GLOBAL INFORMATION SOCIETY WATCH 2020

Technology, the environment and a sustainable world: Responses from the global South

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AFRICA

USING TECHNOLOGY TO BUILD RESILIENCE AND ENGAGE IN CLIMATE ACTION WITH EAST AFRICA'S NEXT GENERATIONS

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Introduction

The year 2020, despite being hit by crisis, is an important year. It marks the 10-year countdown to the expiry of the Sustainable Development Goals (SDGs)[1] and the Sendai Framework for Disaster Risk Reduction 2015-2030.[2] The two frameworks came into force in 2015.

In the recent past, the young generation has been at the centre stage of climate action. The use of information and communications technologies (ICTs) has also amplified the voices and actions of youth across Africa and beyond. Through social media platforms, young activists like Greta Thunberg of Sweden and Vanessa Nakate of Uganda have become household names in the climate action space through climate strikes and other activities.

This report discusses how ICTs are being used for conservation and climate action in four initiatives involving young people in East Africa. It is based on interviews with young people and professionals, as well as senior experts committed to climate action and disaster risk reduction on the continent.

Defining climate action, resilience and sustainable development

The commonly used definition of sustainable development is from *Our Common Future*, also known as the Brundtland Report.[3]

The United Nations Development Programme (UNDP) defines climate action as:

> [S]tepped-up efforts to reduce greenhouse gas emissions and strengthen resilience and adaptive capacity to climate induced impacts, including: climate-related hazards in all countries; integrating climate change measures into national policies, strategies and planning; and improving education, awareness-raising and human and institutional capacity with respect to climate change mitigation, adaptation, impact reduction and early warning. It requires mobilizing USD100 billion annually by 2020 to address the needs of developing countries in moving towards a low-carbon economy.[4]

In disaster risk reduction, resilience "is about anticipating, planning and reducing disaster risk to effectively protect persons, communities and countries, their livelihoods, health, cultural heritage, socio-economic assets and ecosystems."[5]

Climate action, sustainable development and disaster risk reduction are inseparable. The interlinkage between the three is the basis of the increased use of the term "risk-informed development".[6]

Ethiopia: GPS transmitter tags for bird conservation and using the internet for environmental awareness in disadvantaged schools

Populations of the Egyptian vulture (*Neophron percnopterus*) have declined in the past few decades. It is now listed as endangered by the International Union for Conservation of Nature (IUCN). A partnership of over 10 organisations from both of the global hemispheres have come together to conserve the scavenger. Project LifeNeophron is funded by the Bulgarian Society for the Protection of Birds, the EU and other partners.

Samuel Bakari is the Africa Component Manager of the project. Ethiopia hosts the largest wintering congregation of the Egyptian vulture in Eastern Africa.[7] Bakari explains more:

1 https://sdgs.un.org/goals

2 United Nations Office for Disaster Risk Reduction. (2015). *Sendai Framework for Disaster Risk Reduction 2015-2030*. https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

3 World Commission on Environment and Development. (1987). *Our Common Future*. http://www.un-documents.net/our-common-future.pdf

4 https://www.sdfinance.undp.org/content/sdfinance/en/home/sdg/goal-13--climate-action.html

5 https://www.preventionweb.net/risk/resilience

6 Issar, R. (2019, 25 April). Integrating disaster and climate risk into the SDGs. *United Nations Development Programme*. https://www.undp.org/content/undp/en/home/blog/2019/integrating-disaster-and-climate-risk-into-the-sdgs.html

7 https://www.lifeneophron.eu/#a-status-and-threats-for-the-egyptian-vulture-population-wintering-in-metehara-and-afar-regions-ethiopia

> The main threat to the Egyptian vulture in Ethiopia is human-carnivore conflict. Farmers tend to intentionally poison a cow or sheep so as to kill the predators like lions and hyenas. Unfortunately, the vulture as a scavenger gets to feed on the poisoned carcasses. This has led to a big drop in their number, endangering their existence, and definitely interrupting the food chain.[8]

ICTs have been at the centre of this conservation project. In an effort to track the movement of the birds, a GPS transmitter is attached to the bird in the form of a "backpack". This tag is programmed to communicate by transmitting regular information on the movement and the location of the bird. In yet another great example of how technology is being used to influence thinking and bringing nature closer to people, project LifeNeophron has a website that livestreams all happenings in the nests of the geo-tagged birds.[9]

In an effort to attract young people to this kind of conservation effort, and raise public awareness on threats to nature and the environment, the project has connected schools to the internet in the Afar region of Ethiopia. In the past months, a primary school in Metehara was connected to electricity. The project also allocated three desktop computers and an internet connection with a speed of one megabyte per second. A second school in Logiya received the same, and its internet connection was installed later. The internet is used by both teachers and students, and the desktops are also used for administrative work at the schools.

