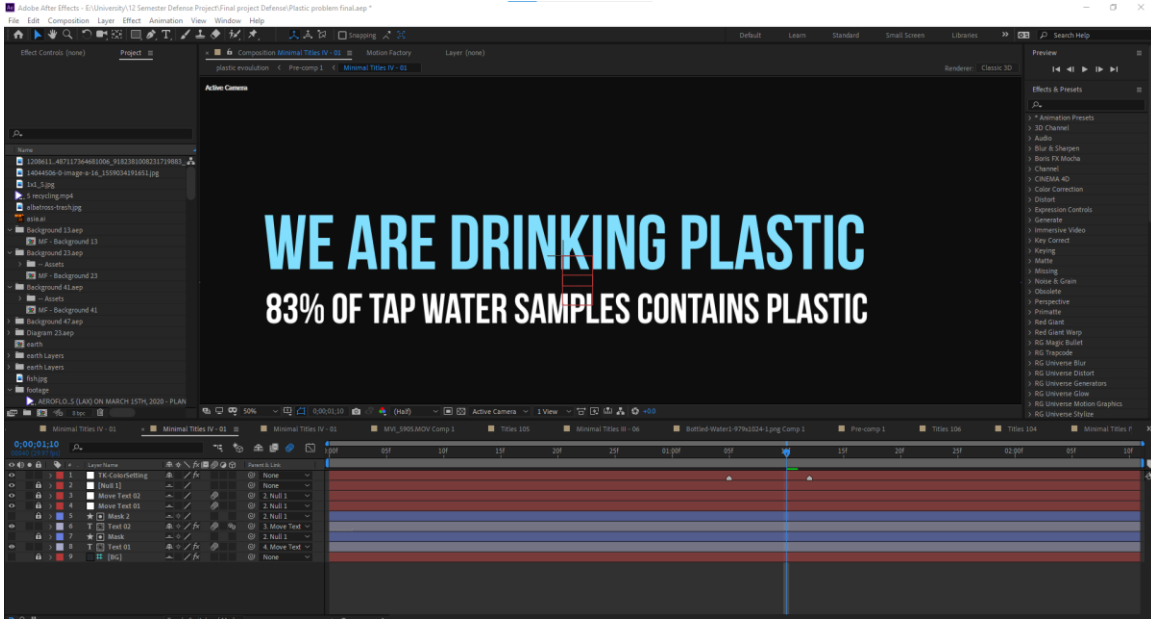


Figure 3.4.41 Title animation 23



Figure 3.4.42 Title animation 24

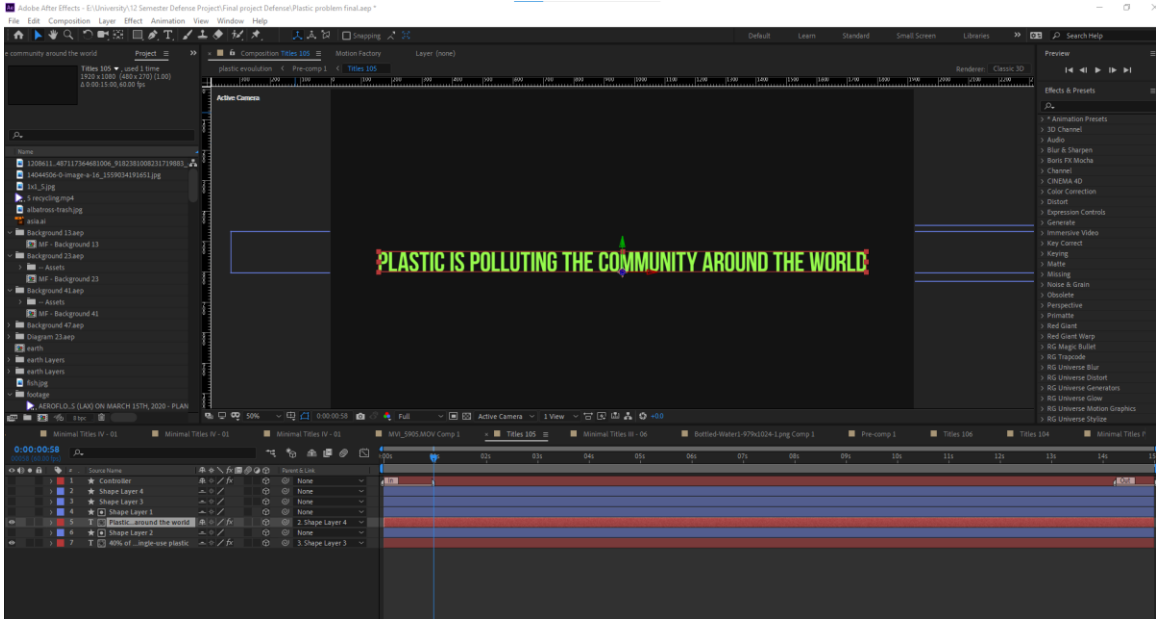


Figure 3.4.43 Title animation 25

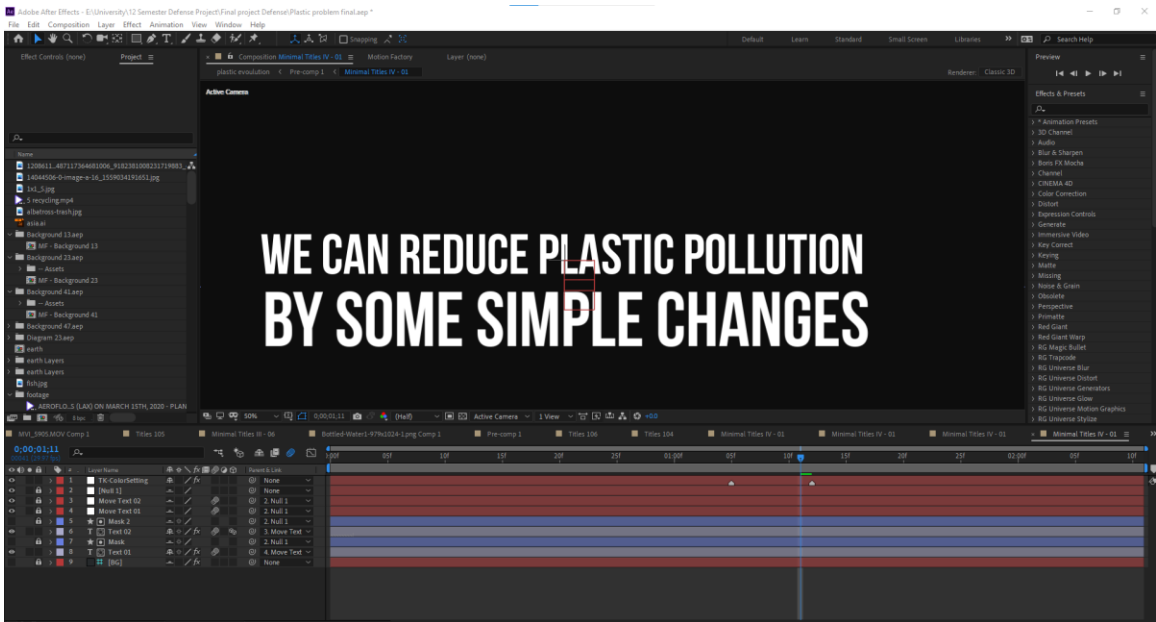


Figure 3.4.44 Title animation 26

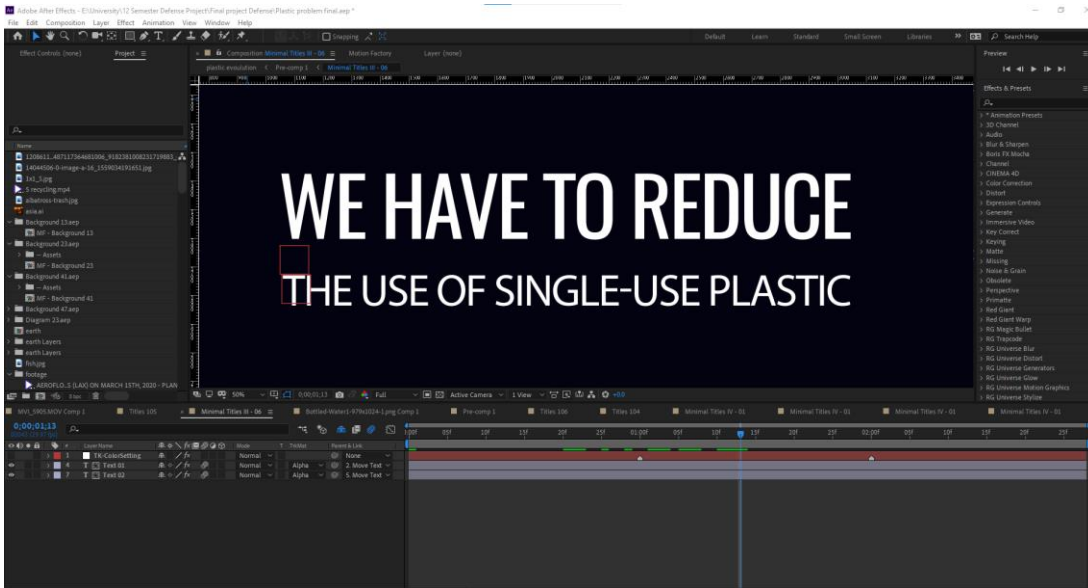


Figure 3.4.45 Title animation 27

Step 30: “Stop using single use plastic bottles instead use reusable bottle. Stop using plastic bag use reusable jute bag or use paper bag”. For this Text I have download plastic bottle, reusable bottle, plastic bag, reusable bag, paper bag image and made them PNG transparent using Adobe Photoshop. Then imported to AE. Position them with key