



The Intrinsic Role of Information in Combating Climate Change

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Abstract

Scientific reports and climate change information have categorically revealed that climate change is real and it is ravaging the environment, atmosphere and the planet earth. These reports have confirmed that the main reason for the global climate change is as a result of human activity. On a daily basis, different media platforms release information on the devastating and catastrophic effects and impacts of climate change. Emission of greenhouse gases by different culprits is the major cause of climate change. To fight and combat climate change, all tools in the tool box need to be deployed. This article identifies and explores the significance of ample and prompt information as the tools to fight the scourge of climate change. As a matter of fact, information contained in scientific reports and data is a source of the strategies and measures that are currently being used to fight and tackle the scourge of global warming in order to peg temperature at 1.5 degree Celsius. Assuming there is no access to these reports, the situation would have gotten worse because there would not be the knowledge or know-how on how to mitigate and adapt to the scourge of climate change.

Keywords: Global warming; Scientific information; Awareness; Catastrophe; Emission reduction

Introduction

Hardly a day passes by without reports or news in the media about issues surrounding climate change [1]. Even though the information on climate change paints pictures of gloom and doom, to a greater extent, it seems that majority of the people have not been taking these news seriously except those who are in the business of fighting and tackling climate change like the Non-Governmental Organizations (NGOs), Environmentalists, policy makers and to some extent governments who believe that climate change is real and not a hoax as claimed by the current President of the United States of America (USA), President Donald Trump and his administration. President Donald Trump has kept his promise

to withdraw the USA, the world's biggest source of historical emissions from the Paris Climate Accord, known as the "Paris Agreement" by the United Nations is an international agreement reached in 2015 aimed at reducing carbon emissions, slowing rising global temperatures and helping countries deal with the effects of climate change." Writing on the rebellious position taken by the US against the international community regarding climate change, Boykoff said that "the Intergovernmental Panel on Climate Change comprised of top climate scientists from around the globe has reached consensus that human activities have contributed significantly to global climate change" [2]. However, over time, the United States has refused to join concerted international efforts-such as the Kyoto Protocol- to the United Nations Framework Convention on Climate Change which is an international treaty, adopted in December 1997 that aimed to reduce the emission of gases that contribute to global warming. In order to curb emission, the Kyoto protocol recognizes that since human activities that contributed immensely to climate change, human interventions are needed to reverse the course in order to curb emission causing climate change.

Undoubtedly, there have been frantic efforts to disseminate information on climate change to both educated and uneducated members of the society in order to sensitize them on the issues pertaining to climate change. This is to create awareness on the impact and effect of climate change and what should be done to mitigate or adapt to it. And more importantly, "the increasing interconnectedness of the world that characterizes the process of globalization compels us to interlink local, national, and transnational phenomena, such as environmental risks, in both journalistic and academic discourse. Among environmental risks of global scope climate change is probably the one receiving the most attention at present, not least in the media" [3].

Therefore, access to information from various platforms is significant for the purposes of achieving the dissemination and using of the information to tackle and combat climate change.

While this article does not attempt to apportion blame to anyone for not having requisite information or knowledge of climate change, it seeks to emphasize on the need for all and sundry to have access to contemporary up-to-date information

on climate change in order to be aware of the threat and danger climate change poses to the environment, atmosphere and human beings and how to combat it. This assertion is made against the backdrop that science is settled on the issues of climate change because climate change is a reality confrontin the globe. This is why it is imperative for the world and in particular the international community to stand up and confronting the problem and act by deploying and using whatever it is available to address the problem.

Therefore, there is need to continue to encourage the intensification of widespread information and awareness particularly to the nonchalant on why it is important for all and sundry to join hands together to fight climate change on the ground that, in the words of UN Secretary-General António Guterres “climate change is the defining issue of our time and we are at a defining moment. From shifting weather patterns that threaten food production, to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented in scale. Without drastic action, adapting to these impacts in the future will be more difficult and costly.” The reason why climate change should be tackled is backed up with scientific evidence. For instance, according to UN Secretary-General António Guterres “the world’s leading climate scientists have warned there is only a dozen years for global warming to be kept to a maximum of 1.5°C, beyond which even half a degree increase will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people.” This information is scary because it shows that if human beings do not change their lackadaisical attitudes and actions considering that climate change are man-made, the situation will get out of hand and will severely impact human race. According to the United Nations’ Intergovernmental Panel on Climate Change (IPCC), “severe impacts of global warming would occur by 2040, or in the lifetime of today’s working-age people. In order to avert that scenario, global warming must be contained at 1.5 degrees Celsius above pre-industrial era levels.”

