

African Media Respond to Imperative in Preserving the Environment

*By Maurice Odine**

As the second largest continent, Africa perpetually faces environmental problems that put populations at risk, often resulting in massive destruction and sometimes death. The Chadian-Cameroon Oil Pipeline, Bypass Project in Mozambique and Ogoni-land Nigerian project are examples of the devastation brought about by the dollar-seeking countries and Western-style oil-drilling companies. The telecommunication company, Huawei, has established 40 offices on the continent aimed at training Africans on environmental communication using digital technology. To raise awareness, the Stockholm Challenge emphasizes environmental justice and sustainable development. Despite achieving statehood only in 1994, the government of South Africa has condemned environmentally-induced poverty. Elsewhere, concerned Paul and Anne Ehrlich (1990) published, "The Population Explosion", which highlighted the planet's depleting resources. In the blog, "Environmental Communication 2015", Andrew Revkin focuses on youth and solicits the latter's ideas, ranging from library books and multiple channels to social and digital media. East African countries have formed the population, health and environment (HEP) union committed to environmental communication to protect planet earth.

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Introduction

Humans and other creatures owe their survival to the environment, namely, food, water and habitat. However, humans have continued to cause impurity, degradation, and even devastation to the environment, causing health hazards and environmental malaise. It is the latter that has given birth to environmental communication. Ethel Kennedy, in the publication, "The Chad Cameroon Oil and Pipeline Project: Putting People and the Environment at Risk", raises grave concern. The writer quotes the well-known leader, Archbishop Desmond Tutu, as saying, "Africa cannot afford the environmental devastation of such a project. We need to help construct, not to destroy it". Making reference to the Chad-Cameroon Oil and Pipeline project, the writer laments that it will exacerbate environment devastation, social disruption and human rights violations. Similarly, the writer draws attention to the Ogoni-land debacle in Nigeria as a traumatic reminder of what happens when the rights of a people and their environment are trampled. Desmond Tutu may have just predicted the coming of a large-scale oil company solely dependent on gains extorted from the environment.

The chief executive officer of MarEUSAID adds, "If they insist on such measures, foreign investment might go elsewhere". Ethel Kennedy (1999) is

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bemused because these pronouncements are contrary to the World Bank Group's goals: poverty alleviation and sustainable development, and not gambling with the lives and future of Africans. Bully tactics, and forceful degradation of Africa's livelihoods in pursuit of petro-dollars, is totally inhumane and sidesteps well-known environmental hazards.

It is in this context that Kaya, Ruffin, and Teffo (2016) writing in "African Indigenous Languages and Environmental Communication", argue that the desired change in environmental conservation can only be achieved if information appeals to the cultural values of the recipients. "African indigenous languages are the best vehicles of communicating environmental information as they are cultural specific", state the authors.

Although the scientific community and lawmakers are aware of the dangers of a hazardous environment, media have reported the issue as deeply rooted in conflict and uncertainty. To this end, environmental communication has taken an entirely multidisciplinary perspective, examining how environmental issues develop; entertaining various viewpoints; and researching the relevant scientific and technical information. Historically, South Africa was irrelevant and unimportant. The majority black citizens (79 percent) were uprooted and transplanted at will by the racial, white-only government (apartheid) to restrict black movement and population growth.

Pursuing an environmental sustainability policy, the new South Africa participated in the 1992 United Nations Conference on Environment and Development (UNCED). In 2009, East Africa nations met in Kigali (Rwanda) to reaffirm their commitment to examine linkages between the population and the environment. In March 2015, President Abdel Fattah el-Sisi of Egypt and Prime Minister Haile Mariam Desalegn of Ethiopia signed a "Declaration of Principles" on the Nile hydropower dam. Furthermore, networks have emerged in different parts of Africa to program and disseminate information, along with environmental analyses and features and opinions. The pursuant media-environment union is mutually inclusive.

It is this union that gave birth to the population, health and environment (PHE) championed by Ethiopia, Kenya, Rwanda, Tanzania and Uganda. Jason Bremner is program director at Population, Health and Environment at the Population Reference Bureau. The writer describes PHE as an intergovernmental network designed to provide leadership and promote sustainable development in Eastern Africa. In this endeavor, member countries facilitate an active network for information exchange, professional networking, capacity building and collaborative advocacy to raise awareness about PHE issues aimed at cross-sector integration. Speaking for the majority of African nations at a policy meeting in March 2009 in Rwanda, the Minister of Natural Resources, Stanislaus Kamanzi, noted: "[Africa] faces great challenges, many of which are related to the complex relationships between population trends, poverty and environmental conditions"¹.

¹Kamanzi, S. (2009, March 25). <https://www.prb.org/rwandaphenetwork/>.

The delegates and the minister's proclamations would come to naught without information and communication. This partly explains why the two-day meeting devoted sufficient attention to formulating a communications advocacy policy. In this regard, representatives worked in groups to develop ways to translate knowledge into action, using knowledge and coalition building and agenda setting to create channels to disseminate information on the environment. Furthermore, participants agreed to create communication strategies best suited for respective countries and audiences, and in relation to PHE.

