A Long Journey to Success: Impacts of Sida/Sweden Support to AAU/Ethiopia (2008-2017)

Documented by the Grants' Coordination Office, AAU
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July 2017
Addis Ababa

Publisher's page:

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This book can be referred to as follows.

Brook Lemma, Mastewal Moges and Echu Teshome (2017): A Long Journey to Success: Impacts of Sida/Sweden Support to AAU/Ethiopia (2008-2017). Compiled by the Grants' Coordination Office of AAU and Published at AAU Printing Press, Addis Ababa; 92 pp.

Cover page images

Upper: From left to right, His Excellency Hailemariam Desalegn providing the award certificate, Professor Admasu Tsegaye, former President of AAU and His Excellency Ambassador Dr. Jan Sadek, Ambassador of Sweden receiving the award on behalf of Sida and himself.

Lower: From left to right, Professor Admasu Tsegaye, former President of AAU, Dr. Jan Sadek receiving the award on behalf of Sida and himself, His Excellency Ato Kassa Tekleberhan, Chairman of AAU Board and Dr. Jeilu Oumer, Academic Vice President of AAU

CONTENTS

ACRONYMS

AAU	Addis Ababa University
ABB	Logo of Swedish industrial digitization company
BPR	Business Process Re-engineering
BSC	Balanced Score Card Model
CEES	Center for Ecological and Evolutionary Synthesis of UiO
ETB	Ethiopian Birr
GCO	Grants' Coordination Office of AAU
GTP	Growth and Transformation Plan of Ethiopia
HSIU	Haile Selassie I University, now AAU
IBFIS	Integrated Budget and Finance Information System
IBFS	Integrated Budget and Finance System
ICT	Information and Communication Technology
IFMIS	Integrated Finance Management Information System
INASP	International Network for the Availability of Scientific Publications
IT	Information Technology
KTH	Royal Institute of Technology, Sweden
Lab	Laboratory
NORHED	Norwegian Program for Capacity Development in Higher Education and Research for Development
PPA	Procurement and Property Administration

Sida	Swedish International Development Agency
Sida/SAREC	Sida/Swedish International Development Cooperation Agency
SLU	Swedish University of Agricultural Sciences
SMIS	Students' Management Information System
SU	Stockholm University
UiO	University of Oslo
UoK	University of Khartoum
VPASS	Vice President for Administration and Student Services
VPRTT	Vice President for Research and Technology Transfer

ACKNOWLEDGEMENTS

INTRODUCTION

Introducing the great achievements of Sida/Sweden support to AAU and their impacts in the development of Ethiopia thereof is apparently an easy and self-explanatory task. This is because the evidences are very easy to find when one observes the professor that filled AAU and other Ethiopian higher education institutions and the nation's research centers. The multiplier impact of these intellectuals in the development of human capacity within the country and the technologies they generated over the years are beyond any scale of measurement. Looking back to all experts in social, natural and applied sciences are proving worth the efforts made by the Swedish Government to support Ethiopia in achieving its development goals.

The reader of this report will have the opportunity to observe evidences of these outcomes. The attempts started early on in the 1940s in the form of emergency medical services to Ethiopians affected by poison gas during the Ethio-Italian war continued into capacity building in the war-torn post-war Ethiopia.

At the time Emperor Haile-Selassie who made it a point that young Ethiopians should attend contemporary/modern education so that Ethiopia starts to build its departure from traditional-religion-based governance dominated by the influence of the Orthodox Church to eventual secular governance of the country. In this effort, the support of Sida that started by building elementary schools in remote and poorly accessible rural villages to the peak of the formal education of the university level as reported in this book. This is achieved in slightly over half a century.

Obviously the road that brought Sweden and Ethiopia to this level was not easy. At times of peace, developing projects, signing agreements and implementing the same as per the agreement to achieve the desired goals was not an easy task.

At times of internal unrests in Ethiopia, projects were kept at slow paces and at times temporarily terminated until the Ethiopian and Swedish Governments searched for alternative ways of putting the development agenda of Ethiopia forward.

Today, when one looks back and examines the achievements one realizes that all these rich outcomes are all worth the prices that were paid by Ethiopia and Sweden.

Today, AAU only reports in this book the achievements at their latent segment and at that those that are the creams captured between 2009 and 2017 at and with AAU only. The Sida Support to AAU and hence the Ethiopian people cannot be captured within the bounds of this book. Going to the ground-level and observing the developments achieved by the end-users in Ethiopia will surely open a new chapter of facts and figures with live-examples of the cases.

Once again AAU on behalf of all those who benefited from Sida/Sweden support extends its heartfelt gratitude to Sida/Sweden and commits itself to uphold the achievements in its records for coming generations and continue to work vigilantly to implement the on-going training and development projects to achieve their planned goals of serving the Ethiopian people and show the Swedish tax-payers that the funds they extended to Ethiopia have borne fruit that sustains Ethiopia's development for generations to come.

Professor Tassew Woldehanna
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BACKGROUND

Like any other country in the world, Ethiopia is a country with a long history and culture. What is maybe special in Ethiopia's history is that it has never been colonized and hence its cultures and traditions surged into the twenty-first century from the struggles within rather than the persistent and relentless impact of civilization from the North. As a consequence, the history of its modern education is too short, coming much after the Second World War when Ethiopia very slowly started to open up to modern civilization. The history of higher education is even much shorter.