Avoiding the devastating impact is to confront the problem head on and act now. Scientists have spoken through all their reports and findings that greenhouse gases emissions causing global climate change must be drastically reduced in order to save the planet from climatic catastrophes. This clarion bell from the scientists must be heeded. Heeding this clarion call will undoubtedly mobilize people to take action to fight climate change and dents the mood of complacency that is restraining action to combat climate change.

Theoretical Framework

Information is power and also an asset. The source and access to good *information* are unique framework that will reveal that there is a looming problem which needs to be attended to. Lack of information is likely to hide the problem from the person who has the skill or the know-how on how to solve the problem. This is a huge dilemma because if there is no information, the problem will persist and could lead to an irreparable damage which might cause permanent damage

and destruction. This is why information and in particular, access to information will create the awareness on the need to intervene and to find sustainable and enduring solution to the problem. In this regard, information becomes a potential tool and asset for solving imminent problem.

Undoubtedly, nowadays, we all live in a world where information drives what we do and as such, the information we receive from different sources become the most important thing that shapes and influences how we react to or handle problems and issues. The person who decides to accept information becomes automatically equipped and knowledgeable on the issue because the information becomes a tool which can be used to solve the problem or take a certain decision.

Having access to good information enables a person to acquire knowledge. Therefore, with regard to climate change, information on the impact and effects of the threats and dangers pose by climate change is a vital resource [4]. Fundamentally, the dissemination of information of various scientific reports on climate change is a useful tool for awareness on how and what to do to fight and combat climate change [5]. Therefore, the potential role of information technology is significant to the fighting and combating of climate change.

With regard to the threats and dangers posed by climate change, possession of the right information timeously is very crucial and it is an important tool for the purposes of mitigating or adapting to the problems. Access to climate change information through different media houses or social platforms or scientist reports are useful tools that are usable in making the decision on how to mitigate or cope with the impact and effect of climate change. Timely information will enable people plan ahead of how to reduce carbon foot prints and climate change information on technology or what to do to adapt to climate change will enable people to make informed decision and use cutting hedge technology that can be deployed for adaptation to climate change.

Information could also be used as measure to prevent engagement in activities that will increase the emission of greenhouse gasses and exacerbate the problem of climate change. Managing information and sources of information are critical to the tackling of climate change. Over and above, it is essential that people always have adequate information on climate change and what to do to tackle it at all times. This will require the ability to offer information promptly so that people can access the information timeously in order to be able to mitigate or adapt to climate change.

Literature Review

Overall consensus in the climate change science is that global temperature should be pegged at 1.5 degrees Celsius and that everything must be done not to let it rise to 2 degrees Celsius. Therefore, it is imperative to ensure that emission is drastically curbed otherwise if emission is allowed to continue to increase; there is every likelihood that the 2 degrees might even be exceeded.

In order not to exceed the 1.5°C limit, information on how to retain and sustain the temperature becomes salient and imperative to both the scientific community of the world and the society at large. This is said against the backdrop that the gap between 1.5 and 2°C is small. As a matter of fact, it can be attained quicker than expected if emissions are allowed to continue to increase instead of reducing.

Obviously, climate change information and how to disseminate it has now become salient topics in science and the society at large [6]. Fundamentally, the issues surrounding climate change have attracted the attention of the government, business, society and even the international community [7]. Interestingly, all professions continue to have their say on the issues whether the industry, communication outfits, the health sector, scholars, scientists, media because of the different manifestations of disasters and catastrophes attributed to climate change. These professionals rely mostly on information from scientific reports and data to formulate how to respond to the problem and threat of climate change. Mostly, scientific information has assisted a lot in having knowledge on what to do to mitigate and adapt to climate change [8]. The continuity of the access to ample information on how to tackle and curb climate change is robustly encouraged. This proposition is made against the backdrop that virtually all scientific reports painted scary and gloomy pictures of what would happen to the planet earth and its inhabitants if global warming is not curbed [5].

