Environmental Politics Through the Use of Social Media to Spread the Issue of Climate Change and Land Fires

Elyta[1], Ratu Zahira Lutfie[2], Arissy Jorgi Sutan[3]
[12]Universitas Tanjungpura
[3]Department Government Affairs and Adminitration, Universitas Muhammadiyah Yogyakarta, Yogyakarta.
*Corresponding author email: elyta79@gmail.com

Artikel info	ABSTRACT
	Social media is employed in various acts, one of which is related to social movements, as in the example of social movements against climate change that use social media. This study seeks to understand the social media used in the climate change social movement that occurred on social media. This research's value and analysis portion was delivered through a descriptive narrative and a qualitative technique. This study also used qualitative data analysis software (Q-DAS) to learn about the trends in social media conversations and themes. Twitter was the social media platform employed in this study. This study addresses the following question: Q1 What kind of relevant climate change theme is spreading on social media? Q2 Explain the role of hashtags in the climate change debate. Q3 What is the nature of the narrative that has propagated on social media about climate change subjects, and how relevant is it? Q4: How does climate change affect social movements from the standpoint of Green Politics? The findings of this study are as follows: 1.) The climate change topic gained traction on social media. The narrative in this example avoided utilizing hashtags to promote and provide information about climate change talks. 2.) There is still a link between the hashtags for climate change talks on social media. 3.) The narration on the climate change topic is dominating, with hashtags used to ensure that the narration spreads and that netizens pay attention. 4.) The social media climate change movement is a form of green political practice.

How to Cite: Elyta, Lutfie RZ, & Sutan AJ (2024) Environmental Politics Through the Use of Social Media to Spread the Issue of Climate Change and Land Fires. Jurnal Pendidikan Lingkungan dan Pembangunan Berkelanjutan, 25 (01), 1-15. doi: https://doi.org/10.21009/PLPB.251.01

INTRODUCTION

This article analyzed the social media used in climate change movements and forest fires. Social media has grown fast and has become an alternative media to get information (Gerbaudo & Treré, 2015; Istenic, 2018). Social media has many various platforms, and everybody can use it. Social media is also used to speak up about the central issues in the entire world and many countries (McNeish, 2017; Ozturkcan et al., 2017). Social media bring a new dimension and perspective for netizens to see the urgent issue and should be a priority to solve(Shields et al., 2014). Social media also has many various accounts that concern environmental issues. The Environmental problem in many countries is still a big problem that has not been finished yet.

Climate change is the main problem that will be the priority in many countries. Nobody can escape from the climate change effect. Some of the social groups in the world have lost their source and brought more significant impact from it. In addition to the depletion of resources, climate change also leads to the erosion of cultural identity and the disruption of livelihoods (Liu & Zhao, 2017). Climate change also affects increased environmental hazards and Pollution, Worsening current inequality gaps around dimensions of social difference such as race, class, ethnicity, and gender (Thomas et al., 2019).

Humans respond to the climate change problem slowly; the slow and, to date, the largely unsuccessful reaction of humanity to climate change reveals the difficulty in establishing coherent, common dreams of potential futures that can cause social changes (Milkoreit, 2017). There are some factors why most humans respond to this problem slowly; the poor response of afflicted communities and cultures constitutes a twofold failure of innovation with significant ramifications for human well-being. Initially, there exists a need for more originality around the integrity and enormity of climatic perils. Furthermore, there exists a hesitancy to imagine potential and feasible future tactics and aspirations (Death, 2016; Milkoreit, 2017).

Some research taught that young generations engage in the climate change issue as major talks in social media. There is some urgency to change the behaviour of young people to confront the climate change talks. The *'experiential'* matters the most in facilitating behavioural Change: issues and media guided by young people, ideally encouraged by a peer-to-peer approach, have been found to promote sustainable behaviour. Community events and peer-led initiatives may be more effective than information campaigns in promoting long-term improvements in environmental behaviour (Corner et al., 2015; Segerberg & Bennett, 2013).

Social media also raise climate change and environmental problems on Twitter and other social media channels. The proliferation of social media played a pivotal role in initiating the Arab Spring and the subsequent protests calling for democracy in the Middle East in 2011. Social problems like racism, human rights issues, and environmental issues also spread using the internet after the phenomenon of the Arab Spring. Individuals and microblog accounts dominate the social media narration about climate change.

Another research talks about two perspectives on social media and climate change (Hassani et al., 2019; Nordgren et al., 2016; Segerberg & Bennett, 2013):

1.) From a first viewpoint, Twitter is interesting as an organizing tool within the protest context. Interconnected demonstration places and knowledge exchange represent agreed personal and group activity realms. As social media platforms become more popular, they have become networking actors within the protesting area. The relative importance of abilities or narratives restrictions and allows intervention in such often tightly related and useable regions at the exact moment as their support framework ties amongst multiple directors, problems, and activities. Those frameworks of citizens and resources can function mainly indifferent to cohesiveness. The focus is on the actions' sustainability and efficacy, which calls for attention. Digital format interfaced protest areas also include large networks of multiple chemicals by various players, so Twitter is one of the many virtual platforms representing the area of a protest and professional and non.