frame create opacity low and high. And for smooth motion used Motion2.jsxbin extention. Also used Animation composer for the text.

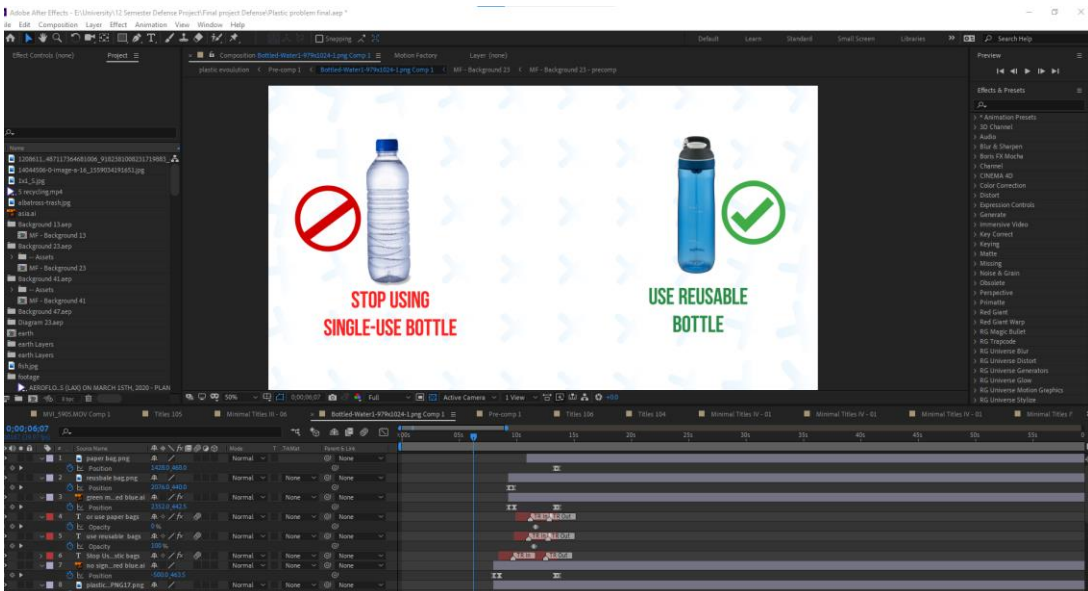


Figure 3.4.46 Plastic bottle alternative animation

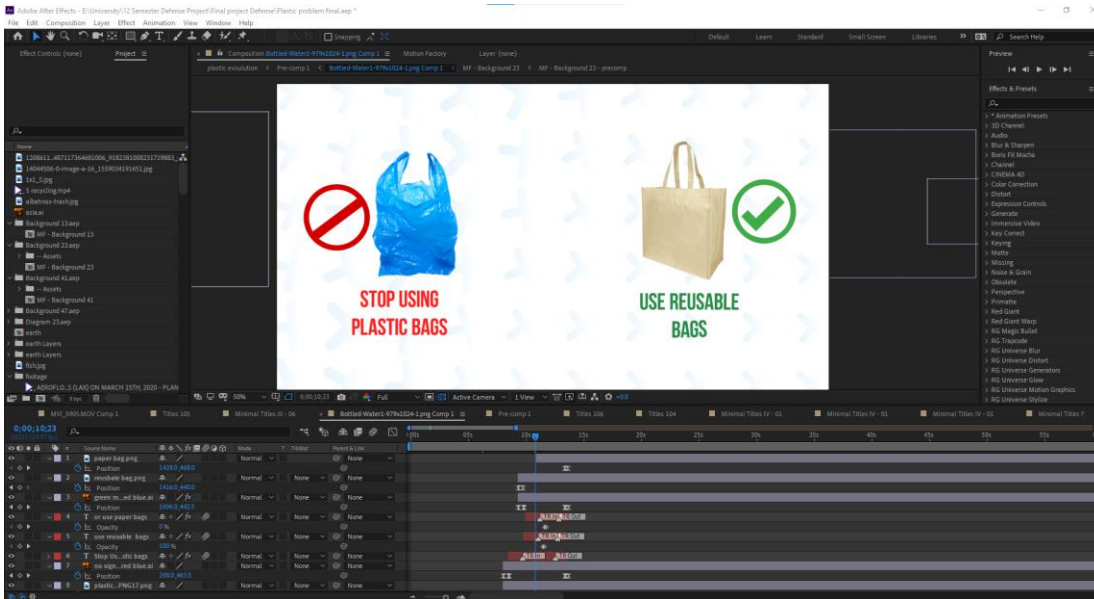


Figure 3.4.47 Plastic Bags alternative animation

Step 31: “We have to use our recyclable trash bins” for this line animated the same illustration that we done to create throwing waste to the outside used that illustration to motivate that we can change our habit. We can create awareness. And create the animation using puppet tool, and position. And create key frame to match the 2d animation hand and plastic bottle.