The society presently, to a large extent, have access to information on climate change because of the numerous sources of information available to people nowadays unlike in the midtolate 1980s when the science of anthropogenic climate change first emerged on the public agenda. Then, information on climate change was restricted to very few people mainly to scientists with research focus on climate and environmental issues [9]. Even though there were television and radio stations, very few people had access to them. There was no internet nor social media platforms where people can share “breaking news.” Therefore, information and the dissemination of climate change were very poor. However, nowadays, 24 hours a day television and radio news have made information on climate change, and more recently, the question of how to disseminate it most effectively to witness a steep rise. The information available on climate change has now been made possible courtesy of ample access to various media platforms.

More importantly, information on climate change could influence attitude and there could be an attitudinal change to do the right thing by reducing emission and not to engage in businesses where fossil fuel which emits carbon dioxide are hugely consumed. Scientific information has shown that the earth will suffer the consequences. To avert consequences, one way to intervene is for the government to engender mitigative behaviors which would be to introduce regulation that forces green behavior (which compels shifting from fossil energy to renewable sustainable energy) in order to fight global emissions [10]. It is also imperative that voluntary strategies and measures could be taken as part of behavioral

change from the use of fossil fuels to renewable sustainable energy. Therefore, effective and widespread information could play critical roles in engaging the public in low carbon lifestyles. This could be achieved by facilitating public acceptance of regulation and secondly, to stimulate grass-roots action through effective and rational engagement with issues, strategies and measures to fight and tackle climate change [10]. The significance of information on climate change and environmental matters by policy makers and government have been succinctly articulated thus “policy makers around the world are calling for the production and diffusion of more useful information for environmental decision-making. Ideally, useful information expands alternatives, clarifies choice and enables policy makers to achieve desired outcomes” [10]. This assertion is made against the backdrop that “decision makers, however, often lack the useful information needed for good decision-making” [6].

It is pertinent to point out that scientific information is imperative for decision makers, hence, scientists should produce information that are relevant and useful to decision makers. The same also applies to those who rely on scientific information to take informed decision on business. Users of this information may have specific information needs that should be met. Through ample dissemination they would be aware of the existence of potentially useful climate change information that can be used to address a specific climate change problem.

More importantly, newspaper and television media constitute key influences among a set of complex dynamics shaping information dissemination in this era of global climate change hence, “mass-media coverage of climate change is not simply a random amalgam of newspaper articles and television segments; rather, it is a social relationship between scientists, policy actors and the public that is mediated by such news packages” [2].

The print and television media as a ‘public arena together with various social media platforms have continue to improve understanding of how scientific information being disseminated through these platforms have shaped interactions at the interface with climate science, policy and the society at large [2].

While information is good in tackling climate change, this does not mean that there are no challenges in effectively disseminating the information in order to achieve the desired outcomes. Depending on the users or the receivers, the end goal is that it should be able to address climate change problem in order to avert disaster [11].

Take for an instance, how farmers receive information on the prediction of seasonal rainfall produced by meteorological science is significant to when and how to plant crops. Scientific information on the rain and the climate become more imperative as a result of increasing climate variability. Some aspects of local forecasting knowledge, such as those stressing the relationship between temperatures, wind, and rainfall, can help explain meteorology-based forecasts [8].

There is needed to make the message clear and comprehensible to the general public. This is because the acceptance of the information might create awareness which would make the receiver to take concrete action towards climate change mitigation or adaptation. Processing of this informed information would enable the receiver to make knowledgeably decision and as such take immediate action to curb the scourge.

Fighting climate change also involves using an up-to-date modern technology of all sorts including smart phones and devices to receive prompt information on the current status of the climate and the environment by just touching or pressing a button. The application and use of these technological tools which are user friendly and fast increases quite effectively climate change awareness for purposes of mitigating and coping with the scourge [12]. Skanavis et al. succinctly describes the significance of technology in disseminating climate change information thus "living in the era of technology and information, mobile devices, such as mobile phones, laptops, personal digital assistants (PDAs), tablet PCs, are becoming gradually popular and connected with people's daily lives. The conjunction of the intensification of online technologies and rising public awareness of the changing climate provides numerous opportunities and challenges for climate-change communication." The opportunity provided by the use of these technological tools is that they assist in disseminating climate change information "with the intention of increasing the knowledge and altering the attitude and behaviour of the society towards this crucial environmental issue and the danger it pose to the planet hearth and the inhabitants. The significance of the environmental problem at stake, classifies it as one that mandates immediate awareness [12].

