

THAT'S RIGHT! TO BUILD **YOUR**
RESILIENCE TO CLIMATE CHANGE

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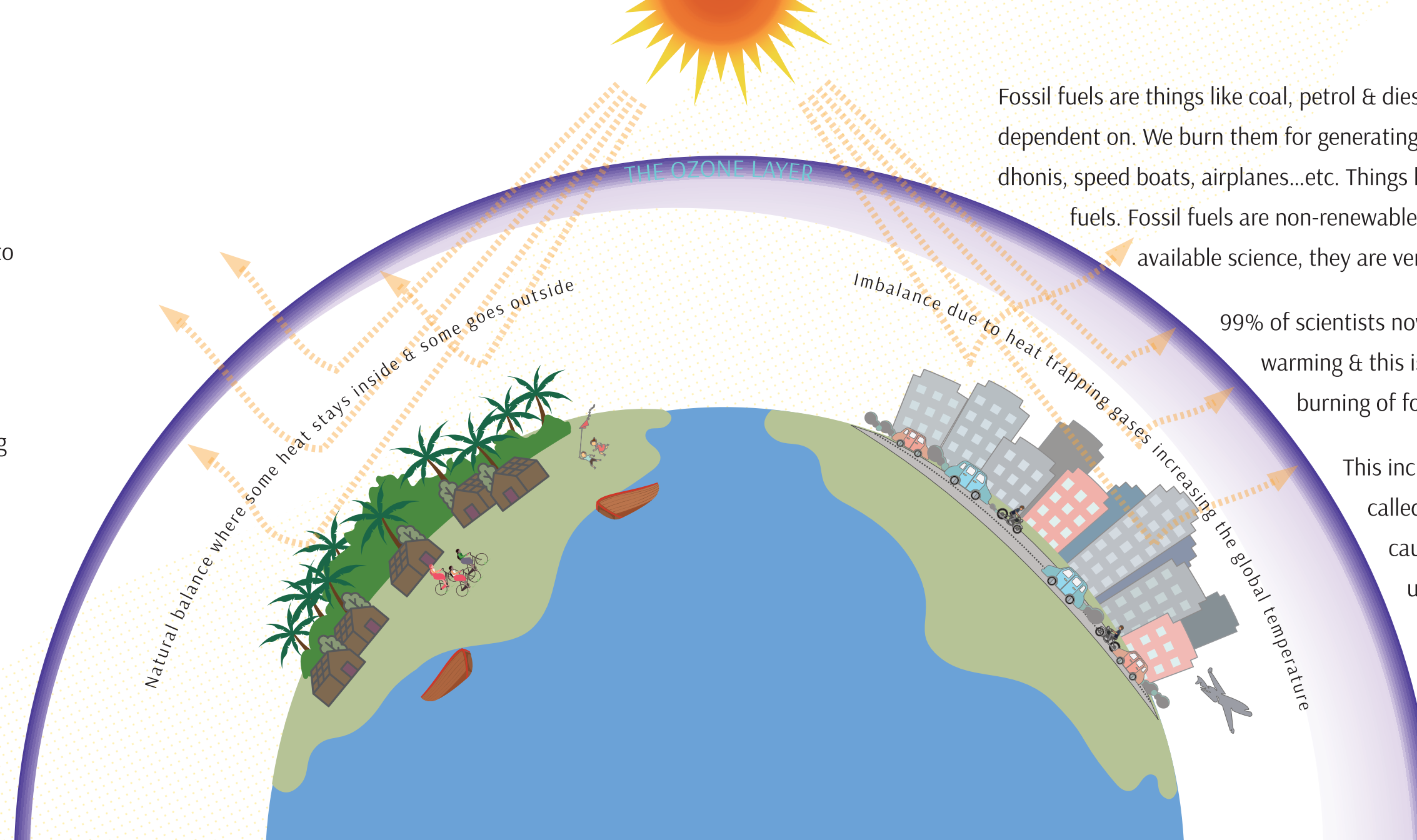
This toolkit is designed & developed as a self-guided handbook for young people, with the hope of empowering them to take action to address climate change & environmental degradation.