Coalition building has not escaped the commendable work by the United States (US) Agency for International Development (USAID). Two projects supported by USAID integrated aspects of population, health and the environment service delivery. The macro-level relationships inherent in the projects are examples of how innovative solutions can be used to further communication and advocacy in the interest of the environment. On the importance of the subject, Jason Bremner has praised Africa's initiatives on the environment, affirming that, "...[In the] African region where men, women, and children are healthy, the environment is conserved, and livelihoods are secure".

One glaring reason is survival, which translates into food chain as an example of a useful component of the ecosystem. *Encyclopedia Britannica* explains that, plants use sunlight, water and elements in soil and air to create food for them. They are eaten in turn by animals and micro-organisms. Humans find themselves at the top of the food pyramid in any eco-system because they use plants and animals for food. Earthworms and small insects (bees, pollinating plants) are all part of the environment, without which the food chain would be broken.

According to the Food and Agriculture Organization (FAO) of the United Nations, world production can be gauged when one considers that, as much as 2,533 million tons of cereals were grown in 2015. Meanwhile, the University of Minnesota points out that, the nutritional value of food has decreased since the 1950s, "so we are now getting less nutrition per calorie in our foods". Brian Halweil (2007) of the Organic Center explains that crop increase in crop yield corresponds with decrease in nutritional value. What is the reason? It is because industrial farming relies on monoculture and the excessive use of chemicals as fertilizers and pesticides which upset many of the natural processes. The center calls on humans on Earth to consider the environment vitally important; humans should not disrupt the chain as such action would adversely affect food growth.

It is true Africa and Africans are not oblivious to existential threats posed by an unfriendly environment. John Muthee (2018) writes under the title, "Serving and growing with Africa: How Huawei enriches life through Communication". The writer praises Huawei Technologies for going beyond commercialization to enrich the lives of Africans by providing communications network solutions. John Muthee regrets the prevalence whereby corporate

profits have relegated human service to irrelevant doldrums, commending the telecommunications company on "enriching the life of Africans with the diversified communication services offered by affiliate telecom companies". The writer notes that, Huawei is pursuing a mission to address the economic and geographic imbalance by bridging the digital divide through empowerment of local telecommunication expertise.

It is to this end that Huawei has successfully customized competitive telecommunications solutions and given African populations the rare opportunity to take part in the information society and to enable citizens to acquire training and technological know-how. In this regard, Huawei has set up six training centers in Africa which have thus far graduated over 12,000 technical experts to serve in community centers.

As for the environment, the writer recognizes a noteworthy trio, that is, Green Huawei, Green Communication and Green World. It is not only functional, but also well established that environmental deterioration and accelerated global warming has surfaced as issues for mankind. Telecommunication technologies have contributed not only to reduced energy consumption, but also carbon reductions in dioxide emissions since telephone calls and teleconferences have since eliminated non-essential travel.

Huawei's goal resides in its trio: Green Huawei, Green Communications and Green World). To enhance this goal, the company has established branch offices in more than 40 African countries that include sales and services, technical and manufacturing centers. These initiatives have led to the hiring of talented Africans to enter the field of communication, and are charged with conceptualizing and disseminating information on environmental protection.

Indeed, the road to environmental protection starts with education. Professor Helen Correll teaches Environmental Communications at Metropolitan State University (member of Minnesota State University System). According to the syllabus, the "course focuses on environmental communication which encompasses a multidisciplinary viewpoint". The course attempts to enable students to understand how environmental issues and conflicts develop; the values underlying the perspectives on these issues; and the scientific and technical information involved in understanding environmental communication.

"We also look at how environmental values can be conveyed throughout a variety of media", says Dr. Correll on the syllabus². The professor states course objectives as follows:

- Understand the complexities of environmental issues;
- Analyze the underlying values that propel disagreements;
- Understand the role of scientific and technical writing in environmental issues; and

²Correll, H. (N.D.). Environmental Communication Course Syllabus. Retrieved from <https://theieca.org/sites/default/files/syllabi/correll.pdf>

- Establish guidelines for affective environmental communication.

Course procedure does include discussion on various environmental communication issues, with students contributing mostly to the discussion. The weekly class meeting covers a specific issue following prior preparation by students based on assigned readings. Projects include individual annotated bibliography of about 20 to 25 entries on a topic of their choice in environmental communication, with sufficient copies to share with class mates. A final requirement is a graduate project or research paper synthesizing what the student has learned in the course. The paper consulted books, journal articles and magazines on the subject under investigation. Relevant online sources form part of the research effort. These secondary sources are used for purposes of interpretation and analysis.

A number of research topics are then considered. Topic one lays down the case for Africa's environment. Topic two looks at communicating environmental risk. Topic three studies the *raison d'être* of environmental communication. And topic four assesses youth relationship with environmental communication.

Topic one lays out a comprehensive and integrated analysis of the continent's environment, equally noting the complex interplay between natural events and the impact of human actions on the environment. Topic two describes a case involving risk management and how the risk was communicated to stakeholders and the people whose habitat was affected. Topic three deals with the imperative to prevent the ruin of mankind's ecosystem, let alone impending perils to humans and youth to whom the future belongs. And topic four highlights the need to create environmental communication awareness among the youth.

