Leveraging NREN Capabilities: Boosting Women's Impact in Climate Data Analysis

Presented by: Lucas Yikimpa Chigabatia, CEO of GARNET

Venue: Conference Room - Vice Chancellors Ghana Office Complex

Date: 30th August 2024

Purpose of Presentation

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To discuss **how GARNET,** as a National Research and Education Network (NREN), **can empower women** in the field of **climate data analysis.**

WHY?

Purpose of Presentation

➢ Climate change is one of the most **pressing challenges of our time**.

➢ Accurate climate **data analysis is crucial for understanding** its **impact,** and for

➢ Devising **strategies** for **mitigation** and **adaptation**.

Why Women in Climate Data Analysis?

➢ **Importance of Gender Diversity in Climate Science:**

Diverse perspectives lead to more innovative solutions and comprehensive analysis in climate research.

➢ **Current Challenges:**

Underrepresentation of women in climate science, **particularly in data analysis roles**, due to limited access to resources, training, and mentorship.

➢ **Opportunities for GARNET:**

By leveraging its capabilities, GARNET can play a crucial role in empowering women to take on more significant roles in climate data analysis.

What is GARNET

GARNET was Conceived in 1995

To Build an advanced Network of institutions of higher

To provide high-speed internet connectivity and specialized services to the academic and research community in Ghana

To promote

- ➢ Teaching
- ➢ Learning
- ➢ Research
- ➢ Collaboration

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Research Schools Network

What is GARNET

GARNET was incorporated as a Not-for-profit Company Limited by Guarantee in 2010.

Membership to GARNET is formulated on the basis of **Open Access, implying that all** accredited Tertiary Education and Research **Institutions in Ghana are free to join as members.**

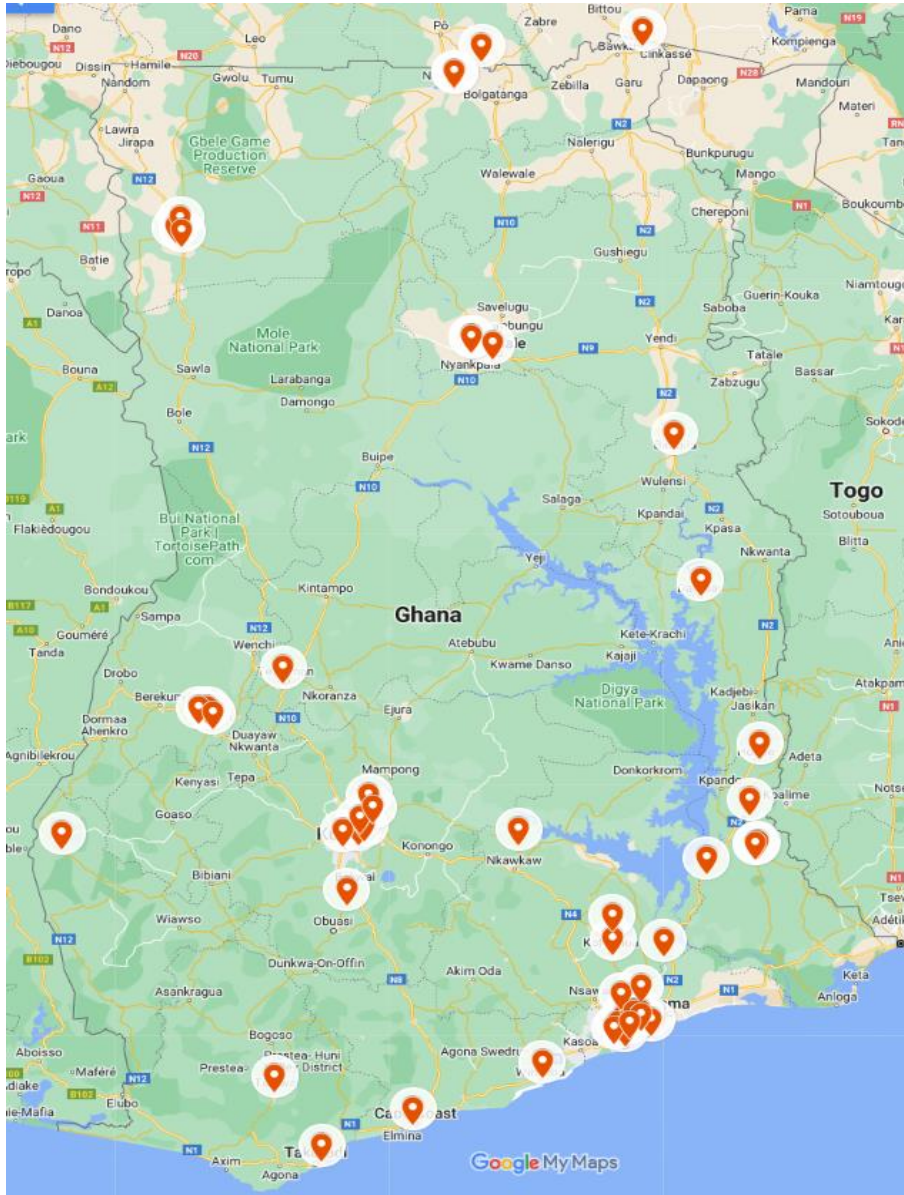**The Organisation is** owned by its members.

