AI in Environment & Development?

Emerging Trends, Ethical Questions and Lessons from GX Africa

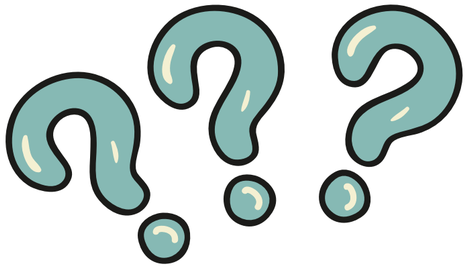
Presented by Sagini Obuba at the

Edinburgh Environment and Development Network (EEDN)

14 May 2026

What to expect

- Activity
- My AI story
- Emerging Trends
- Ethical Questions
- Lessons from GX Africa
- Reflections & more questions



www.menti.com

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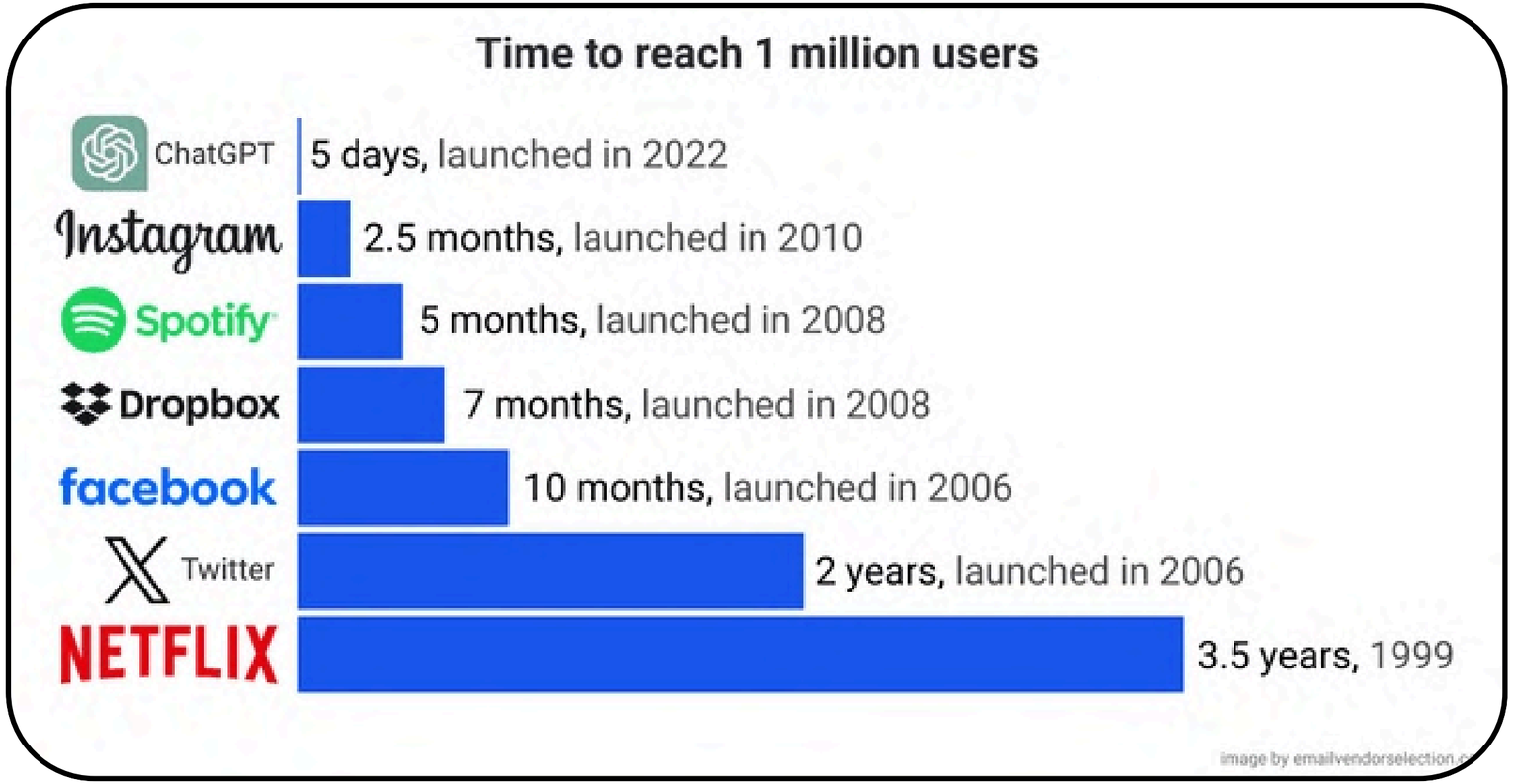
Activity

1. **Where were you on 30 November 2022?**
2. **In one word, how do you feel about AI??**
3. **Has your view of AI changed over time?**

ChatGPT dropped on 30 Nov 2022



My AI Story

2022

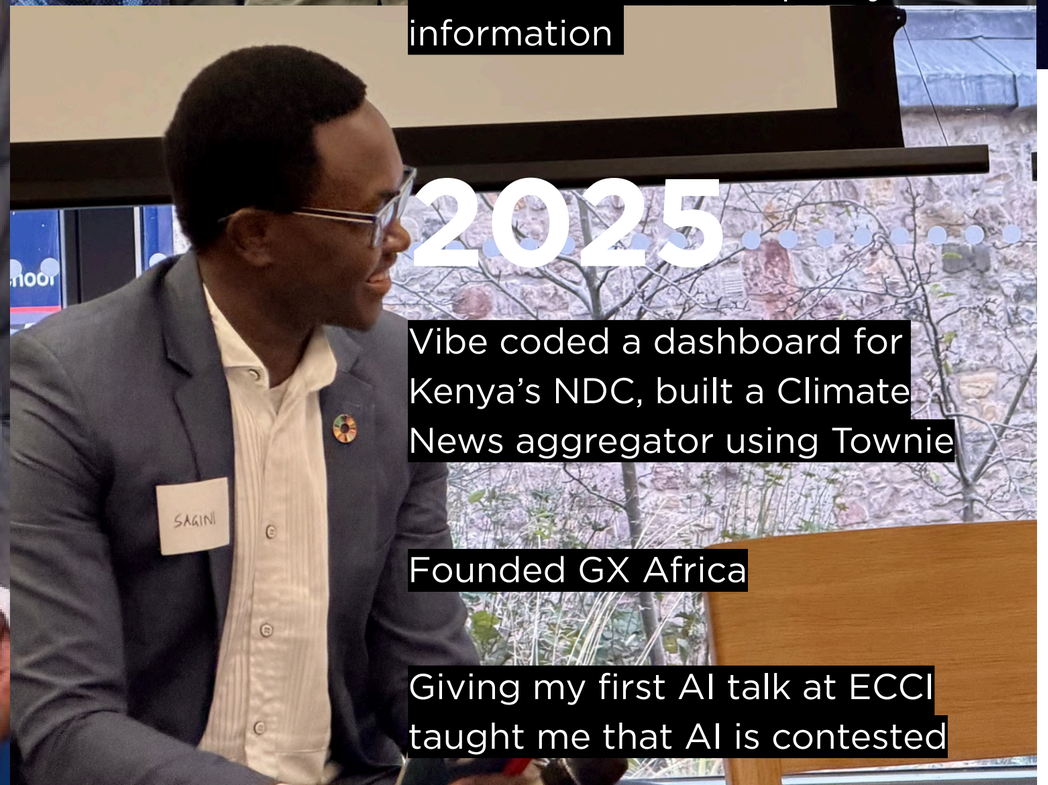
Experimented with ChatGPT for social media

On 8 Dec 2022, I won the Innovation Volunteer of the Year Award (UNV, Kenya Gov). By then, ChatGPT had surpassed 1 million followers.

Photograph: Luis Tato/AFP/Getty Images:

2024

Participating in Kenyan GenZ protests showed me how AI can be used to democratise policy information



2025

Vibe coded a dashboard for Kenya's NDC, built a Climate News aggregator using Townie

Founded GX Africa

Giving my first AI talk at ECCI taught me that AI is contested

2026

Presented GX Africa's AI work at a global panel

AI & Youth: Driving Innovation Change and Global Impact

HNPW & ECOSOC Youth Forum 2026
Pre-Departure Briefing and Strategy Session

AI as a Window of Opportunity

Figure 2: Climate activists marching against data centres: Credits: Climate Camp Ireland

AI has become a focusing event. This is an occurrence which is sudden, rare, and draws political and public attention. As such, it makes contestations harder to ignore.

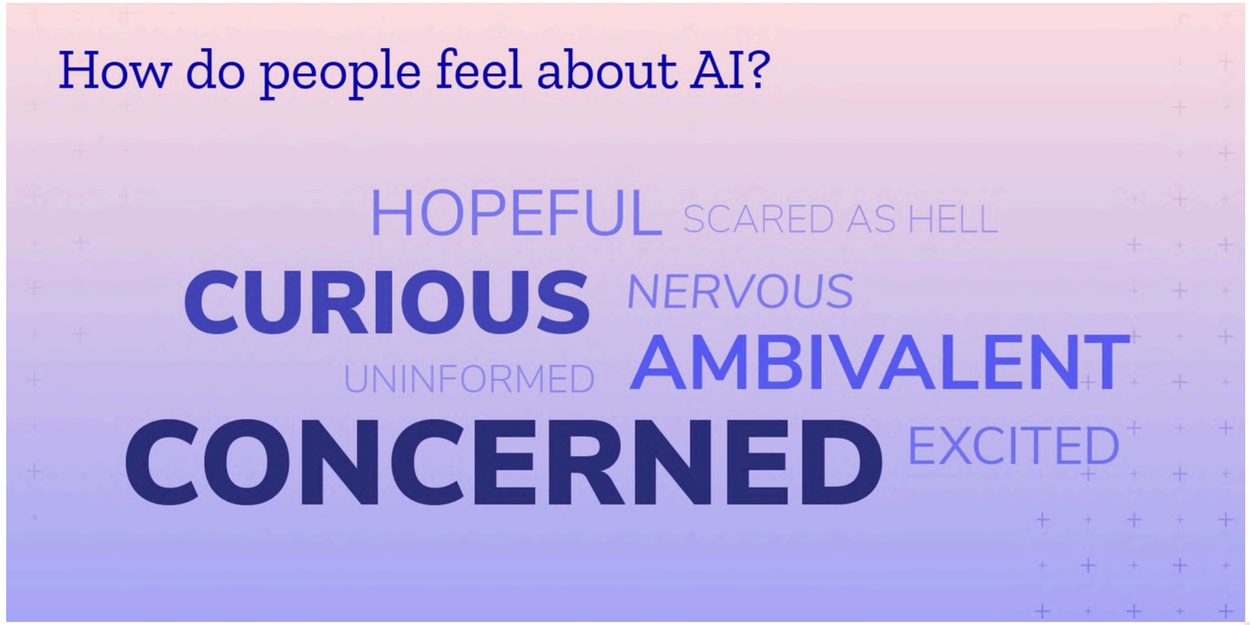
When generative AI systems moved from research labs into everyday life, the Twin Transition's narrative of smooth digital green growth met a more visible reality. Data centres are not abstract entities living in the cloud. They occupy physical space, draw immense power, require massive cooling, and compete with other demands on the grid and water sup
as 100,000 househ
water-stressed regi

I treat this as a gov
classrooms, policy
conversations awa
accountability, and

But windows close. The same surge of attention can be neutralised with familiar talking points. Tech companies are already promising that future algorithms will be more