Literature Review

Environmental Degradation in Africa

One would tend to think conventionalism would be on mankind's side when the environment is concerned. However, torture and desperation proliferate to wreak havoc on even the frail and helpless. James Wolfensohn (1999) comments: "Seeking equity when government is riddled with corruption and has inefficient and untrained officials is an objective that will never be realized". The front page of the article, "The Chad Cameroon Oil and Pipeline Project: Putting People and the Environment at Risk", shows a man [photo by Korina Horta] in his mid-thirties.

In his hands are a wooden bow and arrow. He is standing in the middle of a dirt road lined on both sides with dust-laden shrubs, green grass and bushes. The man is wearing a wrinkled brown shirt, standing in the middle of a dirt road, with the back against the green vegetation. He is without shoes; his feet

and toes show accumulated dust and sand. The man's long-sleeved jacket holds on; his left shoulder saddled with a bag. His face is solemn, polite, but stern, as if to say, "What's next for me?" or "Do I have a future?" It is a calculation in view of desperation, as if to exhibit the rock-bottom of his fate or life's gloomy outlook. The man is an example of the environmental degradation that continues to plague Africa's populations.

In 1999, the Environmental Defense Fund reported the Chad Cameroon Oil and Pipeline Project would construct 300 oil wells in the Doha fields of Southern Chad; construct a 650-mile pipeline from Doha through Cameroon to the Atlantic; build a marine pipeline at Kribi to a floating storage offloading (FSO) vessel; and produce 225,000 barrels per day. The final project's financial arrangements placed Exxon-Mobile to earn 40 percent, while ELF (French company) stood to earn 20 percent. Esso, a European conglomerate, came in much lower. The total estimated cost of the oil project was \$3.5 billion. According to Amnesty International, the Chadian government was responsible for killing hundreds of civilians in the oil-producing region, and for the disappearance and murder of civilians while in police custody.

Access to information on the environmental degradation in the region have been dismissed or marginalized by the Chadian and Cameroon governments. Critical, too, is lack of information on compensation for farmers who have lost trees and crops as part of the project. In Cameroon, it was only after years of criticism that the compensation rate for one mango tree jumped from mere \$6.58 to \$9,400. The environmental degradation of the mango tree is economically ruinous since it takes three- to five-years, from when it is planted to the time it bears fruit. In their mostly rural and land-locked communities, one step forward is to educate Africa's population on their environment.

Environmental Awareness through Education

Education, therefore, stands to play a major role in Africa's environmental communication. From a positive viewpoint, the Stockholm Challenge is entitled, "Awareness raising and education about Africa Environmental Justice and Sustainable Development Challenges (1995-2011)"³. Besides addressing concerns embedded in the title, the organization serves a dual purpose. First, it serves as a tool to communicate to the international community with the purpose of raising awareness about Africa's environmental challenges. Second, it has as a goal to combat poverty by promoting socio-economic development. How can this be achieved?

The unit organizes public education and is creating awareness through Internet using online groups, newsletters, bulletins, blogs, conferences and websites. These channels of communication are used to disseminate and facilitate information exchange, as well as debate and learning. Meanwhile, Millennium Development Goals is an agenda of the Stockholm Challenge. It is

³ <https://sustainabledevelopment.un.org/topics/africa/decisions>

intended to address the environment, natural resource management, sustainable development and climate change in Africa. Additionally, the goals for education, communication and awareness involve discussion and exchange of ideas, experiences, news, case studies, policies and practices as they related to the environment and sustainable development.

At this juncture, about 500 African countries and non-governmental organizations (NGOs) take advantage of the program's work. Boykoff and Roberts (2007) embrace history. The authors assert that, international and domestic environmental policy began in the mid-1980s. These activities were championed by the International Council of Scientific Unions (ICSU), the United Nations Environmental Program (UNEP) and the World Meteorological Organization (WMO).

Consequently, content meant for mass dissemination cannot ignore harnessing information communication technology (ICT). It cannot be denied that, the well-known digital divide has resulted in a lack of access to information among African populations. Hence, the gap between developed and developing countries to obtain and utilize information has widened. Consequently, the lack of information remains a major hindrance to economic, scientific and technological development in Africa. The lack of Internet service and other channels of information, at home or work, has had retrogressive consequences on the continent. Moreover, there are no community libraries; books are expensive; and it is hard to find publications that focus on environmental communication. Notwithstanding, many people rely on Internet connections in the cafés or public places.

At a time when other nations are bombarded with information and related technology, a typical African is starved of information. To alleviate the status quo, the Stockholm Challenge has taken certain steps to provide communication and to create awareness. These steps include collecting, editing and distributing information to e-groups and e-newsletters; updating and maintaining a website to disseminate information on case studies, links, experiences, ideas on environmental communication; as well as managing information technology e-mail groups and e-newsletters using text and HTML, Blogger, Microsoft Word, Excel, Publisher and InDesign.