Addis Ababa University College was the first higher education institution to be established in the country in 1950. Its first Graduate program was launched in 1978. This blessing in disguise came when the communist military government expelled western expatriate faculty members from the then Haile Selassie I University (HSIU) (now Addis Ababa University (AAU) to replace them with Soviet and East European instructors. This operation did not however function at the time mainly because the English language ability of all the instructors from the communist countries was non-existent and all AAU staff, students, books and facilities were functioning in English only. Therefore, AAU opted to cultivate its own faculty members at maters level. By then, the Sida/SAREC of Sweden provided the financial support to run masters' program at AAU and some PhD programs in Swedish Universities with sandwich modality. At the time, there was only one university, namely, AAU, and five colleges under it. Mentioning these colleges I important to the ultimate objectives of compiling this report.

Hence, AAU was responsible to run Gondar Public Health College in the North, Jimma Agricultural College in Central Highlands in the West, Bahir Dar College of Pedagogy in the North, Alemaya College of Agriculture in the

Eastern Highlands, and Awassa College of Agriculture in the Southern Lowlands. The agricultural colleges were dispersed with the understanding that they address agricultural problems in their respective climatic zones and provide research output in improved varieties and technical personnel capacity development that manage them in the field joining hands with the peasant farmers of the country to support the Ethiopian economy that was and is mainly dependent on agriculture. Towards the end of the military regime, there were three universities in Ethiopia, Alemaya (now Haramaya) College of Agriculture upgraded in 1985 to an agricultural university and University of Asmara upgraded from what it was an Italian medical college.

With the coming of the current government in Ethiopia, there remained only two universities with Asmara University remaining for the new Eritrean state. The first indications of the expansion of higher education in Ethiopia came when the government gave autonomy to the colleges under AAU. The first generation of new universities were then Jimma in 1999, Hawassa (formerly (Awassa) and Bahir Dar in 2000 and Gondar in 2003.

After 2004, the Federal Government of Ethiopia placed a great emphasis to expand higher education in its Growth and Transformation Plan I (GTP I) with the aim of changing the county's economy from agriculture to industry-led system that takes with it the modernization of agriculture in the country. This required building of high capacity human power quickly and generating of research outcomes that feed into the development plans of the country. As a result, new universities were opened in different parts of the country in batches of about ten at a time, with Addis Ababa University having the mandate of building capacity at PhD level in all possible fields the country requires for its development. Even if AAU was more capable to achieve the task it is assigned to do, it realized that it could not achieve it with the required quality and quantity in the planned time.

A turning point was achieved in 2008/09 when AAU came up with the proposal that it interfaces its plans of research and capacity building with the interests of international universities and donor organization. This plan was kindly picked up by Sida/Sweden that provided the financial support to launch many in-house PhD programs in all possible fields and create enabling environment in the university by improving the library, the ICT, finance and record systems of the university. PhD student were registered from all the new universities, now 36 in number, expatriate staff came to do block teaching and examining PhD dissertations, PhD student travel to international universities for research and consultations with their supervisors.

This assistance of Sida to Addis Ababa University has repeatedly demonstrated that the support had and has multiplier effect in the new universities as they are now opening PhD programs, and in public offices and the civil society that capable Ethiopians at high level have been produced with sufficient researched knowledge on national problems of their respective field of specialization.

Today, AAU has multiple bilateral projects with Sida in the fields of national importance such as improvement of quality of education, management/economics PhD programs to feed the growing economy, electric and power control engineering to effectively use the safe energy Ethiopia is producing, the Commissioned Education Program that builds capacity of the civil society, providing legal support and trainings to illiterate and uneducated sectors of society and others.

AGREEMENT/MODALITIES OF THE RELATION

Sida has been supporting Addis Ababa University for over three decades through its earlier program Sida/SAREC. As the result of this funding support, Addis Ababa University has been benefiting through capacity building in terms of human power, programs, infrastructure, equipment, etc. Scaling up its support in 2009, Sida entered into a new modality of special block grant agreement with Addis Ababa University in order to support Addis Ababa University's new initiative on graduate expansion, more specifically the in-house PhD program as well as research development.

The main components of the project as outlined in the inception plan were:

- Expanding the graduate program and launch in-house PhD programs and research;
- Establish centers of excellences in the needed areas;
- Improve library services and enhance research facilities commensurate to the existing and envisaged PhD programs.
- Improve the Administrative and academic reform to support the in-house PhD program
- Putting in place integrated automated administration system that included digitizing the finance, research and student record keeping and retrieval systems

Accordingly the project had the following specific objectives:

- To launch and execute quality in-house PhD programs;
- To strengthen the existing research capacity of the University;
- To establish relevant centers of excellence;
- To support the administrative reform and improve efficiency of the administrative wing in running PhD program and the associated research; and
- To improve library services and enhance research facilities commensurate to the existing and envisaged PhD programs.

The project was executed under the following major headlines:

- Graduate programs and research;
- Administrative and academic reform;
- Integrated Budget and Finance Information System (IBFIS); and
- Graduate library expansion.

The *Agreement* required an end-term review to assess progress made by AAU in the implementation of the Block Grant as stipulated in the *Agreement*. Article 7 of the *Agreement* calls for an End-Term Review to "monitor and follow up on the reform and the qualitative and quantitative aspects regarding the expansion of PhD programs before the end of 2011".

The *Agreement* was signed to cover the period of 5 years as of July 2009. The first phase of which extends from July 2009 to December 2011.

The first phase of the five years program was carried on up to December 2011. However, in order to fully utilize the lately disbursed fund, the agreement was extended first up to March 2012 then again up to June 30, 2012.

Then, in order to enhance the collaboration with Swedish universities and make them contribute to the graduate programs of AAU, a workshop was organized in the first week of September 2012. The main objectives of the workshop were to strengthen the already exiting collaboration with the Swedish universities and to create new collaborative initiatives, to identify specific areas of collaboration, make concrete action plans and time tables with the relevant College Dean's and Department heads to clearly set up the way forward. Participants who attended the workshop were from the University of Stockholm, University of Jönköping, University of Lund, University Linköping and Swedish University of Agricultural Sciences.