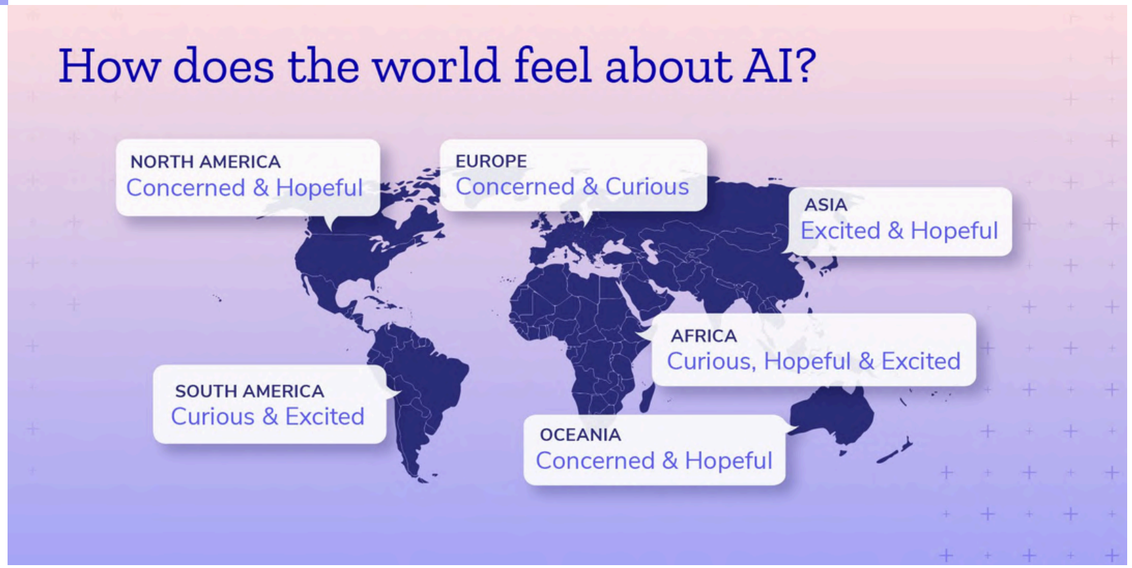
Unlearning: Wrote an essay arguing for transformation of AI4Environment&Development

Excitement, curiousity, concern, phobia and hope.
No single story of AI is complete.



How you feel about AI & Where you come from

Over 60K people surveyed by connexion3.gr



AI & Sustainable Development?

Environmental Science & Policy
Volume 150, December 2023, 103590

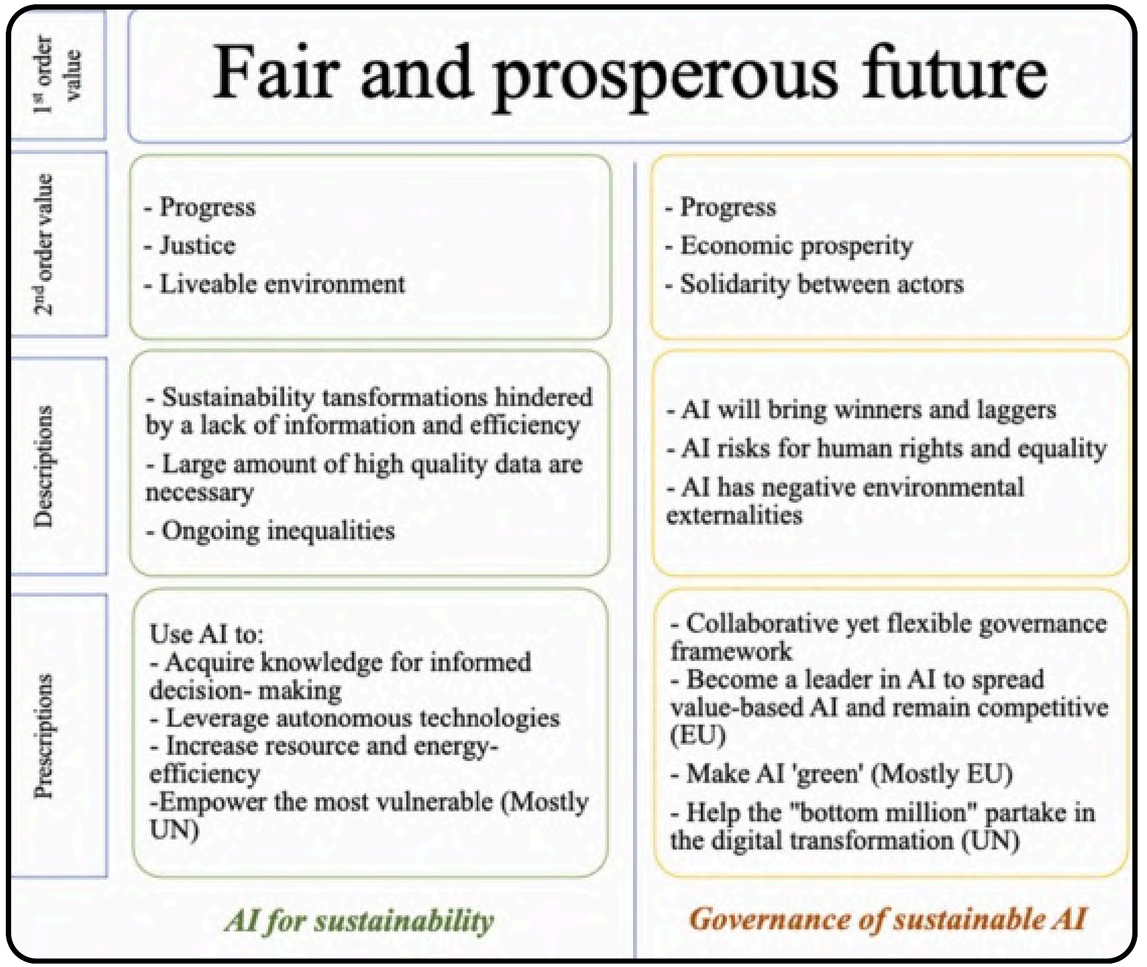
AI and the governance of sustainable development. An idea analysis of the European Union, the United Nations, and the World Economic Forum

Marie Francisco [a b 1], Björn-Ola Linnér [a b]

[a] Department of Thematic Studies, Environmental Change, Linköping University, Sweden
[b] Center for Climate Science and Policy Research, Linköping University, Sweden

Received 12 April 2023, Revised 12 August 2023, Accepted 17 September 2023, Available online 22 September 2023, Version of Record 22 September 2023.

Read Article: https://www.humanitarianleadershipacademy.org/resources/initial-insights-report-how-are-humanitarians-using-artificial-intelligence-in-2025/



Emerging Trends

World's first comprehensive study of AI in humanitarian sector

Global survey of **2,539 humanitarian workers across 144 countries**

Download Report: https://www.humanitarianleadershipacademy.org/resources/initial-insights-report-how-are-humanitarians-using-artificial-intelligence-in-2025/

1

AI adoption is happening faster than many institutions expected.
In the humanitarian sector, a 2025 global study found that **93% of respondents had used AI tools**.
70% reported **using AI daily or weekly in their work but many do so without organization backing leading to 'shadow AI'.**
This suggests AI is no longer a niche or experimental tool; it is becoming part of everyday professional practice.

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2

AI is increasingly being used for everyday 'content generation' tasks such as:

- Drafting and editing reports
- Summarising long documents
- Translating text
- Analysing data
- Writing emails and proposals
- Creating training materials
- Supporting research
- Designing communication products
- Making technical information easier to understand

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3

AI skepticism

“Interestingly, 40% of those respondents who are AI ‘skeptics’ - those who rarely or never use AI in their work come from **international NGOs**, which may reflect institutional caution rather than technological inability. Data privacy and security concerns dominate their reluctance, with managers particularly wary of exposing sensitive data”.

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4

Disconnect between usage and conviction

- Only 47% of survey respondents agree with the statement that AI has improved operational efficiency, while just 38% believe it has enhanced decision-making.
- Nearly **30% remain neutral or uncertain about AI's benefits**, with **a quarter disagreeing that AI improves efficiency.**

> **Whenever me or my colleagues try and use AI, for data analysis or creating content for presentations, it always falls flat. The analysis isn't right and I have to redo it...**

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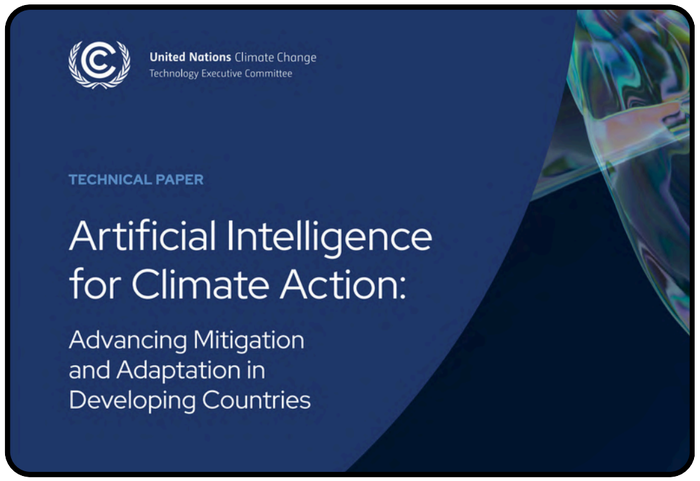
AI learning is often informal and self-directed

- 64% of respondents reported little or no organisation-directed AI training.
- 73% identified training as the most important support needed over the next 12–24 months.

Emerging Trends



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6

#AI4climate action is growing
AI is being explored for:

- Climate modelling
- Disaster risk prediction (early warning systems)
- Flood and drought forecasting
- Land-use monitoring
- Biodiversity tracking
- Energy optimisation
- Agricultural advisory systems
- Climate finance targeting
- Public climate communication

AI has potential for climate action, but this potential is unevenly distributed. Global South countries may face data poverty, infrastructure gaps, and limited access to computing power.

Ethical Questions

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7

Shadow AI & governance vacuum
What ethical risks arise when E&D workers use AI tools without formal approval, guidance, or oversight?

While 70% of humanitarian workers regularly use AI tools, organisational adoption remains uneven. **7% work in organisations that explicitly have no plans to adopt AI**, while 17% are in organisations that have not yet adopted AI but intend to do so

This gap creates “Shadow AI”, which the report refers to as **unsanctioned use of AI tools raising serious ethical risks** in development contexts.

Ethical Questions

8

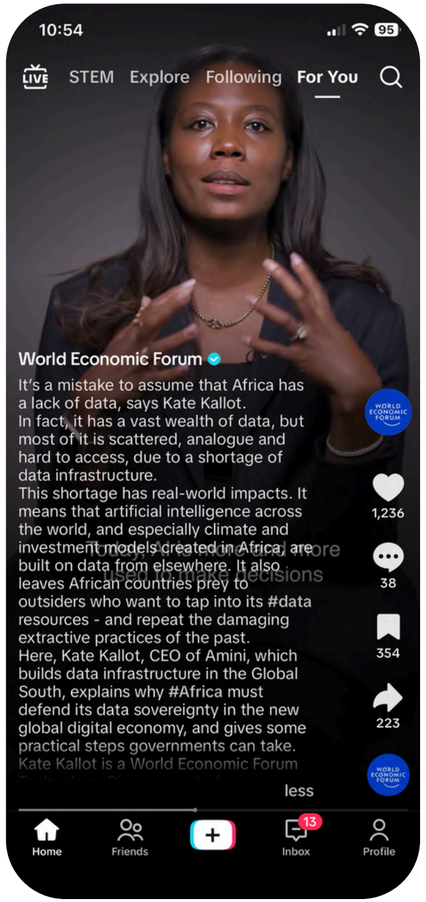
Whose Data?