The important role of environmental communication is more apparent in view of the absolute certainty of the role and livelihood of future generations. In this context, youth's interdisciplinary education assures that information is conceptualized and managed and disseminated to a pluralism of audiences with a view to maintaining an eco-friendly environment. According to the University of Wisconsin (Oshkosh), "Environmental communication pertains to any profession which communicates an environmental or scientific message. This message can range from conservation of resources, promotion of products, to education about community programs". Quite often, the environment's natural resources are depleted, leaving behind an array of insurmountable problems ranging from mankind's substance to survival. These conditions

require information know-how to counter conflicting propagandistic environmental communication by sophisticated professionals.

The university's curriculum recognizes that, effective communication of any environmental message can determine the fate of an environmental campaign at the local, regional or national level.

A simple question is: "What do those in environmental communication do?" Actually, environmental communicators do the following:

- Communicate the importance of conservation to the public, governmental agencies and private corporations;
- Convey the responsible agency's commitment to good environmental stewardship;
- Persuade others of the need for compliance with environmental regulations;
- Share information with media about environmental issues;
- Write speeches on the virtues of a healthy environment; and
- Help sell environmentally-safe products.

Certain skills are necessary to be an effective environmental communicator. These include:

- public speaking: the ability to articulate views efficiently and positively in various formats, including a speech, panel, debate, and group discussion;
- writing skills: effective and efficient writing;
- interpersonal skills: conflict resolution, negotiation, and community building, and) computer skills: not only word-processing, but also spread sheets and computer presentation (PowerPoint).

Qualities include the ability to convey information in a clear and efficient way while demonstrating care for the environment; ability to understand multiple and opposing viewpoints and responding to them in an informed, clear way; and a strong commitment to the well-being of the environment, plus a strong desire to work against those who are destructive of nature.

Network for Environmental Communication

The thrust in environmental communication is recognizing that ICT cannot do it alone. ICT is to work in partnership with other types of media or channels. There is an adage that one medium complements another. As deity would will it, the United Nations Environment Program (UNEP) is headquartered in

Nairobi, Kenya. In a press release on 20 September 2017⁴, under the caption, "UN Environment and Discovery Communications Partner to Engage World on Environmental Action", UNEP announced a dynamic partnership to bring about awareness regarding the planet's most pressing environmental challenges and to highlight innovative solutions to address them.

The UN agency has developed strategies to develop original content on the environment with a view to encouraging individuals and communities to make a difference in utilizing content for dissemination using digital and social media, including Discovery Channels and UN media apparatus. "Together with the UN, Discovery will use its global platforms to amplify our share stories and message around the world and make a lasting difference for our planet", said Erik Solheim, head of UNEP⁵.

Findings

The Case for Africa's Environment

The paper on environmental communication is likely to add to the urgency of addressing issues of grave concern to the environment which, after all, is habitat to natural resources, mankind and animals. It is, therefore, no surprise that, the Environment Outlook (AEO)⁶ report lays out a comprehensive, integrated analysis of the continent's environment. The report contains a detailed analysis of the state of the environment in Africa, indicating discernible trends. It equally notes the complex interplay between natural events and the impact of human actions on the environment. Contextually, AEO (2013) analyzes the effects of environmental change in terms of human vulnerability and security. In so doing, it presents a set of circumstances on Africa's environmental outlook and makes recommendations for policy actions:

- Atmosphere: Africa is vulnerable to climate variability and climate change. Variations in rainfall have resulted in drought and flooding, sometimes with disastrous consequences for populations and the environment;
- Biodiversity: Africa's biological resources are declining rapidly as a result of habitat loss, overharvesting of selected resources and illegal activities. Although formal protection has been strengthened at the national and international levels over the past 30 years, additional

⁴UNEP (2017, September 20). Retrieved from <https://corporate.discovery.com/discovery-new-room/un-environment-and-discovery-communications-partner-to-engage-world-on-environmental-action/>

⁵Eric Solheim is an official at UN Environmental Protection Program in Nairobi, Kenya.

⁶Africa Environmental Outlook (AEO), (2013). Retrieved from <https://www.unenvironment.org/resources/report/african-environment-outlook-3-aeo-3-summary-policy-makers>

measures are required, particularly as it relates to indigenous knowledge and involvement of stakeholders;

- Coastal and marine habitats: Overharvesting of Africa's coastal resources and poor inland management is unfriendly to the environment; oil pollution is a threat to resources, habitats and economies located along the African coastline;
- Forests: Africa has the world's fastest deforestation growth rate. This has caused loss of resources, imperiled livelihoods, energy dependence and threatened alternative energy sources;
- Fresh and Clean water: Unavailability of fresh and clean water remains a limiting factor for development in Africa. The condition constraints food production and industrial activities, contributing significantly to the burden of disease;
- Land: Degradation of soil and vegetation is largely due to increased population pressures. Thus, inequitable land access has brought about poverty; decline in agricultural yields and food security; and an increased potential for conflict; and
- Urbanization: Although most Africans live in rural areas, the continent's rate of urbanization is among the highest in the world. Poor economic growth, coupled with low investment in infrastructure, has impeded the provision of housing and basic services in urban areas.

