

**Ethiopian Diaspora
for
Research and Education Advancement
through Partnership
(ED-REAP)**

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(Motto: *Harvesting Knowledge through Partnership*)

I. Background and Rationale

Ethiopia, with a population of over 80 million, is the second most populous country in Africa. It faces many economic and social challenges resulting from decades of limited socioeconomic development. Access to clean water, sanitation facilities, nutritional deficiencies, poor health coverage, unchecked population growth, insufficient educational capacity, and widespread poverty are only few examples. Consequently, the country experiences high levels of disease and substantial premature mortality (1).

Over the past decade, the Ethiopian government has embarked on a rapid, multi-pronged poverty reduction program, resulting in institutional restructuring and policy reforms (2-5). This program has included a major focus on increasing the number of higher education institutions in the country, building up basic physical infrastructures (such as roads), fully exploiting the vast potential for hydroelectric power and on improving health system infrastructure throughout the country. Since the year 2000, 22 new universities have been established throughout the country and former branches of existing and relatively older universities, such as Addis Ababa University, have been elevated to full-fledged universities. Ten additional universities are also currently in the planning and early construction phases. All of these universities aspire to have faculties in several key areas such as the Natural Sciences, Social Sciences, Engineering and Medicine. For example, several of these universities have medical schools/colleges of health sciences. Some have been in place for many years and have well-established clinical and research programs (e.g., AAU), while others have opened recently (e.g., Mekelle University). Several of the universities also have Colleges of Engineering, with the most established one being at AAU.

Despite the unprecedented expansion of universities, infrastructure and health care facilities, all Ethiopian universities, including the flagship university AAU, continue to suffer from a shortage of skilled faculty, poor infrastructure and working conditions, poor culture of research, limited funds for research and limited leadership capacity. Even though recent developments such as the formation of the Ethiopian Academy of Sciences are encouraging, there is also lack of intra- and inter-university co-ordination of joint research activities and lack of communication about potential synergistic projects and findings. The relatively well-established ones, such as AAU, are facing a shortage of skilled teaching and research faculty as they move to reform undergraduate programs and expand post-graduate educational programs. AAU, for example, only began offering its first Ph.D. level training in public health in Ethiopia in 2003. Until this time, Ph.D. training in public health relied on overseas programs, resulting in unfortunately high rates of emigration by candidates sent abroad, high costs of overseas training, and few opportunities for capacity building around locally relevant issues at local institutions. The newly formed universities face several additional challenges as they try to build their programs.

Even though the huge exodus of skilled manpower from Ethiopia to western industrialized countries such as the United States of America during the military government of the Derg created a vacuum at the time, significant number of these emigrants have acquired advanced training in a multitude and diverse areas of study and have amassed a wealth of experience in various fields. Over the years, several members of the Ethiopian Diaspora have also ascended to prominent academic and executive positions in the corporate, government and international institutions. As a result, there is a huge reservoir of skilled manpower in the Diaspora, with a great potential for meaningful engagement and useful contribution in the ambitious developmental activities currently underway in Ethiopia.

At this moment, five professors from different parts of the United States are organizing themselves to make a commitment to provide service to the strategic needs of Ethiopia. Some members of the Ethiopian Diaspora (ED), including all the founding members of ED-REAP, have been already engaged in various research and capacity building activities for many years. However, even though well intentioned and useful, these individually initiated activities usually end up being fragmented, poorly planned and, at times, repetitive. It is possible that such un-coordinated activities may put unintended burden on the poorly equipped local Ethiopian institutions. Hence, the net benefit of these well intentioned activities may not have been as great as it could have been, had the efforts been well coordinated. Thus, the need for an organization that coordinates and streamlines ED activities in higher education and research is very timely and relevant.

The goal of ED-REAP is therefore to alleviate such fragmentation by allowing for better planning and co-ordination of research capacity building efforts, by bringing together a multi-disciplinary group of academicians from the ED to work with appropriate and interested Ethiopian universities and research institutions in a well planned manner. In addition to the engagement by members of the organization, the group brings great potential for creating networks between home institutions of the ED here in the US and appropriate partners in Ethiopia.

The recent governmental initiatives in Ethiopia make this an opportune time for effective involvement of the proposed organization. The vision and mission of the organization responds to the urgent need to increase access to quality higher education in order to assure the manpower, scientific information, and technologies needed for Ethiopian national development.