A year later, the office of the President established the Grants' Coordination Office (GCO) for the first time in AAU history. Thus, the establishment of the new GCO is a significant step in achieving this goal and in

bringing faculty members of interdisciplinary nature together to construct winner proposals. This office is headed by a senior professor who was to be supported by an assistant. The office is thus responsible for the proper management of grants coming into AAU from various donors. The office is given particular directives to make its point that the Sida Block Grant is handled as priority and hence the office does not spare any effort to make things as smooth as possible and serve all stakeholders with Sida Stockholm, Sida desk at the Embassy of Sweden and all those found in AAU.

Since its establishment, the office have successfully facilitated the timely submission of reports, financial statements, and all the various AAU units that require support (apparently all activities reported below) to meet their targets. Among all activities the most prominent one at the opening of the office were found to be the timely submission of the Concept Note for Sida 2016/2021 Support to AAU, defend it in the presence of Sida officials from Stockholm, personnel of the Embassy of Sweden in Addis Ababa. Finally, the document together with the minutes of the meeting and a follow up activity plans for the participants were submitted to all concerned offices.

This was followed by finalizing the actual complete proposal document for Sida Block Grant support from 2016 to 2021 in consultation with AAU units that are end users of Sida grants and the Office of the President of AAU. The same proposal was submitted to Sida as planned and was accepted as reported.

Towards the end of the grant year and the development of the new 2016/21 block Grant the idea of diversifying the sources of funding for AAU projects was agreed to be an important point as Sida support may at some stage wither out without the appropriate preparedness on AAU side. To support this concept, Sida allowed AAU to request an extra package within the same project, based on one such attempt back in 2013/14 grant period under the title

of donors' conference. In the following years and including in the 2016/21 new proposal the efforts towards more number of aid sources have included visiting donor countries to forge relations with international universities and research institutes directly and accrue support including from the World Bank.

The GCO has also dispatched its staff with a delegation of ten AAU officials to Mozambique and South Africa to learn more about fund management practices of international universities, particularly the management of Sida funds at the University of Eduardo Mondlane, Maputo, Mozambique. Although the GCO is new and faces some challenges such as organizing itself in both physical facilities and development of project implementation procedures, have started to successfully prepare reports, proposal, and memoranda of agreements and communicate the same to the concerned bodies.

PROVIDING/IMPROVISING FACILITIES

The government of Ethiopia, working primarily through Addis Ababa University, has taken a bolder step in harnessing higher education for development than in any other country in Africa, possibly in the world. To this end, the government entered into bold action of expanding PhD programs at AAU that build capacity to the new universities in the country (now reaching 36) and generate research outcomes through dissertation research to feed into the development plans of the country. This in turn entailed empowering of AAU. One of the very indispensable attributes for the university to accomplish its task is provision and improvising its facilities. Sida has supported this ambitious by undertaking many focused and monitored commitments. These commitments were displayed in different capacities.

Enhancing the Information and Communications Technology

The University had already acquired ICT facilities worth 8.6 million ETB during the first phase of the project. The facilities included 259 desktop computers, 130 laptops, 30 printers, 60 flash discs of high capacity, 70 UPS, and 41 scanners and. Despite this, the ICT center at AAU had not been functioning to the expected standard to match the requirements of PhD programs. In other words, it was not efficient enough to support the teaching-learning process of PhD level programs in the sense that both PhD candidates and their supervisors had to reach each other online constantly and at the same time, they had to communicate with international supervisors online.

In 2012 the university planned to strengthen its ICT Center and improve the ICT services delivered to students. This lead to additional funding by Sida to improve the hardware at the ICT Center and make it accessible with broadband services. This eventually led to the establishment of smart classrooms to PhD candidates where internet access and communications in

real-time started to become possible and set up Virtual Desktop Infrastructures for student dormitories AAU libraries, student-staff lounges and other areas where students can sit and use their free time to access information.

The graduate library has been strengthened by availing 49 electronic databases with a wide range of current and relevant electronic research journals and books for researchers, academic staffs and students. In addition, more than 1883 books were purchased for different PhD programs. Books are received, catalogued and distributed to different branch libraries. Besides, 141 computers have been acquired and being utilized in the different branches of the library. A small reference library has been established at the Kaliti Campus for PhD students who reside on the same campus.

AAU Library

In addition to what is described under the AAU ICT above, AAU library has expanded to meet the growing number and demands of graduate students. It was overburdened by thousands of undergraduate students. This has been felt strongly by AAU and the Ethiopian Government which allocated the required complementary budget to what Sida was offering to put up a new structure much bigger than the old but vital Kennedy Library, a donation by the Kennedy Family, USA back in the 1970s. Consequently, the library has been equipped with the necessary facilities using Sida grants. Facilities for mini printing and digitization shops have been purchased and the library is networked to provide it with internet facilities.

Intending to maintain the quality of the PhD trainings and researches, the University has also undertaken updating the libraries in all campuses with up-to-date books and replacing older computers with hi-tech ones. Wi-Fi services have been also made available.

The library has entered into agreements with international publishing houses organized by International Network for the Availability of Scientific Publications (INASP) among whom prominent publishers such as Elsevier and others to make contemporary publications available to graduate students and researchers with the annual fees covered from Sida funding. In other words, Addis Ababa University library utilizes Sida funds mainly to finance its subscription to electronic journals (information resources) and services which coordinated by the International Network for the Availability of Scientific Publications (INASP).