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THE BASICS

We know that our environment is degrading due to unsustainable development practices that lead to rapid changes to our climate.

Trees play a vital role in absorbing Carbon dioxide (the air we breathe out) & releasing Oxygen (the air we breathe in) - trees purify the air we breathe.



Fossil fuels are things like coal, petrol & diesel which we are currently, heavily dependent on. We burn them for generating electricity, powering motorcycles, cars, dhonis, speed boats, airplanes...etc. Things like plastic are also made from fossil fuels. Fossil fuels are non-renewable sources of energy & according to best available science, they are very harmful for us & the environment.

99% of scientists now agree that our planet is abnormally warming & this is because of human action mostly from burning of fossil fuels & cutting down trees.

This increase in average global temperature is called global warming. Global warming has caused the world's climate to change with unusual & extreme weather events happening across the planet. This is called climate change.

CLIMATE CHANGE IS REAL!

Bad News

Extreme weather events are happening across the world. We are experiencing extremely hot days, short bursts of intense rainfall that causes flooding & dengue outbreaks. We also see more coral bleaching.

Good News

The world's leading scientists have said that if URGENT action is taken, it is very much possible to save us from these extreme weather events & protect our environment that we depend on for our survival.

It's normal to feel negative emotions when thinking about climate change & environmental degradation.



What's great is that, it is humanly possible to channel all those negative feelings to fuel positive action.

Already millions of young people from across the globe are doing this.

This guide will give you a few tips on how to get started on making a positive difference.

Sustainable Development is such a buzz word...so let's first find out what it really means....

WHAT IS SUSTAINABLE DEVELOPMENT?

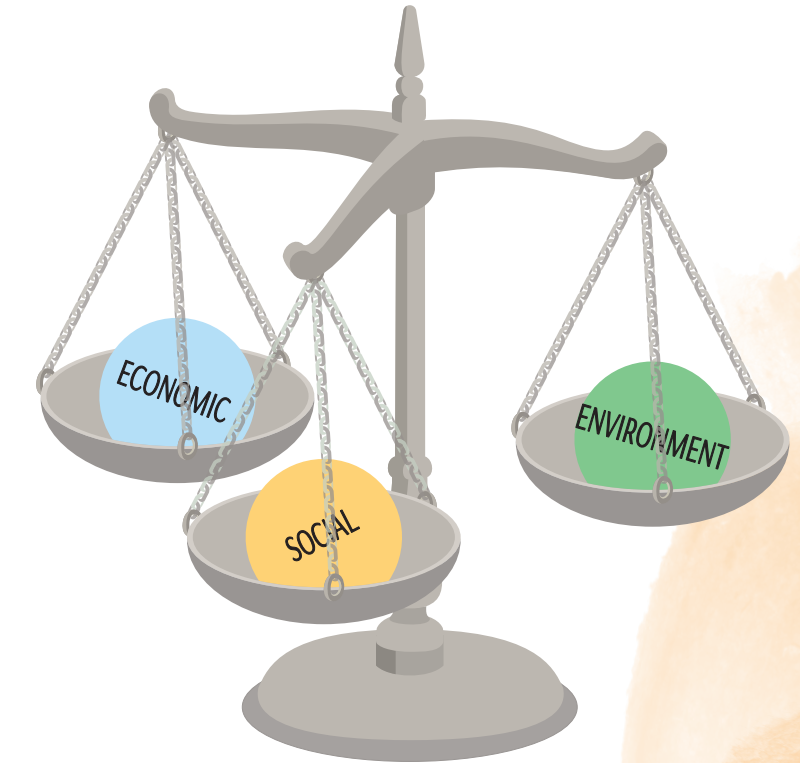


Check this link: <https://vimeo.com/144354623>

Sustainable development means development that meets the needs of the present generation without compromising the needs of future generations.

Development is considered sustainable if there is a balance between economic, social & environmental aspects.

Simply put, sustainable means being able to continue doing what you are doing forever.



CHECK THE FOLLOWING VIDEOS TO SEE WHAT YOU CAN DO!