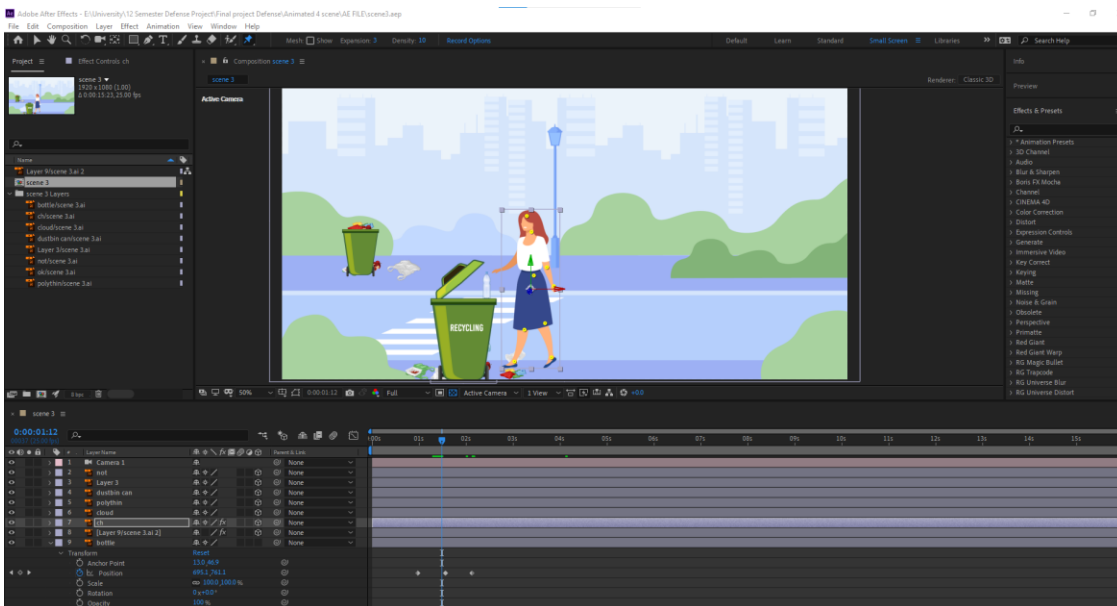


Figure 3.4.48 Plastic Recycle animation 2d

Step 32: “We have to recycle our existing plastic products” for this create a composition with freepik.com asset and then modify it for animation, import on AE use puppet tool for animation. And used camera tool to create depth of field and 3d feel with the text animation.

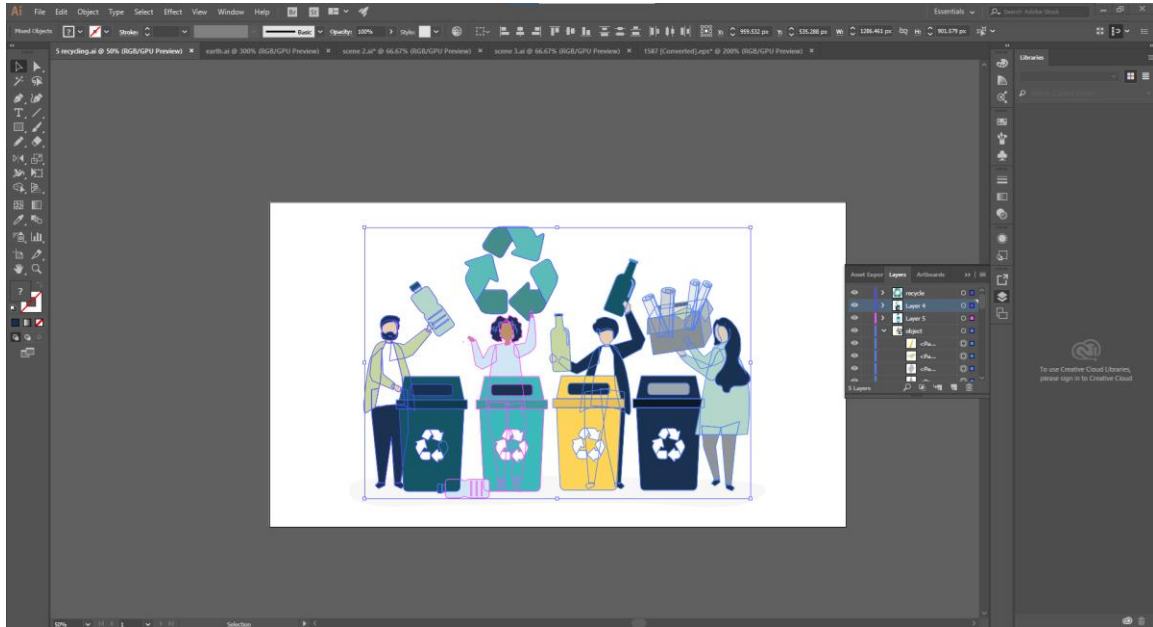


Figure 3.4.49 Plastic recycle illustration

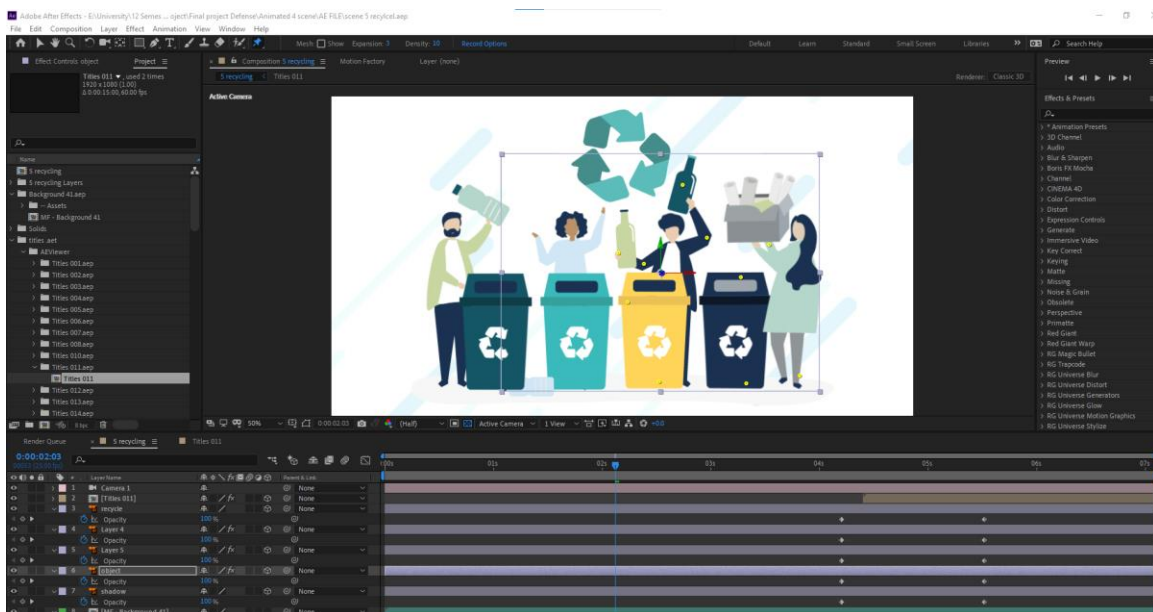


Figure 3.4.50 Plastic recycle Animation

Step 33: After this, I have Rendered the file from AE file to H.264 full hd, with 29.97 frame rate.

I have rendered using aftercodec plugin. This plugin extension can create h.264 render. By default, After Effects CC 2019 does not have this feature. So I had to render using aftereffects mp4. That encoded with H264. It takes 45min to render.