Collectively, the founding members of ED-REAP bring multi-disciplinary set of world-class expertise in the academia and a well established record of research and scholarship. Because, each member of ED-REAP benefitted from growing up and studying in Ethiopia, the group is highly committed to pursuing activities that are beneficial to Ethiopia. In fact, they have already been doing so for several years, as we briefly outline below:

II. Our Vision

The organization envisions a linkage of the vast scholarly resources of the Ethiopian Diaspora with appropriate Ethiopian higher learning and research institutions for the betterment of the people of Ethiopia.

III. Our Mission

The Ethiopian Diaspora is a huge reservoir of world-class scholarly skills in a wide array of multi-disciplinary fields of study; and has amassed vast amount of teaching, research, leadership, management, and policy-making experience from all over the world. Because of its cultural, emotional and historical attachment to Ethiopia, the Diaspora can play a significant role in accelerating the ambitious developmental activities currently underway in Ethiopia. The main mission of this organization is to create a network of ED scholars that would serve as a think-tank group to create, co-ordinate and foster partnerships between ED and their host institutions and Ethiopian higher learning and research institutions in order to bring about a productive research culture and to produce well trained class of Ethiopian intellectuals.

IV. Objectives

ED-REAP will strive to improve the quality of higher education and the culture of research in higher education and research institutes in Ethiopia by partnering with ED scholars and their host institutions. It will work with Ethiopian higher education institutions to create a Diaspora partnership office that coordinates and streamlines Diaspora activities in higher education and research. The partnership office will play a key role in streamlining the currently scattered ED research and academic activities in Ethiopia. Three major agendas are proposed focusing on education and research:

1. The specific agendas on the Education front are:

- a. To coordinate and participate in the teaching of short term graduate and undergraduate courses
 1. To participate in the short term professional training of academic staffs
 2. To coordinate continuing long distance education/training programs with US institutions
 3. To support upgrading and rehabilitation of labs and workshops, including training of their lab staffs
- b. To coordinate and provide continuing education/training in use of educational technology, in medical/health research, leadership in higher education, water resource management and agricultural economics and business
- c. To assist the universities in upgrading their library systems (eg. e-library systems)
- d. To coordinate and provide mentorship to junior faculty/lecturers and department chairs in Ethiopian higher education and research institutions
- e. To serve as a conduit between Ethiopian and US universities with the objective of fostering partnerships

2. The specific agendas on the research front are:

- a. To promote the culture of research among faculty and students of higher learning and research institutes
- b. To provide advice on effective ways to create and maintain research infrastructure

- c. To provide advice on effective ways of using statistical data for informing policy
 - d. To participate and undertake research activities in the medical/health/education, educational technology, water resource management and agricultural business sectors
 - e. To undertake research activities in the areas relevant to the growth and transformation plan of the Ethiopian Government
 - f. To compete for grants and funds to help with the activities listed above
 - g. To provide training and mentoring on research methods
3. The specific agendas on the leadership and management system development front
- a. To introduce modern university management system such as introducing an IT-based student administration, and personnel and financial management systems
 - b. To participate in local university leadership capacity development activities including – coaching leaders, delivering short term leadership capacity development programs, etc

V. Our Approaches.

We are proposing to use the following specific approaches. We will,

1. help with the creation of an office that streamlines Diaspora educational and research activities within the Ministry of Education and Universities in order to facilitate partnership of ED scholars and their host institutions with higher learning and research institutions in Ethiopia.
2. facilitate and create forums for Diaspora intellectuals to participate in higher education and research development in Ethiopia
3. work to obtain and channel research and education related support from our US institutions towards realizing this endeavor
4. engage in teaching of short term courses, advising and mentoring of graduate students and organize workshops/ conferences work through a legally registered NGO, both in the US and Ethiopia
5. participate in local university leadership capacity development activities including – coaching leaders, delivering short term leadership capacity development programs
6. compete for grants and funds from local and global funding agencies

VI. Personnel

Some of the qualifications and experiences pertinent to the partnership with Ethiopian higher education and research institutions of the five professors who are the founding members of this initiative is described below.

1. Dr. Solomon Abraham, PhD, is an Associate Professor and Coordinator of Mathematics Education, in the Department of Mathematics and Computer Science at North Carolina Central University (Durham, NC, USA). He has been engaged for over ten years in teaching, research and capacity building activities with several Ethiopian universities.-The activities include:

I. In 1999, a pilot study to understand the Ethiopian Educational System and try some American teaching practices with Ethiopia Middle Grade Mathematics Teachers.