World's Largest Lesson Part 1:

The way we are living on earth now is damaging the very things we need to survive. We need to fix this. Good news is there is a plan. Let's find out what the plan is.

Check the link: <https://vimeo.com/138852758>



World's Largest Lesson Part 2:

Can young people make a positive difference to save us & our planet? Let's find out what young people from across the globe are already doing.

Check the link: <https://vimeo.com/178464378>



World's Largest Lesson Part 3:

Getting started can be hard especially when the change needed seems to be enormous. Let's find out how you can get started.

Check the link: <https://vimeo.com/266852848>

Tip 1 "EVERY LITTLE BIT COUNTS"

Don't let the naysayers stop you.

Would you rather be called crazy for ...

People may call you crazy but it's also crazy not to do anything & continue life as usual.

doing nothing & pretending that climate change isn't real?

taking action to save you, your family, friends & community?

Would you sit inside your house if it was on fire?
Certainly not!

World leading scientists have said that we need transformational & unprecedented change to happen within these few years.

What does that mean?

Yup, it means embracing crazy & thinking beyond the norm.

Tip 2 "BE HEALTHY & FIT"

You need to be resilient yourself to be able to help others in need & strive towards building the resilience of your community.

The Essentials:

1. Drink Plenty of Water

Extremely hot days are also expected to be the norm. It is vital that we drink plenty of water to avoid dehydration & stay healthy.

Rain-water is a good source of water but we need to ensure it is safe to drink through filtration and/or boiling.

Remember, hydration is key for your overall well-being which is what makes you resilient.

knowing that we have access to water at all times

Water Security

With climate change, we are experiencing short bursts of intense rainfall which makes it difficult to harvest rainwater. We need to think of innovative ways to collect & store this precious water.

Desalination of water (removal of salt & impurities from sea water) is an expensive process if powered by fossil fuels.

Also it is very concerning if the desalination is powered by fossil fuels because burning of fossil fuels is what's causing this climate crisis!

We need to ensure we switch to renewable sources of energy as soon as possible.

Renewable energy is the way forward. Examples of renewable energy sources include sun, wind, tide & currents.

Energy Security

knowing that we have access to electricity at all times

DID YOU KNOW?

SINGLE-USE BOTTLED WATER CONTAINS MICRO-PLASTICS WHICH ARE HARMFUL TO YOU !!!

2. Eat Healthy

Extreme weather events are occurring all around the world destroying farmlands & factories that produce food.

Greater than 90% of the food we eat are imported from other countries to the Maldives.



Its concerning!!!

This means we are at risk of starvation & hunger. This is called Food Insecurity. We need to make sure this does not happen.

Solutions exist. We just need to be creative & find innovative ways that fit the local context.



Moringa (މޮރިންގާ)
Superfood + Seeds are used to purify water

Let's find out why the Moringa tree is called the "Miracle" tree



DID YOU KNOW?
MORINGA,
BREADFRUIT &
SCREWPIPE ARE
CONSIDERED AS SUPER
FOOD?

What's exciting is that these 3 plants are local species that can be easily grown on our islands.



Breadfruit (މަލްމަލް)
Superfood + provides shade



Screwpine (މަލްމަލް)
Superfood + acts as a natural shield from wind & waves + good for fencing



Check the link: <http://youtu.be/oePqGysg4IE>

So why not grow Moringa, Breadfruit & Screwpine?

This will contribute to our Food Security

When choosing food, it is important to think about mileage. The further it comes from, the greater its carbon footprint or in other words more greenhouse gas emissions into the atmosphere.

Our ancestors were great at self-sustenance. Talk to the elders of the community & find out how food security was ensured. See if you can integrate the traditional practices with the current technological advances to find innovative solutions to ensure food security.

The UN has a committee for ensuring food security. Let's learn more.



Check the link: <http://youtu.be/75evrzgNsMs>

DID YOU KNOW?
MOST OF THE FROZEN CHICKEN WE BUY FROM THE SHOPS ARE IMPORTED FROM BRAZIL?



3. Learn to Swim

Knowing that our islands are tiny & surrounded by sea (where 99% of our nation is ocean), it is just common sense that we learn how to swim.



