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CLIMATE CHANGE IMAGES IN KENYA'S NEWS PHOTOGRAPHIC REPRESENTATIONS

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ABSTRACT: *Visual symbolic forms dominate today's communicative landscape. Climate change is a topical issue in societies and its debates are not solely confined to linguistic representation, but also evident in visual symbolic forms. The communicative strategy for symbolic forms enhances our understanding of climatic changes, which consequently would initiate appropriate action to counter adaptation deficit often experienced in many regions of the world. Drawing reference from the Kenyan media context, this paper focuses on news photographic representation to answer the question "Can society see the climate changing?" This paper highlights specific visual symbolic form modalities used in News broadcasts to effect the understanding of climate dynamics in Kenya. The study found out that pictorial representation in Kenya's media triumphs in use of crisis metaphors. It found that visual forms often take lesser roles when accompanied by written texts in climate change reporting. It acknowledges that visual constructions of climate change issues in Kenya appear in both local and international media reports. Nevertheless, the authors warn that the power of photographic representations in climate change interventions should not be underestimated.*

KEYWORDS: Visual Communication, Climate Change, Symbolic Form, Photographic Representation, Media

INTRODUCTION

Visual symbolic forms of communication are today used extensively, and their relevance in entertaining, informing and educating the masses acknowledged. For Nicholson – Cole (2005), visual communication is critical in stimulating public awareness to engage in an emerging issue. Likewise, Hudy & Gunnthorsdottir (2000) emphasize the relevance of visual appeals in environmental activism, which is at variance with opinions of DiFrancesco & Young, (2010) on the underestimation of contributions of visual representations to the social and cultural life and environmental issues.

Use of photographs dominates in advertisement, and also used extensively in developmental programmes. Photographic representations in climate change have not been an exception for countries that are either susceptible or contributing to the change; for both a number of images have been used as symbolic representations for the topical issue. The DARA Vulnerability monitor (2013) report on climate crisis distinguishes the two categories of countries, on one hand linking industrialized nations in the West to high emissions of Green House Gases (GHGs), contributing substantial input to global warming. On the other hand, are the developing countries which are low emitters and most vulnerable to climate change effects (ibid). In the report, Kenya is listed as a developing country low emitter, and key vulnerabilities linked to the country include droughts, flooding and possible deaths that dent the country's economic progress. Communicative strategies for countries contributing to climate change focus on mitigation plans, whereas for nations at risk like Kenya an approach that centers on strengthening community resilience to adapt to the impacts is preferred.

For both mitigation and adaptation plans, the communicative intent in photographic representation is to create awareness of the problem and elicit appropriate responses as a counter attack to climate change inaction observed worldwide. Climate change communication is often dominated by a focus on text, but Leisorowitz (2006), explains that it can be improved by an inclusion of representational elements that appeal to values and affect perceptions of risks related to climate change. Such elements include pictorial compositions, complemented or supplemented with linguistic forms. In this sense therefore, we regard climate change as a risk and therefore an uncertainty surrounding future events and outcomes that may befall a country, most people in developing countries have not embraced this idea.

Pictures are best positioned to making descriptive references on topical phenomena as evidenced in mediated communication on climate change. Such stories are often accompanied by pictures especially when broadcast in documentary films and news highlights. We can learn a lot from the worldwide visual attention to climate change crisis in Al Gore's 2006 movie entitled "an inconvenient truth". The movie is a universal warning on the impending global warming and its consequences. Documentary films on climate change may employ thousands of motion images, whereas photographic representation in news broadcasts may be dominated by the use of still images which are fewer in number as compared to those used in documentaries.