Since the University runs a number of programs which covers from undergraduate to PhD, its enormous admission clearly enforce the availability of reading and reference materials. Especially, the graduate programs could never be successful without the availability of recourses and the special supports it obtained through Sida funding. The subscription made by Sida fund mainly address and overcome the shortage of resources that the students and academics require. The resources are accessed by all university members through 22 branch libraries of which two are found outside Addis Ababa in 50 km radius. These resources are not only accessed by Addis Ababa University but universities in the country, research institutions and even colleges are allowed through their IP addresses throughout Ethiopia. This gives a potential resource power to all institutions to overcome the shortage of electronic and current publications, which were otherwise and unaffordable to cover costs for all 36 universities.

Addressing the networking problems of twenty-two AAU libraries and facilitating the exchange of soft copy materials to users to any distant request points is surely a challenging task given the ages-old still unresolved ICT infrastructure problems of the new universities. By 2013/14 the library was able to produce a list of databases supported and selected by universities through

their teaching departments and research institutions. In the same academic year, for instance, Birr 5,897,314 was transferred for journal subscription which triggered additional free access to some channels from Eifel, INASP and a few others as friendly gestures to universities from developing countries that make such bold efforts.. Also they assist the university libraries by delivering different trainings in collaboration with the local organizations.

In addition to the above facilities, the AAU Main Library was able to purchase numerous mini-print shop facilities and laptops which were distributed to all 22 AAU libraries for the reproduction of electronic materials, digitizing theses and rare books to be placed in the e-books facilities of the library website and for sharing such materials with the new universities in the country. Today, all AAU libraries have laptops for spot use by students who do not have their own laptops. Some of these facilities are shown below.

Fig. 1: Mini-print shops facilities and laptops purchased by Sida funding to AAU Libraries

Procurement of Laboratory Supplies, Chemicals and Core Laboratory Facilities

As part of the fund for the expansion of the PhD programs, over 37 million ETB had been covered by Sida in the year 2009-2012 for the purchase of the

equipment, chemicals and communication facilities. The Ethiopian Government also contributed Birr 25 million for this purpose as matching or complementary fund. The purchase of the equipment, chemicals and communication facilities was to raise the quality of research and educational facilities for the PhD programs and creating enabling conditions for online interactions, generating research date supported with up-to-date facilities and generating outcomes to support national development needs.

Table 1: Cost of Equipment covered by Sida

Year	Costs in ET Birr
2009	1,270,692
2010	17,728,096
2011	8,224,303
2012	10,261,837
Total	**37,484,929**

The Scientific Laboratory Equipment was distributed to the departments of Biology, Earth Science, Food Science, Physics and Chemistry of the College of Natural Sciences, and Pharmacology and Microbiology of the College of Health Sciences. The Tropical and Infectious Diseases Department of the Aklilu Lemma Institute of Pato-biology also received similar equipment. The Department of Linguistics and Philology of the Faculty of Humanities had requested and received audiovisual equipment. Over 285 kinds of chemicals had also been procured for the Tropical and Infectious Diseases Department of the Aklilu Lemma Institute of Patho-biology and others.

Furthermore, the expansion of the PhD program requires establishment of infrastructure for conducting PhD research as one of the priorities of the University. To this end, the already established laboratories have been enriched with various equipment, chemicals and communication facilities. Because of

the increment in the number of PhD students, there demand to establish core laboratories in each campus became necessary. PhD students need to be provided with minor laboratory equipment. For researcher who involve in visiting fieldworks, field instruments will be made available.

The establishment of core laboratories became particularly important as the direction of the University is towards graduate education and research. These laboratories are hoped to be used to conduct advanced researches. They will also be used to keep national databases in identified areas, which will be used for research.

AAU has already several laboratories particularly in the College of Natural Sciences, Addis Ababa Institute of Technology and the College of Health Sciences, but the need to strengthen the collections of equipment and materials in other faculties remains to be done. In January 2012 the AAU commissioned a Task Force of Five AAU faculty to look into the issue of establishing a Core Laboratories specifically for soil, water, plant minerals and rock analysis. The recommendation is to set up a Core Lab and Central Core Facility in a separate building at a cost of 271m Ethiopian Birr. The support from Sida has been a great help for covering the cost of laboratories and other consumables although there is still a great demand to strengthen the exiting labs and establish new ones in certain areas. For instance, the 2013-2015 budget of the Sida Block Grant provides SEK 2m for Core Laboratories.

EMPOWERING THE SUPPORT WING

The Business Process-Reengineering (BPR)

Sida support was and is still committed to the strengthening of those parts of AAU Administration that support the smooth functioning of the PhD programs that are meant to deliver the development of Ethiopia as planned in the Growth and Transformation Plans I and II (GTP I and II). Back then, it was logical to argue that working to build PhD programs at AAU using the old system of governance did not make sense. This was discussed with Sida who committed substantial amount of fund to transform the university system whereby the obsolete AAU administrative and academic process should be replaced by one that is efficient, digitized and equipped with workforce that owns the tasks and serves the PhD programs forge forward with success.

AAu therefore opted to seriously implement what was known as Business Process Re-engineering (BPR) reform process, as it was believed to enhance the delivery process of AAU, particularly the launching and successful PhD programs in all possible fields the country requires. The aim was to bring effectiveness and efficiency and thereby improve service delivery. Hence in the first three years, a great effort has been made to redesign the university's business processes, to put in place new governance and structural organizations and to formulate new policies and guidelines. The major accomplishments include:

- Reform design documents on the various processes such as teaching learning, research, community service, administrative support
- A new organizational structure of the university
- New governance structure including University Senate and a managing council
- Establishment of new decentralized colleges

- Recruitment of new officers to the various positions of the new structure
- Redeployment of academic staff in certain colleges
- Formulation of new policies and procedures
- Revision and updating of the existing senate legislation given the new AAU mandates and duties
- Balanced Score Card Model Strategic Plan (BSC) development

Consequently, development of a new strategic plan of the university in BSC framework was started to be undertaken. Further, the management officers and the university community were first trained in Balanced Score Card (BSC) theories and practices. The revision of senate legislation was also completed at this time and was put into implementation. Preparation of Institutional Handbook, a new Legislation Handbook, policy documents and guidelines were also undertaken. Short-term capacity building trainings for newly appointed officers, deans, directors and department heads on management and leadership were undertaken.