2.) Twitter split the topics into two perspectives, showing curious Characteristics of the larger structure of the demonstration environment, but in general, something like the organizational scheme within which they are bound. This can suggest a few of the broader network of relationships related to a specific case, among several other issues, although it does not tell a whole narrative. Another approach is to investigate the participants connecting to a channel, turning a flow inward to focus on who and what is connected to it rather than who is writing. The community and social media connections in tweets reveal the range of groups, data sources, and social networks related to a specific demonstration atmosphere. Besides illustration, social content from both the climate change movements which we addressed earlier design various institutions (through advocacy groups to government departments) or news outlets (for example, the British Broadcasting Corporation, the official news outlet of the United Nations, The Brookings Institution, independent writers on the internet) became associated in protest platforms at various phases of social movements. People evaluating the mainstream media effect of earning management, exchanging think tank content, and relaying their encounters at incidents are the topics of specific connections.

In the U.S., the climate change talks are dominated by the elite of the political sector. U.S. public sentiment upon this problem of climate change became primarily driven by elite signals, especially a resistance of Republican Politicians towards climate change policies than it is by media stories, which essentially replicated specific motions all while portraying that viewpoint of the Democratic party (Farrell, 2015; Tucker et al., 2018). There are some polarization phenomena, and users in social media Twitter have been using the retweet function to reproduce and distribute information and issues like climate change themes (Bowles et al., 2015; Kirilenko et al., 2015).

Social media is used to appear social movement in the social media dimension. As a common issue, climate change is used by social media to spread points and give information about the problem and impact of climate change(Mcadam, 2017). While climate change is a matter of worldwide importance, not all persons demonstrate equal commitment or receptiveness in confronting this issue.   Humans widely recognize that climate change opinions have gotten more divided and politically charged in recent years, reflecting the growing political divide in the United States. Considering these patterns, it is not logical to relate to conservatives who are sure to be still reactive to both topics (Jang & Hart, 2015; Mcadam, 2017).

Climate change and forest fires are intricately interconnected. With increased temperatures and frequent and severe droughts, woods have become increasingly vulnerable to wildfires. Climate change intensifies the hot and arid conditions that facilitate these flames' ignition and rapid spread, rendering areas more susceptible to fire outbreaks. Snowpacks in the western United States are experiencing a reduction in size and an earlier onset of melting (Aronoff et al., 2019; Asiyanbi, 2016), Increasing the flammability of forests and decreasing the water supply for plants. The increased temperature and less precipitation in western U.S. woods provide an unfavourable environment for tree regeneration following wildfires (Klyza & Sousa, 2013).

Furthermore, climate change is amplifying the frequency and intensity of wildfires. Human-induced climate change has intensified the aridity of forest fuels throughout the fire season, leading to an escalation in both the frequency and intensity of wildfires. Wildfires have extensive consequences that can propagate throughout communities, regions, watersheds, and ecosystems. They have the potential to induce air pollution, inflict harm upon infrastructure, and pose a risk to human health and safety. In addition, they can emit substantial quantities of carbon dioxide into the atmosphere, exacerbating climate change (Blühdorn & Welsh, 2013; Doyle et al., 2015; Klyza & Sousa, 2013; Moen et al., 2014). Implementing green politics can effectively tackle climate change and forest fire issues by promoting sustainable land use, enacting legislative reforms, fostering international collaboration, implementing forest management strategies, and undertaking climate change mitigation measures. Implementing these measures makes it feasible to actively strive towards diminishing the frequency and severity of forest fires in an environmentally mindful manner (Dauvergne & Neville, 2013; Rowell, 2017; Thaler et al., 2019).

This study centred on the utilization of social media by climate change social movements. In addition, this research challenged the primary question in three different areas. Q1 What specific issue related to climate change is being widely shared on social media platforms? Q2 The correlation between hashtags and the climate change issue. Q3 What is the nature of the narrative surrounding climate change subjects being disseminated on social media and its significance within social media? Q4: How are climatic changes related to forest fires in the context of social movements in Green Politics? Prior research solely focuses on the issue of climate change movements within discussions on social media platforms. Q5 What strategies can be employed to mitigate forest fires? This study examines social media's role, status, and trajectory within climate change social movements.

