



Introduction to eGYAfrica

Reducing the Digital Divide for Science and Education in Africa

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What is eGYAfrica?

eGYAfrica is a bottom-up effort by scientists from Africa and elsewhere to improving Internet capabilities in African Universities and other research and education institutions. eGYAfrica sets out to achieve this by seeking to influence decision-makers and providers who are in a position to take effective action to address the problem. The eGY strategy has four thrusts. (i) encouraging the formation of national and international bodies and groups who share this objective, (ii) providing an information base and arguments to highlight the Digital Divide problem and the value of investing in a cyber-infrastructure for research and education, (iii).

eGYAfrica was initiated as an Electronic Geophysical Year (eGY) effort to reduce the Digital Divide, with cooperation from the International Heliophysical Year (IHY) community. The international scientific community supports and promotes eGYAfrica through the International Council for Science (ICSU) Regional Office for Africa in Pretoria and the ICSU Committee on Data for Science and Technology (CODATA). The main sponsors of eGYAfrica is the International Union of Geodesy & Geophysics (IUGG) and the International Association of Geomagnetism & Aeronomy (IAGA), with additional support from NASA, the Laboratory for Atmospheric and Space Physics, University of Colorado (LASP), and in-kind support from other institutions.

Why eGYAfrica?

Adoption of modern information and communication technologies is transforming research and education worldwide, and is widely acknowledged as essential for achieving Millennium Development Goals in Africa. Initiatives, such as eGY, proclaim that this information revolution enables scientists and educators in rich and poor communities alike to share equally the benefits of ready, open access to data, information, and services. Yet poor access to the Internet remains the single most important contributor to the growing divide that is isolating African scientists from mainstream modern science, education, and training opportunities and resources. eGYAfrica seeks to address this problem.

Objectives

eGYAfrica seeks to achieve better Internet and Grid access for scientists (and others) in universities and similar research and education institutions in Africa, so they can participate on equal terms with scientists from the rest of the world as we move into the information era. The belief is that

strengthening the research and tertiary education sector in this way is a necessary step towards making African communities wealthier, safer, and more sustainable.

Rationale

Scientists in Universities don't have money to fund better facilities and they don't make decisions about allocating government resources. But they can influence decision-makers and funding bodies through the voice of the scientific community at the local, national, and international levels. Information that needs to be made available includes well-informed statements about the present situation, the benefits and cost-effectiveness of good Internet access, case histories to demonstrate new opportunities and successes, problems that occur, and draw attention to existing policy commitments and resolutions about reducing the digital divide.

eGYAfrica's role

- stimulate, and provide a focus for bottom-up action by scientific communities in Africa, particularly at the national level.
- promote communication networking among scientists and educators who share common concerns
- provide links with the international scientific community and funding bodies
- provide a shared information base to ensure that action taken is well-informed
- provide a forum to coordinate action at local, national, and international levels
- work through existing initiatives with related objectives - such as the UN GAID *Global Alliance for Enhancing Access to and Application of Scientific Data in Developing Countries*, the IAP program: *Access to Scientific Information in Developing Countries*¹, CODATA Task Groups, INASP, ICTP, and ICSU's Regional Office for Africa.

Steps forward

1. Expand the group of participants, both within and outside Africa, leading to the establishment of groups of concerned scientists in each African country. Use existing networks when possible, such as those within IHY, CODATA, INASP, IAP, ICSU-ROA.
2. Assemble reference information about present status, plans, problems, policies, benefits, and opportunities, including case histories. Such information is to be used as a basis for consultation, raising awareness, and preparing arguments why governments and donors should invest in Internet facilities.
3. Engage with bodies and decision-makers to raise the profile of the needs of scientists and educators, and increase awareness of the benefits of providing better Internet services.
4. Host an eGYAfrica 2009 Workshop (details can be downloaded from the website: www.egy.org/egyafrika.php)

Securing funding from major aid donors for projects in Africa is not currently an eGYAfrica function. This is not necessarily beyond the scope of eGYAfrica, but action would need to be carefully coordinated with other players who are doing this.