On the other hand, a big step was also undertaken to strengthen the ICT Center and its service at AAU. In 2013, the ICT Center of AAU transformed its machineries, networked the colleges, AAU faculty members and students, who started to get efficient internet services. The ICT staff engaged themselves in developing software for the finance system, the registrar office and the student services by working together with national and international consultants commissioned by Sida. Latter, the university property system was also brought on board and it too digitized its property handling processes.

All of these developments in facilities by Sida support were coupled with the respective training modules prepared and delivered by experts pulled together from within and outside of the country. At the same time the Ethiopian Government that was committed to expand and promote higher education systems in Ethiopia, provided the funding to build the appropriates buildings

for libraries, classrooms, laboratories, student facilities, conference centers and so on. It also allocated considerable fund to employ senior academic staff returning home from their studies abroad and attract to the University those found in other ministries.

The next big step was the reorganization of AAU's structural set-up and governance system. Some sections were upgraded to make them more visible in the organizational structure and higher up in the governance system. for instance, the office of the Vice President for Administration and Student Services has been structured right from the top level of vice president all the way down to the various frontline work processes. This ensured the practice of swift and customer-oriented service delivery mechanism.

The major accomplishments under this component throughout 2014 include:

1. Creating the link and empowering the Directorate of the Graduate Program in making the final decisions in the academic mobility of faculty members, expatriates for teaching and thesis examination, and PhD students to travel internationally for research purposes. Without any obstacles, colleges and students submit their documents for the processing of payments, arrangement of trips and organizing defenses.

2. This was further made efficient when the GCO was opened and a special finance office desk was established to handle the block grant funds.

3. In the administration wing, all in all, nine support processes (budget & finance, procurement and property administration, human resource management, facility administration, student services and affairs, registrar, library, teaching hospital administration and central administrative support processes) have been redesigned and their roadmap for development and Implementation Manual were produced

through the Strategic Plan directorate. All of these documents had gone through the University Board and the ministry of Education evaluation and review.

4. empowering college level administration and assign them a high level of autonomy almost in all administrative decisions

5. Putting in place a new organizational structure and office arrangements

6. Recruitment of new directors, team leaders and experts to the various positions of the new structure through merit based screening mechanisms

7. New policies and guidelines were developed/amended

8. A new human resource plan (required number of support staffs, job title, job grade, salary scale, required educational qualification and number of service years) has been developed and ratified by the Board. In addition, a new placement procedure has been also developed, after incorporating relevant and valuable feedbacks from all stakeholders.

9. Recruitment and placement of new performers based on the redesigned process and human resource plan, taskforces were formed and rigorous screening process were underway through individual performance and capacity assessment.

10. Currently more than 3846 support staffs have been placed and moved to their new job positions. Since the total number of job positions available is about 5175, efforts are underway to fill the vacant posts.

11. A new Japanese property management system, Kaizen Model, had been introduced and implementation has already been started. Various teams at various colleges are established to scale up the project.

12. In order to build the capacity of support staffs and their respective subordinates, Sida-funded trainings on various administrative issues were given and consequently, in general terms, the decision-making and

service rendering quality has been improved. In addition, the trainings created the feeling of belongingness to the duties and responsibilities assigned to each process owner and motivated them to prepare for the long journey of transformation. Based on the determined scope after conducting training need assessment, the following intense and practical trainings were delivered through Sida support:

✓ In collaboration with the Agency of Procurement and Property Administration (PPA) training was given for more than 306 administrative heads, procurement and property administration team leaders and experts in areas of government PPA regulations and practice,

✓ In collaboration with the Ministry of Finance and Economic Cooperation and the Ethiopian Customs and Inland Revenue Authority training was given on areas of budget and finance, accounting, audit and custom regulations and practice for more than 378 administrative heads and experts

✓ In collaboration with Entoto Technical and Vocational Training Institute training was conducted for more than 800 student services staffs on areas of catering, customer handling, food and beverage preparation and on the associated safety measures that should be taken.

✓ In collaboration with Ministry of Civil Service trainings for more than 134 administrative sections' heads and experts was conducted on areas of human resource administration and development.

✓ In collaboration with the Institute of Kaizen, Kaizen philosophy and practical training was given for more than 130 administrative sections' heads and experts.

- ✓ Training and orientation was also given for all university staffs on the university's five year Balanced Score Card (BSC) strategic plan, as this sector of the university system has to comply with the new system.
- ✓ For more than 62 central directors, college managing directors and administrators a training was delivered to enable them organizing an Educational and Research Development and support mechanisms.
- ✓ In order to minimize the encountered traffic accident and also improve the service of university vehicle and fuel administration, more than 130 administration heads, staff members and drivers participated in trainings on efficiency and effectiveness in service delivery while using consumable materials.

Various capacity-building trainings were also undertaken based on the assessment of the gaps each individual envisages. Accordingly, the implementation of the redesigned process starting from July 2014 enabled the University to have relatively qualified staffs working on the right positions. The action plan from 2014- June 2015 was thus to transform the obsolete business in to the new system that delivers the development goals of the country through supporting the PhD programs.