II. In 2000, a grant proposal was submitted and was funded to develop and implement a summer program in Mathematics, Science, and English Middle Grades Methods (Best Practices), for three summers in Abbyi Addi College of Teacher Education (AACTE)

III. In 2004 the Program was evaluated by external evaluators from Addis Ababa University and the evaluation recommended that the program was very helpful not only to AACTE, but for the whole educational system in Ethiopia (9).

IV. In 2005, an educational collaborative plan was designed to include Mekelle University and Mekelle Institute of Technology.

V. In 2006, formal educational and research collaboration was established by signing Mou's between NCCU and Mekelle University, Mekelle Institute of Technology (MIT), and the Tigray Bureau of Education on the Ethiopian Side. The collaboration includes the following general goals: faculty exchanges, student exchanges (including study abroad programs), faculty collaborative research projects, course exchange through distance education (Poly-com), and student collaborative projects (such as senior research projects)

VI. In 2005-2007 (springs), faculty members from NCCU travelled to Ethiopia to offer short courses and seminars at the three Ethiopian Institutions in Computer Graphics, GIS, Environmental Sciences and Education.

VII. In the summer of 2008, the Academic Vice President of Mekelle University, the Dean of Mekelle Institution of Technology, and a faculty member from TSBE visited NCCU, at the invitation of NCCU.

VIII. In the summer of 2009, Dr. Solomon Abraham gave a graduate course in the Use of Technology in Teaching & Learning Mathematics at Addis Ababa University.

North Carolina Central University's (NCCU) strategic goal #5 on International Dimensions is to "Increase NCCU's participation and presence locally, nationally and internationally to enhance the University's image. The University must continuously improve its contributions at the local, national and global levels. To achieve our vision of national recognition and renown, North Carolina Central University is committed to strengthening our contributions to research of impact and other visible contributions to problem solving on a global level..."

2. Dr. Kiros Berhane, PhD, is a Professor at the Division of Biostatistics, Department of Preventive Medicine, University of Southern California (Los Angeles, CA, USA). He has been engaged with several Ethiopia related activities both personally and also by engaging his home institution. These activities include

1. Signing of a Memorandum of Understanding (MOU) between USC Keck School of Medicine and Addis Ababa University, School of Medicine in April, 2011.
2. Teaching a graduate course on Longitudinal Data Analysis at the Department of Statistics of Addis Ababa University [December 2011 – January 2012]
3. Spearheading and leading grant applications by USC and Ethiopian partners to initiate research and capacity-building programs in Ethiopia. These include a planning Grant to USAID-African HE initiative (with Addis Ababa University, Mekelle U, and Gondar U), to Gates Foundation (with Ethiopian Ministry of Health), to the LAFC foundation (with Mekelle U and Tigray Development Association) and an NIH Fogarty application for training in NCD research (with Addis Ababa University, Mekelle U, and Bahirdar U)
4. Facilitating a benchmarking visit by Addis Ababa University delegation as part of the Business Practice Restructuring (BPR) program [February, 2009]. During this visit the delegation visited several USC schools and institutes and held meetings with the Vice Provost for Globalization, Several senior university officials and faculty at UPC, with the USC Africa Interest Group members.
5. Facilitating and participating in visits to Ethiopia by USC faculty, including a recent visit by Drs. Kiros Berhane and Heather Wipfli to the Ministry of Health, Mekelle University and TDA, and a visit by Dr. Bob Beart to Ethiopia in January, 2009, which led to initiation of a visiting fellow program from AAU to USC.
6. Facilitating an increasing engagement by USC towards scholarly exchanges with Ethiopian universities. To this end, (i) Rahel Demissie, an Ethiopian-American USC medical student, completed a clinical attachment with Ministry of Health last summer under the mentorship of Dr. Kiros Berhane and Dr. Alex Sanchez, and (ii) A research attachment by MPH global Health students to Ethiopia is being planned for summer of 2012.

The University of Southern California (USC) is among the largest private universities in the US with more international students than any other US university. USC is highly committed to enhancing its role in international development, particularly around global health, as demonstrated by the recent establishment of a multi-disciplinary Institute for Global Health (IGH). IGH's vision goes well beyond medicine in its approach to tackling global health issues. USC has put a comprehensive global health curriculum that includes a new Bachelor of Science in Global Health, a Masters of Science in Global Medicine, and a Masters of Public Health concentration in Global Health.