Bakari is upbeat about the role that the internet has already started to play in raising awareness about conservation, and says the schools' environmental club members have already started to use the internet, despite the pandemic. It is hoped that in the long run, students will participate in global conversations about conservation.

Kenya: Using ICTs to address threats to bird habitats in Kinangop

The Kinangop Plateau is a traditionally grasslands area listed as an Important Bird Area (IBA). The montane grasslands are the habitat of birds endemic to Kenya.[10] The Friends of Kinangop Plateau (FoKP) is a community-based organisation in the area. FoKP is the site support group to Nature Kenya, the oldest conservation group in the country. FoKP manages nature reserves totalling 83 acres. The reserves came under threat a few years ago.

Martin Murungaru, 29, is a youth conservationist at FoKP. He explains how one evening in February 2018, he received a distressing phone call:

> A colleague of mine informed me that Leleshwa, one of the nature reserves, was on fire. The Leleshwa Reserve is 40 acres large. Luckily, I was able to mobilise four of my friends. Two had already received the news and had already created a chain of communication with members of the community. In a span of two hours, our collective efforts put out the fires, which unfortunately were declared as a case of arson.[11]

Martin explains that WhatsApp was used to communicate the incident. The channel was subsequently used as way of calling the residents to a meeting where they were trained on fire awareness. Martin credits this awareness as successful, given that along with increased vigilance, no fire has been reported since. "Constant communication through phone calls, text messages and emails to our partners has been part of this monitoring process," he says.

Climate action in Tanzania

Young environmental activists continue raising awareness on the effects of climate change and also providing evidence-based actions to influence policy makers for better environmental policies. One of these activists is Ghaamid Abdulbasat from Dar es Salaam, Tanzania. He is the founder of the Global Youth Biodiversity Network (GYBN)-Tanzania Chapter. He has also been serving as the country director for the Earth Day Network (EDN).

He credits the internet for enabling him and many other young people to become environmental and climate action ambassadors. He was able to host various online meet-ups in preparation for the 70th anniversary of Earth Day, celebrated every year on 22 April. As the country director, he was in charge of overseeing activities in five universities. With the pandemic, Earth Day global activities became digital. The internet became more important than ever before.

Ghaamid explains:

> Through the meet-ups, I was able to connect with volunteers. The five universities had more than 400 volunteers in total who signed up.

8 Interview with the author.

9 https://www.lifeneophron.eu

10 https://www.worldlandtrust.org/species/birds/sharpes-longclaw

11 Interview with the author.

> When it came to the mobilisation in three universities, namely Sokoine, Mzumbe and the University of Dodoma, all my coordination was 100% online.

Ghaamid adds that the internet allowed them to send out relevant information with regard to Earth Day such as videos, toolkits and logos. The internet also allowed them to educate communities inside and outside the universities. As part of the project, a group of women were also trained on the use of energy-saving cooking stoves by Sokoine University of Agriculture in the Mazimbu area. Students from Sokoine and Mzumbe universities fundraised amongst themselves, purchased over 400 seedlings and planted them. It is important to note that the face-to-face training and the tree planting were done earlier than Earth Day itself, way before the pandemic began to bite.

As part of Earth Day 2020, Ghaamid also took part in the Earth Day Challenge 2020.[12] This was aimed at empowering people across the world to monitor threats to the environment around them, such as air pollution. Ghaamid said he found it exciting since he was able to relate to the idea of open citizen science data, and the use of mobile technology. As of July 2020, he is awaiting to see the analysis of the data collected, and share it on his social media platforms.

Internet and disaster risk reduction in Africa

In May 2019, the African Union established the Africa Youth Advisory Board on Disaster Risk Reduction (AYAB DRR).[13] From the outset, it was clear that the internet was going to play a big part in the board's mandate, which is facilitating the meaningful engagement of Africa's youth in disaster risk reduction. A month later, the group kicked off a weekend tweet chat dubbed #SafeSaturdays. Over a year later, this tweet chat has informed and created awareness on important discussions on climate change and disaster risk reduction.