METHODS

This study employs a qualitative methodology and a descriptive narrative to present the findings and analysis. This study also utilized qualitative data analysis software (Q-DAS) to determine the patterns and topics of discussions on social media (Dalkin et al., 2021; Jackson & Bazeley, 2019). The social media platform utilized for this research is Twitter. Twitter is used because of its extensive user base, which allows for the widespread dissemination of social media trends. This study is based on 12 primary sources from the social media platform Twitter. The primary source consists of hashtags pertinent to the issue of climate change on Twitter. This study employs Nvivo 12 Plus as the analysis software. Using Nvivo 12 Plus, this research employs three tools to evaluate the data. Firstly, chart analysis is conducted to examine the level of interest in the issue of climate change on the social media platform Twitter. Furthermore, cluster analysis can be employed to explore the significance and interconnection among the various hashtags. Moreover, a word cloud can visualize the prevailing discourse surrounding climate change issues on social media. In addition to the three analytical tools provided by Nvivo 12

Plus, this research aimed to assess the significance of the Climate change subject in social media and the Green Politics theory.

RESULTS AND DISCUSSION

This part tries to explain and answer the three central questions. To analyze the data using three explore tools in Nvivo12 plus, The available types of analysis are Chart analysis, Cluster analysis, and word cloud analysis. Moreover, to answer the last question using library research and descriptive.

A.) The salient topic on social media regarding climate change

This analysis part uses chart analysis toll to see and describe the correlation theme talks about climate change in social media. This analysis uses three nodes: Climate change, strikes, and Pollution. This analysis uses hashtags about climate change themes in social media to know the social media talks about climate change.
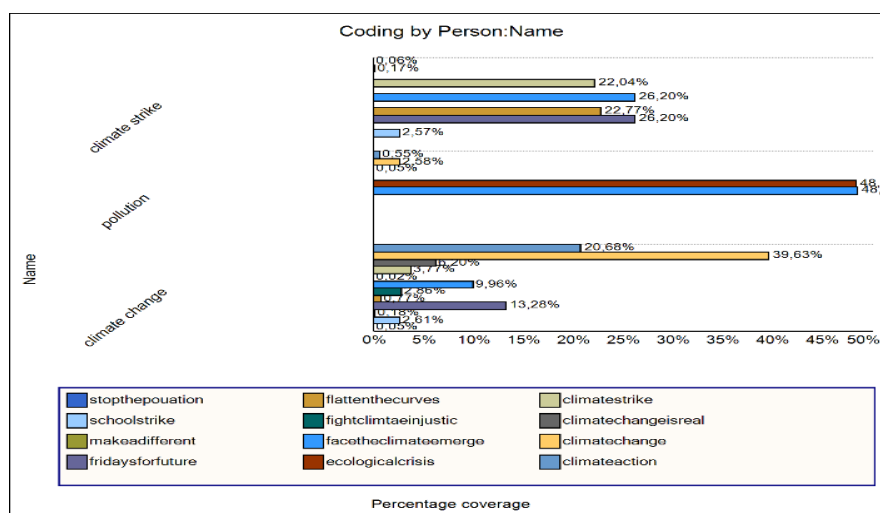

Fig. 1 Social media talks about Climate Change.

Three nodes have different results: climate change, Pollution, and Climate strike. The table of results can be shown below.

Table 1. Social media talks about Climate Change.

Hashtags	Climate Change	Pollution	Climate Strike
#Climateaction	21%	1%	0%
#Climatechnage	40%	3%	0%
#Climatechnageisreal	6%	0%	0%
#Climatestrike	4%	0%	22%

#Ecologicalcrisis	0%	48%	0%
#Facetheclimateemergency	10%	48%	26%
#Fightclimatejustice	3%	0%	0%
#Flattenthecurves	1%	0%	23%
#Fridaysforfuture	13%	0%	26%
#Makeadifferent	0%	0%	0%
#Schoolstrike	3%	0%	3%
#Stopthepouation	0%	0%	0%

Source: Nvivo 12plus analysis

From that analysis part, we know that the results of hashtags in using different nodes fluctuate. It is because the content fits in and is relevant to the hashtags and the nodes in social media. The highest result in climate change nodes is #Climatechange, with a 40% percentage. On the other side, the most increased reach on nodes of Pollution is two hashtags, #Eclologicalcrisis and #Facetheclimateemergency, with the same result of 48%. With different nodes, there is also the extra reach of hashtag results. The nodes of Climate strike have the highest impact on hashtags #Faceclimateemergency with 26% percentage.

In this theme, we know that social media talks about climate change are related to the various hashtags that appear in social media. Suppose we see the connection between the result of the hashtags and the social media theme. In that case, we can see a relation between social media hashtags used and the pieces of climate change in social media. Social media users spread the social problem, which, in this case, is a climate change issue. Using social media to spread the issue is more effective and cheaper.

There is the point in this analysis part there are:

1.) Social media theme about climate change using hashtags to spread the issue, and the narrative talks about climate change. In this case, the narrative used hashtags to promote and give information about climate change talks. Using social media in this century has become a necessity to get information in the entire world. Using social media is also a strategic place to give direction to netizens to discuss and give an argument about climate change talks.