3. Dr. Mulugeta Gebregziabher, PhD, is an Associate Professor of Biostatistics at the Medical University of South Carolina (Charleston, SC, USA) and is the Vice President of the South Carolina Chapter of the American Statistical Association and is President of Statistical Society of Ethiopians in North America (SSENA). He is a graduate of Addis Ababa University and had been a Lecturer at the Department of Statistics in Addis Ababa University (AAU). From 1994-2001, he has consulted on socio-economic and statistical issues with Governmental and non-governmental institutions in Ethiopia. He is currently embarking partnership on HIV/TB research with Mekelle University (MU). Some of his involvement in Ethiopia so far include,

1. an initiative with other MUSC faculty in to engage in HIV/TB research and capacity-building programs in Ethiopia (MU and AAU)
2. seeking seed funding for initiating research on community and MUSC partnership on TB and HIV related research with MU
3. teaching advanced courses in Biostatistics and graduate student advising at the Department of Public Health of Mekelle University and collaborate on research projects
4. a plan to teach a graduate course on Bayesian Analysis at the Department of Statistics of Mekelle University and Addis Ababa University

In addition, some of the recent activities that Dr. Mulugeta Gebregziabher has done are:

1. Visited the college of health Science of Mekelle university (CoHS-MU) and discussed with the dean (Dr. Zerihun Abebe) and chair of Public health and its faculty in Dec 2011 and Dec 2012.
2. Gave a lecture and workshop on 'analysis of longitudinal data' and 'multivariate generalized linear mixed models' at CoHS-MU, Dec 2011, Dec 2012
3. Gave a public lecture on 'Preparing for Big Data: statistical and computational challenges' at the College of Sciences, Addis Ababa University, Dec 2012.
4. Visited Mekelle University in March 2011 to initiate research collaborative contacts. He met with the Academic Vice President (Dr. Kindeya).
5. Met with faculty at the School of Public Health, AAU in March 2011 and discussed on possible initiatives for collaboration in research and training.
6. Discussed collaboration with Dr. Alemayehu(chair, Dept of Biosta and Epidemiology) at AAU.
7. Collaborating with the School of Public Health of MU on TB and HIV related research
8. Collaborating with the Institute of Sustainable Development on the analysis of follow up socio-economic data to assess the effectiveness of the ISD program

Medical University of South Carolina (MUSC)

The main mission of MUSC is to strive to provide an excellent, collaborative education, deliver highest quality, state-of-the-art patient centered care, be a world leader in the creation of new knowledge and its application, serve the health care needs of the citizens of South Carolina while expanding outreach to people throughout the world. The faculty, staff, and trainees at MUSC are currently actively engaged in collaborative global partnerships in the areas of education, public health, clinical care, and research. The objectives of the global initiative are to (1) build an infrastructure that supports collaboration, coordination, and a commitment to sustainable globalization activities highlighting the unique strengths of MUSC; (2) position MUSC to be recognized as a leader in global health initiatives.

4. Dr. Mekonnen Gebremichael, PhD, is an Associate Professor, at the Civil Engineering Department, University of Connecticut,(Storrs. CT, USA). He has been involved on several Ethiopia related activities including as a Project Director of the Ethiopian-U.S. Partnership in Sustainable Water Resources Management: Capacity building in Research, Education, and Outreach. This USAID-HED funded partnership project involves two U.S. universities (University of Connecticut and Alabama A&M University) and five Ethiopian universities (Addis Ababa University, Mekelle University, Hawassa University, Arba Minch University and Bahir Dar University) to develop and implement an integrated academic, research, and community outreach service in water resources programs at the Ethiopian Universities with a primary focus and attention on food security, improved health, educational opportunities and economic development in Ethiopia. More over, Dr. Mekonnen:

1. Received competitive funding from the U.S. National Science Foundation and NASA, which was used to install several water and air sensors in Debreberhan area and perform hydrological experiments for three years (2007-2009) to understand the ability and potential of satellite datasets for water resource studies.
2. Received competitive funding from the U.S. National Science Foundation, which was used to organize an international conference on Water Resources in Ethiopia during January 12-16, 2010.
3. Provided short-term trainings on water resource studies to professionals working for federal and regional offices in Ethiopia.
4. Facilitated Ph.D. assistantships to a number of Ethiopian students to pursue their Ph.D. Degrees at the University of Connecticut and served as thesis advisor to Graduate students in the Civil Engineering Department at AAU.
5. Serves as the Principal Investigator of the project “The Ethiopian-U.S. Partnership in Sustainable Water Resources: Capacity Building in Education, Research & Outreach”

University of Connecticut Mission

The University of Connecticut (UConn) is dedicated to facilitating access to the knowledge, skills, and cultural know-how needed to meet the challenges of an increasingly complex and interconnected world. It generates new knowledge about global affairs, promotes understanding of the foundations and practices of democracy, cultivates cultural knowledge and competencies, and fosters a shared sense of responsibility for humanity globally. Through the global training and development institute, it works to foster global sustainable development, citizenship, and cross-cultural understanding by providing individuals from around the world with transformational learning experiences.