Trainings

Along with this, the administrative and supportive staff members of AAU need to be upgraded with the complementary trainings. With these perspectives at hand, the Office of the Vice President for Administration and Student Services (VPASS) has organized the training. The objectives of this effort were to enable employees perform their work in a better way, to make the performance of employees effective and efficient and to update the skill and knowledge of employees to match the growing needs of compatible system that facilitates the

research, teaching and community services mandates of the university. This has again required training of those personnel in charge of giving service utilizing the automation and the system:

- Exposure to the new human resource regulations and directives of the Federal Government of Ethiopia
- Customer service and
- Good governance

The number of employees who took part in the training 108 administrative employees (39 females and 69 males) and it took place for two days.

Training in procurement and property administration

The purpose of this training was to build the capacity of procurement and property administration employees at the central administration, all colleges and institutes of AAU. Areas of the training covers:

- Introduction to the procurement and property administration regulations and directives of the Federal Government of Ethiopia.
- Customer service
- Good governance

A training in student services aimed at building the capacity of employees working under student service and the dean of students at the central administration, all colleges and institutes of AAU also took place at this time. In this training program, 892 employees (705 females and 187 males) participated for four days in the following areas by highly experienced trainers from AAU and Entoto Poly Technique College. The areas of the training were:

- Customer service in the context of students
- How to maintain cultural difference

- Sanitation and health, sanitation materials and their use
- How to serve students in the dining room
- Cost sharing of students, importance and how to keep such documents
- Gender
- The relationship between beatification and health
- How to keep properties in the store
- Awareness on ICT use

Training in budget and finance operations

Training in budget and finance operations is another batch of the training conducted in the same year. The purpose of conducting this training program was to build the capacity of budget and finance employees at the central administration, all colleges and institutes of AAU. This was conducted with a total of 170 employees (109 females and 61 males) who were engaged for four days in the following areas by highly experienced trainers from AAU and the Ministry of Finance and Economic Development.

The major training areas were:

- Introduction to the budget and finance regulations and directives of the Federal government of Ethiopia.
- Introduction to the new nationwide federal accounting system
- Introduction and hands on training on the Integrated Finance Management Information System (IFMIS), Oracle-based national software to be implemented in all public institutions.

Training in facility management was conducted with the purpose of building the capacity of employees of AAU at the facility management units located at the central administration, all colleges and institutes of AAU. This program had

a total of 1,181 attendants (998 females and 183 males) who were trained for four days in:

- Office cleaning
- Campus beatification
- Customer service
- Rules and regulations of traffic for drivers

Table 2: Summary of trainees that participated in various areas

No.	Types of trainings	Number of trainees		
		F	**M**	**Total**
1	Human resource management and Development	39	69	108
2	Procurement and property administration	31	77	108
3	Student services	705	187	892
4	Budget and finance	109	61	170
5	Facility management	998	183	1181
	Total	**1882**	**577**	**2459**

Automation

Another move of to reverberate the administrative wing was automation of the system process to match the capacity built through training and the facilities put in place. This emanates from AAU's long realized mission of the expansion of the university to launch numerous PhD programs, which is considered to be a futile exercise without the appropriate enabling situation within the university. This has been complemented by Sida support. In this view, the first component of the automation of the administrative system, Integrated Budget and Finance System (IBFS), has been completed and became fully functional by 2012. The transition from manual to IBFS has been very positive and successful. The system comprizes:

- Payroll Module
- Collection Module
- Disbursement
- Advance and Direct Payment Module
- Budget Module

The automation of Human Resource, Procurement, and Student Management Information System (SMIS) also continued. Generally, with Sida support automation of the AAU units such as finance, purchasing, registrar, student services has taken place stage by stage and it continues further as new scenarios appear with the complexity of the growth and development of AAU. The significant contribution of Sida in this regard too, has enabled the University to speed up the attainment of its objective of producing professionally competent graduate students in line with the development need of the country and to improve its various activities. To provide the reader with a case, which he/she can test and find out, is to see that admitted students see for themselves online their department placement, identification numbers, registration formats that they fill out and submit online, and see also their class schedules.

Expected outcomes of the trainings

- The efficiency of AAU management system qualitatively changes as the skills and knowledge gained through the trainings and the interactions thereof generate the desired innovative ways of doing things.
- The new mindset developed through the trainings lead to better ways of doing things with the ultimate goal of providing improved services to end users, particularly to those engaged in and with the PhD programs.
- At all levels improved governance and practices started to b observed with efficient use of resources.
- Improvement in our service, regulatory or policy environment resulting from better informed decision making.
- Improved quality of work

- Effective and integrated work was observed both horizontally and vertically
- Redundant and individual work was replaced with team work.
- Using the new facilities and the software developed has increased the efficiencies of the services.

Fig. 2: Trainees of human resource management and development program as exemplary for the consecutive training sessions

Fig. 3: Closing session of one of the training programs by Mr. Zegeye Muluye, Vice President for Administration and Student Services, AAU (center)

The Office of Change Management and Transformation is supported by Sida Block Grant to enhance strategic thinking and actions related to the mission, vision and goals of the University. It is responsible for establishing systems and coordinating efforts to initiate, plan, implement and evaluate performances, both physical and financial. The Office of Change Management and Transformation focuses on facilitating the overall transition from the traditional deep-rooted ways of doing things to new values and systems that transform the University. Furthermore, it shall establish a system and coordinate change initiatives, plans, implementations, and evaluation modalities and carry out intensive communication concerning institutional and human factors influencing the transition.

Moreover, the Office of Change Management and Transformation works towards integrating the reform initiatives in day-to-day operations and performances by embedding the change ideas into the same. To this end, it is carrying out periodic monitoring and evaluation as well as follows up performances and operational plans in line with the strategic plan. It supports and facilitates the transformative agenda, and a smooth transition from the status quo to the new systems, processes, and roles of the University with minimal risk and a robust University community engagement for the effective and efficient implementation of changes within the University.