Membership

➢ Provide or facilitate **technical support services** to member institutions.

➢ **Act as "Buyers Club"** to negotiate with Service providers for better pricing by aggregating requirements of member institutions.

Total Membership **62**

Forty-nine **(49)** Public
Fourteen **(13)** Private

Membership

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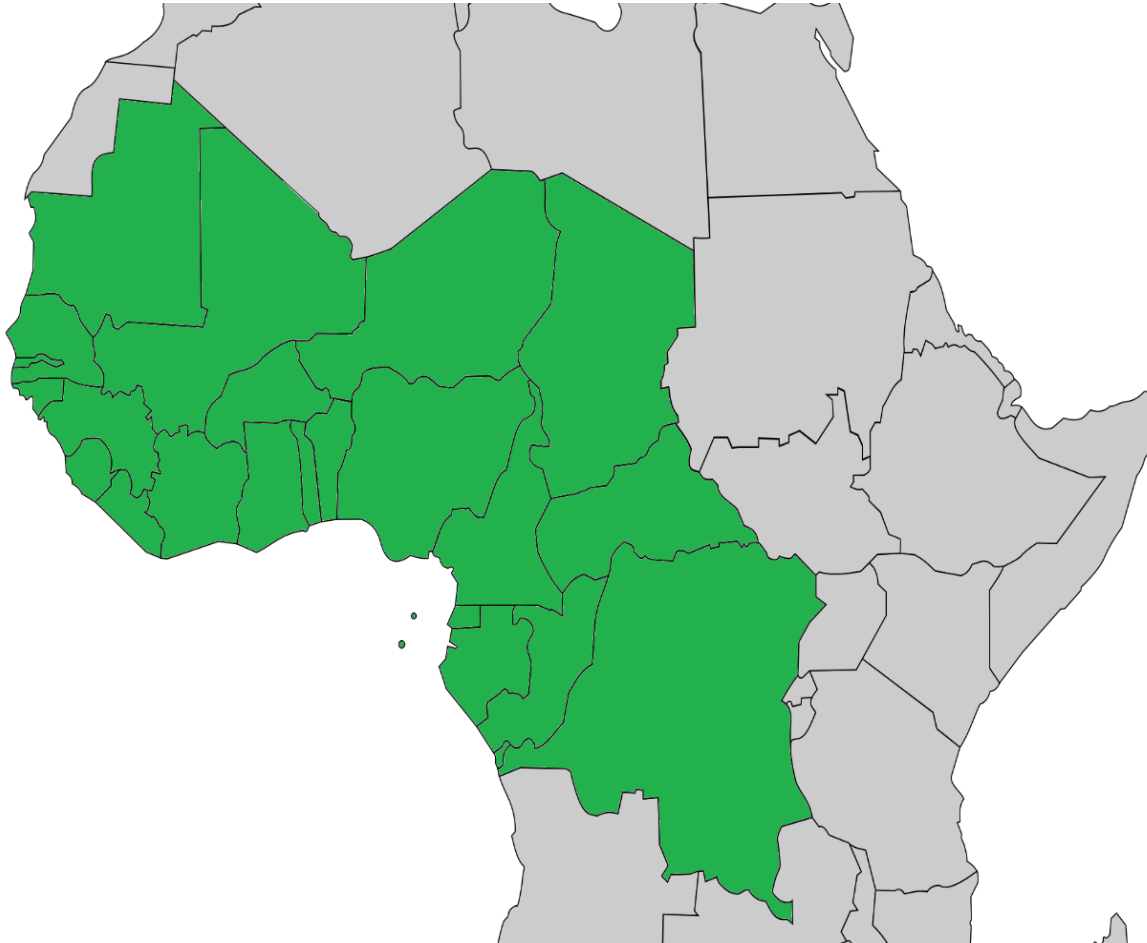| No	Name of Institution	No	Name of Institution
1	University of Ghana	24	Ho Technical University
2	Kwame Nkrumah University of Science and Technology	25	Koforidua Technical University
3	University of Cape Coast	26	Takoradi Technical University
4	University of Education Winneba	27	Accra Technical University
5	University of Development Studies	28	Cape Coast Technical University
6	University of Professional Studies, Accra	29	Bolgatanga Technical University
7	Ghana Institute of Management and Public Administration	30	Sunyani Technical University
8	University of Health and Allied Sciences	31	Tamale Technical University
9	University of Mines and Technology	32	Kumasi Technical University
10	University Energy and Natural Resources	33	Dr Hilla Liman Technical University, Wa
11	Ghana Communication and Technology University	34	African Institute for Mathematical Sciences
12	University of Environmental and Sustainable Development	35	Catholic University of Ghana
13	CKT University of Technology and Applied Science	36	Presbyterian University College
14	SDD University of Business & Integrated Development Studies	37	Methodist University College
15	AAM University of Skills Training & Entrepreneurial Development	38	Valley View University - Kumasi
16	Ghana Institute of Journalism	39	Valley View University - Accra
17	Regional Maritime University	40	Accra College of Medicine
18	Ghana Institute of Languages	41	Central University
19	National Film and Television Institute	42	Garden City University College
20	Ghana Tertiary Education Commission	43	Christian Service University College
21	Savannah Agricultural Research Institute		
22	Ghana Academy of Arts and Science		
23	Council for Scientific & Industrial Research		

