## Climate Education for Action





# 60\%888888 

of youth (16-25) is anxious or extremely worried about climate change

of young adults are choosing not to have kids


## Why YouTube??

My YouTube Channel Link



Began studying Earth science
and physics at UAH

## 2017

Teacher assistant for a course on
air and water pollution

2022
The journey continues

Participated in direct climate action in DC, met CLEAN members at AGU

## 2019

Seriously began producing videos on environmental health, pollution, and climate change, graduated in
December

## YouTube's Legacy

## Social Platform

- Second most visited website


Watch Time

- 1 billion hours watched by users EVERY DAY


## Users

- Approximately $\mathbf{2}$ billion users every month

Videos Watched

- 5 billion videos watched DAILY



#  

of all climate change related videos are uploaded by news channels (source) Many are alarmist in nature optimized for selling fear

less than 33\% of videos attempt describing how to act on climate change

Misinformation videos account for over 20\% of views for top 100 related videos for the search term "global warming"
Each circle is a video whose size is equal to number of views, and only videos with more than 500,000 views labeled. Based on the top 100 related videos for global warming related search queries


## Climate Misinformation Stats

## Pillar 1

For the search term "global warming, "16\% of the top 100 related videos included under the up-next feature had disinformation about climate change (Source Avaaz)

## Pillar 2

70\% of the time
users spend on
YouTube is driven by
the platform's
recommendations

## Pillar 3

The climate misinformation videos Avaaz reviewed had 21.1 million views collectively.

| Search term: Global Warming | Channel | Views |
| :---: | :---: | :---: |
| What They Haven't Told You about Climate Change | PragerU, 2.31 M subscribers | 2,695,102 |
| The truth about global warming | Fox News, 3.5 M subscribers | 2,000,427 |
| Climate Change: What Do Scientists Say? | PragerU, 2.31 M subscribers | 1,982,846 |
| Nobel Laureate Smashes the Global Warming | 1000frolly PhD, 31.3K subscriber S | 1,738,290 |
| ACTUAL SCIENTIST: Climate Change is a Scam! | StevenCrowder, 4.13 M subscribe rs | 1,371,327 |
| The Great Global Warming Swindle - Full Documentary HD | Wisdom Land, 328 K subscribers | 859,213 |
| WHY I SAID GLOBAL WARMING IS THE BIGGEST FRAUD IN HISTORY - Dan Pena I London Rea | London Real, 1.07M subscribers | 694,352 |
| Fatal Flaw In Climate Change Science | SuspiciousObservers, 426K subs cribers | 266,921 |
| Lord Christopher Monckton - Global Warming is a Hoax | Ideacity, 27.8K subscribers | 258,563 |
| 25 NASA Scientists Question the Sanity of the Global Warmists rce -Avaaz | 1000frolly PhD, 31.3K subscriber S | 255,348 |

## Trio of Climate Info on YT



## Solutions for YouTube

- Data based videos

Actual data based facts need to be presented with references and visualization

- Engaging Videos

Engagement and audience retention is difficult to maintain with educational/informative videos. The challenge is to make them entertaining.

- Scientific Sources

References to peer-reviewed articles are included in the video description

- Call to Climate Action

Specific resources and practical tips with examples need to be described in the video for various levels of society


## Video Focus Points

How to drive action from scientific videos


## Specific Climate Action Tips

Instead of vague climate action tips, provide resources and examples of real life action


Systems View of Climate Change
Focus on co-benefits of climate action and interconnections with society and Earth systems


## Personalize the message

How does climate change affect the viewer and how can they benefit in social or financial ways from climate action?


## Planetary Boundaries

Credit: Rockstrom et al., 2009
BREAKING BOUNDARIES DOCUMENTARY

## The Doughnut Economy

"Humanity's 21st century challenge is to meet the needs of all within the means of the planet. In other words, to ensure that no one falls short on life's essentials (from food and housing to healthcare and political voice), while ensuring that collectively we do not overshoot our pressure on Earth's lifesupporting systems, on which we fundamentally depend - such as a stable climate, fertile soils, and a protective ozone layer.
The Doughnut of social and planetary boundaries is a new framing of that challenge, and it acts as a compass for human progress this century."

- Kate Raworth



Climate Action Co-Benefits


Source -Helgenberger et al., 2019



## Age Groups

High School - 16-19
College and Early Professionals - 18-25
Young Parents - 26-34

Interests

## Sustainability

Eco-friendly behaviors
Zero waste
Science documentaries
Sustainable technologies
Healthy eating
Biomimicry

Professions/College Majors

Earth/Climate science
Environmental studies
Chemistry/Physics
Biology/Ecology
Civil engineering
Sociology/Psychology/Anthropology
Data science

## Top geographies

Views • Last 28 days

| United States | $37.1 \%$ |
| :--- | ---: |
| Canada | $4.9 \%$ |
| India | $4.0 \%$ |
| Brazil | $3.8 \%$ |
| United Kingdom | $2.2 \%$ |

13-17 years
$18-24$ years
$25-34$ years
$35-44$ years
$24.9 \%$
$45-54$ years $\quad 6.5 \%$

55-64 years

## Video Framework



## Levels of Actions to Communicate



## Journey of Climate Ed. on YT

Interviews
Conversations with
changemakers and scientists on specific topics

Showcase
Demonstrate real examples of technologies, communities, and cities which mitigate cc

Learn and produce
Keep improving with each video and become a better video creator with more detailed info

## Ultimate Goal of Climate Ed. on YT



## Other Climate Education Channels

1 Our Changing Climate

2 ClimateTown

3 Beckisphere

4 Just Have a Think

5 ClimateAdam

6 Engineering with Rosie

7 Kurtis Baute

8 Sustainability Illustrated

9 Drgilbz


In order to change an existing paradigm you do not struggle to try and change the problematic model. You create a new model and make the old one obsolete.

~Buckminster Fuller