Even a young nation such as South Africa recognizes the need to urbanize as part of a national plan to improve the environment for human life and future generations. Five years after independence in 1994, and the birth of a non-racial and apartheid-free democracy, the Minister of Environmental Affairs and Tourism, Mohammed Valli Moosa⁷, regrets that 20 percent of the country's population lives in poverty. Many of the households in this category do without pipe-borne water, adequate sanitation, waste disposal services, let alone limited access to health care and education. "In contrast, the wealthiest ten percent of South Africans account for 35 percent of all expenditure. They use many more resources and create more waste", said the minister on 26 October 1999.

The minister was adamant about the imperative for a healthy environment capable of supplying raw materials, absorb and tear waste products, while maintaining a free flow of clean water, soil preservation and air quality. As articulated by Moosa, the essentials to a healthy environment are food security, water provision and climate sustainability. These essentials depend on functioning ecosystems; acceptable levels of biodiversity; sustainable rates of resource extraction and minimal production of waste and pollution.

Coming to the rescue of the environment, the minister announced the launching the State of Environment Reporting in South Africa. It is a crafted plan to improve access to environmental information. Although the plan is still

⁷Moosa, Valli is former Minister of Environmental Affairs and Tourism. <https://corporate.suninternational.com/about/directors/valli-moosa/>

in its early stages, Minister Moosa is optimistic: "We are able to provide information on national environmental issues, select local environmental issues and make comparisons between them and with other countries and cities around the world".

However, information can only be effective if it is supported by other mechanisms, including the capacity of decision makers and financial resources to monitor environmental conditions and implement intervention strategies. South Africa's plan on information for the environment is the first, and only, on the continent. The minister's core message is direct: "...We are giving the people of this country [South Africa] access to a very powerful tool: the knowledge of the environment in which they live and work".

Knowledge of the environment is not unrelated to the poverty of most African populations. It is related to their dependence on natural resources, despite their vulnerability to environmental vicissitudes. For more than 40 years, poverty has continued to worsen in Africa and the region's environment has also deteriorated. As a result, Africans find themselves more vulnerable to environmental change.

If there is a puzzle for Africa, it is untangling the intricacies embedded in wonders of encoder-message-decoder that is encapsulated in the practice of effective communication. As a matter of fact, it is all about environmental communication, without which the plight facing the African environment will remain unchecked. This is why the media must disseminate information on the environmental. Accordingly, information is to be targeted toward diverse audiences, governments and related organizations. Communication promises to play an important role by highlighting environmental risk.

Communicating Environmental Risk

Environmental risks are commonplace in rural and urban settings of Africa. Undoubtedly, the risks bring to light a multiplicity of conditions which are harmful and sometimes insurmountable. Bussotti (2014) writes in, "Environment Risk Management and Communication in an African Context: The Case of the Mozal bypass in Mozambique". The writer describes a case involving risk management and how the risk was communicated to stakeholders and the people whose habitat was threatened. Bussotti discusses Mozal, a short form for Mozambique Aluminum. Essentially, Mozal is one of the largest multinational corporations operating in Mozambique.

Not surprising, the national aluminum company is a gigantic entity. It is also manifested in the Mozal Association of Community Development. By virtue of its association, Mozal takes on development initiatives on one hand, and shepherds environmental communication on the other. Today, Mozambique ranks as the world's fifth largest producer of aluminum, amassing wholesome wealth into the country's treasury. In 2010, Mozal decided to construct a "bypass" at its two Fume Treatment Centers.

For two months, the aluminum giant was generously authorized to discharge emissions into the air without using filters, causing harm to human health. Bussotti's writing seeks to understand how the various parties involved acted to prevent, first, the man-created environmental hazard, and second, how Mozal managed and communicated the risk to the populations. The author analyzes the debate on risk communication in Mozambique.

Mozal's management has always ignored the principles of modern communication in relation to environmental risk. Within the corporation, management made choices that favored a "worker elite" capable to absorb the ideas and procedures imposed based on Best Operation Proceedings (BOP). The objective was to inculcate a mentality of prevention stemmed from the conviction that, the technology that was used by the modern company would render "zero harm". This incredible explanation created a dichotomy.

There were those in the country who saw Mozal's investment as important and strategic for the future of Mozambique; others saw that the environmental malaise brought about by the "bypass" was particularly serious, compared to the benefits for the local economy. Obviously, a debate with opposing views had ensued, placing the media directly at the center. The daily paper, *Noticiãs*, has a history of always portraying Mozal as a national company that greatly contributes to the development of Mozambique. Nevertheless, polemic questions of an ecological nature regarding the bypass have not been suppressed.

Ardent critic and Green Party leader, Guimarãs Mahota, was rarely brave. The politician accused Mozal of perpetuating an "environmental catastrophe", pointing out that the government lacked moral environmental standing, let alone ecological ethics as evidenced by its silence on the matter. Certain voices declared that the government was Mozal's megaphone; other voices decried that the right to access information was systemically denied to citizens in favor of unclear interests. The Compliance Advisory (CAO) Ombudsman, read, "Once more the main obstacle...was the very poor flow of information and the communication of risk adopted by Mozal".

