# WORLD WILDLIFE FUND

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## TABLE OF CONTENTS

•	Executive Summary	3
•	Recommendations	4
•	Owned Data	7
•	Earned Data	12
	<ul> <li>Cross-Platform Conversation</li> </ul>	13
	<ul> <li>Competition Conversation</li> </ul>	20
	<ul> <li>Deforestation Conversation</li> </ul>	24
•	Social Network Analysis	

Mentor Feedback

## EXECUTIVE SUMMARY

## STATEMENT OF BUSINESS PROBLEM



While the World Wildlife Fund (WWF) manages a robust social media presence on popular platforms like Twitter, Facebook, and Instagram, they have some untapped opportunities for engagement (e.g., likes, comments, shares). We aim to identify these opportunities and make recommendations to boost their engagement across all platforms.

### DATA OVERVIEW

#### **Platforms\***

#### Twitter, Reddit, and Tumblr

\*Note that due to limitations in accessing data through Brandwatch, certain platforms offered either no data or very small about (i.e., Facebook and Instagram).

### Date Range

**Owned Data:** March 10, 2021 - August 31, 2021 **Earned Data:** June 1, 2021 - August 31, 2021

#### Volume

Owned Data: 331 tweets Earned Data: 12,492,153 mentions

## Software Used

Brandwatch, NodeXL, and Canva



## RECOMMENDATIONS

#### **Owned Data**

WWF should include more tweets themed around a call-to-action. They should post more tweets that encourage followers to take action against things like climate change by participating in marches, include videos about natural disasters, and use hashtags that bring awareness to a cause (#ItalyIsBurning). These posts garnered the second highest engagement (92.03), but only made up 27.8% of tweets. Awareness hashtags brought the most of all hashtags (179.38).

We recommend that WWF improve poor engagement on text-only posts by including hashtags that bring awareness like #NoPlanetB and #TheRaceIsOn. Mentioning government entities (@UN) is another way to increase engagement. Awareness tags have the highest engagement (179.38) but are underutilized (<4% of data). Mentioning government entities is also underutilized (3% of data) with high engagement (107.7)

We suggest that WWF link more news websites to boost engagement, especially by focusing on high-engagement topics like natural disasters, pollution, or oceans. News websites have a high average engagement (107.13) but make up <5% of the data. Natural disasters, pollution, and oceans are topics that also have high engagements but only make up a small section of the sample.

We suggest that WWF increase their engagement for tweets promoting the organization and its projects by including media that drives engagement for their other tweets. This means including elements like videos showing conservation efforts, pollution cleanup, or natural disaster relief. Videos garnered the highest engagement when it came to media (111.95). Content about pollution specifically also earned a high engagement (113.94) but was underutilized.

## RECOMMENDATIONS

#### **Cross-Platform Data**

There is a lot of conversation based on enacting change to improve environmental conditions, and it is most commonly discussed on Twitter. We recommend using Twitter to share calls to action that center around saving the environment. WWF should include things like ways that supporters can make a difference in their own homes and communities.

There was a spike on conversation around the IPCC climate report's release. We recommend that WWF look out for important scientific publications related to their mission statement. They can supply their followers with simplified breakdowns of these reports to generate more conversation, increase engagement on their posts, and spread awareness of WWF's mission.

### **Competition Data**

Spikes in competition data center around newsworthy events related to the organizations' mission statement. We recommend staying vigilant in regard to trends and breaking news that aligns with WWF's mission statement. Using relevant keywords, hashtags, and popular URLs that are tied to the even or story can boost engagement.

Partnerships with or engaging with celebrities was also an area in which other organizations gained engagement. UNICEF's partnership with the K-Pop group BTS caused a spike in engagement with their content. We recommend that WWF interact with celebrities on social media or use hashtags related to them and their events (e.g., the BTS #LoveMyselfTag that referenced their new song).

## RECOMMENDATIONS

#### **Deforestation Topic Data**

Based on our analysis, it seems that users respond best to short-form content, particularly on Twitter. Posts on Twitter are easily shared on the site and gain a large reach, even being reposted onto other social media platforms. WWF could take advantage of this by focusing its efforts to inform users about deforestation on this platform to gain an audience more interested in the effects of deforestation.

Major spikes in mentions came from noteworthy events like a forest fire outbreak. We suggest that WWF increase the number of posts they make that involve major environmental and climate events to get more interaction from their audience. Content like this receives high amounts of engagement which it is posted as the events are unfolding.

We recommend that WWF focus content about deforestation on how it affects users in personal ways. They can do this by describe how it could impact where they live, how deforestation may impact their lives long-term, and how to get involved. Much of the conversation focused on effects on daily life and climate change, so gearing content towards this focus can earn WWF more engagement.

### NodeXL

Based on the social network analysis, we recommend that WWF work to increase their reciprocity and density, both in the deforestation conversation and in their general communities. They can do this by having mutual interactions with their followers (e.g., following them back, responding to their comments and replies, liking their tweets). They can increase density by ensure their followers are using them as an information source by providing cutting-edge, accurate information. This would help WWF because their space is lacking a community like this one with high density and reciprocity that make users feel connected to the message they are receiving.



## OWNED DATA TWITTER ENGAGEMENT DATA



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## DATA DESCRIPTION

We analyzed the official Twitter page of the World Wildlife Fund by developing a coding schema based categories and values. The World Wildlife Fund Twitter account, @WWF, has garnered 3.9 million followers and follows 3,036 accounts.