Whether accompanied by written text or not, the communicative intent in still images has proven sufficient in conveying meanings. A quick glance at any image evokes a number of interpretations within an individual. Often times, still images are captioned in simple phrases as semantic information to the intended meaning. A matter of concern in Kenya however has been the nature of image format, which often causes diverse interpretations across a range of audiences. For instance, photographic sketches of drought cases witnessed in Northern parts of the country often signify a time for migration in search for food, water and pasture for local residents. To the policy makers it is a problem of food insecurity, while a geographer relates the situation to climate change impacts. In such instances, linguistic phrases would hint to the viewer the intended meaning of the pictures. However, an issue of contention in use of written texts to accompany images is that at times the two tend to pull to opposing communicative intents in meaning realization. Manzo's (2009) study on climate action campaigns in the UK confirms this claim, showing how some campaign images repeatedly used were associated with dissimilar agenda on each occasion.

Visuals are important in scientific communication (Carney & Levin, 2002), they play key roles in "issue saliency and efficacy in climate change interventions" (O'Neill, et al. 2013, p. 413 & 419). In climate change interventions, they form a number of communicative strengths. First, they are used as narrative evidence. Climate change images have been used to support publications and claims about the change that world regions are already experiencing. Also the images captured by photojournalists easily exemplify to local communities that climate is changing, and may be used as scientific data on the same. Visual forms easily attract attention, and surpass written and verbal forms in holding audience interests.

Secondly, pictorial compositions document history as noted by Doyle, (2007, p. 131) who posits that images "bear witness" to climate change. A way of "bearing witness" by images is through capturing spectacles of ecological transformations as a result of climate change. These changes can be tracked and stored in visual forms. As the change brings in new transformations on ecological spaces, and erases some of them, powerful images will always

flash out memories of the initial global structures. In northern Kenya climate induced desertification is among the visible signs of transformations on environmental landscapes.

Thirdly, images are directional. Trumbo (1999, p. 421) identifies functions of visual symbols

in science communication also including "clarification of data, illustration of concepts and engaging a public informed through an ever increasing arsenal of computer graphics and new media tools". From this we find that pictorial signs may be used to show processes. For example, discussions on climate change and sea level rise can best be illustrated by diagrams. Similar functions would include images on scientific evidence like temperature graphs. Other functions would entail capturing place vulnerability, before and after images of the environment captured can be used to compare the severity of the impacts.

Several studies agree on the much needed role of visual forms in climate change communication. Anderson (2009) explains this urgency as a way forward in sustaining media interest which is problematic due to lack of climate change visibility. Despite the noted increasing media coverage of climate change (see Boykoff, 2007; and Schafer, Ivanova, & Schmidt, 2014), a critique of the comparative little media coverage of climate change in developing countries is brought forward by Painter, (2007 cited in Anderson 2009, p 169), emphasizing such country's susceptibility to suffer the worst effects of the change. This situation is replicated in Kenya, where climate change receives low coverage in local news media (Atieno & Njoroge, 2014). Media attention to the issue can be rekindled through upholding high regard for visual forms in climate change reporting.

Exalting the simplicity of photographic representations in communicating climate change, DiFrancesca & Young, (2010, p. 518) build their argument on Ungar's (1992) premise that "Linguistic metaphors such as "green house effect" have proven too benign to resonate in the public mind". The authors additionally state that images simplify complex climate change messages (ibid, 2010), but caution on the lack of visual symbols for global climate change as a hurdle to visualization objectives. Their sentiments are echoed by Doyle (2011) who endorses the argument of climate change being effectively invisible. Already, Sheppard (2005) had captured this in a tabulation of visual possibilities of climate change, ranking the likelihood of visualizing a climate change scenario. Figure one maps the visualization options to climate change scenarios in Kenya, based on modifications from Sheppard's visual parameters.