There is not enough data on Sub-Saharan Africa ?

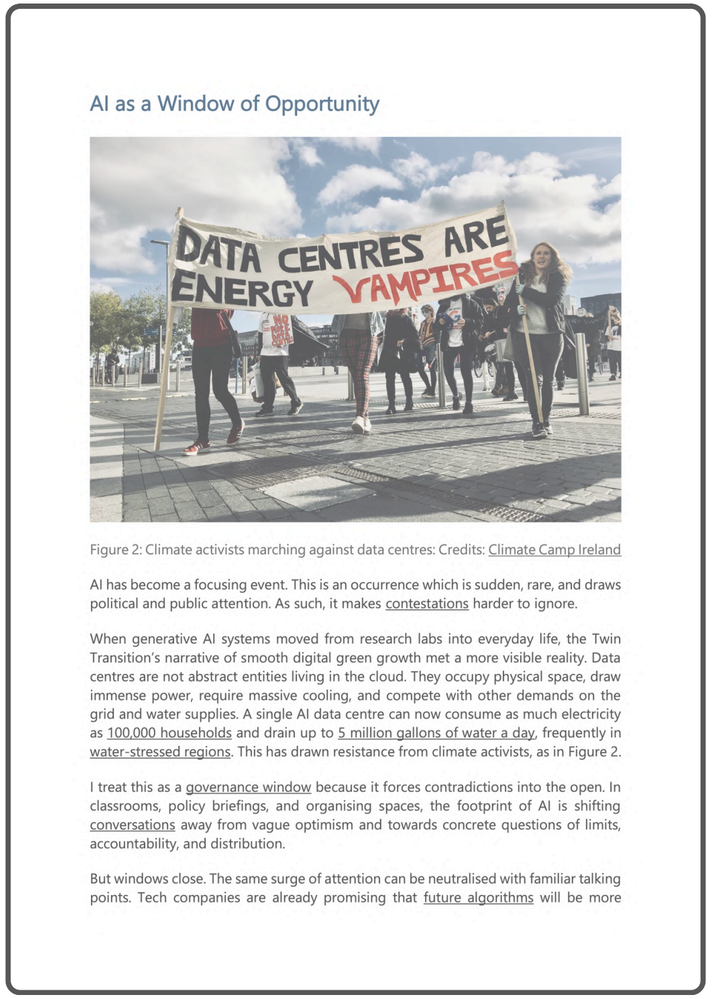
If training data is skewed toward specific groups, the AI adopts those same biases, which can unfairly sideline or disadvantage underrepresented communities.

"It's a mistake to assume that Africa has a lack of data, In fact, it has a vast wealth of data, but most of it is scattered, **analogue** and hard to access, due to a shortage of data infrastructure.
This shortage has real-world impacts. **It means that artificial intelligence across the world, and especially climate and investment models created in Africa, are built on data from elsewhere**. It also leaves African countries prey to outsiders who want to tap into its data resources - and repeat the damaging extractive practices of the past."

-Kate Kallot on World Economic Forum via TiKTok



Ethical Questions



AI as a Window of Opportunity

Figure 2: Climate activists marching against data centres: Credits: Climate Camp Ireland

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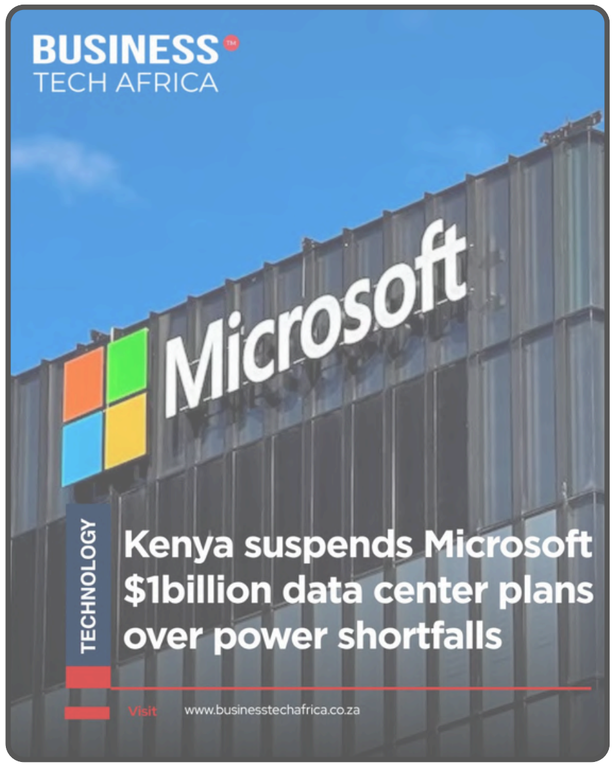
I treat this as a governance window because it forces contradictions into the open. In classrooms, policy briefings, and organising spaces, the footprint of AI is shifting conversations away from vague optimism and towards concrete questions of limits, accountability, and distribution.

But windows close. The same surge of attention can be neutralised with familiar talking points. Tech companies are already promising that future algorithms will be more



9

~~Environmental Impact~~ Environmental injustice: A win for whom and at whose expense?

- "[AI] relies on a massive influx of critical minerals like cobalt, lithium, and copper. These minerals… come from mostly African landscapes **where extraction reshapes livelihoods**, **depletes local water sources, and creates toxic environments".**
- "Emissions do not disappear when they are outsourced, nor do the harsh labour conditions that make digital convenience possible. From miners extracting cobalt in the Democratic Republic of Congo to data labellers moderating toxic content in Kenya, Africa powers the world's digital and green growth".

Ethical Questions

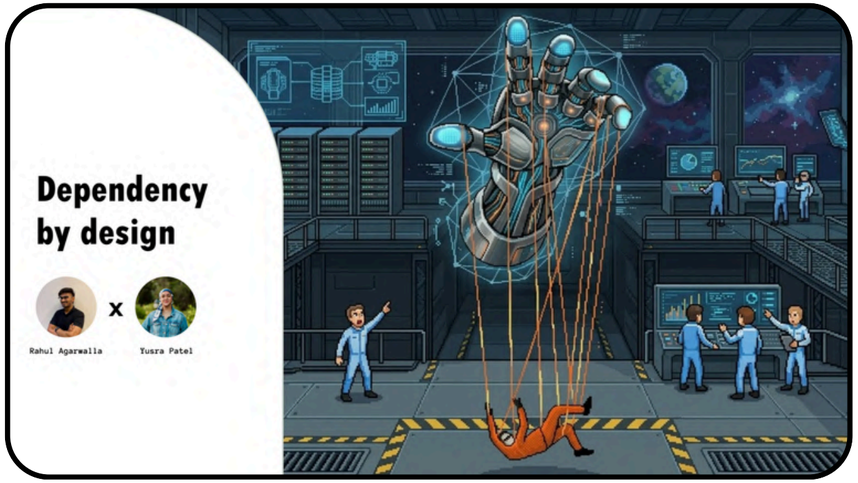


Image courtesy of Rahul Agarwalla & Yusra Patel (University of Edinburgh) via LinkedIn.

Read article here.

10

Dependency on technology

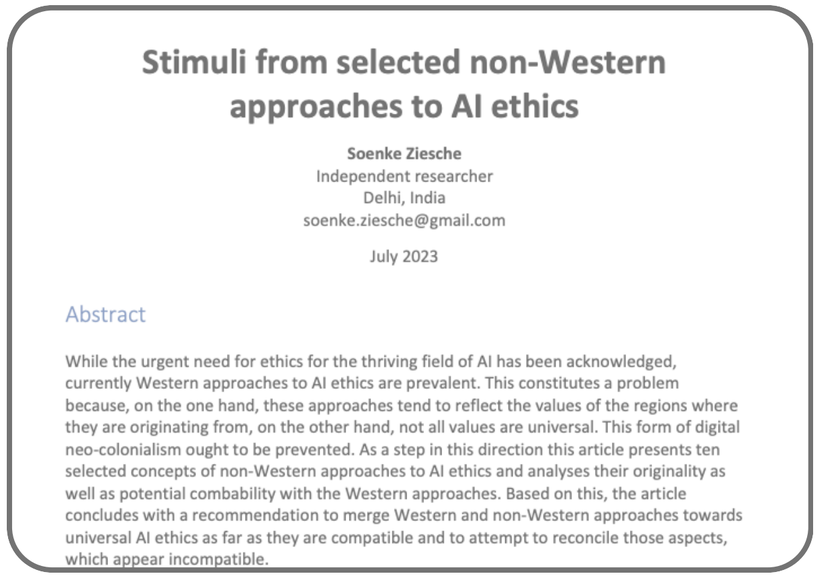
“The deeper concern is that critical thinking is eroding. We’ve all seen the graduation photos where someone thanks ChatGPT in their credits. It’s funny until you sit with the question: **are we all becoming less real and more artificial? Who’s thinking for us? Who gave them permission? Whose knowledge is that thinking based on?”**

Could you finish your assignment if the servers went down and the electricity cut out? Could you do your job? Could you think your way through a problem without prompting a chatbot first?

- Rahul & Yusra

When we reflexively outsource doing and thinking to AI, what becomes of us?

Ethical Questions



Stimuli from selected non-Western approaches to AI ethics

Soenke Ziesche
Independent researcher
Delhi, India
soenke.ziesche@gmail.com

July 2023

Abstract

While the urgent need for ethics for the thriving field of AI has been acknowledged, currently Western approaches to AI ethics are prevalent. This constitutes a problem because, on the one hand, these approaches tend to reflect the values of the regions where they are originating from, on the other hand, not all values are universal. This form of digital neo-colonialism ought to be prevented. As a step in this direction this article presents ten selected concepts of non-Western approaches to AI ethics and analyses their originality as well as potential combability with the Western approaches. Based on this, the article concludes with a recommendation to merge Western and non-Western approaches towards universal AI ethics as far as they are compatible and to attempt to reconcile those aspects, which appear incompatible.

Read article here.