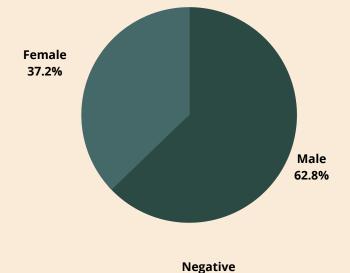


### VOLUME AND TIMEFRAME

Our coded data included 331 tweets from the official World Wildlife Fund Twitter account. The tweets analyzed were posted between March 10, 2021 and August 31, 2021.

### **GENDER & DEMOGRAPHICS**

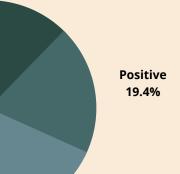
The World Wildlife Fund's Twitter engagement is predominately male, with 62.8% of the engagements being male, and 37.2% being female. 60 thousand of these users are located in the United States, holding the majority.



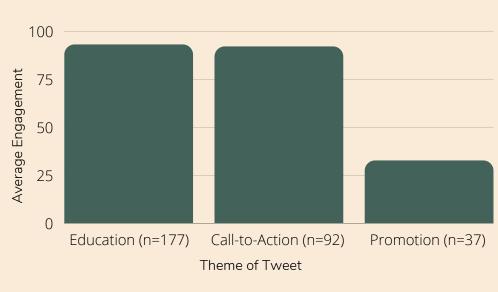
12.3%

### SENTEMENT

The sentiment analysis over our given time period of the WWF Twitter feed shows there is an overwhelming majority of a neutral sentiment, having 668.3% of the total sentiment breakdown. Positive sentiment holds 19.4% and negative sentement holds 12.3%

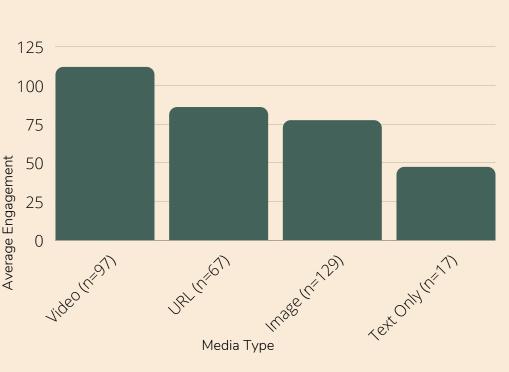


## AVERAGE ENGAGEMENT FOR THEME OF TWEET

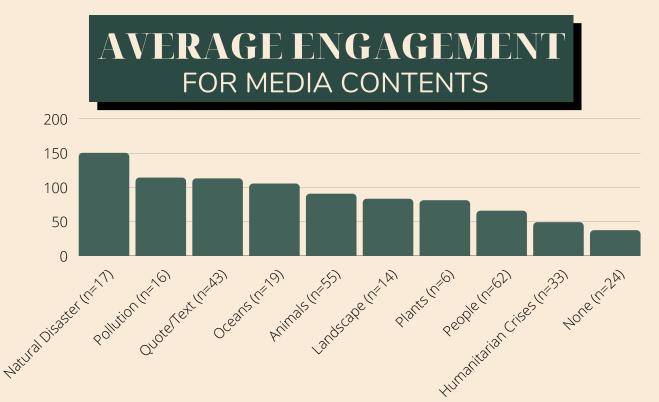


This graph shows average engagement for each theme (n=331) the tweets could fall under, including education (n=177), call-to-action (n=92), and promotion (n=37). The education theme has the highest average engagement at 93.06. Callto-action tweets follow closely at 92.03. Promotion-based tweets (n=37) showed much lower engagement at 64.70. This indicates higher performance for education or call-to-action categories.

### AVERAGE ENGAGEMENT FOR MEDIA TYPE

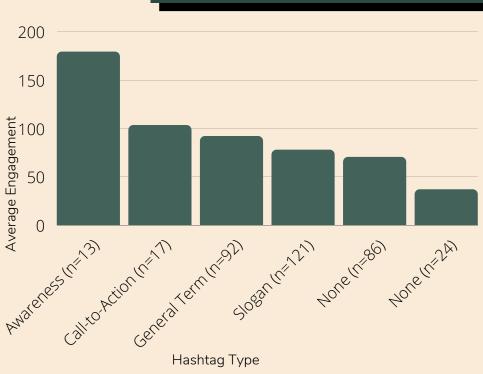


The graph above depicts the average engagement for each value under the media type category. In this category, video (n=97) is by far the highest performing with an average engagement of 111.95. Images (n=129), despite making up a larger share of the total tweets than both video (n=97) and URLs (n=67) had an average engagement of only 77.53. Text only tweets (n=17) (those without video, images, or URLs), performed the lowest out of the four categories and only garnered an average engagement of 47.35.



When considering the topic of the media attached to WWF's tweets, we see that media about natural disasters (n=17) get the most engagement at 150.12 closely followed by infographics (n=21) at 139.43. Natural disasters make up only 5.14% of the total tweets but get the most public attention because they are unique events and often have a lot of media coverage in general. We also see high engagement for media centered on pollution (n=16) and oceans (n=19) despite making up a small share of the total tweets. On the lower end of the spectrum, we see that posts not including any media (n=24) garnered the lowest engagement levels with only 37 engagements on average.

