

Research

on

Climate Change



by the 100 Watt
Ensemble



COPP 27 IN EGYPT



by Sébastien

I did a bit more research on Charm el Cheikh and found a lot of funny stuff (links with Laurence of Arabia amongst other things). Apparently in the beginning it was just this uninhabited desert rock nobody cared about. Only Egyptian fishermen ever went there to set up camp because the variety of sea animals in its bay is quite incredible. They usually went back to villages and towns with infrastructure afterwards.

All this to say **it was only a place you passed by**, not a place which had homes in its own right.



Ras Mohammed National Park



Mt. Sinai at Sunrise

COPP 27 IN EGYPT

Somewhere in the first world war however, countries discovered that **14 miles northeast of its bay is the strait of Tiram which directly connects to the Gulf of Aqaba**. Aqaba is the first city Lawrence of Arabia conquers in the movie, with the cannons facing the sea. That sea is the gulf and that gulf connects to Israel, Jordan, Saudi Arabia and of course Egypt (through Charm el Cheikh). **In 1948, Egyptian guns were set on Charm el Cheikh to prevent Israel from receiving ammunition** from a nearby port (they were having a war of independence at the time). In 1956, Israel captured the installation and therefore Charm el Cheikh as well during the Sinai campaign. The UN got involved and it wasn't clear to whom the place belonged until June 1967, were as a result of the six-day war it officially



Map with Sharm-El-Sheikh in context

belonged to Israel. **I don't know how they made the link that it would make a great tourist location but they did** and started building resorts, investing in the beaches, etc. When peace was made in the 1980s and the land was given back to Egypt, they continued the work of the Israelis and build it up into what we know it today. **Since it's kind of in the middle of plenty of Arab countries, many Middle Eastern leaders go there to sign peace treaties.**

COPP 27 IN EGYPT

That's why it was given special recognition as a city of peace by UNESCO in 2006 (kind of funny). What's also ironic is that after all those years it still is a place people only pass by on and doesn't have a lot of homes. Lastly, it is nicknamed "The Charm".



Tourism images of the resorts

5 Research Points



Hands holding peat moss.

1. Peat Moss

Peatlands act as the planet's **biggest soil carbon sink**, storing one-third of its carbon emissions every year. Therefore, **when peat is mined, it releases enormous amounts of carbon dioxide** into the atmosphere. Peatlands are also a diverse wetland ecosystem, and each inch of the organic matter takes 15

to 25 years to form. They count for 4% of the world's drinking water source. It is to be noted that less than 40% of peatlands on the planet are capable of regrowing. So, like natural gases, **it is a non-renewable natural resource**. Over geological periods of time, it can also transform into coal. Today, it is mostly mined for gardeners (as organic matter) and as fire fuel. Peat moss is used for distilling whiskey, producing heat and electricity.



Image of Peat Moss Farming in Winnipeg

In the U.K., peat has been mined since the Roman times. In Canada, peat has been mined since the 1930s and today, **Canada is the top peat exporter** by value (1.3 million metric tones per year). **Because of climate change and global warming, the biggest peatland in the world, in Syberia, is beginning to thaw** for the first time in 11000 years. It is bigger than France and Germany together, and is said to **release billions of tones of methane gas annually**. (Methane, CH₄, has a warming potential 28 times higher than CO₂, though CO₂ stays longer in the atmosphere).

2. New Cairo

New Cairo is the new **Egyptian capital** and cost 45 billion USD to the Egyptian government. **It was built in order to alleviate the population density of Cairo** (in biased terms, build a new city for wealthy folk). Although more housing is now available, **none of that housing is affordable**, and so New Cairo remains mostly empty, while there are more homeless citizens in Cairo every year. It was built from scratch on desert lands.



Image of New Cairo

3. Sharm El Sheikh

Sharm El Sheikh, the headquarters for the COP 27 meeting, is a resort town, and though it is right by the sea, **feature the world's largest man-made lagoon**. Resorts are one of the tourist destinations that **leave the biggest carbon footprint**, what with food waste, high energy consumption and pollution. **(It seems to me a little bit hypocritical that COP 27 is being held in Egypt, especially since the wonderfully dystopian New Cairo has just opened, and in a resort town)**. But, the city has been given 7 million USD to become a green city before the meeting.

4. Fun Facts



- Bats can eat up to 1000 insects in an hour
- Beavers help prevent land and forest fires because their dams keep the soil moist
- Fish feces can store CO2 emission for 600 years
- Elephants make drinking station for other animals by creating dry waterbeds during seasons of drought
- Rats can sniff out land mines
- Jellyfish have no brain, bones, eyes or heart, and have been on earth for millions of years, even before dinosaurs

5. A thought



*Image of Ana Clara
Credit: Brigitte Pellerin*

Why are things being done now seen as sustainable and as newly devised green technology, when those same things were done before the era of industrialization, and seen as a pure means of survival?