2.) They are continuing from the previous point, which is number 1. Social media platforms facilitate the emergence of social movements throughout society. Social media serves as a means to organize and synchronize the movement. In this discourse on climate change, social media serves as a means to facilitate and disseminate narrative content. For instance, the Scholl strike for climate, also known as Fridays for Future, is an activist movement aimed at demanding action from political and economic leaders to mitigate the climate catastrophe and promote the utilization of renewable energy in the industrial sector.

3.) The use of social media is connected to social issues. From an environmental standpoint, the content on social media should align with the movement by incorporating hashtags

relevant to climate change. To promote a social activity centred around climate change, it is advisable to craft an informative social media post to educate and engage netizens in this cause. Social media provides an ideal platform for promoting social movements, disseminating information and amplifying discussions on climate change. Social media platforms offer cost-effective, adaptable, and secure means to communicate ideas freely. This is how social media perceives the use of tools and the rights associated with public space for social movements. Social media has transformed how people express their opinions and thoughts, shifting from traditional forms of protest to utilizing social media platforms as a convenient and effective means of communication.

4.) In this case, Climate change problems can cause Forest fires, and the green politics movements in this part are climate change movements that also participate in preventing and curing forest fires in many regions. The pollution theme proves that the activities also concentrated on forest fires.

A.) The Relation of all hashtags in the climate change theme.

This section aims to understand the correlation between all hashtags related to the issue of climate change. This part tried to explain the connection of all hashtags and how strong the bond of hashtags is. The explanation about the relationship of hashtags is down below:
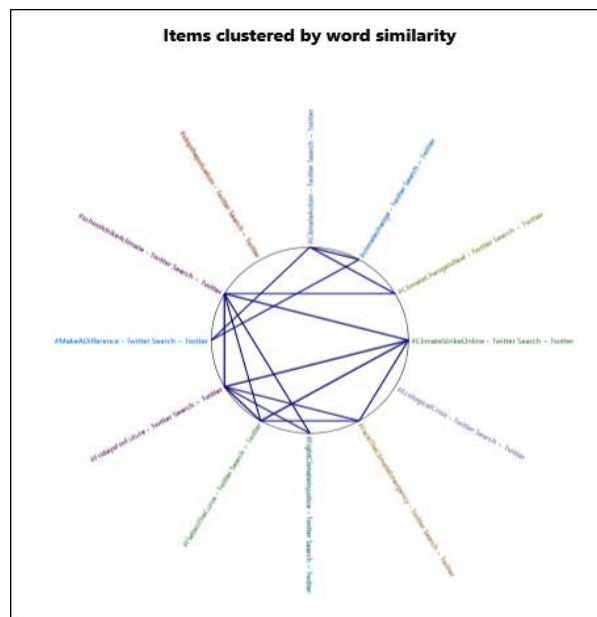

Fig 2 Hashtags' Relation to Climate Change Talks

This part uses Cluster analysis toll in Nvivo12 plus. Cluster analysis in her used to know the Relation of hashtags. This analysis uses Upper limit one and lower limit 0,7 to analyze the hashtag's association. The range is from -1,0, and 1 point. Table explanation in Table 2:

Table 2. Hashtags relation in Climate Change talks

Hashtags a

	Hashtags b	Result
#Flattenthecurves	#Climatestrikeonline	0,89017
#Fridaysforfuture	#Climatestrikeonline	0,882966
#schoolstrike4climate	#FridaysForFuture	0,832846
#FridaysForFuture	#FlattenTheCurve	0,818737
#climatechange	#ClimateAction	0,81711
#schoolstrike4climate	#ClimateStrikeOnline	0,808241
#ClimateChangeIsReal	#ClimateAction	0,759371
#schoolstrike4climate	#FightClimateInjustice	0,752919
#FaceTheClimateEmergency	#ClimateStrikeOnline	0,741259
#FridaysForFuture	#FaceTheClimateEmergency	0,737371

The data shows a connection between the hashtags on social media and climate change narration. In that table, there are the top ten relations of hashtags. In this case, the highest connection of #Flattenthecurves and #Climatestrikeonline with the result is 0,89017. The relationship between #Fridaysforfuture and #Climatestrikeonline is in second place, with a score of 0,882966. The third place is the connection of #schoolstrike4climate and #FridaysForFuture, with the result being 0,832846. From that data, we can see that in the lower limit of 0,7, those hashtags are connected in social media. The connection is quite strong; it still appears even using a 0,7 lower limit.

The social media data is utilized to disseminate the material. Additionally, social media establishes connections amongst hashtags or accounts that share similar reach and objectives. From this standpoint, it is evident that the hashtags that emerge in social media discussions pertain to climate change. The correlation between such hashtags is significant, as seen by their continued presence in social media discussions even when adopting a lower threshold 0.7. From this section, we have obtained the key points, and there is a detailed explanation provided below:

1.) The connection between hashtags and discussions on climate change in social media persists. The correlation between hashtags and social media is significant, as their presence remains evident even with a minimum threshold of 0.7. Social media is employed to disseminate the narrative on climate change. Social media platforms

convey stories and connect various pieces of material through hashtags.   The hashtags are used to categorize either the individual or the institutional account.