## AVERAGE ENGAGEMENT FOR HASHTAG TYPE



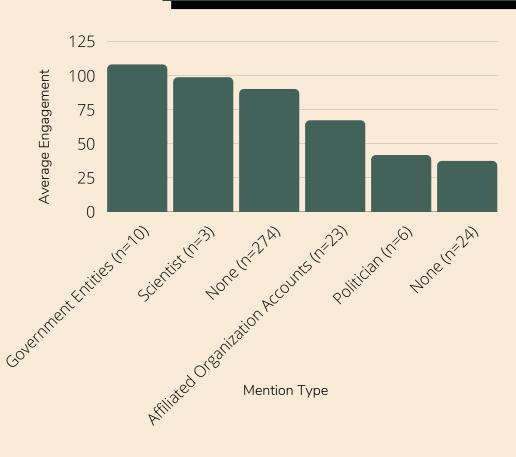
This graph indicates that hashtags bringing awareness (n=13) to a specific topic have the highest average engagement at 179.38 but make up the smallest share of tweets (3.93%). Call to action hashtags (n=17), like #StopPlasticPollution, saw similar engagement levels to general terms (n=92) like #ClimateCrisis. Slogan hashtags (n=121) like #NoPlanetB made up the largest portion of total tweets but saw the lowest average engagement of 77.96. Tweets without hashtags (n=86) got the lowest average engagement of 70.50.

### AVERAGE ENGAGEMENT FOR URL TARGET TYPE



This graph shows a breakdown of average engagement for URL target type. Posts using News Websites (n=16) as the URL had the highest engagement at 107.13 but made up the lowest percentage of any category at 4.83%. Using other organizations (n=23), petitions (n=34), the WWF organization site (n=82) resulted in relatively close engagement levels. Using no URL's at all (n=169) resulted in the lowest levels of engagement at 82.64.

### AVERAGE ENGAGEMENT FOR MENTION TYPE (n=331)



The most highly engaged mention type was government entities (n=10) with an engagement of 107.70. However, this mention type makes up only 3.02% of the tweets analyzed. Further, scientist mentions (n=3) had a high engagement of 98.33, but make up a tiny fraction of tweets included in the dataset. No mention at all (n=274) still received a relatively high engagement at 89.71. Politician mentions (n=6) received the lowest average engagement at 41.33



# EARNED DATA

CROSS-PLATFORM CONVERSATION & COMPETITION CONVERSATION



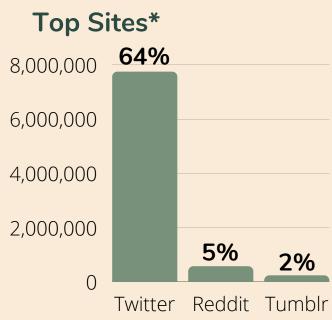
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## EARNED DATA CROSS-PLATFORM CONVERSATION



## DATA OVERVIEW



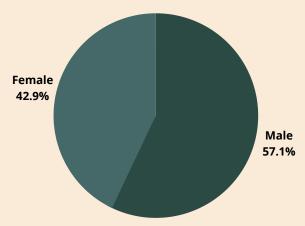
\*Other sites made up less than 1% of mentions.

- **Twitter:** 7,742,365
- **Reddit:** 574,669
- Tumblr: 238,548

**Timeline and Volume Timeline:** June 1, 2021 -August 31, 2021

Volume: 12,074,112

#### **Demographic and Sentiment**



Sentiment is mostly neutral for this topic dataset, with over half

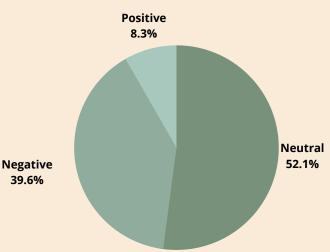
of mentions being neutral.

dominated at almost 40% of

mentions, and positive mentions made up less that 10% of data.

Negative mentions also

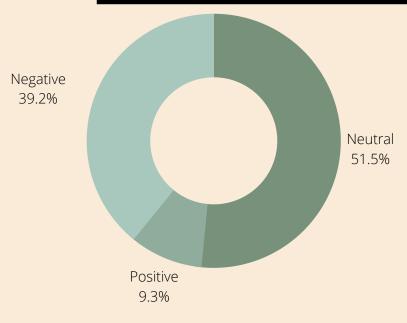
The demographic breakdown for conversation on these platforms includes more men than women. 57.1% of mentions came from males while only 42.9% came from women.



Themes

- Climate change: climate AND (change OR crisis)
- Ocean pollution: ocean OR pollution OR plastic

## **TWITTER INSIGHTS** 7,742,365 mentions



While over half of sentiment was neutral, positive and negative sentiment contributed to overall mentions as well. Negative Twitter mentions focused on the negative impact of fossil fuels on climate change and corrupt government officials. The position mentions centered around President Biden making strides in addressing climate change.

Males dominated this conversation on Twitter, but both men and women had the climate crisis as their primary focus. Female 42.8% Men focused more on "fighting" and "combating" climate change and fossil fuels. Women focused specifically on taking political action against the

Male 57.2%

#### **Influential Users**

• @JFSebastian146

climate crisis.

- 13.8k followers and 6,667 total mentions
- This user is a journalist and climate activist who tweets very frequently about climate issues. They participate with original tweets about the climate crisis and global warming and interact with other accounts that do so.

#### **Top Items**

- #climateaction
  - 88,394 mentions (1.2%)
  - This hashtag is used in tweets about taking action against climate change. It is usually used in a call to action context.
- https://www.nytimes.com/2021/08/09/climate/climate-change-report-ipccun.html?smid=tw-nytimes&smtyp=cur
  - 10,850 mentions (.2%)
  - Link to an NY Times piece warning about the "hotter future."

## TWITTER INSIGHTS





#### August 9 - 11 358,037

This spike came after the release of the IPCC climate report. Conversations focused on global warming and the "climate emergency."