Using beeswax instead of waterproofing spray for coats and boots; using washable underwear and pads instead of disposable ones; transforming food waste into dirt. It just seems silly.

If I could have
a superpower...

Nov 2022 Rehearsal Prompt

**To be able to read people's
minds and know what they think**

**I would be able to transform
into anything. I could transform
into things that exist, things
that don't. Whatever I imagine,
too.**

**To shapeshift.
-or!-- to be able to
relive memories**

**To pass in and out
of the afterworld**

**Eh, I'm not sure but it would
be linked to happiness or
something. To be always very
happy with myself.**

**The ability to share my emotions
with others and feel others' emotions
and share others' emotions with other
people.**

Invisibility

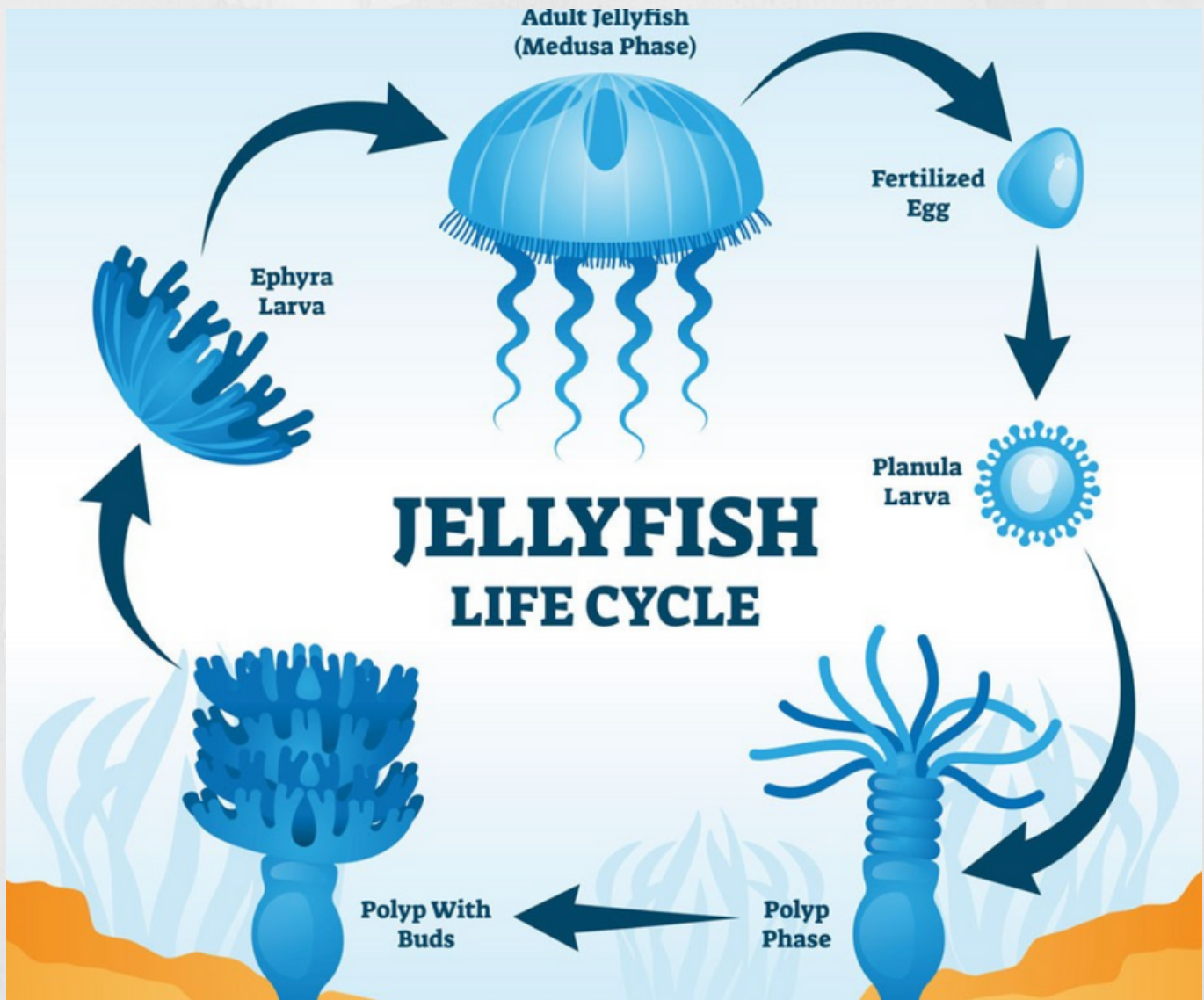
**The ability to multiply things
and part of that is to multiply
things by 0 so I can destroy
them too**

**The ability to stop time (I've
mentioned this many times)**

**Super speed. I have no
philosophical deeper meaning.
It would just be cool as
hell.**

Immortal Jellyfish

It's Marisol here and I would love to speak to you about the immortal jellyfish (since we were learning about infinity). The immortal jellyfish is the only known species to live FOREVER. It's incredibly interesting. It can only die if it gets eaten or wounded badly.