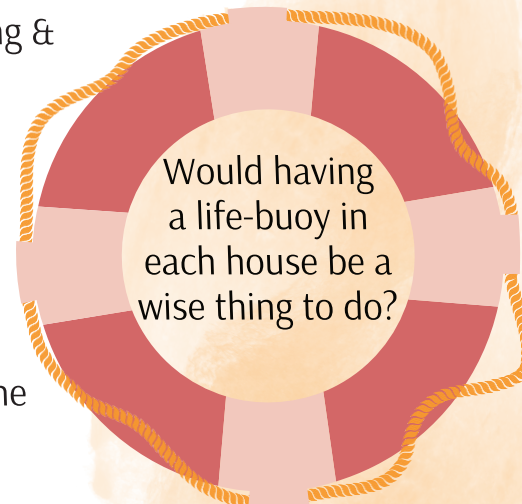
DID YOU KNOW?
MALDIVES CORAL REEF ECOSYSTEM IS THE LARGEST IN SOUTH ASIA & 7TH LARGEST IN THE WORLD

Swimming has numerous benefits. It keeps you physically fit. It helps you connect with nature which is so important for your overall well-being (both physical & mental).

Remember being resilient means being physically & mentally fit.

Knowing how to swim means you can go snorkeling & check out the underwater world - colorful fishes, turtles, manta rays & the whale sharks. You can also check the health of coral reefs as a citizen scientist.

According to best available science, intensity & frequency of stormy days, rough weather & sea swells will increase. Hence, even though we know how to swim, the wise thing to do when travelling by sea is to wear a life-jacket.



Tip 3 "SPREAD THE MESSAGE"

With climate change, what we know is unpredictable weather. But what is predictable is extreme weather events like:

- Short bursts of intense rainfall causing:
 - flooding
 - spread of diseases like Dengue
- Sea Swells (موجات)
- Extreme hot days

We need to do what we can to build our community resilience to these extreme weather events.

Benefits of Trees:

- Flood control (mangroves & wetlands play a vital role in flood management on islands)
- Wind & wave barrier / shield
- Prevent beach erosion
- Air purification
- Enhances mental well-being (makes you happy & relaxed)
- Enhances aesthetics (looks nice)
- Gives shade & reduces temperature
- Provides food
- Home for other species (eg: birds, insects)

DID YOU KNOW?

TREES PLAY A CRUCIAL ROLE IN MODERATING EXTREME WEATHER EVENTS?

Planting trees is extremely important to address the changing climate.

Researchers say that greater than 40% canopy cover is needed to reduce the heat from urban areas.

When planting trees it is important to ensure that native species are planted. Talk to elders & find out plants that are native to your island. What trees were most common during their childhood?

Remember different plants would be ideal for different settings.

For example, for street-scaping & providing canopy cover on the roads a Fish poison tree (بوسه) may not be ideal, but Bullet wood (كوسه) would be ideal.

However, Fish poison tree (بوسه) would be ideal for planting around the island as it not only provides shade but is known to act as a natural shield protecting the island from strong winds & waves.

Coastal vegetation (شجيرات بحرية) of an island play a crucial role in protecting the island. This is why conservation of coastal vegetation is very very important. If the coastal vegetation has been degraded / removed, it is important to restore by planting trees that replicate the natural coastal vegetation of islands.

CASE-STUDY ON ARTIFICIAL COASTLINE

STORY OF KUDAFARI, Noonu Atoll

Like in most islands of Maldives, Kudafari harbor was developed together with land reclamation.

This meant the face of Kudafari or the first thing that one would see when visiting the island was artificial barren land. This also meant the harbor side of the island was vulnerable to extreme weather events.

Kudafari community did not want this. Instead they wanted greenery similar to natural facade (މަދަރުފަތް) of Maldivian islands which will not only beautify the face of the island but also will provide protection from strong winds & cool the island from the hot sun.

Individuals started planting coconut palms & different trees. The local council understood the importance & everyone was encouraged to plant trees. Historically, planting trees has been a practice of Kudafari community & most adults talk with pride how it was part of their compulsory school activities when they were young. It has been a practice they have been passing to the current generation too. Planting trees is a hobby for most Kudafarians & they have passion for it.