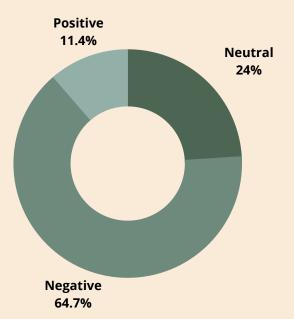
#### **B** June 30 148,310

News broke that Exxon relied on certain senators to keep their company prospering. People discussed corruption in politics that worsens climate change.

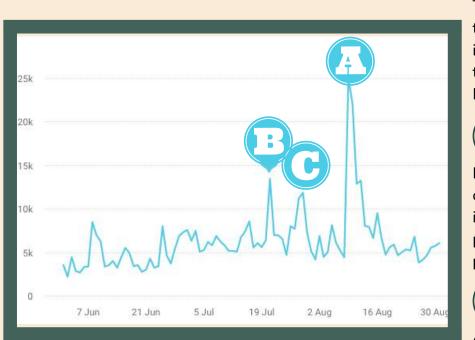


This spike occurred due to large floods in Germany and prompted people to talk about the immediate impacts of climate change.

## **REDDIT INSIGHTS** 574,669 mentions



Negative sentiment dominated on Reddit with the conversations centering around humans as the cause for climate change and a lack of governments addressing the issue. Positive conversation discussed the actions taken to address climate change and the beauty of nature.





August 9 - 12 25,090

This spike occurred due to the release of the IPCC report. People discussed its implications for climate change. They also talked about expanding the Trans Mountain pipeline in Canada.



Flooding in Europe triggered conversations about the immediate implications of climate change, and people talked about its impending tipping point.

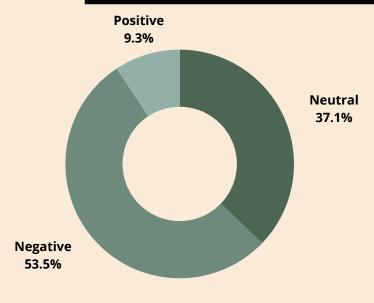
**G** July 29 11,837

A popular thread titled "14,000 scientists warn of 'untold suffering' if we fail to act on climate change" spurred conversations about the extreme consequences of climate change.

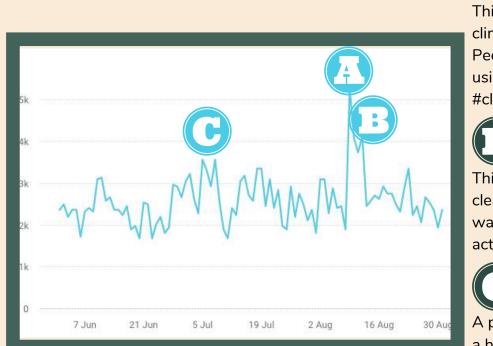
#### **Top Items**

 Reddit's top unique items included a keyword and a URL (https://www.bbc.com/news/science-environment-58130705).
 "Greenhouse gasses" (1,844 mentions, 0.5%) included discussions about their role in climate change. The URL (5,790 mentions, 1%) was a BBC article titled "Climate change: IPCC report is 'code red for humanity.'"

## **TUMBLR INSIGHTS** 238,291 mentions



Negative sentiment lead positive sentiment on Tumblr, and these conversations focused on food waster and poor agricultural practices. The positive discussion centered around having hope that there is time to change and that there are people who care about the planet.





August 9 - 10 5,275

This spike was caused by the IPCC climate report and Canadian pipeline. People discussed what the report meant using the hashtags #climate change and #climate crisis.

B August 12 4,117

This discussion centered around a lack of clear leadership in climate change that was highlighted by many different activists talking about the IPCC report.

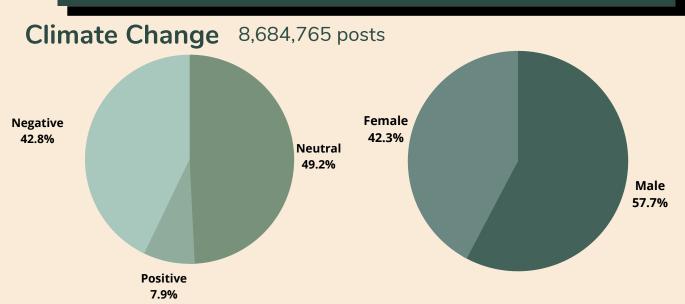


A post about infrastructure melted due to a heat wave circulated, causing conversations about climate change's impact on infrastructure.

### **Top Items**

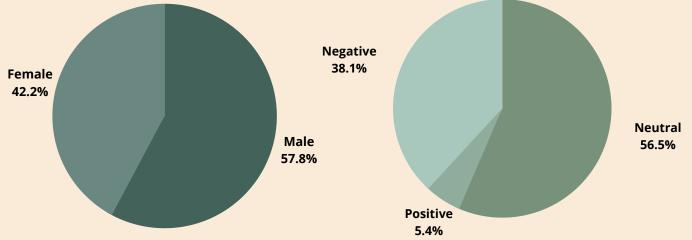
The primary top unique item on Tumblr was #canada (1,329 mentions, 0.6%). This hashtag referred to the Canadian oil pipeline being expanded. Tumblr seemed to talk about this pipepline more than Twitter and Reddit.

## THEME ANALYSIS



Negative conversation focused on the US government and President Biden while positive sentiment focused on steps taken toward action by the government and COVID lessening climate change's impact. Women discussed the "climate crisis" the most, and men focused on Biden and democrats. The hashtags #fossilfuels and #globalwarming were commonly used for this dataset. A URL to the news story "Raging California Wildfire Forces Mass Evacuation from Lake Tahoe" was a top link circulating in this dataset.