11

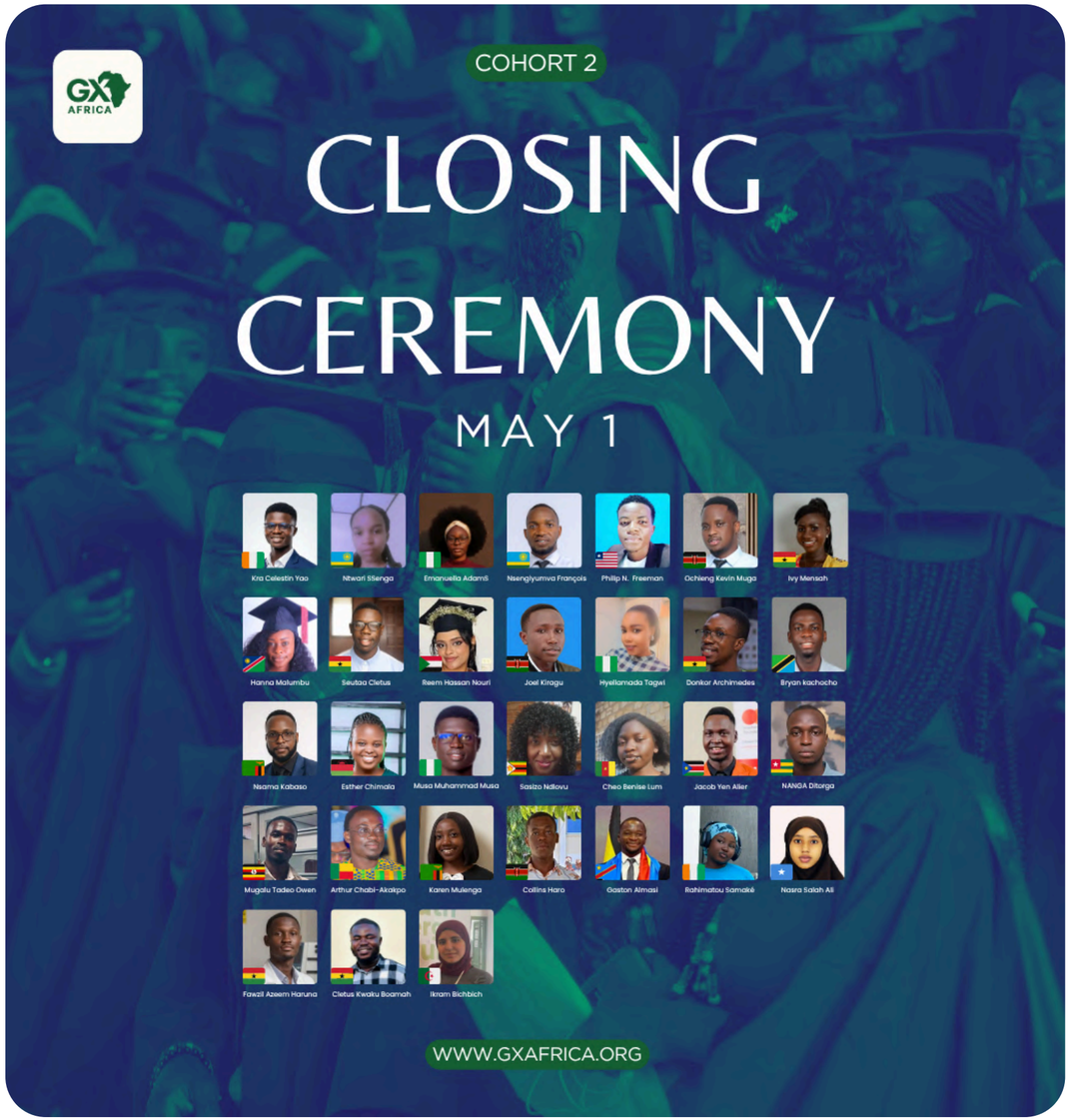
> "In Africa, there is the concept known as 'Ubuntu' — the profound sense that we are human only through the humanity of others; that if we are to accomplish anything in this world, it will in equal measure be due to the work and achievement of others."
>
> - Nelson Mandela

www.dandelionphilosophy.com

Whose ethics?

- The current mainstream discourse on ethical AI is heavily anchored in Western, Euro-American philosophical traditions.
- Ethical frameworks guiding AI development **must be inclusive of diverse cultural perspectives**, particularly from non-Western contexts

The EU's ethical AI model is mainly **rights-first**: lawful, transparent, accountable, and safe.
The AU's ethical AI model is **rights + development**: ethical AI must protect people, but it must also build African capacity, reduce dependency, and reflect local contexts.



Cohort 2: 31 ambassadors from 20 countries

GX Africa

GX Africa is a green career accelerator for African university and TVET students and graduates. We help learners build practical climate and AI skills through hands-on projects in cohorts and challenges, so they graduate with a portfolio and access to green economy opportunities.

Mission:

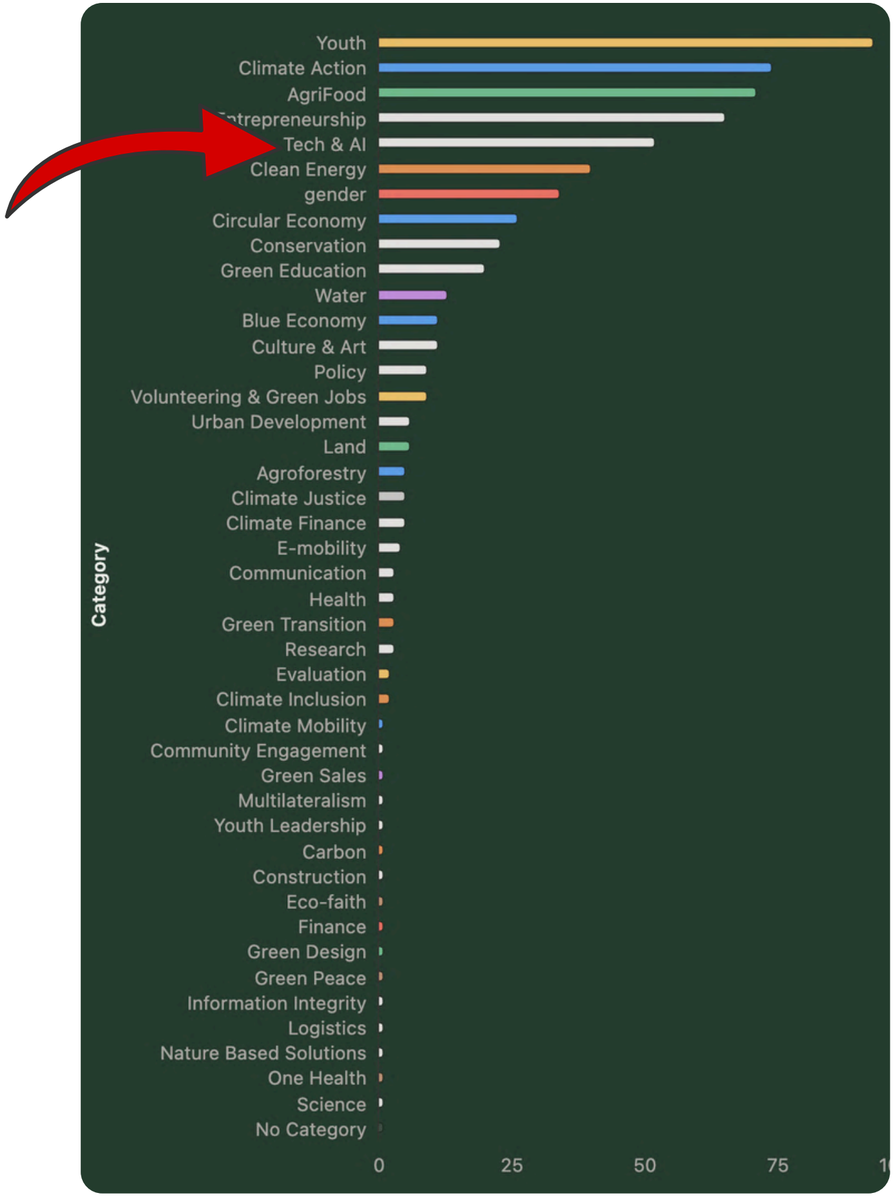
We are building the next generation of African climate leaders.

Goal:

Help students build **practical climate & AI** skills through hands-on projects.

Cohort Programs Outcome:

Students **leave with a green skills portfolio,** a network, and access to the green economy.



GX Africa Pathways to the green economy (based on 300+ green opportunities). ***We are increasingly seeing tech/AI opportunities intersecting with climate action***

We are capitalising on the AI wave

- Launched at COP30, the Global Initiative on Jobs & Skills for the New Economy projects that the climate transition could generate **375 million jobs globally in the next decade**.

- Lower-income countries, especially in Africa, however, **risk being locked into low-paying, labour-intensive roles** due to **skills gaps**, informality and limited investment in education. This creates a situation where motivated **young people have limited potential to contribute to climate action and access green & digital jobs**.

- Simultaneously, **the world is experiencing an AI revolution**. At GX Africa, we are demonstrating that using free Gen AI tools can **democratise green skills and opportunities in Africa.**

TVET/Uni Students **curious** about climate and AI

↓

Joined GX Africa

↓

Learned through structured challenges

↓

Used AI to simplify climate knowledge

↓

Created portfolio evidence

↓

Built confidence and voice

↓

Shared opportunities with others

↓

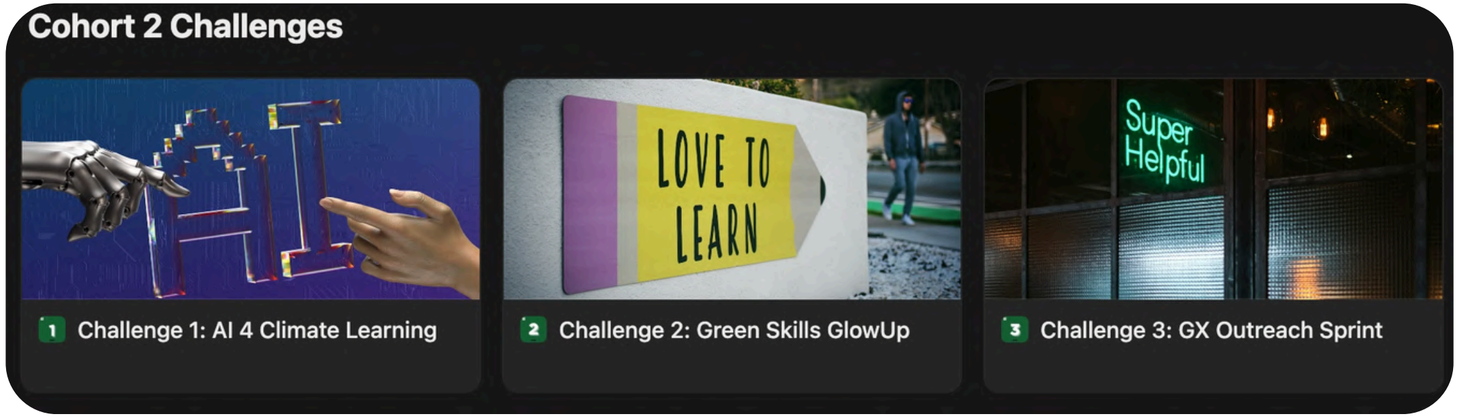
Expanded access across communities

↓

Became green economy leaders

Ambassadors' journey

3 Challenges in 3 months



Month 1: AI 4 Climate Learning

Use AI to discover and learn about your country's climate policies, producing a simple, shareable output.

Month 2: Green Skills GlowUp

Build practical green career skills through curated learning, then document what you learned and how it strengthens your pathway into the green economy.

Month 3: GX Outreach Sprint

Run a focused outreach campaign to teach underrepresented youth what you learned and share GX Africa resources.

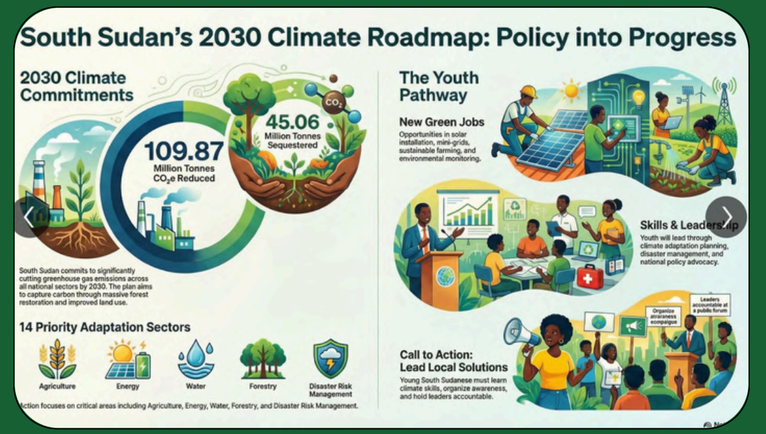
Prompts and guided steps are provided for every challenge.