Fundamentally, climate change information properly disseminated "aims at creating awareness of climate change and willingness to engage in climate change mitigation, adaptation, and transformation, thus fostering a development towards a low-carbon society" [13]. And the overall goal is to "support stakeholders and role players in applying climate change information and dissemination approaches aiming towards sustainable development, by contributing to the implementation of climate change mitigation and adaptation strategies [13].

The imperatives of climate change information

Information on climate change is crucially imperative considering the threat and danger it poses to the environment and the people. Lack of ample information on climate change is dangerous and might result in lackadaisical attitude by not taking any step to ward off the threats and danger before they occur or cope when the disaster manifest.

While access to information on climate change is significant, the receiver of the information should be able to use the information received to be able to address climate change. To this end, information received has to be well processed and applied in order to produce the desired result of preventing or curtailing climate change. In the same vein the supplier of

information has to ensure that the information being disseminated is scientifically accurate and relevant to addressing the problem of climate change.

Available scientific information and reports have confirmed that climate change is caused by human activities. It is hereby submitted that human beings have to come together to pave a way to collectively address the problem. In order words, since human beings are the cause, they have the responsibility to address the problem by offering solutions that will drastically curb greenhouse gases emissions and make the environment clean.

It is generally acceptable that various aspects of industrial and manufacturing activities continue to intensify and emit and greenhouse gas causing climate change. The focus is manufacturing and processing industries because they are categorized as parts of the major consumers of fossil fuels. As a matter of fact these industries have been accused of being the major culprits that have, through centuries of intensive industrial and manufacturing activities contributed immensely to the problem of climate change on the ground that most of the machines and the equipment they use in manufacturing and production are powered using fossil energy. These human activities have already caused the global mean temperature to increase as much as 1.2 degrees Celsius above pre-industrial levels.

Scientific reports have also revealed that if warming of the globe continues at its current rate, it could reach 1.5 degree Celsius very soon and this will result to uncontrolled catastrophes [14]. Tackling these threats requires the massive reduction in fossil fuel energy consumption and transition to renewable energy sources like solar and wind [15]. According to the IPCC report, "global net human-caused emissions of carbon dioxide (CO₂) would need to fall by about 45% from 2010 levels by 2030, and reach "net zero" around 2050" [16]. Accomplishing this goal would require "rapid and far-reaching" transitions in land, energy, industry, buildings, transport and cities," the report added; "every individual, company and country need to participate in this solution." This information is handy and widespread. Therefore, since industry and manufacturers are aware of this, it is incumbent on them to process the information carefully and utilize it to tackle their carbon emissions and footprints. Processing the information presupposes that the owners and management will ensure that the information is passed down to the employees and that it forms part and parcel of the processes that would have to be implemented without any compromise. For the information to be effective there must be effective monitoring for implementation and compliance.

Ample scientific information from different reports has admonished that "to keep warming at 1.5 degree Celsius, governments and private businesses must make unprecedented changes-on a sweeping global scale-in energy systems, land management, building efficiency, industrial operations, shipping and aviation, and city-wide design. Within the next decade, human-caused carbon-dioxide emissions need to fall forty-five per cent below 2010 levels. By 2050, net carbon-dioxide emissions must equal zero." "It's a goal that we

can aspire to, but maybe not meet," Jennifer Francis, a climate scientist at Rutgers" [17]. This scientific revelation should motivate us to rally together to fight the scourge of climate change and ensure that it is combated.

Over and above, "the news media are a central source of information about climate change for most people. Through frames, media transmit information that shape how people understand climate change as well as the actions they are ultimately willing to support to address the problem" [18].

Conclusion

There are different tools that can be used to fight the scourge of climate change, information is one of these tools. Information is significant because it provides insights based on scientific data and reports on how to fight and defeat the scourge of climate change. To this end, this article has demonstrated that well processed information based on scientific evidence are integral parts of the solution to the problem of climate change. The article points out that while information is imperative, the receiver should be able to process it in such a way that it produces the desired result. More importantly, because of the scary information contained in some scientific reports, the article articulates that such should make people unleash all the necessary mitigation and adaptation strategies and measures to tackle the problem. This presupposes that everything should be done both scientifically and humanly done to peg the world's temperature at or below 1.5°C since there is scientific warning that if emission is not reduced, temperature will rise beyond 1.5°C and soonest, reach 2°C. Scientific data has however shows that for temperature not to attain 2 degrees, human beings have to change their attitude and mindset and strive to use available information and technology to reduce greenhouse gases emissions.

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