#### Ocean Pollution 818,150 posts



Negative conversation focused on the climate crisis, oil and gas, the Gulf of Mexico and fossil fuels. The positive conversations were about World Oceans Day, fighting climate change, ocean wildlife, and reducing plastic waste. Male conversations were centered around China and the US's involvement in ocean pollution while women talked more about plastic pollution and waste, The hashtags #savetheplanet, #zerowaste, and #globalwarming were common for this dataset.

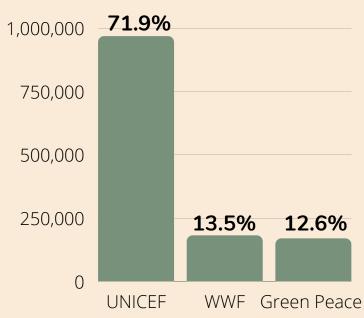
## EARNED DATA COMPETITION CONVERSATION

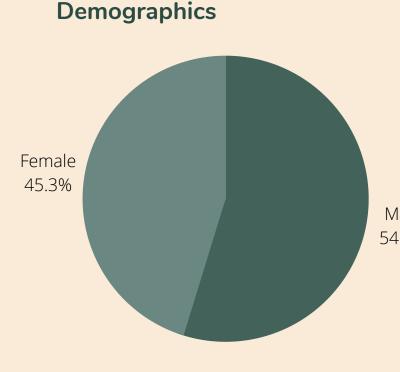


## DATA OVERVIEW

#### **Timeline and Volume**

Timeline: June 1, 2021 - August 31, 2021 Volume: 1,522,792





### Volume by Organization

- UNICEF: 967,949
- WWF: 181,378
- Green Peace: 169, 446

UNICEF (with a mission centered around human rights) has the highest share of voice, dominating the Twitter mentions with 71.9%. The remaining Twitter mentions are split between WWF (mission based on wildlife preservation and human rights and Green Peace (mission involves nurturing Earth). WWF has the second-highest percentage of mentions at 13.5%, but Green Peace closely follows with 12.6%.

MaleThe demographics for<br/>conversation about competitors<br/>on Twitter lean slightly more<br/>male, with males making up<br/>54.7% of mentions and females<br/>making up 45.3%. Male<br/>conversations focused on the<br/>terrorist group TPLF, COVID-19,<br/>and climate change. Women also<br/>focused on COVID-19 and<br/>climate change, but the hashtags<br/>#BTSLoveMyself and<br/>#ENDviolence were very popular.

#### Share of Voice

## **SPIKE ANALYSIS**





#### Date of Peak: August 12 -14, 2021 Total Number of Posts: 37,438

This peak was driven by the hashtags #TPLFTerroristGroup and #FakeAmnestyReport. UNICEF dominated in these mentions. This peak was driven by a massacre in Ethiopia that was potentially the result of the TPLF terrorist group. This event also lead to discussions of displaced children and child hunger in Tigray, Ethiopia, an issue that pertains to UNICEF's mission.



#### Date of Peak: July 25, 2021

#### Total Number of Posts: 29,978

This peak occurred due to a critique of UNICEF for not condemning the terrorist organization in Nigeria called TLPF. While UNICEF received the most mentions in this spike, the sentiment towards them was mostly negative. The hashtags #TLPFisaterroristgroup and #ChildrenNotSoldiers conveyed the main messages of users who tweeted during this spike.

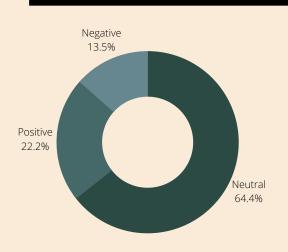


#### Date of Peak: June 5, 2021

#### Total Number of Posts: 30,223

This spike occurred because June 5th is World Environment Day. WWF received the most mentions here because World Environment Day is tied most closely with their mission. The hashtag #WorldWildlifeDay was used the most in this peak.

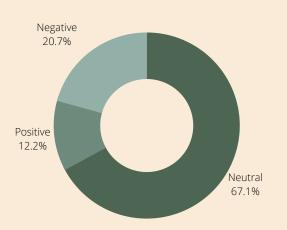
# SENTIMENT ANALYSIS



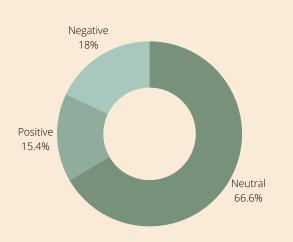
### World Wildlife Fund

WWF's positive sentiment makes up about 22.2% of their total sentiment. The positive sentiments can be represented by posts about making donations and being a part of the WWF team. Their negative sentiments, on the other hand, make up 13.5% of the total. Negative sentiments are represented by conversations about political discourse regarding issues that WWF addresses (e.g., climate change).

#### **Green Peace**



Green Peace's positive sentiment represents 12.2% of the overall sentiment towards them. These posts are generally about climate action and creating a strong global ocean treaty. Negative posts, which make up 20.7% of sentiment, are centered around Green Peace activists dumping plastic.



### UNICEF

UNICEF's positive sentiment makes up 15.4% of their total mention sentiments. These posts are mostly about their partnership with BTS on the #LoveMyself campaign and making donations to UNICEF. Negative posts make up 18% of the organization's sentiment and focus on the crisis in Ethiopia involving child endangerment and human rights violations.