Climate change impact type	Capability to be visualized realistically		
	Often readily apparent or imaginable to lay viewer at landscape level	visually subtle or invisible (requiring augmented realism) at landscape level	Vulnerability hot spots in Kenya
Water level rise	√		*Coastal zones*
Permanent flooding	√		*Tributary zones of major rivers, like Nzoia, Tana, Ewaso nyiro and Nyando*
Changes in seasonal patterns/ timing		√	*Arid and Semi Arid Lands (ASAL)*
Soil erosion from concentrated precipitation	√		*Highland areas*
Stream character change (drying up, loss of riparian vegetation, etc)	√		*Arid and Semi Arid Lands*
Lake level drop	√		*Rift valley lakes, Lake Victoria*
Drought induced vegetation stress		√	*Arid and Semi Arid Lands*
Drought induced vegetation die back	√		*Arid and Semi Arid Lands*
Fire events	√		
Loss of rare plant species		√	*high traffic tourist destinations*
Crop failures	√		*north rift*

Figure 1: Specific visual possibilities of climate change effects in Kenya. Adopted from Sheppard, 2005, p. 651

From the table, sea level rise, permanent flooding and stream character change are among the readily visible climate change conditions to the lay viewer at landscape level. Sea level rise has featured media commentary on climate change in Kenya, with alarmist reports claiming that the coastal Mombasa Island will sink in 20 years time as a result of sea level rise. Scenarios of flooding are apparent effects of El nino rains in urban centers, as well as effects of rivers breaking banks due to high water levels. A common feature of stream character change is the drying up, affecting seasonal rivers like Ewaso Nyiro in Eastern province. This desiccation also extends to Mara and Talek rivers in the Southern parts of Kenya.

Also ranking high on visual possibilities is crop failures which have often been the norm after failed rains in North Rift regions, threatening the country's food security. Lake level drop is also an issue of concern especially for shallow lakes like Lake Victoria in Western parts of Kenya, with a maximum depth of 40 meters and has a history of previously drying up. There is today a striking migration of flamingo birds from Lake Nakuru in Rift Valley to a small Crater Lake 'Simbi Nyaima' in Nyanza province. Flamingoes have been a great attraction to visiting tourists in Lake Nakuru but their migration caused by calamities of climate change stand to affect tourism patterns in Kenya. Climate change conditions that remain difficult to "picture" are listed as changes in seasonal patterns/ timings, drought induced vegetation stress and loss of rare plant species. As visual grasp takes initial roles in stimulating consciousness about climate change, the invisible nature of some of these conditions could possibly block public awareness of the issue.

Given the mentioned hurdles in presenting non predictable conditions of climate change, how can societies see that climate is changing? Based on external choice frames, specific references to Kenya are made in responding to this question. The country is located in the greater horn of Africa, which in 2011 was hard hit by one of the worst droughts in the 21st century prompting the United Nations (UN) to declare famine in the region. Like any other developing country, Kenya is envisaged to have a higher likelihood of suffering the consequences of climate change and has not been spared the drought linked to aerosol pollution from the west. At the moment, Kenya still hosts a number of climate change refugees who fled from neighboring countries such as Somali and Ethiopia in search of drought food relief. A British Broadcasting Corporation's (BBC) international coverage of the issue carried the heading *"A vision of hell"*, reporting on the emergency situation at Dadaab refugee camp in Northern Kenya as a result of the 2011 drought in the greater horn of Africa. Other climate change scenarios have occurred in the country, and may or may not share the same agonizing "vision". The deliberate use of the word "vision" hints that transformations are signs that can be seen by both predator and prey of climate change.

Signs of the changing climate

According to Manzo (2009), climate change signifiers take two distinct positions; that of "fingerprints" showing the marks left by climate change impacts, and the "harbinger", giving the example of cracked grounds as a harbinger of climate change. Harbingers are events that foreshadow the types of impacts likely to become more frequent and widespread with continued warming (ibid, p. 4). Taking the example of the 2011 drought in northern parts of Kenya, associated fingerprints would be drying up of water points and depletion of grazing land in the affected areas. Elsewhere, episodes of failed short rains in the highland areas of the rift valley are in a similar way "harbingers" that expected long rains may also disappoint.