The following shows reportage on the bypass environmental disaster in the Mozambican press:

- *Noticiãs*⁸: Portrayed the bypass as a controlled operation, never making it clear that it has arisen from an unpredictable and unpredicted technological accident. The instances when it used a more deserving tone was when it covered the political debates. It presented the opponents as irrational and stopping or slowing down the country's development;
- *O País*⁹: Presented the environmental risks deriving from the Mozal bypass in a different light. The privately-owned paper associated

⁸*Noticiãs* is a Mozambique newspaper. Available online at <http://www.jornalnoticias.co.mz>

⁹*O País* is a Mozambique newspaper. Available online at <http://opais.sapo.mz>

Mozal's position with that of the Mozambican government. It mocked and ridiculed the weakness of the latter. The paper's headlines were bombastic, as were the editorials;

- The Weekly *A Verdade*¹⁰: Published nineteen articles on the bypass between July 2010 and 9 November 2011. The paper hardly published articles. Instead, it republished stories from other media, and usually with no comments made. Majority of articles were press releases.

Raison d'Être of Environmental Communication

There is good and evil on earth. So, too, is there right and wrong. And, then, there is "The Right and the Good", as McEwen (2014) puts it. The author says communication is at the heart of what we humans do in our personal and professional lives. This, says the author, leads humans to reach a better understanding of social practices, institutions and policies that shape the world we live in.

And since communication helps us understand the world, the author goes on, the difference between "The Right and The Good" messages is relevance when it comes to environmental communication. McEwen refers to the concept of what one should do; it is really about persuading someone to change behavior or act in a certain way. Preventing the ruin of mankind's ecosystems is something that involves everyone, including children. To this end, mankind's environmental decision-making is based on what is considered Right and Good.

In keeping with "right and good", humans first lived harmoniously with nature, even when early man lived in caves while hunting and gathering as means of survival. Needless to say, man caused little or no damage or harm to the environment. Waste or pollutants were purely natural, widely spread and easily absorbed. But as human numbers increased, food surpluses were stored or traded for protection or goods; people interacted and societies expended; cultures organized; and populations grew with prosperity. Eventually, a multiplicity of humans overcame resources.

These apparent life-threatening conditions prompted Paul and Anne Ehrlich (1990) to write and publish the book, "The Population Explosion". The book describes how the earth's population grows by 95 million people a year. Consequently, the planet's resources are dwindling rapidly, causing famine, global warming, acid rain and other major problems. The authors elaborate the "immediate action that will lessen the threat of ruin and begin to build a more peaceful, sane and secure world". It is critical that the threat posed by environmental abuse, or neglect to communicate same to the youth, be made a priority.

¹⁰*A Verdade* is a Mozambique newspaper. Available online at <http://www.verdade.co.mz>

Youth Relationship with Environmental Communication

That the Mozambican press provided extensive coverage on a controversial life-threatening environmental issue is not commonplace in Mozambique. In fact, interest in issues about the environment transcends African borders, after all the youth are tomorrow's leaders and the next generation belongs to them. It is not surprising, therefore, that the UN declared 2000-2015 the decade of Education for Sustainable Development. Of significance is that, the international declaration emphasized the need to closely connect environmental communication and the younger generation. To amplify the point, the UN declared 2010 as the International Youth Year, which proclaimed the world organization to enhance youth power in tackling current challenges of humankind.

The UN's action was further propelled by the recognition that young people have a dual role in getting environmental messages through the society. On one hand, the youth can act as effective intermediaries, transmitting environmental messages to their families and they represent the adults; and on the other hand, youth are tomorrow's citizens, consumers and workers. EECN Newsflash, in, "Framing environmental communication and youth", calls on teachers and communicators to help children hold a common definition and apply same values to sustainability; underline the idea that action triggers change, instead of deterministic worldview; try to generate a balance between passionate commitment and critical thinking; and to help youth become action-competent for sustainable development.

This is consistent with the view that the future will be a different nature and that young people hold the strings of defining it. In Argentina, an interesting initiative is the UN-Habitat Best Practices, namely, "Rosario: The City of Children". The purpose is to connect nature and culture, theory and practice and to integrate children, youngsters and adults in the building of a new ecological thought.

The online publication argues that, engaging youth and encouraging them to participate in projects is a good way of including them in their community and in raising their awareness on environmental issues. Another initiative was set up in a rural area of Kenya. It began with organizing soccer and volleyball leagues for the local youth, and then linking them to waste prevention using a very innovative strategy. The Kenyan initiative awarded league points for each garbage cleanup project completed by a team.

The success of the above youth initiatives underlines the importance of integrating various activities targeted at stakeholders and at different geographical levels. The authors believe the youth can be educated and enlightened about the importance of the environment, hence strengthening the need for environmental communication. This includes multiple youth-friendly principles that reinforce each other; involve youth directly in environmental improvement activities; use broad-based approaches such as population groups, policy domains and program area; involve local communities; include a variety

of stakeholders rather a single organization or government agency; and to spread and expand projects.

Speaking about youth, Andrew Revkin¹¹, in a blog, "Environmental Communication in 2015", discusses communication and the environment with journalism and science students at Ohio University. The writer had been invited to speak to Professor Bernard Debatin's class on the topic. The writer and learners examined the merits and limitations of blogging, which can be an excellent medium for ideas and observations; it can also expose general audiences to issues and ideas they might never otherwise consider. More importantly, they talked about the environment and media challenges in a modern world and to immerse in necessary reportage.