Membership

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No	Name of Institution
44	Entrance University College of Health Sciences
45	Valley View University, Techiman
46	African University College of Communications
47	Ashesi University
48	Berekum College of Education
49	Akrokerri College of Education
50	ST John Bosco College Of Education
51	Peki College of Education
52	Nusrat Jahan Armadiya College of Education
53	E. P. College of Education, Bimbilla
54	Holy Child College of Education
55	E. P. College of Education, Amedzope
56	Bia Lamplighter College of Education, Sefwi-Debiso
57	Dambai College of Education
58	Gbewaa College of Education
59	SDA College of Education
60	College of Nursing and Midwifery, Nalerigu
61	Education International
62	GNAT Institute for Research and Industrial Relations Studies

GARNET belongs to the West And Central Africa Research & Education Network (WACREN)

WACREN Members:

1. RerBénin – Bénin
2. RBER - Bénin
3. FasoREN - Burkina Faso
4. RIC - Cameroon
5. TchadREN - Tchad
6. RITER - Côte d'Ivoire
7. **GARNET - Ghana**
8. Gn-REN - Guinea
9. LRREN - Liberia
10. MaliREN - Mali
11. NgREN - Nigeria
12. NigerREN - Niger
13. SLREN - Sierra Leone
14. TogoRER - Togo

Governance

The Board of GARNET is composed as follows.

1. **Professor Nii Narku Quaynor** – Chairman

2. **Professor Elsie Effah Kaufmann** – Member, Dean, School of Engineering Sciences , UG

3. **Professor Nicholas N. N. Nsowah-Nuamah** - Member, Representative of Private Universities.

4. **Professor Peter Amoako-Yirenkyi** - Member, Representative of Public Universities.

5. **Dr. Emmanuel Kitcher** - Member, Chairman of Technical Committee.