At first, Change Management and Transformation Office focuses on capacity building based on Kaizen philosophy, peer learning, BSC automation, good governance and administration and student services. It organized a series of trainings that were aimed at strengthening the reforms underway at AAU. The trainings offered by the office lasted for two or three days using different batches of trainees from various administrative wings of the University as given below.

- 40 directors, officers of various positions and college BSC committee members and ICT staff were trained on BSC Automation principles
- Kaizen philosophy training was given for 140 academic and administrative staff
- Training was given for 100 finance and human resource development on peer learning
- 16 procurement and properties administration staff members were given training on peer learning
- 60 procurement and properties administration staff members were trained by the Procurement Service Office of AAU on procurement and property administration
- 500 Education and Behavioral College, Humanities and Language Studies, Social Science College, Low and Governance College, Visual Performing College, Business and Economics College, Natural and Computational Sciences College and AAiT staff members were trained on Kaizen Philosophy
- 107 Campus Security and Safety Team Leaders were trained on peer learning
- Training on good governance was given for 107 managing directors, other directors and team leaders
- Training 130 human resource team leaders, experts and record officers on the proclamation, guidelines and rules and regulations on human resource and civil service
- Training how to prepare food and beverage and customer service was given for 840 student services staff members
- Training was given for deans and Directors on procurement and property administration.
- Two staff members of the Change Management Office were trained at the Management Institute on Monitoring and Evaluation.

Table 3: Number of trainees and the topics covered

Course Components of the Training	Trainees	No. of trainees
BSC automation	Directors, Officers and College BSC Committee /ICT	40
Kaizen philosophy	Academic and administrative staff	70
Kaizen philosophy	Academic and administrative staff	70
Peer learning	Finance and human resource development experts	100
Peer learning	Procurement and Property Administration	16
Peer learning	Facility management staff	120
Evaluation of peer learning	Vice presidents, college deans, directors and managing directors	150
University performance report	Vice presidents, college deans, directors and managing directors	100
Kaizen philosophy	College of Education and Behavioral, College of Humanities and Language studies, College of Social Science College, College of Low and Governance , College of Visual Performing, College of Business and Economics, College of Natural Science and Computing and AAIT staff members	500
Peer learning	Campus Security and Safety Team Leaders were trained on peer learning	107
Good governance	Managing Directors, Other Directors and Team leaders	107
On proclamation, guidelines and rules and regulation	Human resource team leaders, experts and record officers	130
Customer service, sanitation and health, dining room services, cost sharing office, gender awareness on ICT	Student service	840
Total		**2350**

Fig. 4: A Glimpse of the training sessions and the trainees

Fig. 5: AAU Vice presidents, namely, Dr. Jeilu Oumer, Academic Vice President (middle), Dr. Tassew Woldehanna, Vice President for Research and Technology Transfer (left) and Professor WoldeAmlak Bewket, Guest Speaker (right).

INVOLVEMENT ON ACTUAL TEACHING AND EVALUATION

One of the most severe constraints of the expansion and quality of PhD programs at AAU is shortage of faculty and supervisors. Even as late as 2011 only 16 percent of the academic staff members have reached the rank of associate professor to serve as PhD supervisors as per the Senate Legislation of AAU.

This problem is therefore an obstruction in the effort of AAU to turn itself into graduate and research University and at the same time meet the human resource needs of the newly emerging universities across the nation. As described in the background section of this report, AAU realized that this is not a task that it can do it alone, for that matter any university even in the developed countries. There was no time to use common sense of vertical thinking but convert that to good sense of working horizontally within and outside the country in real-time. Hence, AAU opted for the following four actions. These are:

- AAU seized the concept of the flat world whereby it can mobilize international collaboration from anywhere in the world using the ICT technology and without awaiting the traditional orders and permissions form higher offices
- Do away with the old research process of working on fragmented discipline focussed issues, whose results have remained shelved for decades, but instead use thematic researches with overarching goals to:
  - ♦ Meet national development agenda,
  - ♦ Meet societal demands with outcomes of exceeding expectations of society and the government development directions.

♦ Plan research end-to-end (inception to implementation)

♦ Merge research and graduate teaching as the workforce and creativity of young people always prevails

♦ Link research and teaching in graduate programs with the industry, agriculture and all other development sectors for practical research questions development and thereby generate usable outcomes

♦ Survey all possible comparative advantages AAU has to attract international universities and research institutes such as pproblems of health (humans and animals), food security, archeology, history, biodiversity, etc.

In the wake of the mandate of AAU to expand its PhD program with quality and the change of mindset as indicated above, it launched an international workshop from 19-21 June 2008 at Kaliti Campus, Addis Ababa, under the title: "International Workshop on PhD Programs at Addis Ababa University" with the full support of Sida. This was opened a great opportunity for AAU to demonstrate its commitment to government ministers, national stakeholders and bring on board international universities and research institutes from around the world and find out common grounds of collaboration and optimizing mutual interest area of research and capacity building. At this workshop about 40 different international academic institutes in all imaginable fields from Europe, mainly Sweden, Africa, USA, and Asia (India, Japan, etc.) with a total of close to 250 participants took part. Some of the images of the workshop are shown below.

Fig. 6: Top-down: Poster announcing the conference, Government officials, AAU President, PhD curricula and research plan

Following the above conference, AAU faculty members created linkages with their respective international counterparts, curricula started to be developed and

approved by organizing international conferences, and the Sida supported Block Grant project started to unfold.