2.) Social media platforms include hashtags to facilitate content sharing. However, hashtags also serve the purpose of promoting and popularizing the material. Utilizing hashtags facilitates the dissemination of narrative content, increasing its popularity and capturing the attention of internet users. Using social media is the most efficient medium for disseminating narrative content and linking them through hashtags to capture the attention of social media users regarding a social issue, specifically climate change, in this instance.

B.) Narrative spread in social media about and the Relevance with Social Media.

This analysis utilizes a word cloud tool to determine the prevailing narrative or often-used words within a social media theme. Social media disseminate information and propagate narratives around the issues. The analytical sections are located below:

Fig 3 Narrative Spread in Social Media about Climate Change

Table 3. Narrative Spread in Social Media about Climate Change

Word	Counts
	16924
#facetheclimateemergency	16852
#climatechange	16794
#fridaysforfuture	14551
#climateaction	11232

#flattenthecurve	10929
#climatestrikeonline	10245
week	7047
climate	6470
#schoolstrike4climate	6415
#climatechangeisreal	

According to the data, the social media narrative with the highest score is #facetheclimateemergency, which has a score of 16924.   The second position is occupied by climate change, which has been mentioned 16852 times. The third place is occupied by #fridaysforfuture, with a score of 16852.   Based on the statistics, it is evident that social media has overwhelmingly shaped the discourse on climate change, influencing the public perception of the nature and magnitude of the problem on social media platforms.   In this instance, the social media discourse was primarily characterized by the prevalence of hashtags and concise vocabulary.   In this instance, they exerted greater control over hashtags to achieve the maximum score. Social media platforms utilize hashtags to popularize and spread narratives. Using social media enables one to identify posts that pertain to the theme and subject matter of social media discussions.

From the data, the popular beside the hashtags is a single word with few characters that can be defined in two sides: 1.) a single word that indicates a change or step of climate change, for example, *Join, Difference, Climate.* 2.) A single word and hashtag that shows awareness of another problem like the pandemic COVID-19, for example, words like *Pandemic, # COVID-19,* and *distance.*

In this case, social media is used to share climate change content. In this case, two points can be:

1.) The narration on the climate change subject is predominantly conveyed through hashtags, ensuring widespread dissemination and capturing the attention of internet users.   In this scenario, hashtags are utilized to share the content, which are interconnected.   In this instance, social media serves as a platform for raising awareness and mobilizing support for addressing climate change. It has the potential to catalyze a social movement that advocates for proactive measures and practical solutions to combat climate change issues.

2.) The widespread word phenomenon is dominant using hashtags rather than a single word. However, in a single word, there are two criteria that we can define: a.) The word that indicated to make a change about climate change. b.) words and hashtags are also aware of the COVID-19 pandemic problems.

C.) Climate change social media movements and green politics

Green politics is a unique phenomenon in the political sector that can make the government aware of the environment and nature or make the government more greedy. Green politics appears because of factors like The damage to the natural environment, natural disasters that can threaten humans, the government that is unaware of the environmental sustainability sector, And capitalism that impacts global economic development (Sri Lestari, 2016).

In this situation, green politics tries to answer the two major perspectives that relate differently to power. The mainstream wings operate primarily on the state and market until the parliamentary tries to make a difference. You can call it the Green politics from above. On the other side, the radical prefigurative wigs side is dominant from the green activists and civil society; this is a social movement organization known as "Green Politics from Below". The majority of the activity is from this section.

The climate change social media movement is part of social media's green politics practice and how they attract society to be more aware of the environmental sector, especially the climate change problem. On the other side, social media brings a new dimension to the social movements of the climate change sector that, to take action, can be used social media as a public space. Social media has become a tool to share and spread the narration of the climate change problem. Using social media is a strategic choice that can use a green activist.

Climate change narration that spread in social media now is the massive movement that develops the green activists. From this, we can define that the climate change movements in social media are the politics of the green from below because the rising voice about climate change is from the bottom; its means to voice the issue started from the activist, civil society, and social movements organization. Social media serves as a platform and tool for disseminating the narrative of the climate change issue.

From the explanation, we can define two points:

1.) The climate change movement in social media is part of green politics practice. At this point, the action is trying to give information to society and demand improvement about climate change issue awareness of government. Green politics is the framework for all the activity of society to reason about the environmental problem to understand the environment.

2.) The climate change movements in social media that promoted activist, society, and social movements organizations define green politics from below. It shows the main idea and raises the voice of the issue from the bottom, which uses social media platforms.

3.) Forest fire problems are becoming part of the climate change issues; in this case, more strategies are needed to clear the Climate change that can also cause forest fire problems.