And it explains the life cycle of the immortal jellyfish. As you can see, when it's in its final stage of life (the medusa phase) it goes back to being a fertilized egg. So cool right?



"We can still turn this around."

Green Idioms

inspiration



Green New Deal

A plan for 100% renewable energy by 2030 utilizing a carbon tax, jobs guarantee, free college, single-payer health, and using public programs

Green Bananas

"I don't buy green bananas"

Means someone doesn't invest in something that won't produce results.



"Green as a gooseberry"

Meaning you are young or inexperienced

Green

Meaning money, slang.



Green Milk

Green Milk is a citrus drink featuring mandarin orange, passion fruit, grapefruit, and orange blossom. It is a movie reference to Star Wars.

Green rivers Olafur Eliasson

A water-soluble dye used to test ocean currents was poured into rivers in urban and rural settings, turning the rivers green. Carried along by the currents, the dye radically changed the appearance of the rivers and their surroundings.



An Icelandic-Danish artist.



This video documents 'Green river' in Tokyo in 2001; other locations for the intervention are Bremen, Germany, 1998; Moss, Norway, 1998; The Northern Fjallabak Route, Iceland, 1998; Los Angeles, 1999; and Stockholm, 2000

Green Campus

"A program that integrates environmental management and protection into tertiary institutions [1]. Green campus is a combination of the environment and the campus world in its management"

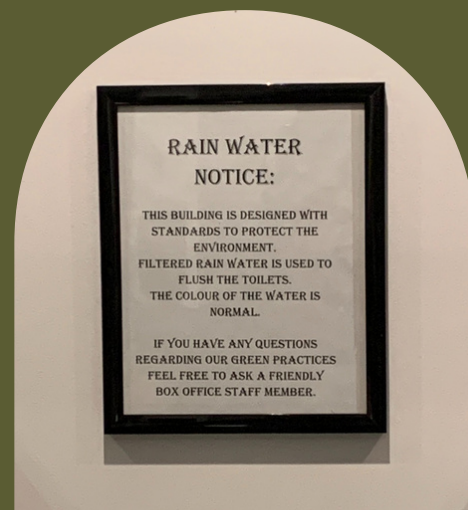


Green Management

Green management is a paradigm that includes improving environmental awareness, using energy resources and eco-friendly technologies, reuse of wastes, and recycling activities starting from production activities of businesses to packaging and delivering to consumers

Green Practices

It says this in the washroom at the GCTC to explain that the establishment uses rain for the water in the toilets so it's normal that the color is off. «For more information on our green practices visit our website...



Green Gas Production

"Green gases are renewable and low carbon gases that can be used in place of fossil fuels, reducing carbon emissions in the heat, power, and transport sectors. They include biomethane, bio-propane, and hydrogen"



Green House Gass Emissions

"Greenhouse gases are gases in Earth's atmosphere that trap heat. They let sunlight pass through the atmosphere, but they prevent the heat that the sunlight brings from leaving the atmosphere. The main greenhouse gases are: Water vapor. Carbon dioxide"



Green Thumb

means to have a natural talent for growing plants.



Green Bin

A green bin is a large, movable, rigid plastic or metal container that contains biodegradable waste or compostable materials as a means to divert waste from landfills.



Green Washing

Greenwashing, also called "green sheen", is a form of advertising or marketing spin in which green PR and green marketing are deceptively used to persuade the public that an organization's products, aims and policies are environmentally friendly

Green with Envy

means to be very jealous, envious.



COP27 FUND

MY RESEARCH ON COP27 «FUND»



When I started my research, I wanted to know what the countries that would put money in the fund are and how they were decided. I read this article: "COP27 ends with announcement of historic loss and damage fund".