# EARNED DATA

DEFORESTATION CONVERSATION

1785

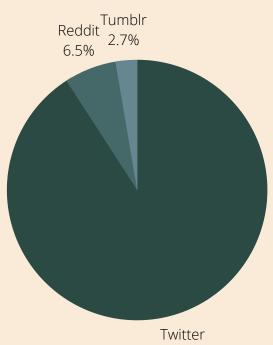
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## DATA OVERVIEW

Timeline: June 1, 2021 - August 31, 2021 Volume: 12,420,269 posts

### PLATFORMS

The top-used platforms for this conversation are Twitter, Reddit, and Tumblr. Twitter dominates with 90.9% of the mentions, however it is typical for Twitter to be the top platform because of its large volume of posts.



#### 90.9%

### SENTIMENT

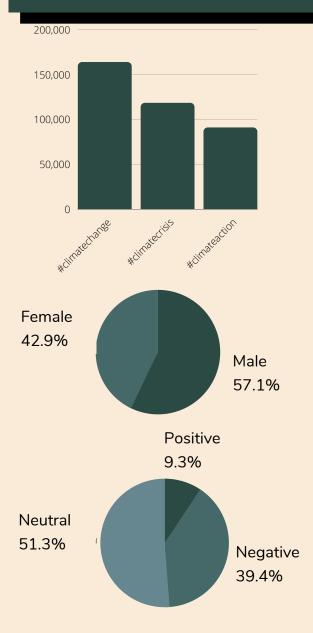
Sentiment across all platforms was mostly neutral. Of the total mentions for this topic, 52% were neutral. 40% of posts were negative, leaving on 8% of mentions with positive sentiment.

### DEMOGRAPHICS

This conversation tended to be maledominated across all platforms with males holding 57.5% of all mentions.

Female 42.5% Male 57.5%

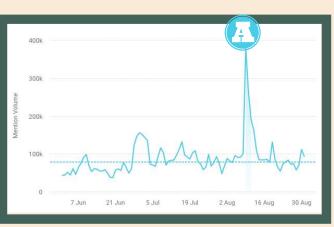
## TWITTER OVERVIEW



The top hashtags for Twitter posts in the deforestation conversation are #climatechange, #climatecrisis, and #climateaction. #Climatechange had the most posts at 163,921 mentions, then #climatecrisis with 118,459, and last #climateaction with 91,053. These hashtags each discuss climate change, a topic tied closely to deforestation.

The Twitter conversation is male-dominated with 57.1% of mentions coming from men. Women contributed 42.9% of mentions.

On Twitter, the conversation was mostly neutral. Negative tweets made up a large portion of the mentions at 39.4%. These conversations focused on climate change, extreme weather, and politics. Positive tweets made up less than 10% of the total posts. These conversations focused on taking action against climate change



Date of Peak: August 9 -11, 2021 Total Number of Posts: 382,441

Overall, newsworthy and sensationalized global topics like these tend to garner more mentions.

During this 3 day period there was a 388% increase from typical conversation. The increase was driven by the hashtags #ipcc, #climatereport, and #climateemergency. Conversation revolved release of a around the report from the Intergovernmental Panel on Climate Change on the impacts of climate change. This was a very newsworthy topic. The report detailed the disastrous impacts of climate change and what is to come. This topic is related tothe deforestation topic because deforestation contributes heavily to climate change.

## REDDIT



#### 25,175 posts August 9-12, 2021

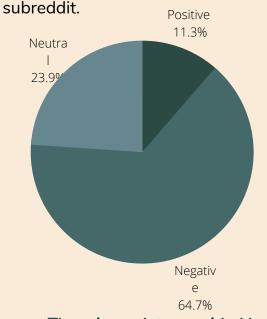
This peak on Reddit was a 351% increase in activity for this conversation. The spike occurred because of the release of the IPCC report. Discussion centered around how things like deforestation worsen climate change and how climate change will impact people and the planet in the near future. A good bit of this conversation took place in the r/worldnews and r/outoftheloop subreddits.



#### 13,595 posts July 21, 2021



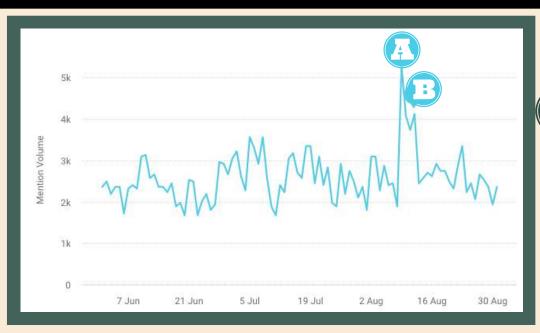
This peak showed a 143% increase compared to regular conversation about deforestation. This peak revolved around a URL to an article about Earth approaching a tipping point in climate changes. Discussions then focused on discussing the article that warns of Earth becoming too warm to recover from climate change. The article generated several popular threads for discussing its implications. The majority of this conversation took place in the r/science



Sentiment about deforestation on Reddit was mostly negative, with 64.7% of mentions. Neutral sentiment made up the next largest portion of the mentions with 23.9% of mentions. The conversation with **negative sentiment** focused on people's concerns and frustrations with climate change and the climate change issue within politics. **Positive sentiment** made up 11.3% of total sentiment. These conversations were about providing incentives to small nations to encourage caring for climate change and its relation to wildlife and to politics.

There is no data provided by Brandwatch for demographics or hashtags for Reddit.

## TUMBLR



5,275 posts

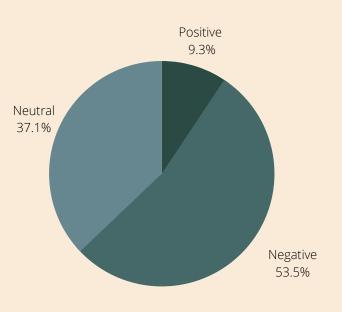
#### 5,275 posts August 9-10, 2021

This peak on Tumblr had a 112% increase in activity for this conversation. The conversation had 857

hashtag #climatechange and 257 mentions using #climatecrisis. Many di**mestions wing the**ed how climate change is negatively affecting the planet and warnings from the U.N. of unavoidable impacts of climate change.