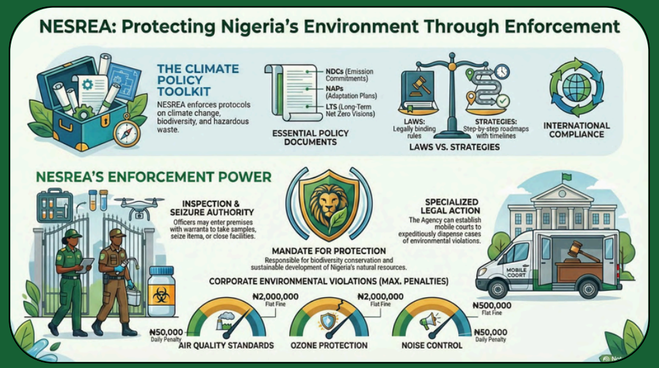
Challenge 1: AI-Aided Policy Learning

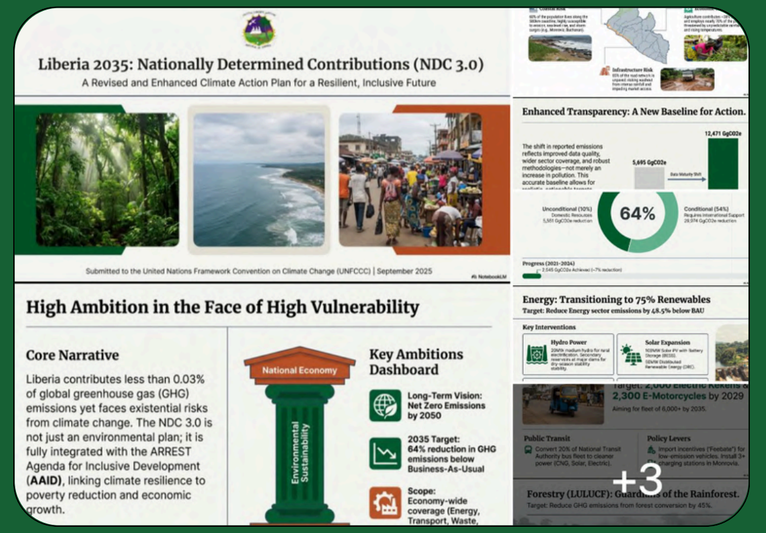
- Ambassadors used Gen AI tools to **discover and simplify climate policies** in their countries, including NDCs (Nationally Determined Contributions), national climate action plans, and environmental laws
- Participants learned that climate policy extends beyond the environment to include **green jobs, livelihoods, public health, agriculture, food security, energy, construction, and youth employment**
- Examples included analysis of Liberia's NDC, Kenya's NCCAP, Zambia's Green Growth Strategy, Nigeria's NESREA Act, and policies from Namibia, Algeria, and Sudan
- Many ambassadors discovered **they were previously unaware of these policy documents** in their own countries

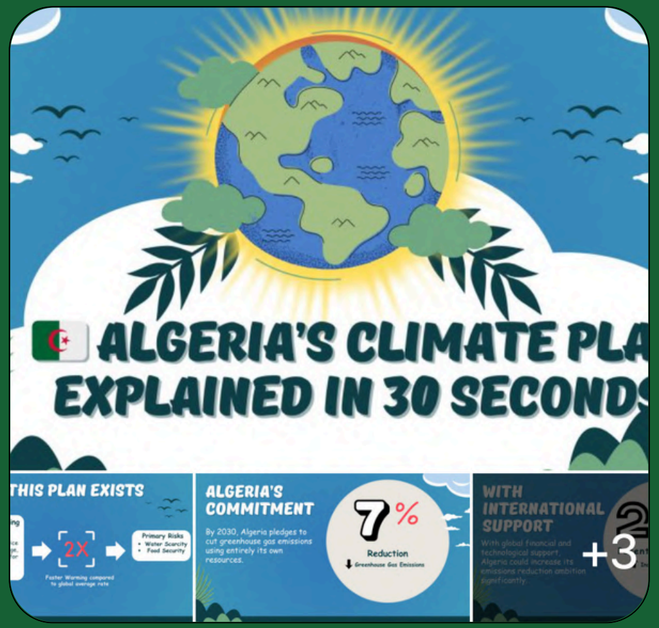
Check this LinkedIn post by our Ambassador from Algeria

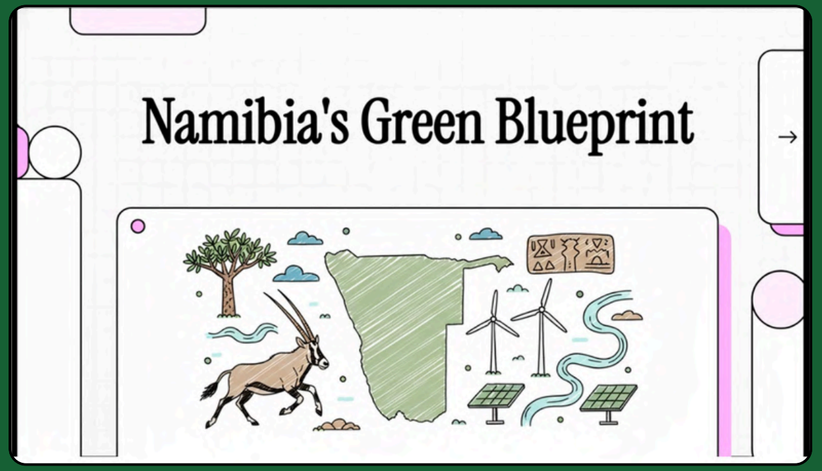
NotebookLM was used for 'groundsourcing'. AI was also used to translate between English and French

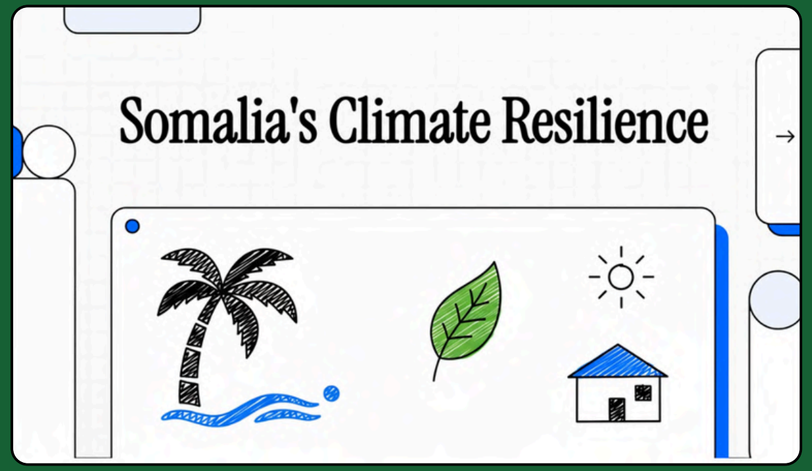


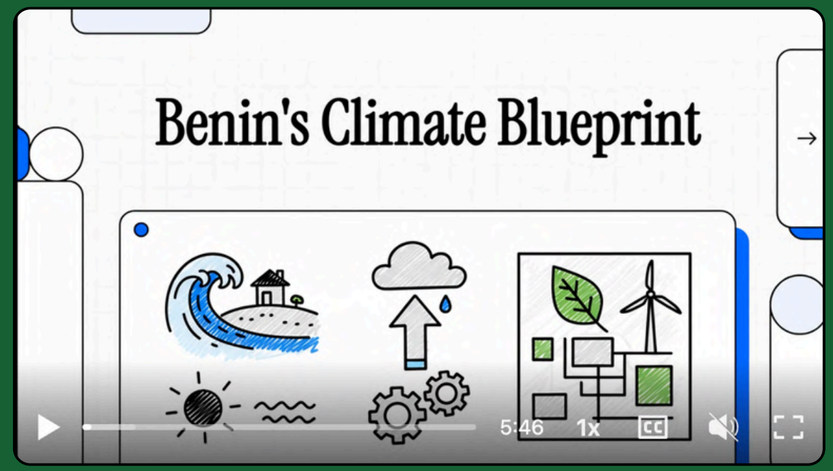







Namibia's Green Blueprint


Somalia's Climate Resilience


Benin's Climate Blueprint
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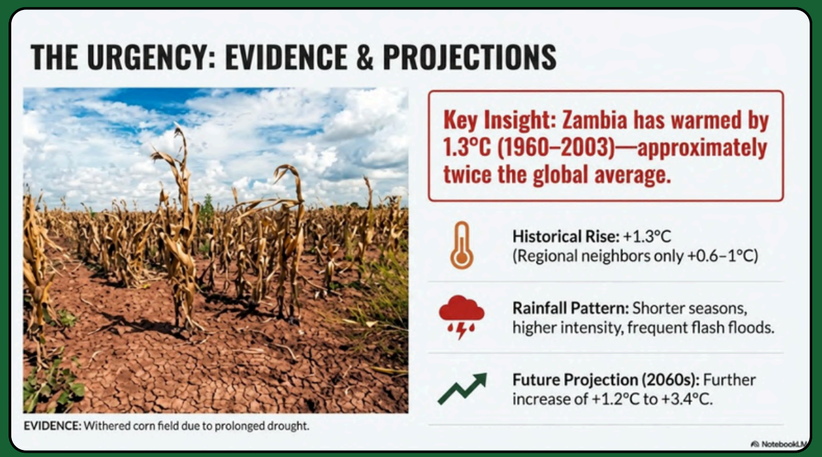
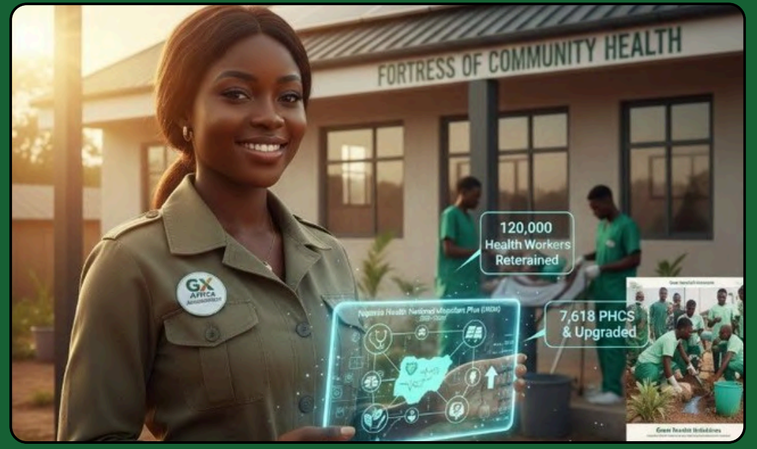

THE URGENCY: EVIDENCE & PROJECTIONS
Key Insight: Zambia has warmed by 1.3°C (1960–2003)—approximately twice the global average.
Historical Rise: +1.3°C
(Regional neighbors only +0.6–1°C)
Rainfall Pattern: Shorter seasons, higher intensity, frequent flash floods.
Future Projection (2060s): Further increase of +1.2°C to +3.4°C.
EVIDENCE: Withered corn field due to prolonged drought.