D.) Strategy to Vanish the Forest Fire Problems

There are some strategies to solve the forest problems as examples:

1.) **Policy Reform**: Enacting appropriate policies is of utmost importance. This step involves ensuring the effective implementation of the 'fire financing fix', distributing resources for both wildfire suppression and prevention, enhancing research efforts to identify optimal forest management strategies, and reinforcing existing environmental legislation (Asiyanbi, 2016; Goodin, 2013; Klyza & Sousa, 2013; Zhang & Barr, 2013).

2.) **Forest Management**: Turning forest byproducts into new revenue can help reduce the fire risk by removing vegetation that can fuel fires. These tree parts and plants can be turned into a renewable energy source, providing an economic opportunity while reducing fire risk (Asiyanbi, 2016; Geels, 2014; Goodin, 2013; Klyza & Sousa, 2013; Purnomo et al., 2018; Siddi, 2020; Zhang & Barr, 2013).

3.) **Sustainability Practices**: Integrating sustainability best management practices, such as achieving zero environmental impact on all significant fire incidents by 2030, can be a crucial part of green politics. This step includes using green alternatives for power and light in fire camps to reduce fuel, emissions, and noise and reduce the water footprint tied to fire camp operations (Edwards & Kleinschmit, 2013; Hutto et al., 2016; Stretesky et al., 2013).

4.) **Prevention**: Ensuring the prevention of wildfires is of utmost importance. This phase entails assessing meteorological and aridity conditions, constructing campfires in exposed areas distant from combustible materials, extinguishing campfires completely before departure, and refraining from parking automobiles on dried grass. (Chance, 2015; Edwards & Kleinschmit, 2013; Hutto et al., 2016; Rudman et al., 2013; Seymour & Busch, 2016; Stretesky et al., 2013).

5.) **Ecological Forest Management**: Previous studies indicate that using ecological forest management techniques in susceptible dry forests may counterbalance climate-induced alterations by decreasing the mortality rate of trees in wildfires. This step involves using forest thinning and controlled burns in densely populated dry forests to mitigate the intensity of fires and minimize the mortality of trees. (Lazarev et al., 2014; McCarthy et al., 2014).

6.) **Restoring Active Wildland Fire Regimes**: The objective of proactive and evidence-based management is to reinstate active wildland fire patterns and enhance the ability of the landscape to withstand the effects of climate change (Bradshaw et al., 2013; Juárez-Orozco et al., 2017; Leach & Scoones, 2013).

CONCLUSION

These parts recap the explanation in general. In this case of climate change and social media, we can define a few points; the reason is down below:

1.) The climate change problem has proliferated on social media. In this instance, the narrative refrained from utilizing hashtags to promote and provide information regarding climate change discussions. Social media platforms allow social movements to gain traction and mobilize inside society. Furthermore, social media platforms can facilitate interactions that disseminate ideas and information to the community. In addressing climate change, it is advisable to generate informative posts on social media to raise awareness and engage netizens in this social movement.

2.) The connection between hashtags and discussions on climate change in social media is still evident. The correlation between hashtags and social media is highly robust. In this instance, the correlation between the hashtags. Social media platforms utilize

hashtags to facilitate the sharing of material. However, hashtags also serve the purpose of generating trends within the content.   In this scenario, social media extensively uses hashtags to disseminate the narrative, content, and other information related to climate change.

3.) The use of hashtags is prevalent in the climate change discourse, amplifying the narrative and capturing the attention of internet users.   In this scenario, hashtags are utilized to share the content, which are interconnected.   Conversely, there is a prevalent linguistic phenomenon where hashtags are favoured over single words.   However, two conditions can be defined by a single word: a.) A term that signifies taking action to address climate change.   b.) Words and hashtags that are also aware of the pandemic Challenges posed by the COVID-19 pandemic.

4.) The climate change movement in social media is part of green politics practice. At this point, the action is trying to give information to society and demand improvement about climate change issue awareness of government. The climate change movements in social media that promoted activist, cultural, and social movements organizations define green politics from below. The rising voice started from the society, activists, and social movements organizations.

This research is subject to some limitations, such as:

1.) This study exclusively utilizes the social media network Twitter as the primary source of data without making any comparisons to other social media platforms.

2.) This research only tries to know the social media used in climate change effect without knowing the benefits of the social media movement of climate change.

There is also a recommendation for future research that has the same themes:

1.) Using two more social media platforms can give the novelty of the research, and using more than one social media platform and comparing them can make the analysis more valuable.

2.) The following research can be used to know the benefit of using social media on the green politics social movements is a good choice. Social media has a significant impact on getting information. It gives a chance for social media to be used in social action and provide benefits to society.