The internet is a way of connecting like-minded individuals across the world. The group subsequently connected with the Asia Pacific group focusing on the same issues, the U-Inspire Alliance.

With the pandemic, ICTs have enabled intergenerational cooperation as well. AYAB DRR collaborated with UNESCO Nairobi to organise a webinar on youth engagement during COVID-19 for "The Africa We Want"[14] in April 2020. Ann Therese Ndong-Jatta, the director and representative for the UNESCO Regional Office in Eastern Africa, highlighted the importance of investing in young people so they can be at the centre of DRR activities. She emphasised, "We can use them as part of the media, especially social media, but they need to have knowledge, so we have to target them and give them the right knowledge."[15] The outcomes of this webinar included the use of technology to disseminate information about COVID-19 and other hazards, some of which are under development currently. UNESCO Nairobi and AYAB DRR partnered on designing e-posters with information on combating COVID-19. The content was done in five languages, namely French, English, Arabic, Somali and Swahili. Both parties continue to share the posters on various social media channels like Facebook, LinkedIn, Instagram and Twitter.[16]

Challenges

Unforeseen challenges like the coronavirus can hamper online efforts. According to Ghaamid, online mobilisation had been done and a climate strike was scheduled to happen on Earth Day, but this was shelved due to the pandemic.

Poor mobile networks and internet connections, as well as internet shutdowns, derail the efforts of Africa's young crop of environmental activists. "I remember a time when we had to postpone a scheduled #SafeSaturdays tweet chat because our guest could not connect anymore," explained a member of the AYAB DRR social media team.

Internet costs are high in some countries and therefore many potential future climate and environmental experts might miss out on online discussions.

Digital security is still largely unknown. For example, the public posting of webinar passwords can compromise potentially informative meetings. An environmentally themed webinar held in the early days of the pandemic for Africa's activists had to be called off after hackers took over.

12 https://www.earthday.org/campaign/earth-challenge-2020/

13 http://www.riskreductionafrica.org/news/establishment-of-africa-youth-advisory-board-on-disaster-risk-reduction-ayab-drr.html

14 https://au.int/en/agenda2063/overview

15 UNESCO. (2020, 20 April). The Natural Sciences of UNESCO joined hands with the Africa Youth Advisory Board for Disaster Risk Reduction (AYAB DRR) to organise a Webinar on Youth Engagement on COVID-19 for "The Africa We Want". https://en.unesco.org/news/natural-sciences-unesco-joined-hands-africa-youth-advisory-board-disaster-risk-reduction-ayab

16 https://twitter.com/AYAB_DRR/status/1287001348710563841

Conclusion

The internet has played an important role in Africa in bringing young people together, enabling them to share and exchange ideas, and push the climate agenda. In some cases, there have been great successes. The examples here show how young people have been educated about bird conservation in Ethiopia, have mobilised around protecting bird habitats in Kenya, and have advocated for climate action and learned about disaster risk reduction. Key threats to the efficacy of the internet for environmental awareness and action are poor internet connectivity, internet shutdowns, and a low awareness of digital security. All three are areas where internet rights activists can play a role, through capacity building and policy lobbying.

Action steps

The following steps are necessary in East Africa to help environmental activists, especially the youth:

- Civil society movements should embrace young environmental activists and train them on how to use digital tools safely for online collaboration.
- There is a need to continue lobbying to end digital divides, including the gender digital divide, to allow women and marginalised persons to take part in environmental and climate actions and projects.
- Awareness needs to be raised about the impact of internet shutdowns on environmental activism on the continent.

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The world is facing an unprecedented climate and environmental emergency. Scientists have identified human activity as primarily responsible for the climate crisis, which together with rampant environmental pollution, and the unbridled activities of the extractive and agricultural industries, pose a direct threat to the sustainability of life on this planet.

This edition of Global Information Society Watch (GISWatch) seeks to understand the constructive role that technology can play in confronting the crises. It disrupts the normative understanding of technology being an easy panacea to the planet's environmental challenges and suggests that a nuanced and contextual use of technology is necessary for real sustainability to be achieved. A series of thematic reports frame different aspects of the relationship between digital technology and environmental sustainability from a human rights and social justice perspective, while 46 country and regional reports explore the diverse frontiers where technology meets the needs of both the environment and communities, and where technology itself becomes a challenge to a sustainable future.

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