Within just 3-4 years of continuous tree planting efforts, the harbor now looks pretty green starting to resemble the natural coastal vegetation (ނަޖަވަތް).

Lessons learnt:

- Planting Beach Plum (މަލިބު) is the first step for greening reclaimed land. It helps to cool/moderate the temperatures enabling ideal conditions for other trees like Coconut palm (ކަލަވު), Oil-nut tree (މަލިބު), Indian Almond (މަލިބު), Fish poison tree (މަލިބު), Banyan tree (މަލިބު), Cordia (މަލިބު) to thrive.
- Survival rates are higher when planting is done soon after rain. If planting during dry periods, watering of plants need to be ensured.
- Since it is reclaimed land, there is a need to enrich the soil with fertile soil (މަލިބު) before planting the trees/seeds.
- Seeds of Oil-nut tree (މަލިބު), Indian Almond (މަލިބު) & Screw pine (މަލިބު) grows easily & well.
- Beefwood tree (މަލިބު) though it looks nice, is not an ideal tree to plant, because it is a non-native, invasive species.
- Pemphis (މަލިބު) & Bay cedar (މަލިބު) while good coastal plants, they are difficult to grow.
- The local community initially wanted to cover the rock boulders with Beach morning glory (މަލިބު) but it doesn't spread over the rock, maybe because the surface is too hot.
- According to the local community, planting on ad-hoc basis whenever anyone feels like is better rather than a set program.
- Keeping in mind that not all seeds/seedlings/trees planted will survive. Currently, it can be said only 10% survived out of all those planted. It is a journey, learning by doing & from each other.



NATURAL COASTLINE
(ނަޖަވަތް)



ARTIFICIAL COASTLINE
(އަދަބު ނަޖަވަތް)

Tip 4 “CALL FOR ACTION”

Discuss with your community leaders to understand the situation of your island & what can be done about it at the community level.

Talk with experts such as engineers & environmental managers. Remember solutions exist. It is a matter of finding the solution that works for your island. Each island is unique. What works in one island may not work in another.

That is why meaningful consultations & engagement with community members is essential.

Do not undermine traditional knowledge. Also ensure inclusivity. This means making sure that everyone is involved...women, people with disabilities, migrants, children - leaving no one behind.

Get involved in global movements like the #FridaysForFuture movement (<https://www.fridaysforfuture.org/join>) started by Greta Thunberg. Be inspired. Remember there are many young people already doing awesome work to make a positive difference. If they can, why can't you? Change begins with you!

CAUTION
ALWAYS BE MINDFUL
THAT IT'S VERY
IMPORTANT TO WALK
THE TALK SO THAT
PEOPLE WILL TRUST
YOU & YOU WILL
HAVE CREDIBILITY IN
WHAT YOU DO.

Let's hear a little bit from Greta Thunberg, speaking in New York, on 20th September 2019. Greta has proven how one person, no matter how small or young, can make a difference. On 20th August 2018, she decided to skip school & sit outside the Swedish parliament by herself, with a hand written board saying “School Strike for Climate”.

By September 2019, she has brought truth to power, inspiring millions of children as well as adults from across the world, from all walks of life, to demand decision-makers to take urgent climate action.



August 2018 / Sweden / Photograph: Adam Johansson



September 2019 / New York / Photograph: Shadia Fayne Wood

Check the link: <http://youtu.be/tALIM6uUWrc>

USEFUL RESOURCES

The following links provide a number of useful resources to learn more.

Be informed & build your resilience 

The Maldives Conservation Portal <https://www.maldivesconservationportal.org>

World's Largest Lesson <http://worldslargestlesson.globalgoals.org>

Green Fins <https://www.greenfins.net/>

Climate Center of IFRC <https://www.climatecentre.org>

ATTRIBUTIONS / REFERENCES

World's Largest Lesson

<http://worldslargestlesson.globalgoals.org>

IPCC Special Report on 1.5 °C

<https://www.ipcc.ch/sr15/>

Free Vector

<https://www.freevector.com>

Freepik

<https://www.freepik.com>



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