REFERENCES

Dalkin

Dauvergne, P., & Neville, K. J. (2013). Forests, food, and fuel in the tropics: the uneven social and ecological consequences of the emerging political economy of biofuels. *The Politics of Biofuels, Land and* https://doi.org/10.4324/9781315874678-9

Death, C. (2016). Green States in Africa: beyond the usual suspects. *Environmental Politics*, *25*(1), 116–135. https://doi.org/10.1080/09644016.2015.1074380

Doyle, T., McEachern, D., & MacGregor, S. (2015). *Environment and politics*. books.google.com.

https://books.google.com/books?hl=en&lr=&id=ucFzCgAAQBAJ&oi=fnd&pg=PP1&dq=greens+politics+and+forest+fires&ots=sh05rEGeOh&sig=mc9RhIoGpfIDAQMxvoolIhTmPfE

Edwards, P., & Kleinschmit, D. (2013). Towards a European forest policy—conflicting courses. *Forest Policy and Economics*. https://www.sciencedirect.com/science/article/pii/S1389934112001268

Farrell, J. (2015). Network structure and influence of the climate change counter-movement. In *Nature Climate Change* (Issue November). https://doi.org/10.1038/NCLIMATE2875

Geels, F. W. (2014). Regime resistance against low-carbon transitions: introducing politics and power into the multi-level perspective. *Theory, Culture &society*. https://doi.org/10.1177/0263276414531627

Gerbaudo, P., & Treré, E. (2015). In search of the 'we' of social media activism: introduction to the special issue on social media and protest identities. *Information Communication and Society*, *18*(8), 865–871. https://doi.org/10.1080/1369118X.2015.1043319

Goodin, R. E. (2013). *Green political theory*. books.google.com. https://books.google.com/books?hl=en&lr=&id=LLimSF81PSAC&oi=fnd&pg=PA27&dq=greens+politics+and+forest+fires&ots=ruASSPdaxi&sig=YhS-JJHW5qscgDUXxlw33Ga9kio

Hassani, H., Huang, X., & Silva, A. E. (2019). Big data and climate change. *Big Data and Cognitive Computing*, *3*(1), 1–17. https://doi.org/10.3390/bdcc3010012

Hutto, R. L., Keane, R. E., Sherriff, R. L., Rota, C. T., Eby, L. A., & ... (2016). Toward a more ecologically informed view of severe forest fires. …. https://doi.org/10.1002/ecs2.1255

Istenic, S. P. (2018). Green Resistance or Reproduction of Neoliberal Politics. *Ethnologia Europaea: Journal of European Ethnology*, *48*(1), 34–49.

Jackson, K., & Bazeley, P. (2019). *Qualitative data analysis with NVivo*. Sage.

Jang, S. M., & Hart, P. S. (2015). Polarized frames on '" climate change "' and '" global warming "' across countries and states : Evidence from Twitter big data. *Global Environmental Change*, *32*, 11–17. https://doi.org/10.1016/j.gloenvcha.2015.02.010

Juárez-Orozco, S. M., Siebe, C., & ... (2017). Causes and effects of forest fires in tropical rainforests: a bibliometric approach. *Tropical* …. https://doi.org/10.1177/1940082917737207

Kirilenko, A. P., Molodtsova, T., & Stepchenkova, S. O. (2015). People as sensors : Mass media and local temperature influence climate change discussion on Twitter. *Global Environmental Change*, *30*, 92–100. https://doi.org/10.1016/j.gloenvcha.2014.11.003

Klyza, C. M. G., & Sousa, D. J. (2013). *American environmental policy, updated and expanded edition: Beyond gridlock*. books.google.com. https://books.google.com/books?hl=en&lr=&id=ADA3AgAAQBAJ&oi=fnd&pg=PR7&dq=greens+politics+and+forest+fires&ots=lNx1sb68Gn&sig=1cnHelSCQrykJHUZZa9_57m6WtU

Lazarev, E., Sobolev, A., Soboleva, I. V, & Sokolov, B. (2014). Trial by fire: A natural Disaster's impact on support for the authorities in rural Russia. *World Politics*. https://www.cambridge.org/core/journals/world-politics/article/trial-by-fire-a-natural-disasters-impact-on-support-for-the-authorities-in-rural-russia/5B04E5AD0CAEE699D750CD29C28AD9DE

Leach, M., & Scoones, I. (2013). Carbon forestry in West Africa: the politics of models, measures and verification processes. *Global Environmental Change*. https://www.sciencedirect.com/science/article/pii/S0959378013001143

Liu, J. C. E., & Zhao, B. (2017). Who speaks for climate change in China? Evidence from Weibo. *Climatic Change*, *140*(3–4), pp. 413–422. https://doi.org/10.1007/s10584-016-1883-y

Mcadam, D. (2017). Social Movement Theory and the Prospects for Climate Change Activism in the United States. *The Annual Review of Political Science*, pp. 189–208.