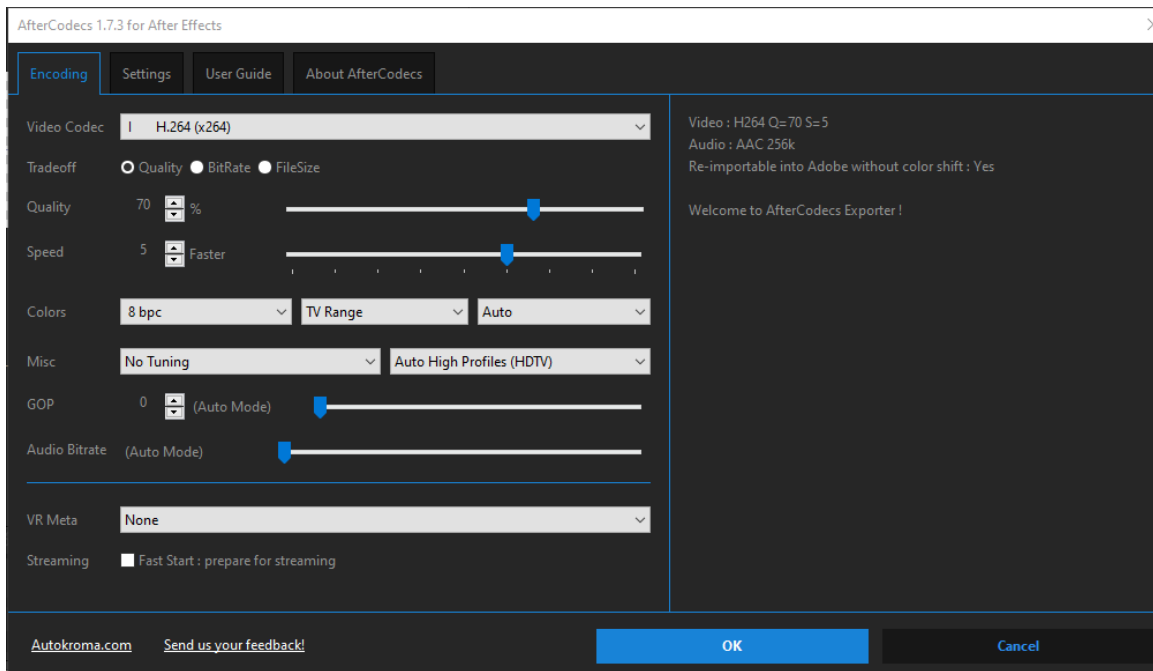


Figure 3.4.51 AfterCodec setting

Step 34: After having the rendered file I have open the file again to add some scene intro scene and daffodil international university opening scene and the last scene credit scene.

And also I have downloaded audio from audio jungle and some audio from YouTube no copyright free. Or royalty free copyright. And then imported then and did audio mixing with voice-over noise cancelation.

And added last Burignaga footage and then rendered the final project file using Premiere Pro CC 2020.

And then hit export to h.264, audio export ACC 48000Mhz and maximum quality render it takes 6-7 minute to render the final project file, Documentary Environment pollution by Plastic. And I edited audio voice over on audacity.