Pillars of Zimbabwe's National Environmental Policy
CORE VISION & GUIDING PRINCIPLES
The Central Goal: Sustainable Living
To avoid irreversible damage, maintain essential processes, and preserve biodiversity for future generations.
Pressure-State-Response Model
A framework to understand how social and economic pressures impact the environment's state.
Three Fundamental Environmental Rights
Clean Environment
Access to Information
Protection for Future Generations
Published in 2009, this framework integrates environmental management with social and economic activities to reduce poverty and improve quality of life.
KEY STRATEGIC FOCUS AREAS
Protecting Natural Capital
4,440 Plant Species
672 Bird Species
Conserving Zimbabwe's rich biodiversity, including 4,440 plant and 672 bird species.
Integrating Social & Economic Issues
Linking poverty reduction, health, and key economic sectors like mining and agriculture to environmental sustainability.
FRAMEWORK FOR ACTION
Framework for Action
Public Participation
Integrated Management Plans


Kenya's Green Blueprint
4:13
1x

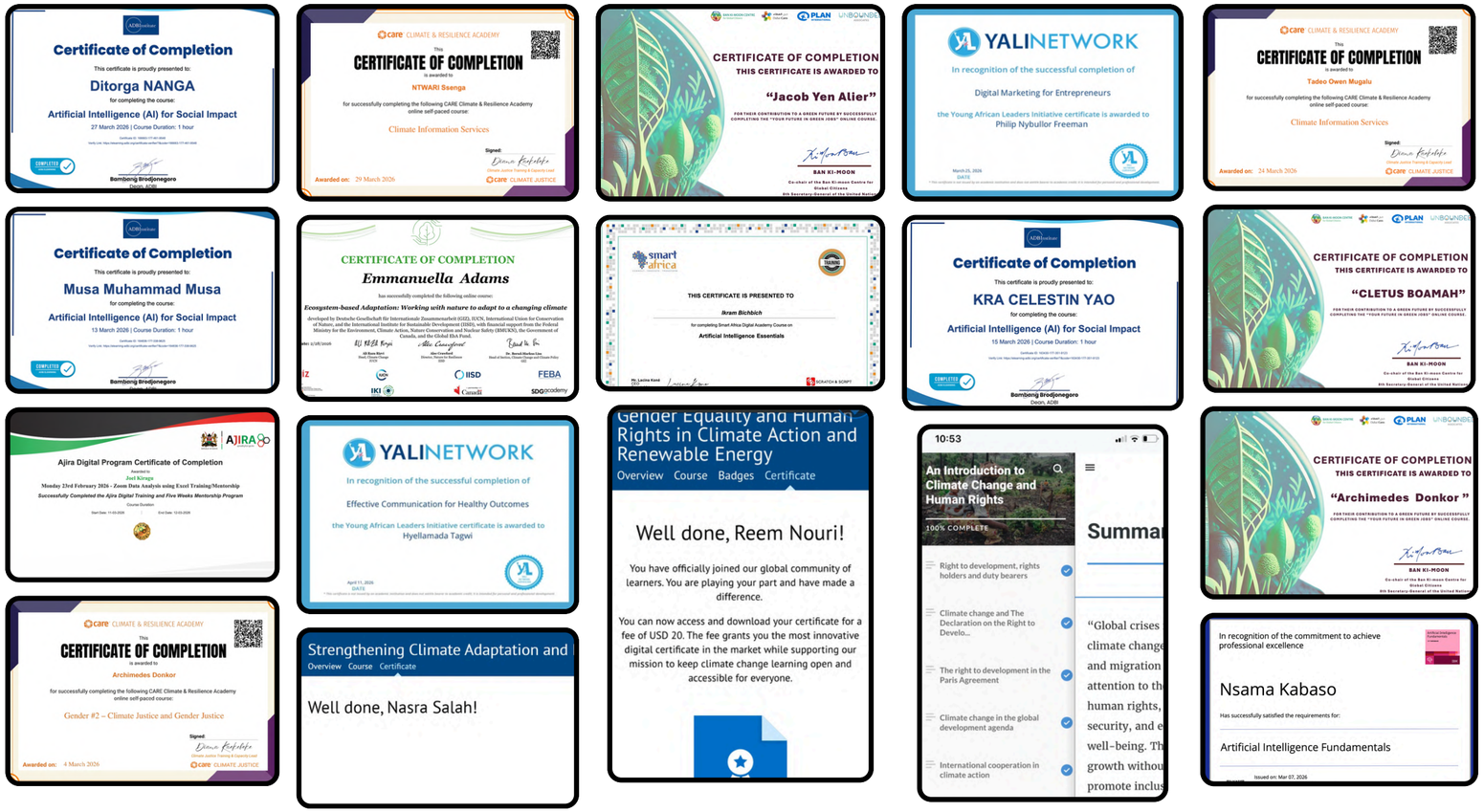

Analyser la Politique Climatique de la Côte d'Ivoire
CDN 2022
Contributions Déterminées au niveau National
Réduire les émissions
Créer des emplois verts
IA & Jeunesse
#ClimateAction | #YouthInClimate | #AI4ClimateLearning | #GXAfrica


FORTRESS OF COMMUNITY HEALTH
120,000 Health Workers Reterained
7,618 PHCS & Upgraded


GX AFRICA
CODE FOR CLIMATE JUSTICE.

Challenge 2: Skills Development

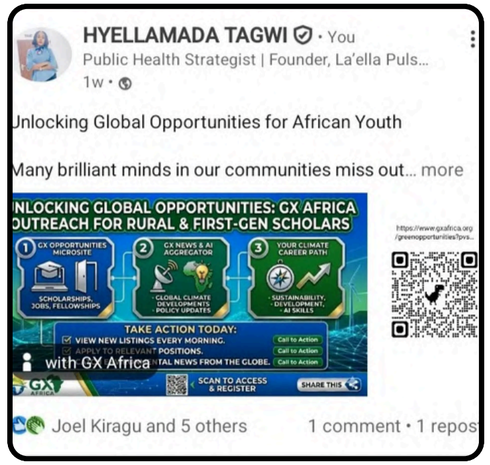
- Ambassadors completed courses from a curated compendium (over 100+ free courses/MOOCs offered externally) covering climate information, health, green economy, AI, digital transition, and climate change
- Certificates and course completions now form part of ambassadors' portfolios, demonstrating ability to learn independently and use digital tools
- Some participants completed multiple courses (one ambassador completed 4-5 courses)
- The **learning connected climate knowledge to real-world issues** and informed ambassadors' Challenge 3 activities

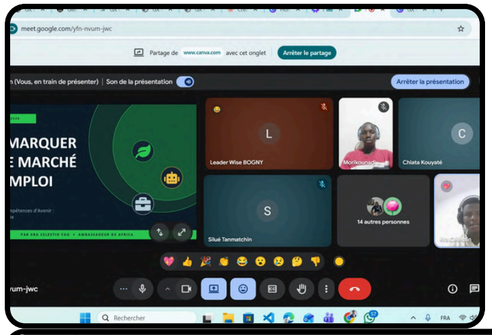


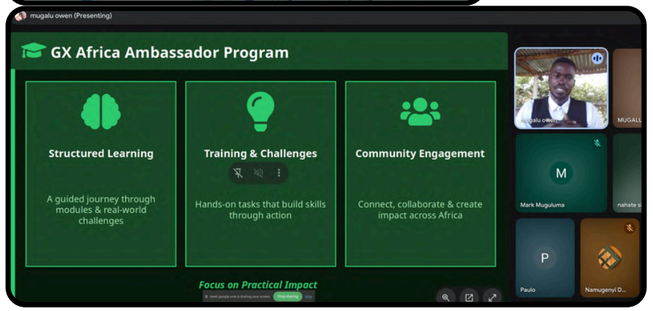
We partly used AI to curate the GX Learning Lab (100+ free courses/MOOCs externally offered).

Challenge 3: Community Outreach

- Ambassadors shared opportunities and resources through **WhatsApp groups, LinkedIn, social media, webinars, Google Meet sessions, student networks, environmental clubs, and physical community sessions**
- Reached diverse audiences, including students, graduates, young professionals, women, first-generation learners, and local communities across Sudan, Somalia, Algeria, Zambia, Rwanda, Uganda, and other countries
- **Nearly 6,000 people reached** through outreach activities alone, with some ambassadors reaching 2,000-3,000 people from single engagements







Ambassadors used AI to design posters, slides, and messaging. They did this of their own volition. This likely made their outputs faster and fun to do.


WhatsApp
5 reposts
GX Africa
4,671 followers
11m
In support of Sudan's young people 🇸🇩 🇸🇩 Climate justice and educational justice go hand in hand! 🌍 📚 Brilliant insights from Reem Nouri on #GreenSkillsWithoutBorders Proud to see our Generation GX community championing these vital conversations! 🙌🏾💚 #GXAfrica #SDG4 #EducationalJustice #ClimateAction"
Reem Nouri · You
Talent Acquisition | International Development Intern |C...
1h
Does a passport define the right to learn?
My journey as a GX Africa Ambassador, through...more
HTTPS://WWW.GX AFRICA.ORG/
GREEN SKILLS WITHOUT BORDERS
SDG 13: CLIMATE ACTION
Empowering Sudanese youth to lead global climate action beyond borders.
SDG 4: QUALITY EDUCATION
Breaking barriers to international green certifications for all.
SDG 10: REDUCED INEQUALI
Making Green Education a human right, not a passport privilege.
1
1 comment