McCarthy, J. F., Vel, J. A. C., & Afiff, S. (2014). Trajectories of land acquisition and enclosure: Development schemes, virtual land grabs, and green acquisitions in Indonesia's Outer Islands. *Green Grabbing: A New …*. https://doi.org/10.4324/9781315829654-18/trajectories-land-acquisition-enclosure-development-schemes-virtual-land-grabs-green-acquisitions-indonesia-outer-islands-john-mccarthy-jacqueline-vel-suraya-a%EF%AC%81%EF%AC%80

McNeish, W. (2017). From revelation to revolution: apocalypticism in green politics. *Environmental Politics*, *26*(6), 1035–1054. https://doi.org/10.1080/09644016.2017.1343766

Milkoreit, M. (2017). Imaginary politics: Climate change and making the future. *Elementa*, *5*. https://doi.org/10.1525/elementa.249

Moen, J., Rist, L., Bishop, K., III, F. S. C., & … (2014). Eye on the taiga: Removing global policy impediments to safeguard the boreal forest. *Conservation …*. https://doi.org/10.1111/conl.12098

Nordgren, J., Stults, M., & Meerow, S. (2016). Environmental Science & Policy Supporting Local Climate Change Adaptation : Where We Are and Need to Go. *Environmental Science and Policy*, *2015*. https://doi.org/10.1016/j.envsci.2016.05.006

Ozturkcan, S., Kasap, N., Cevik, M., & Zaman, T. (2017). An analysis of the Gezi Park social movement tweets. *Aslib Journal of Information Management*, *69*(4), 426–440. https://doi.org/10.1108/AJIM-03-2017-0064

Purnomo, H., Okarda, B., Dewayani, A. A., Ali, M., & … (2018). We are reducing forest and land fires through good palm oil value chain governance. In *Forest policy and …*. Elsevier. https://www.sciencedirect.com/science/article/pii/S1389934117301508

Rowell, A. (2017). *Green backlash: Global subversion of the environment movement*. books.google.com. https://books.google.com/books?hl=en&lr=&id=HwTFDwAAQBAJ&oi=fnd&pg=PP1&dq=greens+politics+and+forest+fires&ots=ZZcQgyOsiU&sig=MfNfU-UV9eXYoj4rHh8swrJMWO4

Rudman, L. A., McLean, M. C., & Bunzl, M. (2013). When the truth is personally inconvenient, attitudes change the impact of extreme weather on implicit support for green politicians and explicit climate-change beliefs. *Psychological Science*. https://doi.org/10.1177/0956797613492775

Segerberg, A., & Bennett, W. L. (2013). Social Media and the Organization of Collective Action : Using Twitter to Explore the Ecologies of Two Climate Change Protests Social Media and the Organization of Collective Action : Using Twitter to Explore the Ecologies.

The Communication Review, *February 2013*, 37–41. https://doi.org/10.1080/10714421.2011.597250

Seymour, F., & Busch, J. (2016). *Why forests? Why now?: The science, economics, and politics of tropical forests and climate change*. books.google.com. https://books.google.com/books?hl=en&lr=&id=5-KACwAAQBAJ&oi=fnd&pg=PT6&dq=greens+politics+and+forest+fires&ots=FWsBN IYjLU&sig=2_uElmpBnRWm3VtdnBSvP8Ft5_w

Shields, D., Verga, F., & Blengini, G. A. (2014). Social Media for Environmental Sustainability Awareness in Higher Education. *International Journal of Sustainability in Higher Education*, *15*(4), 390–403.

Siddi, M. (2020). The European Green Deal: Assessing its current state and future implementation. *UPI REPORT*. https://iris.unica.it/handle/11584/313484

Sri Lestari, Y. (2016). Environmentalism Dan Green Politics: Pembahasan Teoretis. *Community*, *2*(April), 188–200. http://jurnal.utu.ac.id/jcommunity/article/view/137/127

Stretesky, P., Long, M., & Lynch, M. (2013). *The treadmill of crime: Political economy and green criminology*. taylorfrancis.com. https://doi.org/10.4324/9780203077092

Thaler, G. M., Viana, C., & Toni, F. (2019). From frontier governance to governance frontier: The political geography of Brazil's Amazon transition. *World Development*. https://www.sciencedirect.com/science/article/pii/S0305750X18303541

Thomas, K., Hardy, R. D., Lazrus, H., Mendez, M., Orlove, B., Rivera-Collazo, I., Roberts, J. T., Rockman, M., Warner, B. P., & Winthrop, R. (2019). Explaining differential vulnerability to climate change: A social science review. *Wiley Interdisciplinary Reviews: Climate Change*, *10*(2), 1–18. https://doi.org/10.1002/wcc.565

Tucker, J. A., Guess, A., & Vaccari, C. (2018). Social Media, Political Polarization, and Political Disinformation : A Review of the Scientific Literature. *SSRN Electronic Journal*, *March*, pp. 1–95.

Zhang, J. Y., & Barr, M. (2013). *Green politics in China: Environmental governance and state-society relations*. library.oapen.org. https://library.oapen.org/handle/20.500.12657/76367