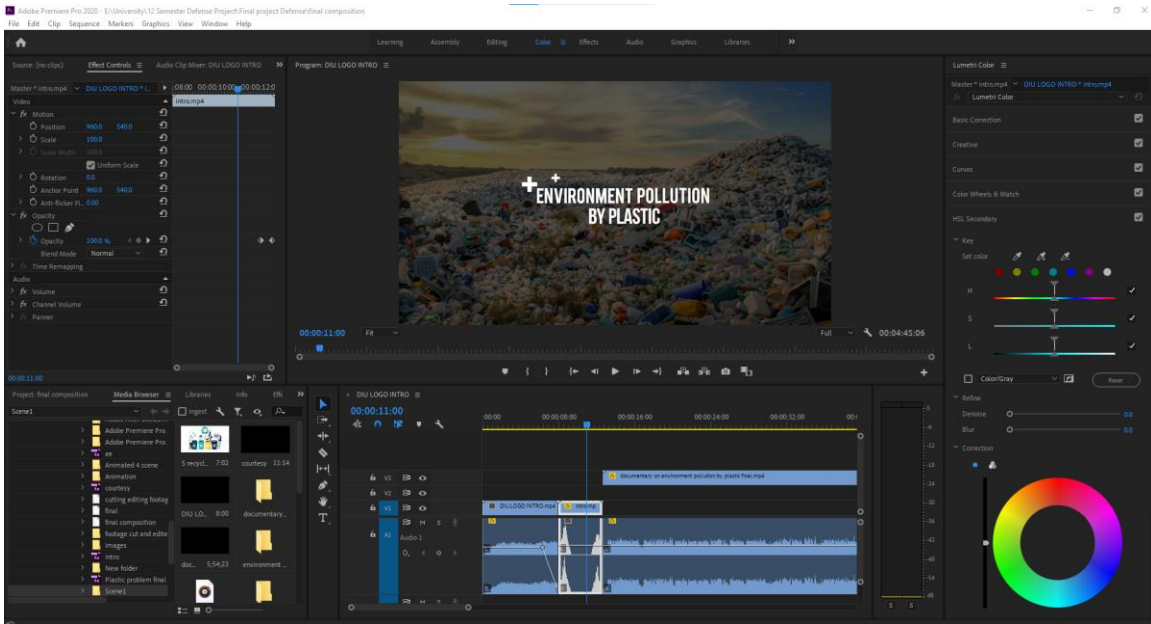


Figure 3.4.52 Premiere pro sound mixing

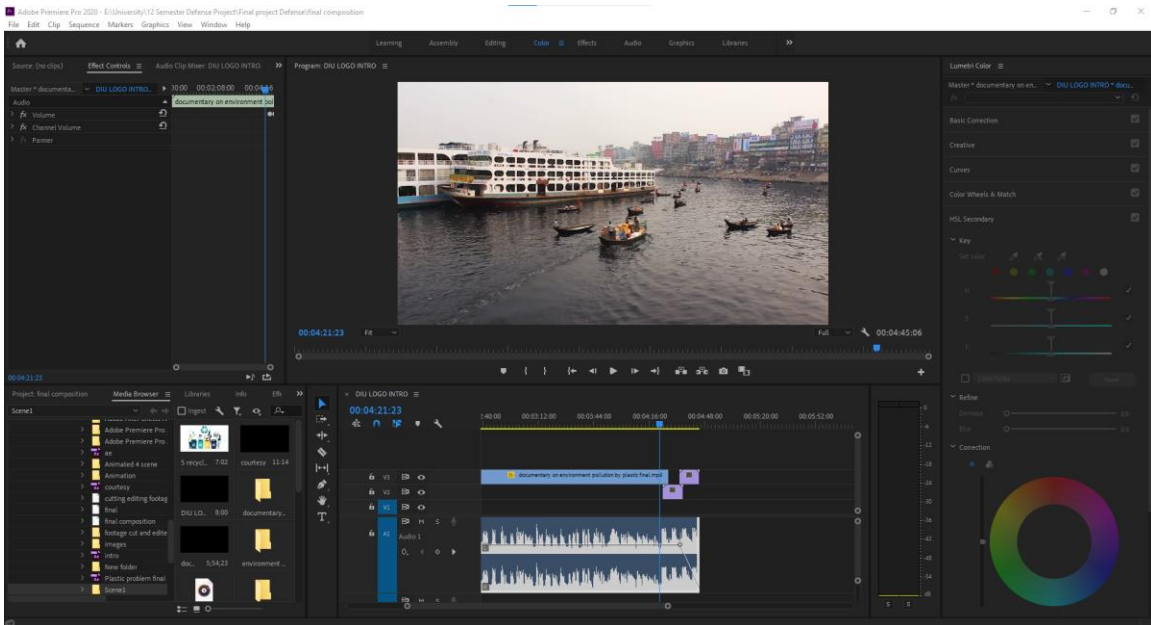


Figure 3.4.53 Premiere pro footage adding

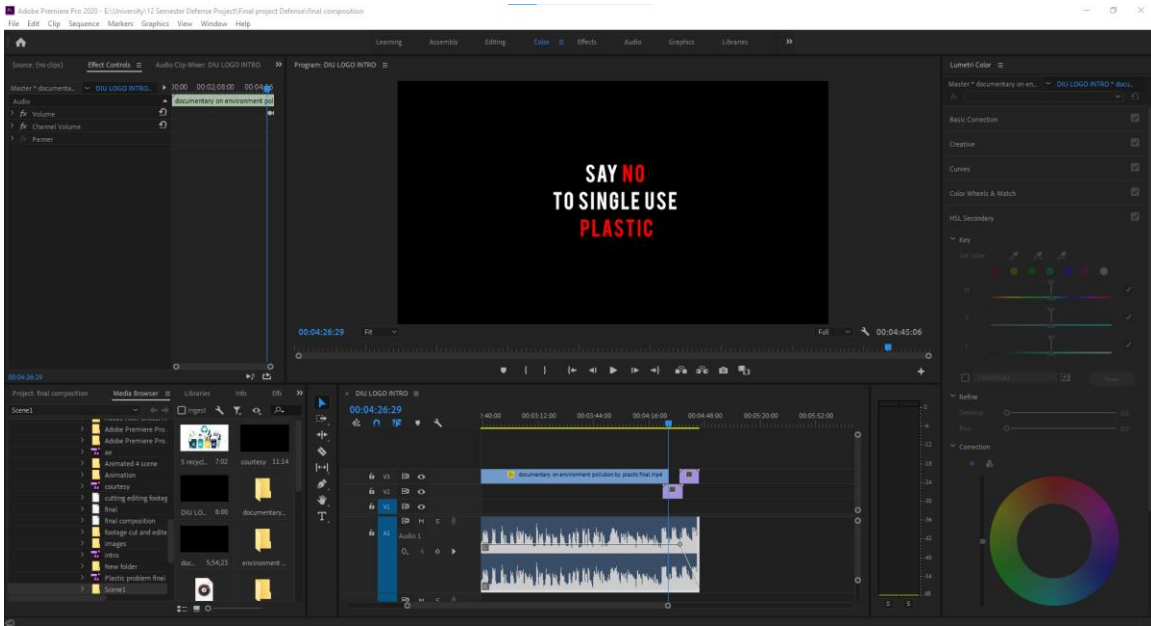


Figure 3.4.54 Premiere Pro Title animation

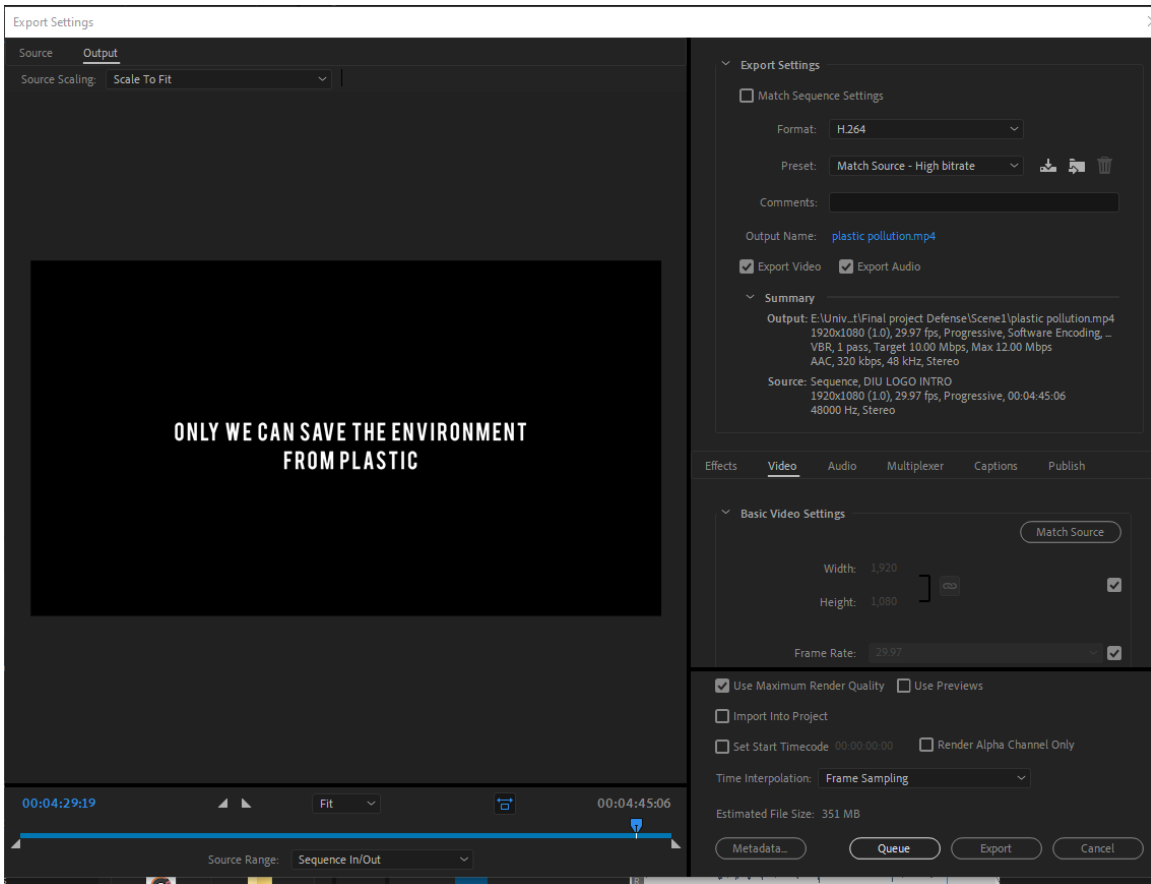


Figure 3.4.55 Premiere Pro Final Export setting

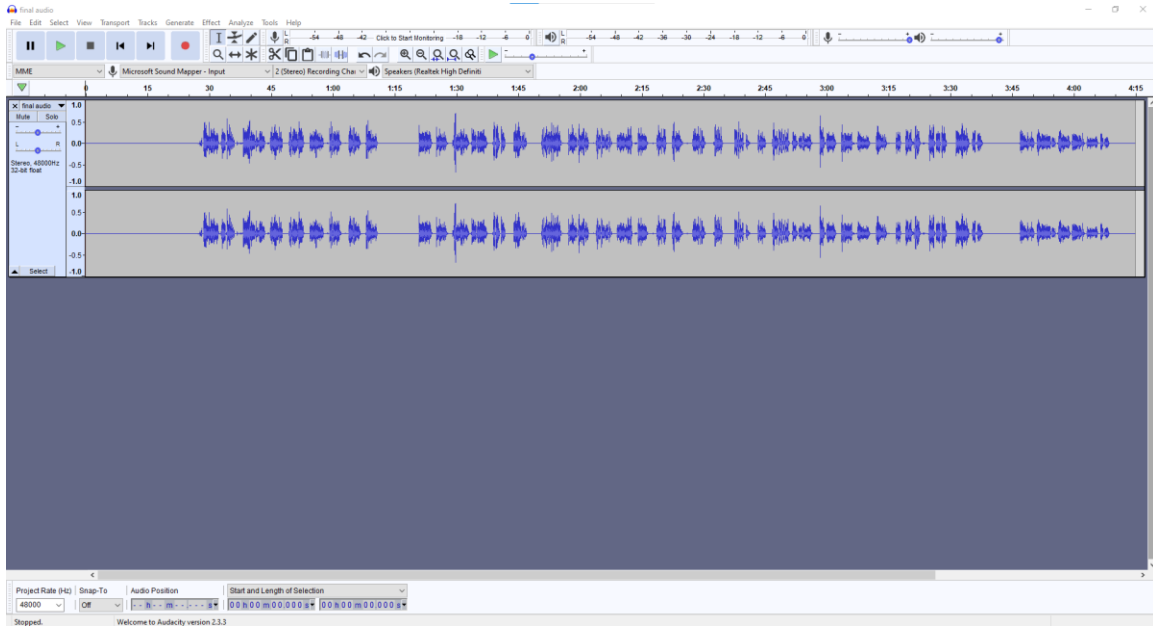


Figure 3.4.56 Audacity Voice over editing

CHAPTER 4

SOFTWARES & PLUGINS

4.1 Adobe Premiere Pro CC 2020



Figure 4.1.1 Premiere pro logo

Adobe Premiere Pro, developed by Adobe Systems and released as part of the Adobe Creative Cloud licensing program, is a timeline based video editing software application. First launched in 2003, Adobe Premiere Pro is a successor (first launched in 1991) to Adobe Premiere. It is oriented towards professional video editing, while the consumer market is targeted by its sister, Adobe Premiere Elements.

Premiere Pro supports high-definition video editing in both RGB and YUV at up to 10,240 × 8,192 definition, at up to 32-bit per channel color. Sample-level audio editing, support for the VST audio plug-in, and 5.1 surround sound mixing are available. The plug-in architecture of Premiere Pro allows it to import and export formats beyond those provided by QuickTime or DirectShow, supporting a wide range of MacOS and Windows video and audio file formats and codecs. It facilitates 3D editing with the ability to display 3D content using 2D monitors when used with CineForm's Neo line of plug-ins, while allowing individual left and right eye adjustments.