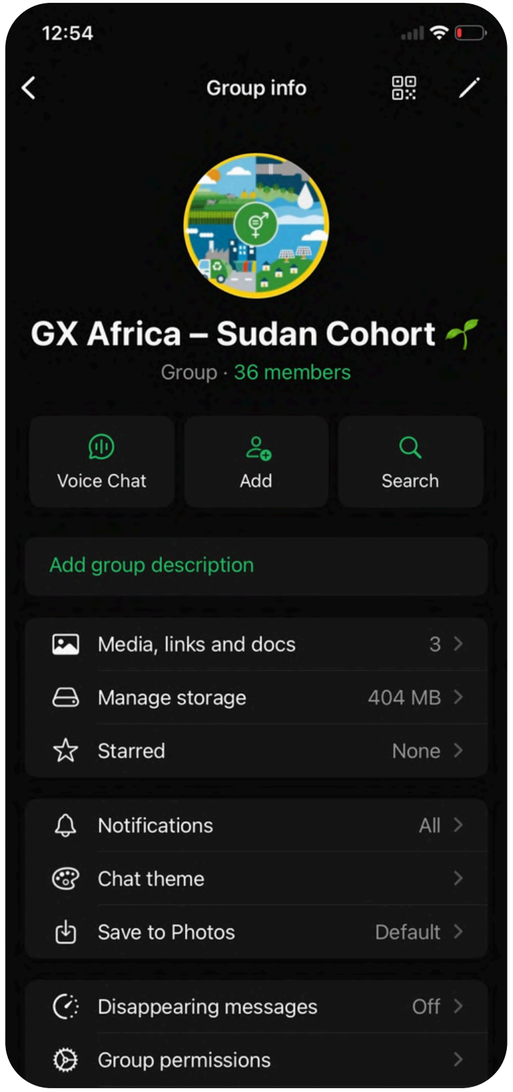
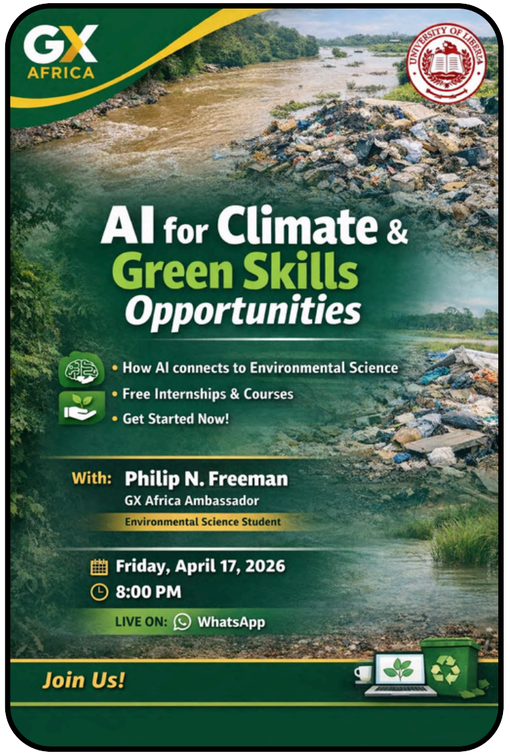
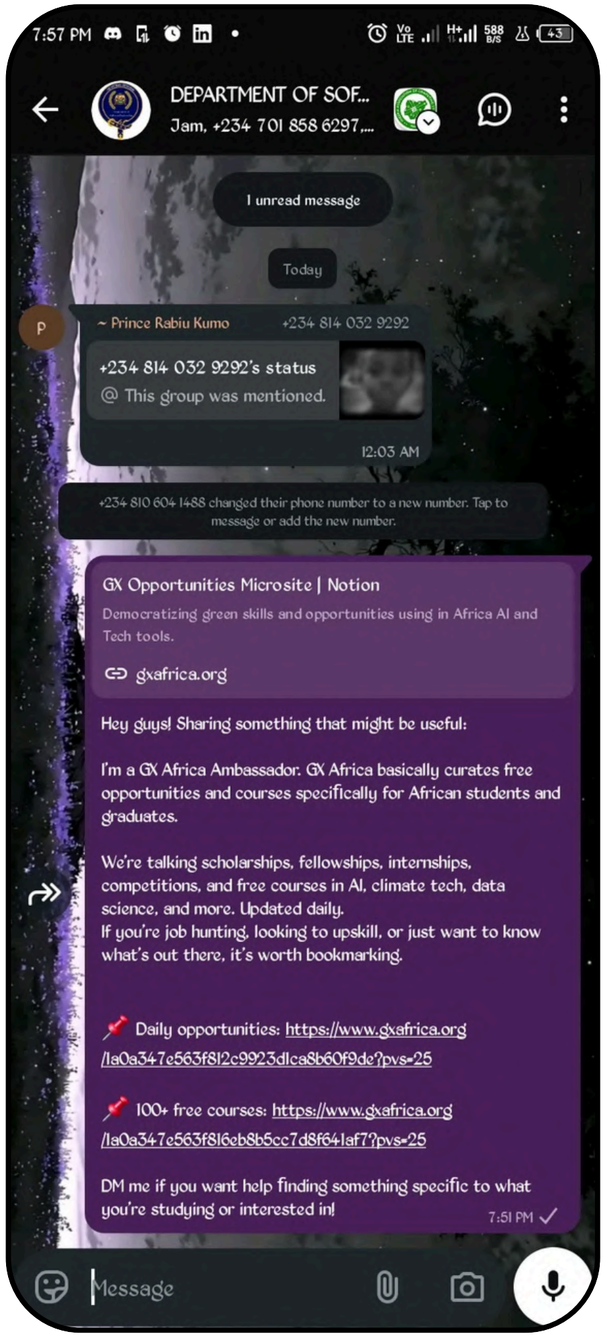
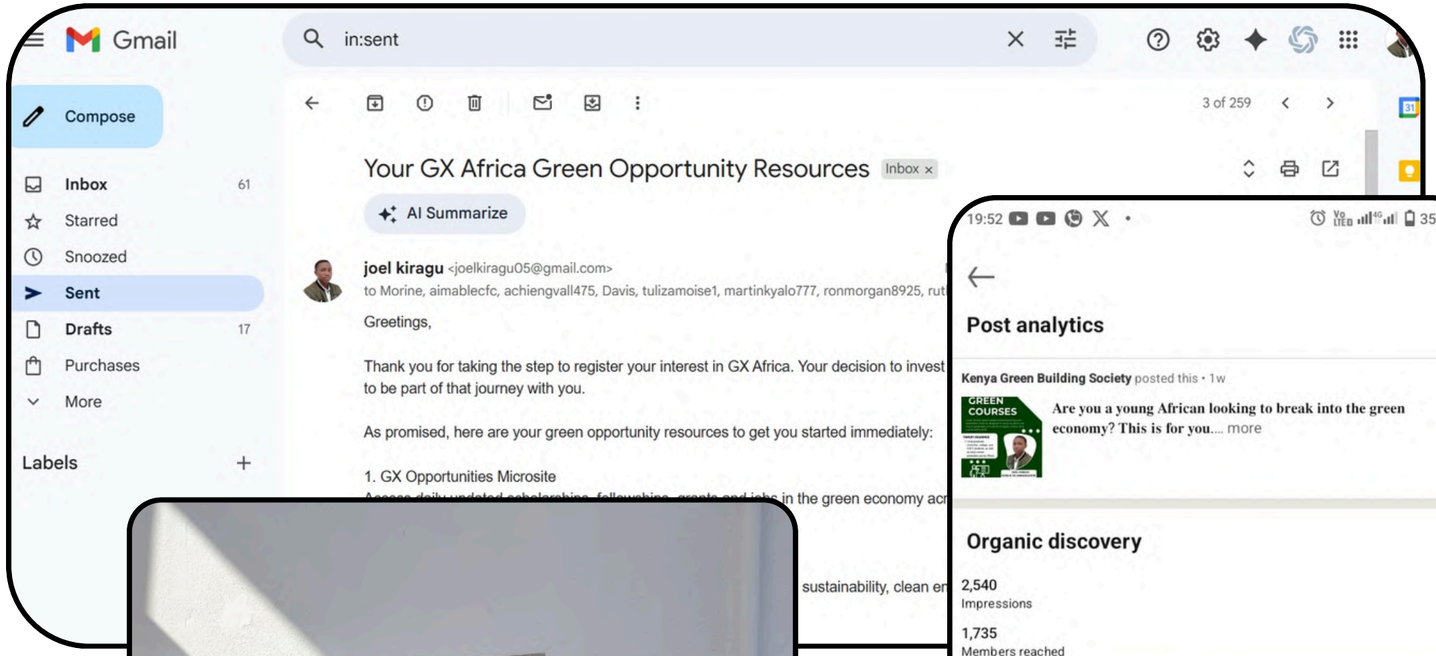

12:54
Group info
GX Africa – Sudan Cohort 🌱
Group · 36 members
Voice Chat
Add
Search
Add group description
Media, links and docs 3
Manage storage 404 MB
Starred None
Notifications All
Chat theme
Save to Photos Default
Disappearing messages Off
Group permissions

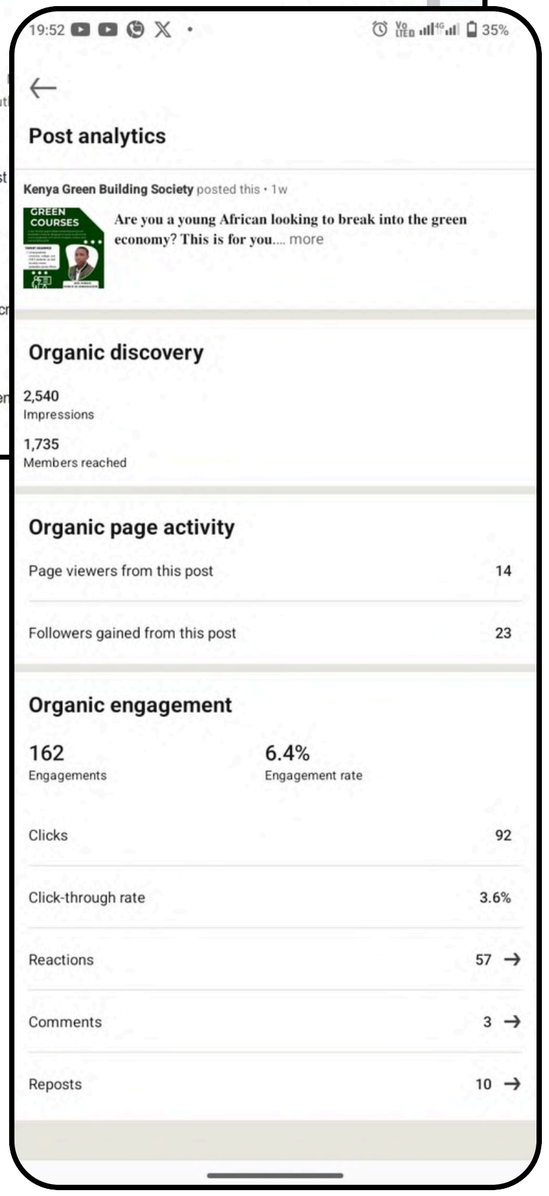

Photo credits: Nasra Salah Ali (GX 2.0 Ambassador, Somalia)


GX AFRICA
AI for Climate & Green Skills Opportunities
• How AI connects to Environmental Science
• Free Internships & Courses
• Get Started Now!
With: Philip N. Freeman
GX Africa Ambassador
Environmental Science Student
Friday, April 17, 2026
8:00 PM
LIVE ON: WhatsApp
Join Us!


7:57 PM
DEPARTMENT OF SOF...
Jam, +234 701 858 6297,...
1 unread message
Today
~ Prince Rabiu Kumo
+234 814 032 9292
+234 814 032 9292's status
@ This group was mentioned.
12:03 AM
+234 810 604 1488 changed their phone number to a new number. Tap to message or add the new number.
GX Opportunities Microsite | Notion
Democratizing green skills and opportunities using in Africa AI and Tech tools.
gxafrica.org
Hey guys! Sharing something that might be useful:
I'm a GX Africa Ambassador. GX Africa basically curates free opportunities and courses specifically for African students and graduates.
We're talking scholarships, fellowships, internships, competitions, and free courses in AI, climate tech, data science, and more. Updated daily.
If you're job hunting, looking to upskill, or just want to know what's out there, it's worth bookmarking.
Daily opportunities: https://www.gxafrica.org/la0a347e563f812c9923dlca8b60f9de?pvs=25
100+ free courses: https://www.gxafrica.org/la0a347e563f816eb8b5cc7d8f641af7?pvs=25
DM me if you want help finding something specific to what you're studying or interested in!
7:51 PM
Message


Gmail
in:sent
Compose
Inbox 61
Starred
Snoozed
Sent
Drafts 17
Purchases
More
Labels
3 of 259
Your GX Africa Green Opportunity Resources
Inbox
AI Summarize
joel kiragu <joelkiragu05@gmail.com>
to Morine, aimablecfc, achiengvall475, Davis, tulizamoise1, martinkyalo777, ronmorgan8925, rut
Greetings,
Thank you for taking the step to register your interest in GX Africa. Your decision to invest
to be part of that journey with you.
As promised, here are your green opportunity resources to get you started immediately:
1. GX Opportunities Microsite
sustainability, clean en