Visual depictions on climate change are presentable as either as nature - based visual representations or pictorial constructions. Examples of nature based representations abound in witnessed cases of climate change impacts e.g. flooded landscapes like those of Budalang'i in Western province and Kano plains in Nyanza province, drought effects of desertification in northern Kenya, and melting ice in the snow capped mount Kenya and Kilimanjaro. Even though such depictions may not have an initial communicative intent, they are obvious signs that the climate is changing. A case in point specific to Kenya is the abnormal high water levels seen in rift valley lakes notably Lake Baringo and Lake Bogoria being denotative that floods are guaranteed incase any of the water bodies' break its banks.

Most pictorial depictions of climate change in Kenya's news media stem from a communications objective to inform the populace of vulnerabilities witnessed in different regions. In this regard, these pictures are positioned as signs to convey the crisis of climate change. DiFrancesco & Young, (2010) categorize images according to themes; human themes, (citizen, celebrity, scientist/expert), nature themes (urban/ natural landscapes, ocean/ coast, flora and fauna), industry/ technology themes (green technology, oil sands/ refinery, transportation). Preference is given to some themes over others due to several reasons, including relevance of the theme to the context. As such, some themes gain popularity as others remain in the shadows. A study by Smith & Joffe (2009) of UK climate change images confirms the predominant use of human themes rather than natural ones in framing climate change crisis. Equally, research findings by DiFrancesco & Young, (2010, p 522) indicate that "two thirds of identified images focus on humans".

A still image on climate change may show that climate is changing, highlight the specific impact of the change and at the same time capture the severity of the change or the harshness of the impacts. For Kenya's news media, frequently used images of hunger stricken women and malnourished children in local dailies can denote the punishing drought in ASALs and at the same time show the extent of climate change vulnerabilities resulting from prolonged dry seasons. In this sense the image validates the claim that a photograph can enshrine multiple meanings. O'Sullivan and Greiger, (1995) have argued that images can inoculate viewers to persuasive information, such images can be rated as high arousal or low arousal depending on how they tap on cognitive states of their audiences. Indeed the affective function of visual communications has received much attention on television audience research (Littlejohn & Foss, 2009), where studies have centered on visual representations such as violent programs and their effects on their specific audiences.

Even though they are non - linguistic signs, images run at the forefront in communicative functions. As earlier mentioned, they document history, easily draw attention and encompass diverse meanings. The popularity of visual forms in present day communication should inform intervention strategies on climate change. Climate related disasters including floods, drought, and wildfires need to be packaged in visual formats to enhance climate change communication to general publics.

News images of climate change in Kenya

In Kenya, visual depictions of climate change are brought to the public domain through news image representations among other approaches. These are evident in images accompanying climate related stories in news media, especially print and internet networks. Photojournalists creatively position images as narrative evidence that climate is changing.

Climate change references to Kenya emphasize on the impacts of the change likely to affect both viable economic and social status of the country, despite the country's minimal contribution to climate change. The DARA Vulnerability Monitor (2013) categorizes Kenya as a Sub Saharan country low emitter. There is a common view that climate change is already happening and media attention to the topic in Kenya centers on vulnerabilities witnessed in communities.

Episodes of droughts in Northern parts of the country, contrasted with floods in tributary zones of major rivers draining to Lake Victoria and Indian Ocean have been the hallmark of Kenya's climate change impacts. Drought hit areas include the Arid and Semi Arid Lands

(ASALs) in the northern parts of the country. Prolonged droughts, linked to climate change have often times caused famine and subsequent loss of lives in the regions. Failed rains in arable areas have lead to low agricultural productivity, threatening food security in the country. Again, excessive rains have mostly resulted to incidences of flooding along the shores of rivers Nzoia and Nyando in Nyanza province, both tributaries to Lake Victoria. These cases summarize the impacts of climate change currently witnessed by Kenyan communities and represented in news photography.