Progress so far

1. An organisational structure has been established (Appendix-A), and participation in eGYAfrica is expanding. Officers have attended ICT-related conferences.
2. A website (www.egy.org/egyafrika.php) and electronic newsletter are established.
3. National eGYAfrica groups are forming, e.g., in Ethiopia. A list of suggested activities for national groups is given in Appendix-B.
4. Working relationships are being formed with bodies with related interests – e.g., IUGG and other ICSU Unions, ICTP, CODATA, IAP, eSDDC, eIFLnet, INASP, AGS.

¹ within the program *Digital Knowledge Resources and Infrastructure in Developing Countries*.

5. eGYAfrica is working with the PingER Project and ICTP to measure and analyse Internet performance (response) throughout Africa.
6. A Questionnaire Survey has been prepared and a test version has been run. A more comprehensive questionnaire is being developed in collaboration with ICTP (Sandro Radicella) to get information about the present status of Internet access for university scientific research and education staff for each country or region in Africa, new developments and plans, problems, benefits, and opportunities.
7. A workshop is planned for 2009 or 2010: IUGG has awarded a grant to help run the Workshop; IAP, eSDDC, CODATA, eIFLnet, and AGS are interested in some agreed form of joint meeting.

Further information

Visit: www.egy.org/egyafrika.php

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APPENDIX-A. eGYAfrica Committee

eGYAfrica Committee		
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APPENDIX-B. Activities for national eGYAfrica groups

This is a list of suggestions of activities for national eGYAfrica groups. The list is presented as an aid to planning. It is not intended to be exclusive or to be applicable for all countries. Countries with well-developed cyber-capabilities are encouraged to participate in eGYAfrica with the aim of helping their less fortunate colleagues elsewhere.

- Establish a national group of scientists concerned about securing better Internet access for their own and other communities.
- Hold local and national meetings to develop people-networks, share information (problems, successes, progress, opportunities), and plan actions.
- Identify areas and targets for advocacy, where scientists individually and through special interest groups, institutions, national, and international bodies (ICSU) can influence decisions about resources and aid allocations to improve Internet services.
- Collect and share information about the status of Internet facilities in your country/region, problems encountered, and plans for progress.

- Participate in the PingER Project (if not already doing so).
- Participate in developing the Questionnaire and running the Survey.
- Promote participation in eGYAfrica – use the information available through the eGY Website (www.egy.org), subscribe and contribute to the eGYAfrica newsletter, attend meetings,
- Participate in the organization, planning, and policies of eGYAfrica.
- Help establish links with other agencies and bodies with interests related to eGYAfrica objectives.
- Collect and share information about policy statements about the Digital Divide problem.
- Identify funding opportunities for securing better Internet facilities and/or to support eGYAfrica (the main requirement for the latter being support for attending meetings).
- Attend ICT meetings in Africa and elsewhere, e.g., IST-Africa meetings.

APPENDIX-C. Acronyms

CODATA	ICSU's Committee on Data for Science & Technology	http://www.codata.org/
AGS	African Geospace Society	www.arcsstee.org/ags.html ,
eGY	The Electronic Geophysical Year, 2007-2008	www.egy.org
eIFL	Electronic Information for Libraries	www.eifl.net
IAGA	The International Association of Geomagnetism & Aeronomy – one of the 8 scientific Associations of IUGG	www.iugg.org/IAGA/
IAP	The Inter-Academies Panel on International Issues (partners with ICSU)	www.interacademies.net/iap
ICT	Information and Communications Technologies	
ICTP	Centre for Theoretical Physics, Trieste, Italy	http://www.ictp.it/
ICSU-ROA	ICSU's Regional Office for Africa, Pretoria	www.icsu-africa.org
ICSU	The International Council for Science	http://www.icsu.org/
IHY	The International Heliophysical Year	http://ihy2007.org/
INASP	The International Network for the Availability of Scientific Publications	http://www.inasp.info/
IST-Africa	Conference series run under the European Commission FP7 program for ICT in Africa	www.IST-Africa.org/Conference2009
IUGG	The International Union of Geodesy & Geophysics – one of the 30 Scientific Unions of ICSU	www.iugg.org
LASP	Laboratory for Atmospheric and Space Physics, University of Colorado	http://lasp.colorado.edu/
UN GAID	UN Global Alliance for ICT and Development	http://www.un-gaid.org/
eSDDC	UN GAID's Global Alliance for Enhancing Access to and Application of Scientific Data in Developing Countries	http://www.un-gaid.org/en/node/165