#### 4,117 posts August 12, 2021

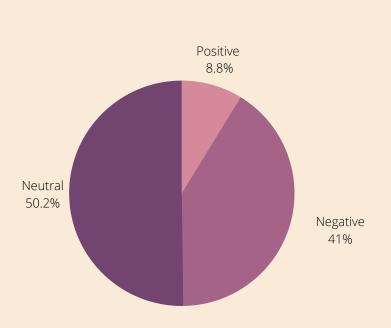
This peak on Tumblr had a 65% increase in activity for this conversation. This conversation on August 12th, 2021, had 514 mentions using the hashtag #climatechange, and 128 mentions using #sustainability. There were many discussions concerning sustainability, in particular with Australian farming and how its livestock industry is a big part of a climate solution.



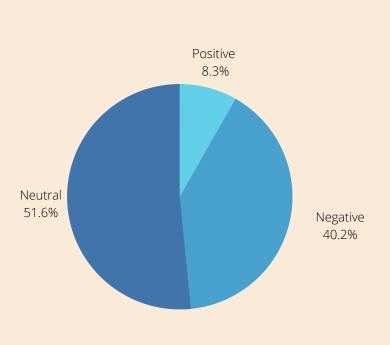
The sentiment for this conversation on Tumblr was majority negative. The negative sentiment made up 53.5% of the conversation. Neutral sentiment then made up the next largest portion contribution 37.1% of the total mentions to the conversation. Positive sentiment only made up 9.3% of the total mentions. The negative sentiment conversations discussed ood scarcity and its relation to climate change, the amazon rainforest, and donation opportunities to aid victims from Hurricane Ida. The positive conversation discussed ways to be more sustainable and limit food waste as it relates to climate change.

There is no data provided by Brandwatch for demographics or hashtags for Tumblr.

## SENTIMENT & GENDER



Among females, most of the conversations around deforestation were neutral. These posts talked about the European Union's response to climate change and the effects of climate change on everyday people. Posts with a negative sentiment account for 41% of the conversation among females. These posts are about the lack of government action on climate change and about climate change caused by deforestation being an existential crisis. Among the 8.8% of posts that held a positive sentiment, a lot were sarcastically positive and actually carried a negative sentiment or were about raising environmental standards for countries and companies.

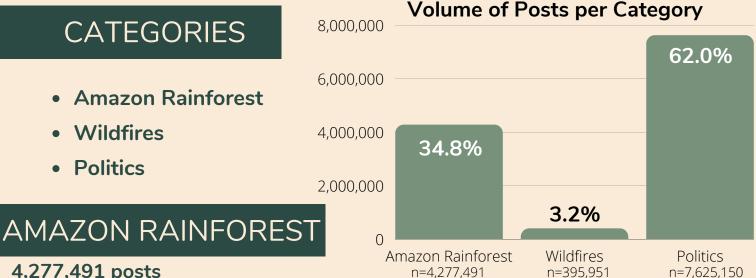


The sentiment analysis of posts by male users is very similar to that of the female users. Once again a majority of the posts had a neutral sentiment. These posts discussed wildfires and the effects of deforestation on agriculture. A small amount (8.3%) of the posts had a positive sentiment. Users in this category talked about recent innovations that may help fight climate change and government forestry grants. Negative posts account for a larger portion of the deforestation conversation (40.2%). These posts talked mostly about the threat of wildires to homes across California.

## **TOPICS**

### THE PROCESS

We used Brandwatch's AI feature to sort out specific themes within the deforestation conversation. Using the categories listed below, we filtered our data into more specific, nuanced sets. By analyzing these sub-groups we gained stronger insights on trends and gender and sentiment breakdowns of each topic.



#### 4,277,491 posts

Conversation for this category centers around the impacts of deforestation in the Amazon rainforest, like food insecurity, and the action surrounding the issues. Positive conversations (9%) center around taking steps to fight the climate crisis and deforestation. Negative conversations (45%) are mostly about fossil fuels, extreme weather, and climate change.

#### **Top Items**

- #climate
  - 12,952 mentions
  - This hashtag is similar to others popular in the deforestation conversation.
- #worldhumanitarianday
  - 12,873 mentions
  - This hashtag was used to promote various humanitarian causes leading. up to August 19, World Humanitarian Day.

Female 42.3% Male 57.7%

The gender breakdown is very similar to the breakdown of the deforestation conversation as a whole.

#### page 31

#### **WILDFIRES** 395,951 posts

The wildfire conversation focuses on fires, heatwaves, and their causes and impacts. Many of these posts focus on recent historically significant droughts and heatwaves. The **positive conversations** (4%) focus on stopping potential fires. Negative conversations (43%) focus on the California and Dixie Wildfires, and the climate being the driest and warmest it has been in 30 years.

#### **Top Items**

- nature.com
- 7,422 mentions
- This website seems to be popular in Flooding can be caused in the deforestation conversation with many referencing their articles about deforestation

#### Flooding in Germany

- 1,969 mentions
- part by deforestation. This tweet highlights the negative effects of climate change.

The gender breakdown for wildfires is identical to that of the Amazon Rainforest. 57.7% of posts were authored by men and 42.3% by women.