As a matter of fact, some stories failed to link incidences to climate change, illuminating only the harsh consequences being felt at grassroots level. Such stories are accompanied by images depicting ordinary citizens as affected publics. Cases of drought in North Eastern Province and other ASALs have at times been verified by photos of malnourished children in hospitals to emphasize multiplier effects for the health sector. Pictures of local people in long queues receiving food aid emphasize starvation as a consequence of prolonged droughts. The basic formula for most dailies in selecting an image for publication is its ability to show "a face of famine". This cliché resonates with previous findings by Smith & Joffe (2009) who showed that in the UKs visual imagery, personification of the crisis is among the leading themes. 2011 highlights of the prolonged drought that hit ASAL areas in the north attest to this, with image captions such as "*Suffering; Emaciated, hungry and low on hope a Turkana woman lies next to a sufuria* (cooking pan) *of raw beef of a dead cow, as her helpless son blankly stares at horizon"* in a standard media online press dated 29th July 2011.

Earlier in 2009, a severe drought caused massive economic losses to pastoral communities due to livestock death. Recovery efforts to slaughter the animals at the Kenya Meat Commission bore no fruits as most died while waiting for the butcher's knife. During this time, news press flashed images of dead livestock as a result of loss of grazing land, as an economic indicator of pastoralist drop outs. Two image captions for the tragedy were "*A truck offloads dead cows for burial in Athi River on Thursday. Hundreds of cows have died at the Kenya Meat Commission while awaiting slaughter"* and *"A vet officer inspects a dead cow at the Kenya Meat Commission in Athi River*". Both pieces appeared on daily nation online editorials dated 17th September 2009 and 27th July 2009 respectively. On 23rd October 2009, the same platform also depicted effects of an equivalent drought in Tsavo West national park, with a picture of a buffalo carcass and a Kenya Wildlife Service ranger standing next to it.

Human themes in coverage also include political figures (O'Neill, 2012; Sheppard, 2005). O'Neill (2012) relates this to political framing of climate change. In early 2014, some regions in northern parts of the country were adversely affected by drought and were in dire need of food aid. A February 8th 2014 article on the issue in the standard newspaper shows on its front page the picture of President Uhuru Kenyatta at state house Nairobi flagging off a vehicle loaded with relief food destined to regions hard hit by the drought. The accompanying written text was on expert's caution of sharp rise in cost of living due to prevailing droughts.

Images are likely to appear with attributions of blame, use of crisis metaphor, mention of the future (DiFransesca & Young, 2010), and least likely to appear with discussion of causation. A crisis metaphor repeatedly used for drought effects in Kenya is death toll, for both human and animals. Fear appeal is the main tool employed in these pictures which capture horrific details of climate change impacts.

Some images may not provide clear evidence of climate change. For example, an environmental piece entitled "*Depleted forest of soit ngiro*", in an 8th November 2014 Nation online publication, features an image of a spot on Ngeng River, which fails to visually represent the condition of forest depletion. One would expect the depleted forest to be visually depicted by images capturing loss of forest cover, or substitution of forest land to other human use. Further, the pictorial composition doesn't portray any forest and the reader is left guessing the relevance of Ngeng River to the story of the depleted forest.

Narrations of failed rains draw images from areas deemed to be the country's bread basket. These are the north rift regions of the country. For urban areas, images of flooded roads depict the impacts of excessive rainfall on infrastructures. It has been noted that El Niño rains render less robust feeder roads to tourist attractions impassable. Rural populations are not spared ruin by such deluge. All these are captured in photojournalistic images for local and international news. Climate change reports in news media acknowledge that news photography enhances the visibility of climate change threat or its perceived severity.

Even though some parameters are categorized as "readily apparent to lay viewer" by Sheppard, (2005), only a few were used as symbolic representations of climate change stories in news media. Picturing "flooding" and "crop failures" appears to be photojournalist's favorite captions for environmental themes in Kenya. The aftermath of heavy downpours would be depicted by images of motorists and pedestrians trying to make their way through flooded road sections. The same scenario for rural setting would encompass submerged homesteads and displaced populations in areas prone to perennial flooding like Budalang'i in Western Kenya.