Premiere Pro can be used to generate broadcast-quality, high-definition video for all popular video editing tasks required. It can be used to import video, audio and graphics, and it can be used to produce new, edited video versions that can be exported to the medium and format needed for distribution.

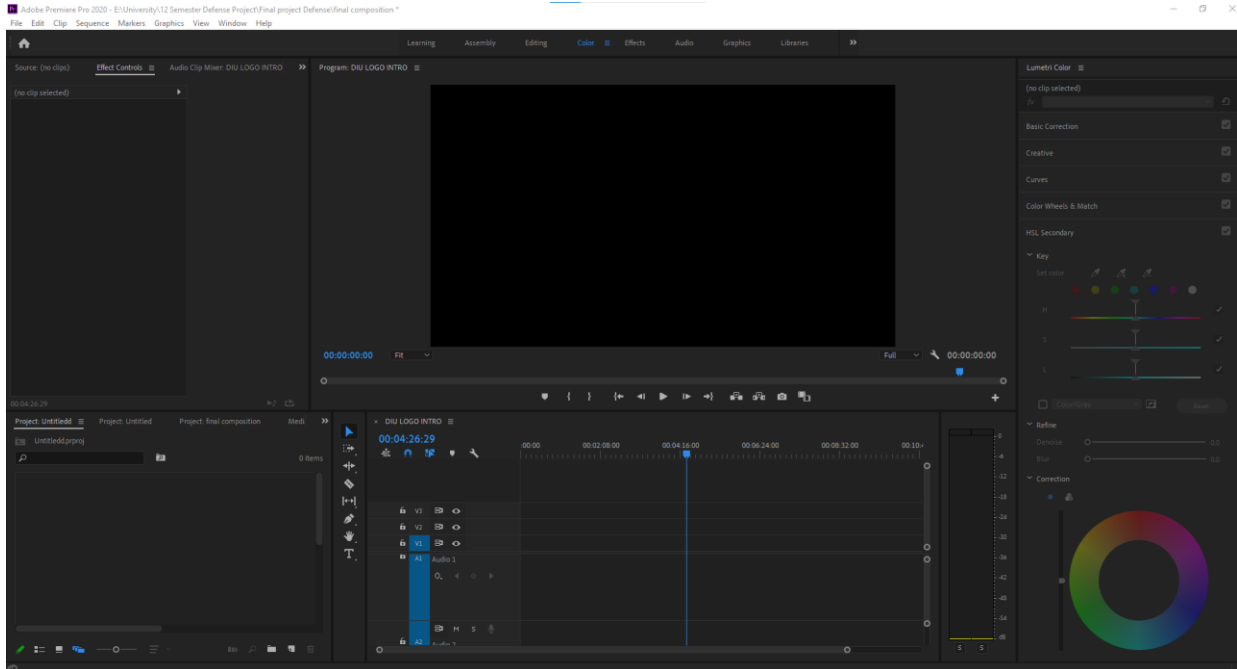


Figure 4.1.1 Premiere pro User Interface

4.2 Adobe After Effects CC 2019



Figure 4.2.1 After Effects logo

Adobe After Effects is an application developed by Adobe Systems for digital visual effects, motion graphics and compositing, used in the post-production process of film making, video games and television production. After Effects can be used for keyframing, monitoring, compositing, and animation, among other things. It also acts as a very simple non-linear editor, media transcoder, and audio editor. The software received an Academy Award for scientific and technological accomplishment in 2019.

It has robust plug-in support for After Effects; a wide range of third-party plug-ins are available. There are a number of plug-in styles, such as particle systems for realistic rain, snow, fire, etc. effects. After Effects can render 3D effects with or without third-party plug-ins. Some of these 3D plug-ins use After Effects' simple 2D layers. There are plug-ins to make video look like film or cartoons in addition to 3D effects; simulate fire, smoke, or water; particle systems; slow motion; create animated maps, graphs, and other data visualization; measure a camera's 3D motion in a 2D video shot; erase flicker, noise, or rigging lines; translate FCP or Avid timelines; add high-end color correction;