Mindful of the student audience, Andrew Revkin asked the question: What is your vision of how the public will track environmental issues and developments in five years? Here is a sample of the answers:

- Sarah: Over the next five years, I suspect grassroots and community organizations concerned with environmental issue will become more sophisticated in their ability to spread their message. Whether through social network sites or through the publication of their own magazine, more and more people will get their information from those invested in and directly working on the issues. This has the potential to destabilize any centralized distribution of information and instead develop a stronger web distribution, where each locality is linked to a larger system;
- Kabercik: We often walk around with cell phones or iPads or and headphones. Our ways of receiving information are becoming high-tech, and the same applies to how we receive information about environmental issues;
- Susie: One component of environmental coverage that suffer is investigative journalism. Investigative stories require an incredible amount of time and money that bloggers and citizen journalists may not be able to afford. Will alternatives [media] take on environmental topics; and
- Alaquist: Of course, we cannot forget Google. I want to start with communications policy-making. The system desperately needs reconfiguration with the environment and Internet at the center. Let's tax Google and Microsoft to ump some money into environmental communication. I'd love to see public libraries as part of a revitalized public sphere where we come together to talk about environmental issues. We also need mobile technology to connect with people digitally.

¹¹Revkin, A. (2015, May 27). Environmental Communication in 2015 [Blog post]. *Dot Earth*. Retrieved from <https://nyti.ms/2TancLu>.

Africa Renewal reports on the environment, including the work of Greenpeace International. The publication interviewed Kumi Naidoo of South Africa known for fighting for the environment, development and people's empowerment (africarenewal.com/taxonomy/term/7). "Economic growth is not sustainable without social and environmental justice", concedes Kumi Naidoo. "We need to adopt a sustainable path for our future, and for the future of our planet and our continent".

The critic admits that the 2012 Rio summit ended the false dichotomy between the environment on one hand, and development on the other. To be credible, the writer adds, Rio 2020 must support an energy revolution based on renewable energy and energy efficiency. In other words, government and businesses must commit to zero deforestation by 2020. "At Rio governments must listen to the people, not the polluters, otherwise they are bound to fail the world", concludes Kumi Naidoo.

Discussion

The Africa Environment Information Network (AEIN) published its implementation guidelines in November 2004 on capacity building for access to information and knowledge in support of growth and management of Africa's environmental resources for sustainable development. It is noteworthy to mention that, AEIN intends to strengthen African's information know-how to make intelligent decisions when it relates to the environment. A key objective is to establish essential data on environmental communication through an information management system.

The system is aimed at sharing environmental data and information resources at the institutional level, while providing a framework for integrating, analyzing, synthesizing and reporting at various levels. Specifically, the guidelines target the audience as follows: national data centers involved in the generation of relevant information; environmental information management socialists; personnel responsible for managing AEIN activities; consultants and freelancers; plus, national environmental organizations responsible for identifying environmental themes.

A constructive environmental communication network is aligned with environmental themes to assure efficiency, information management, information systems and information technology. Moreover, the vision is a strategic context which provides orientation and direction; to demonstrate the importance of information as per AEIN's mandate; and to outline information requirements for environmental management and reporting that includes assessment of information sources.

The process of managing information sources, maintaining and auditing information as a strategic asset, is core to managing the environment. A properly conceptualized and well-managed environmental communication unit is responsible for supporting organizational activities; dealing with interrelated

components such as hardware; software, disseminating data and information; and facilitating knowledge and information to address environmental issues. Above all, the guidelines are to emphasize information and communication technology to provide necessary mechanisms in implementing information about change in the way Africans relate to the environment.

The Eastern Africa Environmental Network (EAEN) is based in Nairobi, Kenya. Basking in the glow of Africanism, the organization has charted the monumental cause for Africans and their environment. Since its founding in 1990, EAEN has displayed a commitment to maintaining a human-friendly habitat to improve the quality of life and to bring about a sustaining environment. Furthermore, it is the policy of the organization to promote peace and food security with a focus on environmental protection and natural resource conservation.

EAEN contends that sharing of information, experiences and resources is crucial to socio-economic development and a healthy environment. Accordingly, EAEN has created a communication strategy which features an annual conference on production and dissemination of publications on the environment. The content of the publications is feature stories, commentaries and short stories concentrating on environmental issues. www.eaenetwork.org is part of the communication network. The organization attempts to communicate with opinion leaders and key decision makers as target audience.

Ecologist Vijayalaxmi Kinhal¹² says the environment is an important issue when society is faced with economic crises, wars and unending social problems. The researcher maintains that the environment is important because Earth is the only home that humans have; it provides air, food water and essential needs. The ecosystem system, too, is humanity's life support. It depends on the well-being of all the species living on earth, usually referred to as the biosphere. The latter encompasses one global ecological system in which all living creatures are interdependent. And amid the one global ecological system are smaller ecosystems such as rainforests, oceans, the desert and tundra.