5. Dr. Haile Mariam G. Selassie, Ph.D., is a Professor and Interim Chair at the Department of Accounting, Agribusiness, and Economics College of Business and Applied Professional Sciences South Carolina State University (Orangeburg, SC, USA).

Dr. Haile M. G. Selassie is a tenured professor of Agribusiness and Economics at South Carolina State University. His Ph.D. and Masters of Science degrees are in Agricultural Economics earned from Oklahoma State University in 1983 and 1977 respectively. He is a 1972 graduate of Alemaya College, Ethiopia with a Bachelor of Science degree in Agriculture/Agriculture Business.

Dr. Haile M. G. Selassie has more than twenty five years of teaching experience at South Carolina State University, an institution that is based on a land-grant mission of research, teaching, and extension. He has developed and taught extensive number of undergraduate and post-graduate courses especially in the area of agribusiness, economics, and information systems.

Dr. Haile M. G. Selassie serves as a member of the Strategic Planning and Assessment Committees, among others. Dr. Haile has become a member of the International Honors Society of Beta Gamma Sigma after his school achieved accreditation of AACSB International. Dr. Haile is member of the South Carolina State University committee for international program. In the past, he has traveled to the University of West Indies in Trinidad and Tobago to assess collaborative opportunities for students and faculty. He has also traveled to India as a member of a team that presented the Business Programs' Professional Development Model.

Dr. Haile has been involved in writing capacity building grants. Currently, he is a member a team that is working on a project (\$449, 900.00) that deals with Biomass and Bio-energy Logistics Networks.

In the last five years, he has worked with research areas designed to analyze the determinants of employment and income in South Carolina, the Impact of Quality of Life and Business Climate Variables on Employment, Predicting the Probability of Loan Defaults using Evidence from Farm Borrowers, Economic Evaluation of Sustainable Small Scale Aquaculture/Vegetable Farms in South Carolina, and is the Project Director of the 2009 Multicultural Scholarship Program Funded by the USDA –National Institute of Food and Agriculture.

South Carolina State University (SCSU)

South Carolina State University is a senior comprehensive teaching institution is committed to providing affordable and accessible quality undergraduate and graduate degree programs. The mission of the Business Programs is in consonance with the University's mission, in providing quality management education and leadership development to produce competitive graduates for a global and diverse environment. Faculty members at SC State University are encouraged to work in any international related activity.

REFERENCES

1. Lutz W, Scherbov S, Makinwa-Adebusoye P, Reniers G: Population-Environment-Development-Agriculture Interactions in Africa: A Case Study on Ethiopia. In *The End of World Population Growth in the 21st Century: New Challenges for Human Capital Formation and Sustainable Development* Lutz W, Sanderson W, Scherbov S, Eds. London, Earthscan Publications Ltd, 2004, p. 187-213
2. Teshome Y: Policy development in higher education in Ethiopia and the role of donors and development partners. In *Nuffic Conference 'A Changing Landscape'* The Hague, Netherlands, 2005
3. Saint W: Higher education in Ethiopia: The vision and its challenges. *JHEA/RESA* 2:83-113, 2004
4. FDRE: Capacity Building Strategy and Programs. Addis Ababa, Ethiopia, Federal Democratic Republic of Ethiopia, 2002, p. 1-295
5. FDRE: Higher Education Proclamation. Addis Ababa, Ethiopia, Federal Democratic Republic of Ethiopia: Negarit Gazette, 2003
6. MOH: Accelerated Expansion of Primary Health Care Coverage in Ethiopia, 2005-2009. . Addis Ababa, 2004
7. Health FMO: Prevention and Control of Chronic Non-Communicable Diseases: Strategic Framework. Department PaP, Ed. Addis Ababa, 2010
8. Ministry of Education [Ethiopian]: New Vision (Brochure): QUALITY EDUCATION FOR ALL, 2011
9. IER External Report on BESP, (Basic Education Support Program in Tigray, Ethiopia): IER, Addis Ababa, 2003