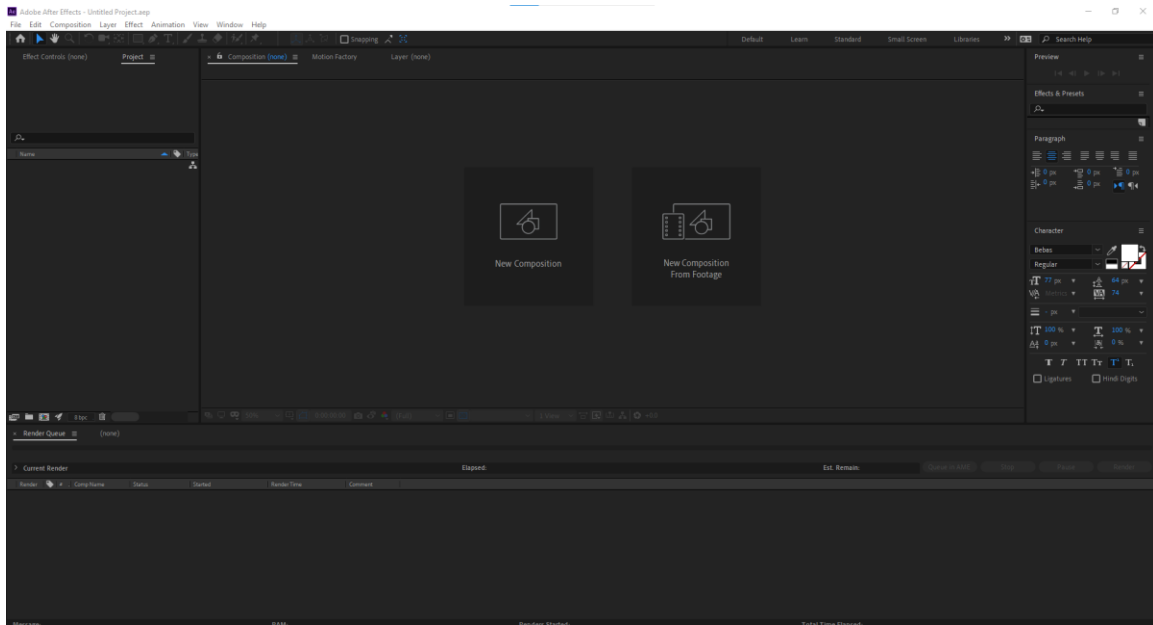


Figure 4.2.2 After Effects User Interface

4.3 Adobe Illustrator 2017



Figure 4.3.1 Adobe Illustrator logo

Adobe Illustrator is a vector graphics editor and design program developed and marketed by Adobe Inc. Originally designed for the Apple Macintosh, development of Adobe Illustrator began in 1985. Along with Creative Cloud, Illustrator CC was released.

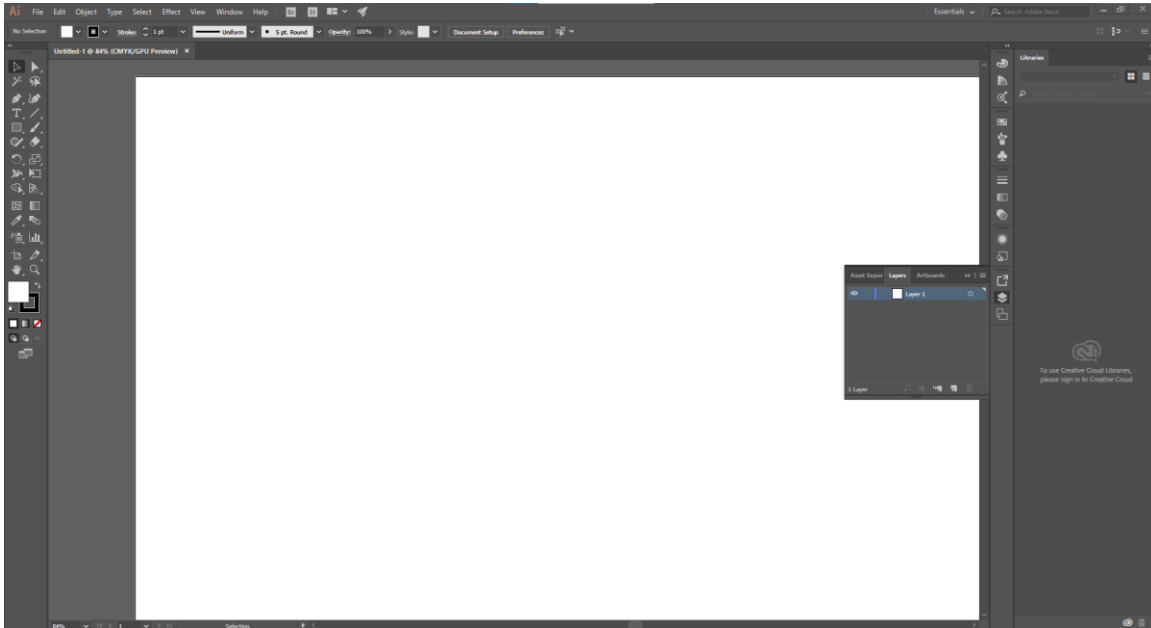


Figure 4.3.2 Adobe Illustrator User Interface

4.4 Adobe Photoshop 2019



Figure 4.4.1 Adobe Photoshop logo

Adobe Photoshop is a Windows and MacOS raster graphics editor developed and released by Adobe Inc. Thomas and John Knoll first founded it in 1988. Since then, not only in raster graphics editing, but in digital art as a whole, software has become an industry standard. The name of the program has since become a common trademark, resulting in its use as a verb (e.g. "photoshop an image", "photoshopping", and "photoshop contest"),

although such use is discouraged by Adobe. Photoshop can edit and compose multi-layer raster images and supports RGB, CMYK, CIELAB, spot color, and duotone masks, alpha compositing, and multiple color models. To support certain features, Photoshop uses its own PSD and PSB file formats. As well as raster graphics.

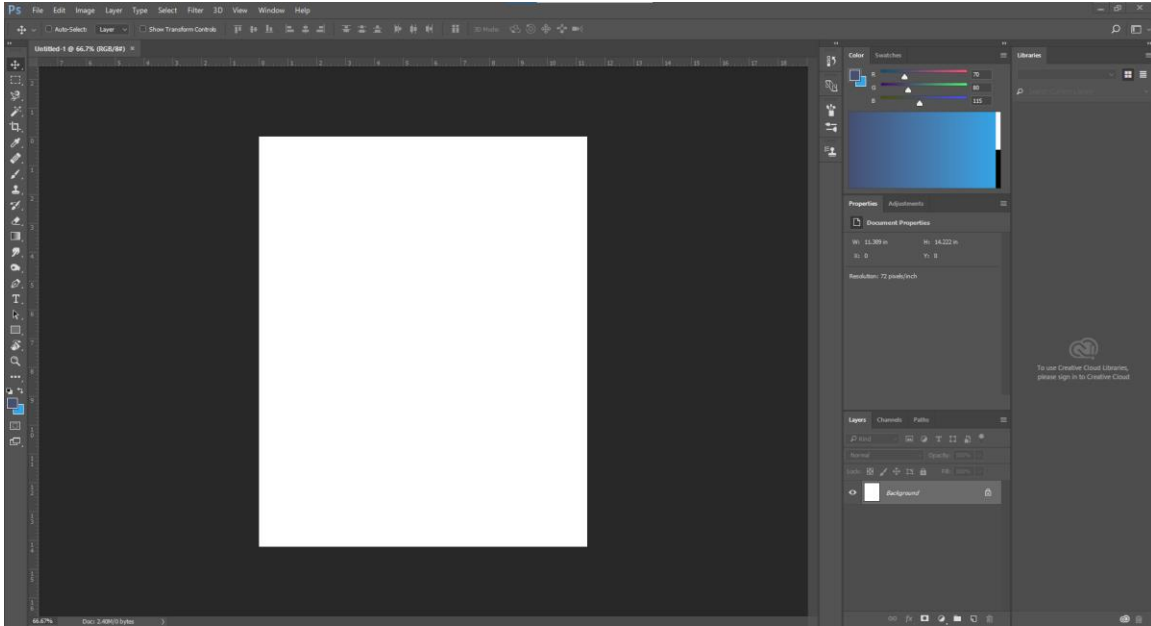


Figure 4.4.2 Adobe Photoshop User Interface

4.5 Audacity



Figure 4.5.1 Audacity logo

Audacity, available for Windows , macOS , Linux, and other Unix-like operating systems, is a free and open source digital audio editor and recording application software. Dominic Mazzoni and Roger Dannenberg began Audacity at Carnegie Mellon University in the fall of 1999 and was published as version 0.8 on May 28, 2000.