GREENSPIRE
ESSAIA
Higher School of Food Sciences And Agro-food industries
"Greenspire" your green therapy
Scientific Club of Higher School of Food Sciences And Agro-Food Industries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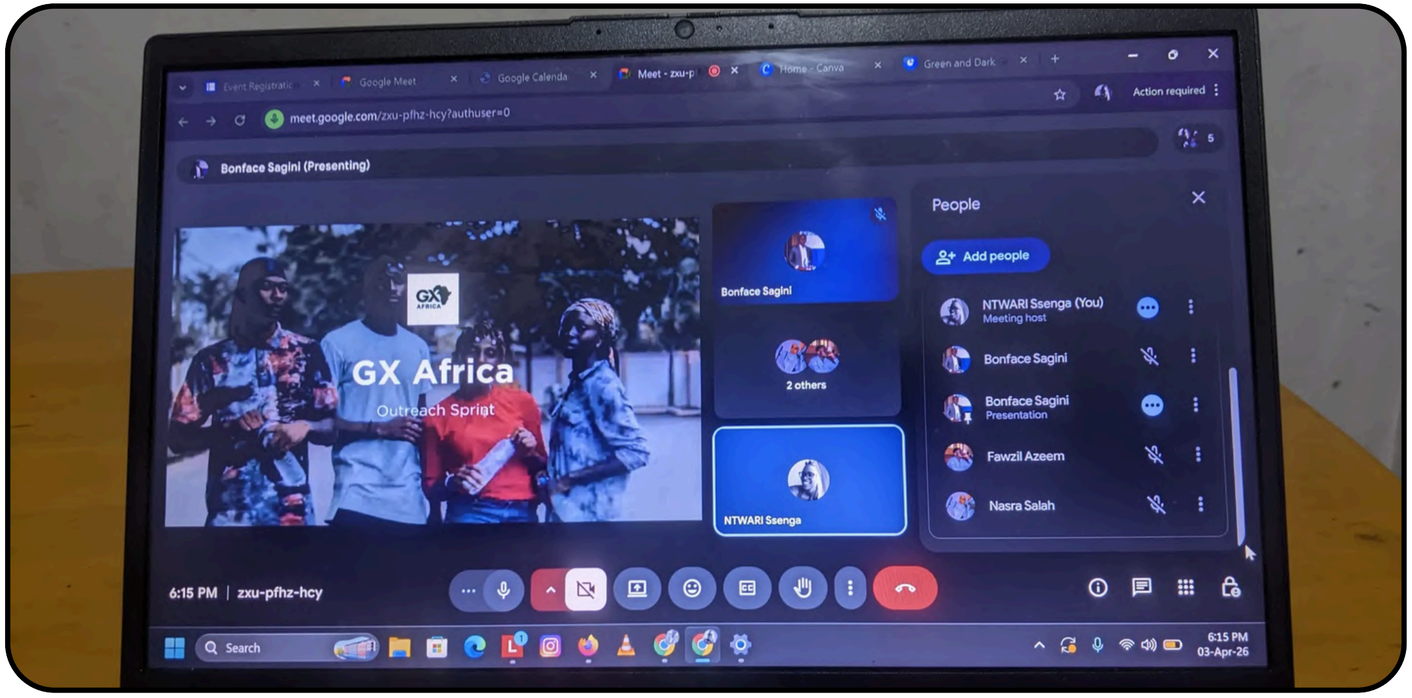
Post analytics
Kenya Green Building Society posted this • 1w
GREEN COURSES
Are you a young African looking to break into the green economy? This is for you.... more
Organic discovery
2,540
Impressions
1,735
Members reached
Organic page activity
Page viewers from this post 14
Followers gained from this post 23
Organic engagement
162
Engagements
6.4%
Engagement rate
Clicks 92
Click-through rate 3.6%
Reactions 57
Comments 3
Reposts 10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Nasra Salah
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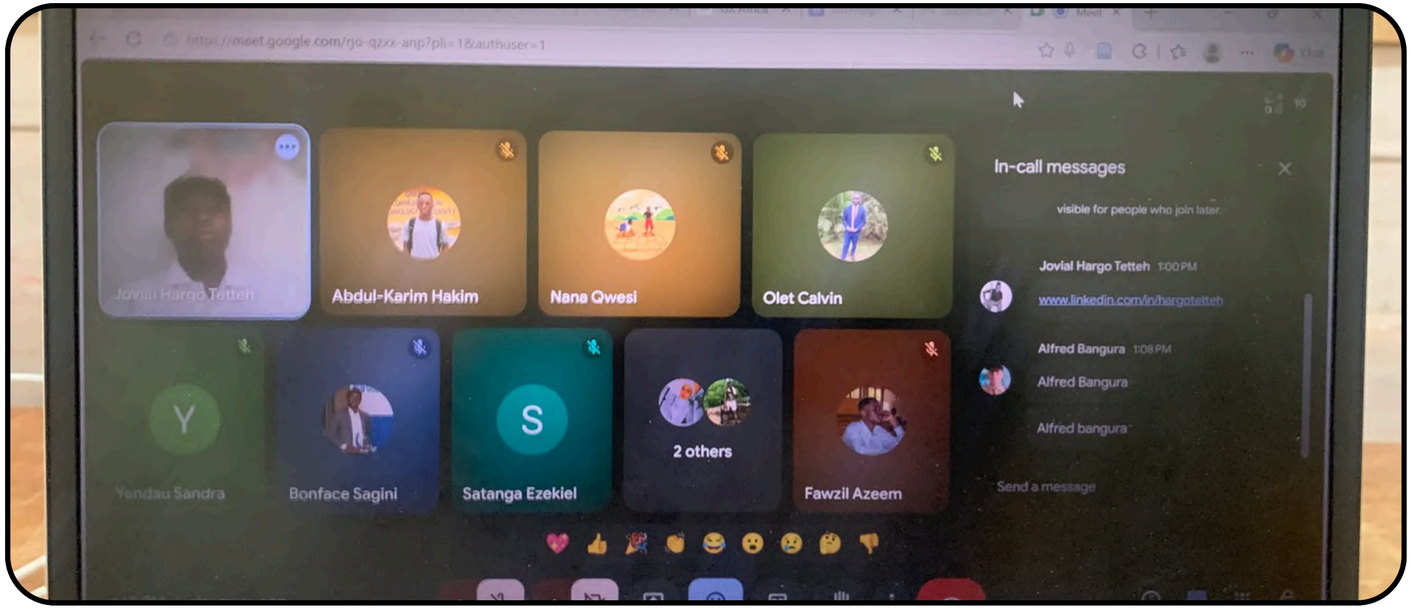
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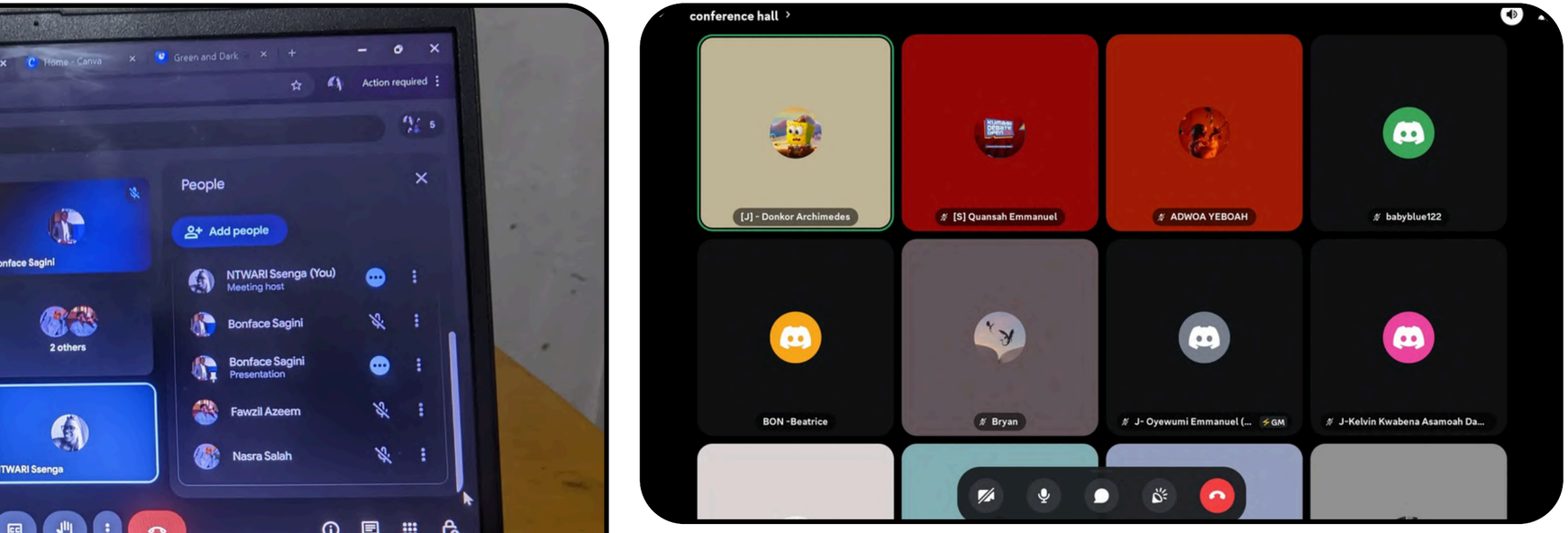
Fawzil Azeem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NATIONAL
FISH
FESTIVAL

What AI means to GX Africa

“**AI holds a mirror to us**. It can **amplify our creativity**, accelerate our learning, and **democratize access** to knowledge. But **it also amplifies our biases, our shortcuts, and our willingness to outsource thinking**. The algorithm can now generate a masterpiece in seconds. It can paint the portrait. It just can't be the person who lived long enough to deserve one. What it can't generate is a reason to make one in the first place.”

Emmanuella

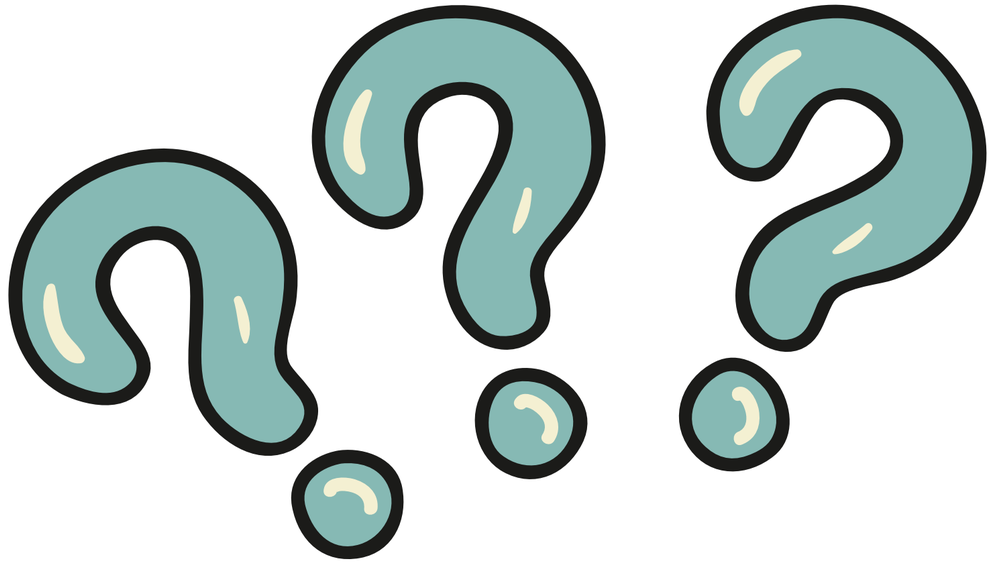
“AI is **not just a tool, it is a bridge**.

It enabled me, as a young professional in Kenya, to analyze a 200-page national climate policy and **uncover opportunities that would otherwise have taken months to understand.**

When used ethically, AI becomes **a force for inclusion**, putting knowledge and opportunity within reach of young people regardless of their background or geography.

The responsibility lies in **ensuring it serves everyone, not just the privileged few**.”

Joel



Final Reflections