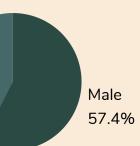
### POLITICS

#### 7,625,150 posts

This conversation centers around politics that concern deforestation. It primarily focused on taking action against climate change. Posts about President Biden, deforestation threatening infrastructure, and young people influencing politics were also included. Positive conversations (9%) talk about countries, specifically Canada use politics to tackle climate change. The negative conversations (36%) center around the climate crisis, Republicans, the US, and the Green New Deal.

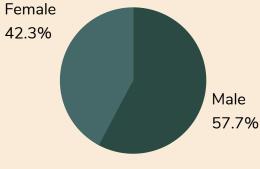
#### **Top Items**

- NYT IPCC Report
  - 10,201
  - This article details the IPCC report saying we're reaching a code red for climate emergency.
- Female 42.6%



- Fossil Fuels
- 182,812 mentions 0
- This topic was hot for political debate. Many people discussed the effects of this industry on climate change.

The gender breakdown for this theme is similar to the other two themes and the conversation as a whole. 57.4% of the posts were posted by males and 42.6% were posted by females.





# SOCIAL NETWORK ANALYSIS

https://seesuite.uga.edu/ @SeeSuiteUGA

## DATA DESCRIPTION

### Topic

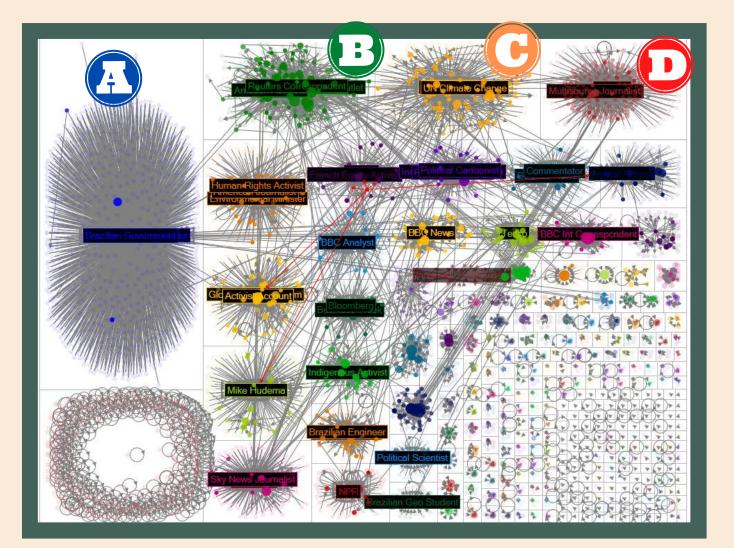
This topic focused on Twitter conversation about deforestation in the Amazon Rainforest

### Volume

4,991 vertices

### **Key Metrics**

- **Reciprocity:** measures how many mutual relationships are being formed with other users interested in the topic (i.e., deforestation)
- **Density:** measures how interconnected a group is based on how much they rely on one another for information
- Modularity: measures how spread out different clusters are



## **CLUSTER ANALYSIS**

The **modularity** for the clusters included in the visualization was 0.8. This is a high score, indicating that there are few connections across different clusters and they are very spread apart.



This cluster's key users included **@jairbolsonaro** (Brazil's president) and **@govbrazil** (Brazilian government). It centered around updates about Brazil's stance on deforestation from the government. Some top items used included the hashtag **#COP26** (referencing the climate panel in Glasgow) and **"greenhouse gases."** The low density (0.002) indicates that the group is not particularly interconnected. The reciprocity (0.001) is also low, showing that there is a lack of mutual relationships in this cluster.



Key users for this cluster are **@reuters** (a news outlet) and **@rebelsanimals** (animal rights activist). These users discussed what changes must be made after the UN climate panel to protect animals and indigenous people in the Amazon. Top items include "**greenhouse gases," #COP26,** and **#UN**. Both density (0.008) and reciprocity (0.007) were higher for this cluster that Cluster A, indicating that this group is more interconnected and key users have more mutual relationships with other users in the cluster.



This cluster's key users include @COP26. The cluster was focused around the UN Climate Change Conference in Glasgow (COP26) and gave updates as to what was discussed. Top items include the hashtags **#COP26**, **#ClimateAction**, and **#TogetherForOurPlanet**. The density (0.005) is still low, but it is mid-level for this dataset indicating that these users do not strongly rely on one another for information. The reciprocity (0.001) is very low, indicating a lack of strong mutual connections between users.



This cluster's key users are **@meganjanetsky** (a journalist in Latin America) and **@astroehlein** (a nonprofit media director). These journalists critiqued the response Latin American governments have to deforestation. Top items in this cluster are **"Colombia," "deforestation,"** and **#COP26**. The density (0.009) is the highest for these clusters, indicating more interconnectedness in this group. However, the reciprocity (0.000) is extremely low which points to a lack of mutual relationships between users.

## MENTOR FEEDBACK

#### Earned Data

- Our mentor said that we should note that UNICEF has a different mission than the other competitors we included. On page 21, we clarified the ties UNICEF has to WWF.
- Our mentor thought it would be good for readers to see a visual on the theme breakdown of the deforestations conversation. On page 30 we added a bar graph showing the volume of posts in our three categories.
- The gender breakdowns for each of our three categories were all very similar to the deforestation conversation as a whole. Our mentor thought this may be a good insight, so we noted that on each of the descriptions.
- In our Earned Data- Deforestation Conversation section, Twitter dominated the platform breakdown. Our mentor noted that this was normal due to the sheer volume of posts on Twitter. We made sure to mention that on page 24.
- On page 27, we broke down the spike analysis for the deforestation conversation on Reddit. Our mentor thought it would be useful to add which subreddits these conversations occurred in. We went back to Brandwatch and noted the main subreddit(s) for each spike.