6. **Ms Teki Akuetteh** – Member, Senior Partner to Nsiah Akuetteh & Co Law Firm

7. **Mrs. Vesta Akosua Nunoo** – Member, Fellow of the Chartered Certified Accountants (FCCA)

8. **Mr. Jacob Tetteh Akunor** - Member, Representative of Ministry of Education.

9. **Mr. Emmanuel Ofori** - Member, Representative of Ministry of Communications and Digitalisation (MoCD).

10. **Mr. Lucas Yikimpa Chigabatia** - Member, Chief Executive Officer, GARNET

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NRENS are Unique for providing

➢ Dedicated **High-Speed Connectivity**: Ensures seamless data transfer, **essential for handling large datasets** in climate research.

➢ **Access to Global Research Networks**: Enables **collaboration with international research institutions** and access to global climate data resources.

➢ Specialized Services: Provides **platforms for e-learning**, **cloud services, and data storage** crucial for climate data analysis.

GARNET Services

Project Implementation Support, Content Sharing, Internet Access, Deal Negotiation, Skills Development.

- ➢ **Direct Internet Bandwidth** for Education and Research Community.

- ➢ **Eduroam** (Educational roaming for Academics and Researchers).

- ➢ **Zoom Conferencing Package** (Special Pricing for R&E Community).

- ➢ **GARNET Tertiary Education Mobile Data** (roaming service on GARNET).

- ➢ Skills Development Through **Technical Training** Workshops.

- ➢ Network Improvement through **Direct Engineering Assistance** (DEA).

Impact

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- ➢ **Overall population impacted is in excess of 550,000**
  - 525,000 students
  - 55/45 percentage Male to female split

- ➢ **Improved access** to internet for students, faculty and researchers
  - Access to Wi-fi in student hostels, computer labs, and Libraries
  - Access to research and educational content and HPC Services
  - Science Gateway and limited number of Sensors deployed

- ➢ **Increased availability** of bandwidth (10Gbps from July 2022)

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Leverage GARNET's Capabilities to Empower Women

➤ **Access to Resources and Training:**

   o **Provide women** with **access** to the necessary **tools, data sets, and high-speed internet** needed for climate data analysis.

   o Organize **targeted workshops and training sessions focused on data analysis skills**, utilizing GARNET's network and partnerships.

➤ **Mentorship and Networking Opportunities:**

   o Use **GARNET's connectivity to foster online communities for women** in climate science, enabling knowledge sharing and collaboration.

Leverage GARNET's Capabilities to Empower Women... Continued

➢ **Promoting Research and Collaboration:**

- o Encourage interdisciplinary research projects that involve women researchers, leveraging GARNET's links with international research networks.

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Building a Climate Data Hub:

➤ Develop a dedicated climate data hub within GARNET to facilitate access to global and regional climate data sets, tailored to support female researchers. **Collaborate with GMeT and WACREN**

Expansion of Training Programs:

➤ Collaborate with international organizations to expand training programs specifically designed for women in climate science and data analysis.
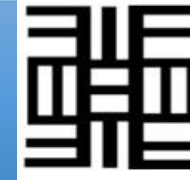
Establishing a Women in Climate Science Fellowship:

➤ Introduce a fellowship program to support women pursuing careers in climate data analysis, offering funding, resources, and mentorship.
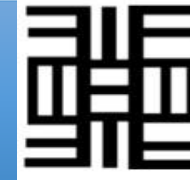
Developing Partnerships for Sustainability:

➢ **Strengthen partnerships** with governmental, non-governmental, and international organizations to **secure funding and resources** to sustain and scale up **initiatives aimed at boosting women's impact in climate data analysis.**

➢ Facilitate Transport of **Earth Observation data**, from satellites and sensors to Meteorological and Geological Survey agencies **using highspeed terrestrial links.**

➢ Negotiate Community Price Deal for Anti-plagiarism software Service – **Turnitin and Network devices**

Plans and Strategic Initiatives

➢ Deploy eLearning Management Systems Platform (LMS).

➢ Deploy **open access repository and publishing platform** (in Collaboration with CARLIGH and LIBSENSE)

➢ Implement a **Ghana Qualifications Register -** Digital Certificates.

➢ Deploy **Datawarehouse and Analytics** Portal (Education & earth observation).

➢ **Establish the GARNET Identity Federation and facilitate single sign-on** to access academic and research services.

Thank You