Absent from pictorial representations in media are changes in seasonal patterns/ timing, drought induced vegetation stress and loss of rare plant species. All these are pertinent issues in climate change debates. The case of loss of native plant species is worth noting because the country's inland and coastal forests are known to harbor threatened plant species. Even though sea level rise has been categorized as a readily visible condition, editorial pieces of the same are dominated by linguistic and not photographic representations. At this juncture, it is clear that some climate change scenarios can be easily represented in pictorial forms in news media, while others remain visually subtle and present challenges in their packaging to pictorial formats.

CONCLUSION

In news media, symbolic forms appear to be overshadowed with linguistic depictions of climate change. When employed simultaneously, these forms take supporting roles to oral and written presentations. Even though DiFrancesco & Young (2010) argue that images alone fail to tell the whole story and need interaction with language, this paper's position is that images can tell the bulk of the story. Even without the wordings, one can easily interpret what is being depicted (see figure 2). This is not a fresh insight into the pictorial representation in the media since in some forms of advertisements, symbolic forms shoulder for oral news presentation the weight of message content.

Figure 2: Visual representation of drought effects in northern Kenya. Source: Standard online, Friday July 29, 2011. Title: Kenyans for Kenya.

For most news depictions of climate change in Kenya, photographic representations adopt an activist orientation. They employ advocacy tactics is in bid to emphasize the prevailing and looming impacts of climate change in the country. The crisis metaphors that punctuate climate change images warn of communities' not strengthening their resilience to climate change. In a similar way, other images reinforce warnings by experts on looming environmental disasters. A case point is the use of photos of sections of flooded roads in El Nino alerts, which obviously would create panic to those who have previous experience of the deluge.

Through news photography, we see the changing climate in crisis metaphors; death tolls of humans and livestock as a result of prolonged droughts, flooded landscapes due to heavy downpours rendering roads impassable in urban areas causing deaths, diseases and drowning in rural lands. We also see images of failed crops in areas suitable for farming. Sheppard, (2009) raises concern on use of such metaphors for visual appeal, arguing they pose the risk of overkill through overload of visual information. The overkill positions climate change problem as too much to bear for local people who subsequently snap to inaction. Further, the appeals could possibly upset people and perpetuate the problem by encouraging acceptance of climate change. Since major pictorial highlights triumphing on the journalistic norm of personalization portray the impacts of the change at the community level, the emotive images are constant reminders that climate change is already happening and communities have to live with that. The fact that this norm downplays the big picture in favor of human tragedies that sit at the surface of events (Bennett, 2002, p 45) implies that individual understandings may be far much distanced from climate change realities. Hard hitting images are likely to distance or disengage individuals from climate change, tending to render them feeling helpless or overwhelmed when they try to comprehend their own relationship with the issue (O'Neill & Nicholson- Cole, 2009 p. 375).

As much as visual representations would enable an immediate understanding of climate change issues, linguistic forms will continue to dominate climate change debates in news media. Of course the dominance of linguistic forms tends to push pictures to subordinate tasks. In essence, there is no stand alone "picture speaks" of climate change in media. The pictorials have to be part of a main linguistic piece. DiFransesco & Young (2010) have shown that climate change is usually communicated through image language interactions in Canadian papers. In their paper, visual forms remain less preferred in main communicative roles as compared to linguistic representations, even though the latter bear similar roots to those of complex scientific language.

It is possible to see when the climate is changing, through nature's occurrences and also visual constructions of the change in media. News producers and media use a number of images in their communication campaigns and climate change reporting to effect awareness of climatic change. Climate narratives are accompanied by images which are directional, showing visually what is described. Pictures enhance our ability to understand concepts, so visually presented stimuli arouse the thinking within the individual.

Visual modes of communication are becoming more dominant in social functions, yet little preference is given to visual forms in depicting climate change in Kenya's news media. Visual compositions can take the lead role in communicating reports on climate changes; they can as well function as standalone pieces not requiring support from other forms. Climate change pictures often signify the reality of the change and judgment of the effects.

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