

## Expanding African Access to Global Scientific Literature in Agriculture, Environment and Health

### 1. THE CONCEPT

Since 1999, several **free or low-cost** electronic scientific journal delivery programs have been implemented to close the serious information gap in food, agriculture, health and medicine. They make available to teaching and research institutions in 114 of the world's poorest nations the equivalent to a research library with the highest quality journal content. These inter-related programs include: 1) **TEEAL** (The Essential Electronic Agricultural Library) [[www.teeal.org](http://www.teeal.org)]; 2) **AGORA** (Access to Global Online Research in Agriculture) [[www.aginternetwork.org](http://www.aginternetwork.org)]; 3) **HINARI** (Health Internetwork Access to Research Initiative) [[www.who.int/hinari](http://www.who.int/hinari)]; and 4) **OARE** (Online Access to Research in the Environment) [[www.oaresciences.org](http://www.oaresciences.org)]; aka (T/A/H/O). Where scientists have access, these programs are having a transformative impact on research and education.<sup>1</sup> However, in most African countries, lack of Internet connectivity, inadequate bandwidth, no or reduced library budgets, and low information literacy skills among librarians, faculty and students limit full use. To increase access to and use of these powerful research and education tools, the current successful inter-agency model of T/A/H/O capacity building coordinated, by the South Africa-based Information Training and Outreach Centre for Africa (ITOCA), will be scaled up over five years with existing and new partners. Existing partners include FAO, WHO, UNEP, Cornell, Yale and Michigan State universities, CTA, INASP, ILRI and the publishers who provide the content. All training is carried out in partnership with local universities or institution. Major components would include: 1) *Distribution of LanTEEAL* sets (200-400 depending on funding) with necessary backstopping and peripherals; 2) Eight 3-day national *Train-the-Trainers workshops* per year in English, French and Portuguese depending on the country; 4) Equipping *Regional Training Hubs in East and West Africa* to carry out more tailored and advanced institutional training; 5) Higher level *Agricultural Information Literacy* training to expand the core of African library professionals able to teach digital literacy skills in agricultural sciences and assist in integrating information literacy into university curricula, with special reference to such initiatives as e-Agriculture, AGRIS, etc.

### 2. RATIONALE AND EVIDENCE THE PROJECT CAN BE SUCCESSFUL

Access to up-to-date, peer-reviewed research is a key driver of both short-term and long-term development in Africa. It contributes to institutional capacity building, curriculum enhancement, research and extension quality, and evidence-based policies, all of which have an impact on smallholders' welfare. As of October 2007, 721 institutions in 43 sub-Saharan African countries had registered for AGORA. Collectively, these institutions represent the major actors in agricultural research and teaching in Africa. They are producing the next generation of agricultural scientists, teachers and field practitioners. The five African countries with the most institutions registered are: Nigeria (100), Tanzania (69), Ethiopia (61), Kenya (56) and Ghana

---

<sup>1</sup> A 2004 TEEAL User Study, which surveyed over 1,000 TEEAL users in 16 institutions, confirmed that TEEAL is having an impact on research and teaching and on how researchers search for information. Fully 75-80% of students, educators and researchers surveyed responded that TEEAL enhances their productivity and the quality of their work. See also Scott, J. C. 2006. HINARI/AGORA Usage Review. Unpublished report. Arlington: Center for Public Service Communications.

(41). They are followed by: Zimbabwe (39), Uganda (36), Mozambique (29), Sudan (27) and Mali (23). An average of almost 20,000 PDF articles are downloaded from AGORA monthly, with 12-14,000 PDF articles downloaded by institutions in Sub-Saharan Africa. This compares with the average monthly download rate of 100,000 for HINARI users in countries that have relatively good Internet access and IT literacy. These figures demonstrate both the demand and potential for improvement. In 2006, over 220 agriculture information professionals launching the Africa Chapter of the International Association of Agricultural Information Specialists (IAALD) urged renewed efforts to mobilize agricultural information to improve food security and enhance rural livelihoods across the continent, underscoring the critical importance of such programs as TEEAL and AGORA. Since its establishment in 1999, ITOCA has trained almost 2,000 librarians, information specialists and researchers how to use these resources. Since April 2004, it has conducted 25 three-day intensive T/A/H/O Train-the-Trainer workshops in 18 African countries, with over 600 trainers from agriculture and health sectors representing 250 institutions. This has led to significant increases in registrations and use of AGORA and HINARI, and more rapid roll out for LanTEEAL. The 2006 external evaluation of AGORA and HINARI found a direct link between training and increased use of the programs.

### **3. EXPECTED BENEFITS OF THE PROJECT INCLUDING COMMENTS ON SUSTAINABILITY AND SCALE**

Follow-on training from ITOCA's training over the last several years has reached some 5,000 users, enabling them to find, search, browse and cite journals and articles and identify other important electronic resources. It is estimated that some 20,000 end users could be reached over a 5-year period. Training information professionals on T/A/H/O has led to increased visibility and status of librarians and libraries and significantly increased library patronage. Specific target audiences for training include CTA-funded Q&A service staff, IAALD Africa chapter members, among many others. Greater use of the literature will lead to more articles submitted from African researchers and accepted by refereed journals and thus more exposure of African agricultural research issues internationally. African researchers likewise will be better able to compete for grant funds and collaborate with peers at advanced research institutions around the world. All of these benefits will improve the quality of research and teaching directed at smallholders in Africa. As training on T/A/H/O and other electronic resources become integrated into curricula, greater emphasis can be placed on more advanced skill development of the institutions' information and knowledge managers.

### **4. HOW THE PROJECT WILL TARGET THE NEEDS AND BE OF SPECIFIC BENEFIT TO WOMEN SMALLHOLDERS**

Access to research affects smallholders (including women) at multiple levels. Examples abound where literature reviews on T/A/H have led to policy recommendations that have major impact on smallholders. As John Willinsky notes in his article on "Research in international policymaking," in the Summer 2006 *Harvard International Review*, the case Chad and Benin made to the WTO against US cotton subsidies, which affected millions of women cotton farmers in West Africa, was based on access to research and data on open sources, such as AGORA. He writes, "This ability to access research has become part of the struggle to create sustainable and fair markets for the developing world." Tanzania's National Institute for Medical Research (NIMR) attributes access to research findings on HINARI for the government's national policy on malaria bed-nets, which affects the well-being of all rural families.

## **5. PROJECTED COSTS OF THE PROJECT**

\$10 million over 5 years, with \$5 million in personnel (mostly Africans, in Africa), \$2.5 million in workshop expenses and \$2.5 for equipment, training materials, backstopping and evaluation.

## **6. MEASURES OF SUCCESS**

Numbers of information professionals completing courses, number of end users reached, increased numbers of articles in international journals authored by African scientists, university curricula integrating T/A/H/O training, numbers of articles downloaded by AGORA-registered institutions

**7. RISK** There are no apparent risks.