As of June 26, 2020, FossHub[9] has been the most popular download, with over 93.2 million downloads since March 2015. Downloads from Google Code and SourceForge were previously given, with a combined total of more than 110 million downloads. Audacity received the SourceForge Community Choice Award for Best Multimedia Project in 2007 and 2009.

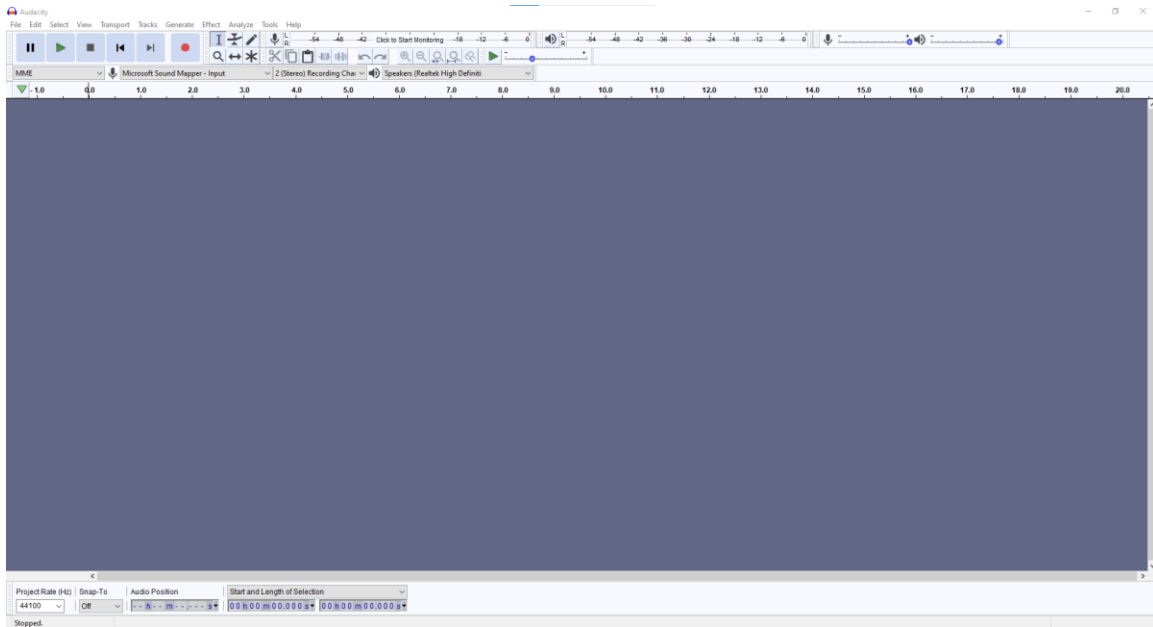


Figure 4.5.2 Audacity User Interface

4.5 Plugins and Extension

Used Motion Factory, AEViewer, Animation Composer, AEJuice, Motion Bro, Motion tolls 2.jsxbin For Animation. Used RedGiant- RG Magic Bullet For Color correction

CHAPTER 5

OBSTACLES

5.1 Footages and The pandemic Situation

I have done shooting for my project only buriganga, sadargaht. But I had a wish to go beyond this. I wanted to collect footage from all other tourist place as well to show which places are more populated in our country Bangladesh. And I wanted to show and take a footage from plastic bags still selling and producing though its ban.

Otherwise this projects go with the plan. But if I had those footage I can add in the end after sadarghat,buriganga footage with a suspense music and voice over. For covid-19 pandemic situation I'm unable to add those, and its quit impossible right now to add.

Plastic pollution has a huge impact in our country and over the world, this sector is huge, if I could get some shot from water bottle single-use plastic industry it would be more good. Though for the pandemic situation I have to collect some footages from some sources, and then I have completed my final defense project.

5.2 Software Issue

I have faced software problem, that's why I had to do some rework again, like for the plastic throwing animation I have saved the project and when I open again the project, its says project error, then I found that the project file for AE damaged, and it also damaged the AI file. So I had to do the illustration composition again, then I reloaded those file again on the composition and did complete the animation.

5.3 Render Issue

After the first Render, when I opened my project mp4 file, it says this file cannot be open, then I realized I didn't render it with my default setting the setting and frame rate mismatched. Then I have re-render the file again and this time the render is complete but it has glitches a bug of rendering cause frame glitches. Then I realize when I was rendering google chrome also using my half of RAM almost, that causes the glitches.

And the last time the render is ready to go.

CHAPTER 6

DISCUSSION

6.1 Compare with other work

National Geographic, WWF International, United Nation did a lot of documentary infographics or awareness film and project.

But James Robert- A plastic wave; New Age Bd-Plastic Pollution threatens Bangladesh; National Geographic-Plastic 101, how we can keep plastic out of the ocean; WWF International-Plastic Pollution.

I reviewed the previous work and addressed a subject such as plastic history, or plastic epidemic, or how we can keep plastic out of the environment everywhere. How plastic waste can be regulated. But I added footage of Buriganga River, the most polluted river in Bangladesh, in my documentary infographics and spoke about all the parameters, added infographics, added animation video editing and generated the documentary with sound mixing that generates a thought for the young generation about the future of plastic.

6.2 Future development

I shot only Sadargaht, buriganga for my project, . But there's a wish for me to go beyond this. I also wanted to collect footage from all other tourist places to show the places in our country, Bangladesh, are more populated. And I decided to demonstrate and take video of plastic bags that were still being sold and manufactured through its prohibition.

In our country and around the world, plastic pollution has a big impact, this sector is big, if I could get any shot from the single-use plastic industry with water bottles, it would be more good. I have a keen interest in this topic in future I will create a full documentary not only infographics but also a documentary with interview of many person those are related to plastic and its pollution with more than 20 minute long.

CHAPTER 7

CONCLUSION

Plastic bags affect many people, not just customers, but the environment and animals are also affected by plastic bags. We are affected by plastic bags because they are wrongly disposed of by all of us and because we do not realize the implications of using plastic bags. Research indicates that "it takes 450-1,000 years for plastic to degrade," which suggests that the plastic we use will not go away anytime soon. The amount of plastic bags we use is important because they will only pile up and produce waste until we throw the plastic bags away, which is detrimental to the environment and how we dispose of the plastic bags is not really going to help because of the amount of time it takes for them to decompose. A significant thing to note is that "50 percent of the plastic we use, we only use once and throw away" should be taken into account.

Environmental and human costs are related because both have a negative impact on us in many ways. "Over the past 10 years, we have produced more plastic than over the entire past century." This piece of evidence is important because it has a few meanings. The first interpretation is concerned with the effect on the environment. For anything that is not needed, we use the resources that are used. What I mean by this is that to make those plastic bags we really don't need, we use oil. The human result is that we are polluting our environment as we dispose of the plastic bags wrongly.

I have learnt a lot of new technic about motion graphics and video editing and audio mixing through this project.

From This Documentary I have learned a lot about the plastic its habitat, and I'm aware of the plastic pollution, hope this mini documentary on plastic pollution will create a awareness through the young generation and all ages of people.

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