"In it, I **found long paragraphs of air, long words and phrases that meant almost nothing that I wanted to know. I just wanted to know who put what in the fund but it was dragging ooonnnn. They kept using fancy paragraphs like this:**

«In negotiations that went down to the wire over the weekend, countries reached a historic decision to establish and operationalize a loss and damage fund, particularly for nations most vulnerable to the climate crisis.» Ok, sure, that just sounds cool but not informative. I continued reading and found out that «the agreement was struck early Sunday morning as leaders concluded talks at the two-week-long United Nations Climate Conference (COP27)» but it never explains what the agreement exactly is. It says that many details remain to be negotiated. «The fund is expected to see developing countries particularly vulnerable to the adverse effects of the climate crisis supported for losses arising from droughts, floods, rising seas and other disasters that are attributed to climate change» **but it never says what those countries are.**

Here's what made me disappointed: «While the negotiated text recognized the need for financial support from a variety of sources, **no decisions have been made on who should pay into the fund, where this money will come from and which countries will benefit. The issue has been one of the most contentious on the negotiating table**».

Then the article stopped talking about the fund. It went to this: «Adapting to the climate crisis — which could require everything from building sea walls to creating drought-resistant crops — could cost developing countries anywhere from US\$160-US\$340 billion annually by 2030. That number could swell to as much as US\$565 billion by 2050 if climate change accelerates, found UN Environment Programme's (UNEP's) 2022 Adaptation Gap Report.» Report is the key word for me there. This is just a report. The final agreement highlights that “US\$4 to \$6 trillion a year needs to be invested in renewable energy until 2030 – including investments in technology and infrastructure – to allow us to reach net-zero emissions by 2050.” And a highlight doesn't mean that it's going to be done.

Who will pay, will they pay, how, where does it go, who is in charge of all of this?! I found no answers and it seems to be because those answers don't exist yet.

The rest of the article is about money and that «while many praised the creation of the fund, many also worried not enough was done at COP27».



- Here are the key takeaways from the conference:
- Countries failed to decisively move away from fossil fuels.
- Countries repeated the “phase-down-of-coal” phrase featured in last year’s agreement at COP26 in Glasgow. While the final text does promote renewables, it also highlights “low emission” energy, which critics say refers to natural gas - still a source of GHG emissions.
- Climate finance was front and center, a key part of COP27.
- States are turning more to technology. Two UN Bodies, the Technology Executive Committee and Climate Technology Centre and Network – announced plans to accelerate the deployment of “transformative” technologies to counter the climate crisis. The UN Secretary-General unveiled a US\$ 3.1 billion plan to ensure everyone on the planet is protected by early warning systems in the next five years.

So, that’s my research on the matter. This was really interesting but I’m kinda tired of reading things that disappoint and frustrate me.

Coral Reef Restoration

By Brianna



Information on coral reef restoration groups:

Coral is an animal and it's dying at an alarming frightening rate. We have already lost half of the world's coral reefs and if nothing changes, 90% of all the coral in the world will be dead by 2050. I found 2 different ways of growing/restoring corals by two different companies, here's info about it:

"The Coral Restoration Foundation is helping restore the biggest coral reef in the continental United States. They run the largest open ocean coral nursery program in the world. In these nurseries they have big metal poles from where:

coral is grown to finger-sized fragments. They care for over 740 of these "Coral Trees" that are capable of raising 45,000 reef-ready corals each year. In about 6 months, employees break them off the poles and plant them in "reef-ready" colonies and once they are large enough, the corals are returned to the wild. The Coral Restoration Foundation has restored over 30,000 square meters of reef area so far (that's over 5 American football fields!). This is one of the most effective and affordable methods for growing corals in the ocean. They also have a long-term volunteer program and they have a public dive and snorkel program.



«Coral Vita is using cutting-edge micro-fragmenting technology, which accelerates coral growth by 50 times normal rates, speeding up reef restoration over months instead of decades. The process also increases species diversity, while strengthening coral resilience to deal with threats caused by global heating, such as increased ocean temperatures and acidity.»



Although they only cover less than 1% of the Earth's surface, coral reefs are the homes of 25% of all marine species. Over 500 million people rely on coral reefs for food. Coral reefs sustain the livelihoods of approximately 1 billion people globally. Coral also absorbs carbon dioxide and provides coastal protection. It's really important that we restore one of the earth's most beautiful and precious ecosystems.

Another coral farm to restore coral reefs is Coral Vita. Contrary to The Coral Restoration Foundation that is a farm in the ocean, Coral Vita is a land-based farm, and the first one!

They grow coral by placing the small fragments in grid-like compartments in pools of water. After growing the coral for 6 to 12 months, they dive down into reefs to plant them and bring these marine ecosystems back to life. Their farms also serve as ecotourism attractions and education centers. The Coral Vita farm that I read about is located in Freeport, Grand Bahama. The Bahamas welcome over 6 millions tourists per year to their islands, so it's a great opportunity for Coral Vita to teach!