Of ultimate importance to the environment is that, the ecosystem is composed of living and non-living parts (terrestrial or aquatic). In the book, *Valuing Ecosystem Services - Toward Better Environmental Decision-Making* (available through The National Academy Press)¹³, the non-living parts are the soil are water, air and nutrients; the livings parts are plants, animals, micro-organisms and humans. In a healthy ecosystem, all the chemical elements and nutrients keep circulating in a cycle to support millions of species. It is in this process that a variety of goods and services, all useful to humans, are produced. Hence, the impetus for humans to champion strategies to maintain an invaluable ecosystem and sustainable environment remains paramount.

¹²Kinhal, V. (N.D.). Why Is Our Environment Important? [Online article]. Retrieved from <https://bit.ly/2O7nSQU>.

¹³Valuing Ecosystem Services - Toward Better Environmental Decision-Making (2005). The National Academies Press. Washington, DC. Retrieved from <https://www.nap.edu/read/11139/chapter/1#xi>.

Workshops that focus on the mutuality that exists between the environment and communication are conducted at various levels. They deal with message conceptualization and dissemination. EAEN's partners are Mali Hai Clubs of Tanzania; Dodoma Environmental Network; Wildlife Clubs of Uganda; Natural Resource Protection Group (Sudan); The East African Wild Life Society; and Resource Management (Somali). Additionally, EAEN publishes a quarterly magazine, *Njiwa*, disseminated to different audiences and stakeholders on matters pertaining to the environment and communication. Conference proceedings and workshop activities are disseminated, too.

Conclusion

Ethel Kennedy, writing in, "The Chad Cameroon Oil and Pipeline Project: Putting People and the Environment at Risk" (1999), raises concerns. The writer quotes Archbishop Desmond Tutu, "Africa cannot afford the environmental devastation of such a project. We need to help construct, not to destroy it". The Chad-Cameroon Oil and Pipeline project is bound to exacerbate environmental devastation and will violate human rights. In a bid to bring about environmental communication, Huawei has established branch telecommunication offices in more than 40 African countries. They include sales and services, technical and manufacturing centers. These initiatives have led to the hiring of talented Africans to enter the field of communication and have charged them with disseminating information on environmental protection.

The chief executive officer of Exxon was quoted in the *Wall Street Journal* on 14 October 1997¹⁴ as "boasting" that poor developing countries cannot afford environmental protection, adding, "If they insist on such measures, foreign investment might go elsewhere". Ethel Kennedy (1999) is bemused because these pronouncements are contrary to poverty alleviation and sustainable development, as they gamble with the lives of Chadians and Cameroonians. Today, South Africa pursues an environmental sustainability policy; the country participated in the 1992 United Nations Conference on Environment and Development (UNCED). In 2009, East Africa nations met in Kigali (Rwanda) to reaffirm their commitment to examine linkages between population and the environment.

It is fair to say that Africa and Africans are not oblivious to existential threats posed by an "unfriendly environment". John Muthee, writing under the title "Serving and growing with Africa: How Huawei enriches life through Communication" (2018), applauds Huawei Technologies for going beyond commercialization to enrich the lives of Africans by providing communications network solutions. John Muthee regrets the prevalence whereby corporate profits have relegated human service to irrelevance, and commends the

¹⁴ <http://umich.edu/~snre492/Jones/pipe.htm>.

telecommunications company on "enriching the life of African people with the diversified communication services offered by affiliate telecom companies". The writer notes that Huawei is on a mission to address the economic and geographic imbalance by bridging the digital divide and elevating local telecommunication expertise.

The Stockholm Challenge is entitled "Awareness raising and education about Africa Environmental Justice and Sustainable Development Challenges". Besides addressing concerns embedded in the title, the organization serves a dual purpose. First, it is a tool to communicate to the international community in order to raise awareness about Africa's environmental challenges. Second, it has as a goal to combat poverty by promoting socio-economic development. As deity would will it, the United Nations Environment Program (UNEP) is headquartered in Nairobi, Kenya.

Exactly five years after statehood and independence, South Africa's Minister of Environmental Affairs and Tourism, Mohammed Valli Moosa, said in 1999 that 20 percent of households, and one-sixth of the global population, lives in poverty. The critic admits that the 2012 Rio summit ended the false dichotomy between the environment on one hand, and development on the other. To be credible, the writer adds, Rio 2020 must support an energy revolution based on renewable energy and energy efficiency. In other words, government and businesses must commit to zero deforestation by 2020. "At Rio governments must listen to the people, not the polluters, otherwise they are bound to fail the world", concludes Kumi Naidoo. Paul and Anne Ehrlich (1990) wrote and published the book "The Population Explosion". The book describes how the Earth's population is growing by 95 million people a year, thus depleting the planet's resources.

Speaking about youth, Andrew Revkin, in a blog (2015, May 27), "Environmental Communication in 2015", discusses communication and the environment with journalism and science students at Ohio University. The writer had been invited to speak to Professor Bernard Debatin's class on the topic. The writer and learners examined the merits and limitations of blogging, which can be an excellent medium for ideas and observations; it can also expose general audiences to issues and ideas they might never otherwise consider.

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