Table 4: Visiting professors by country of origin and beneficiary colleges and institutes: 01 July 2013-30 June 2014

No.	Country of origin	No. of visiting professors	Beneficiary colleges or institutes	No. of visiting professors
1.	Canada	17	College of Social Sciences	5
2.	USA	19	IT Doctoral Program	11
3.	South Africa	3	College of Health Sciences	15
4.	Germany	3	College of Law and Governance	6
5.	Sweden	3	College of Natural and Computational Sciences	8
6.	UK	1	Addis Ababa Institute of Technology	5
7.	Australia	1	College of Education and Behavioral Sciences	1
8.	Egypt	1	College of Business and Economics	1
9.	Belgium	1		
10.	South Korea	1		
11.	France	1		
12	Yemen	1		
	Total	**52**		**52**

As illustrated in the Table 4, in the period between July 1, 2013 to June 30, 2014 alone, 52 visiting professors came from different international universities and offered courses in different colleges, institutes and academic units of AAU. That helped the University to fulfill the gap in knowledge and expertise that was not available locally and educated its PhD students in order to accomplish its long term goal having competent graduates in all fields in order to facilitate national capacity building. On top of this, the involvement of these scholars contributed to the improvement of the quality of the PhD programs as they kept injecting into the system their international experiences and expectations.

Other involvements of the international scholars in the graduate programs are engagements in the final theses examinations of PhD candidates and supervision of the PhD students. As shown in the Table 5 and 6 below, in the period reported, July 1, 2014 to June 30, 2015, eighty distinguished professors were involved in the PhD program as external examiners and advisors. These undertakings, too, are believed to be mechanisms to maintain international standards of the program as well as the students. Similar to the visiting scholars, engaging these experts had contributed to strengthen the PhD program by fulfilling the gap that would have not been filled by the current national capacity.

Table 5: Expatriate external examiners participation at colleges and institutes: 01 July 2013-30 June 2014

No.	College or institute	No. of external examiners	Beneficiary colleges or institute	No. of External examiners
1.	College of Social Sciences	12	Canada	2
2.	IT Doctoral Program	2	USA	15
3.	College of Health Sciences	8	South Africa	6
4.	College of Law and Governance	3	Germany	6
5.	College of Development Studies	3	Sweden	8
6.	College of Natural and Computational Sciences	33	UK	2
7.	Addis Ababa Institute of Technology	2	Italy	4
8.	College of Education and Behavioral Sciences	8	Portugal	3
9.	College of Humanities, Language Studies, Journalism and Communications	9	China	3
			India	6
			Kenya	13
			Japan	1

	Cameroun	1
	Uganda	2
	Switzerland	1
	South Korea	1
	Sudan	1
	Spain	1
	Finland	1
	Nigeria	1
	The Netherlands	1
	Israel	1
Total	**80**	**80**

Table 6: Number of visiting professors by country and user colleges and institutes that provided block courses and counseling to PhD students from July 1, 2014 to June 30, 2015

No.	Country	No. of visiting professors	Colleges or institutes	No. of visiting professors
1	Cameroun	1	Addis Ababa Institute of Technology	3
2	Canada	22	College of Business and Economics	1
3	Czech Republic	1	College of Health Science	23
4	Ethiopia	2	College of Education and Behavioral Studies	6
5	France	1	College of Natural Sciences	5
6	Italy	2	IT Doctoral Program	3
7	Kenya	1	College of Law and Governance Studies	3
8	Norway	1	Performing and Visual Arts	2
9	South Africa	2	College of Social Sciences	4
10	United Arab Emirates	1	Institute of Water Resource	1
11	USA	18	College of Humanities, Language Studies, Journalism and Communication	1
	Total	**52**	**Total**	**52**

As illustrated in the tables above, in the period from July 1, 2014 to June 30, 2015, 52 visiting professors came from different international universities and provided courses in different colleges, institutes and academic units. By doing so, the University

fulfilled the gap in knowledge and expertise that was not available locally and educated its PhD students in order to accomplish its long term goal having competent graduates in all fields in order to fulfill the national capacity building needs. On top of this, the involvement of these scholars contributed to enhance the attempt of the University to make comparable the quality of the PhD programs with international universities.

Similarly as shown in Table 7, during the same period 168 distinguished professors were invited to come to AAU with Sida support as external examiners. As a natural outcome of the academic exercise, the external examiners have commented that they were satisfied with the quality of the work done, as their expectations have been met.

Table 7: Number of external examiners by user colleges and institutes of AAU from July 1, 2014 to June 30, 2015

No.	Colleges and institutes	No. of external examiners
1	Addis Ababa Institute of Technology	6
2	Aklilu Lemma Institute of Patho-biology	3
3	College of Education and Behavioural Studies	24
4	College of Development Studies	2
5	College of Health Science	21
6	College of Humanities, Language studies, Journalism and communication	31
7	College of Law and Governance studies	2
8	College of Natural Sciences	42
9	College of Social Science	21
10	EiABC	2
11	Institute of Educational Research	3
12	Institute of Water Resource	1
13	IT Doctoral Program	10
	Total	**168**

Table 8: Number of external examiners by country of origin from July 1, 2014 to June 30, 2015

No.	Country	Number of External examiners	No.	Country	Number of External examiners
1.	Austria	1	17.	Kenya	6
2.	Belgium	2	18.	Lisbon	1
3.	Botswana	1	19.	The Netherland	2
4.	Canada	10	20.	Malawi	2
5.	China	4	21.	Norway	6
6.	Djibouti	2	22.	Poland	1
7.	Denmark	2	23.	South Africa	12
8.	Ethiopia	28	24.	The Sudan	3
9.	Finland	3	25.	Sweden	7
10.	France	3	26.	UK	7
11.	Germany	12	27.	USA	28
12.	Indian	8	28.	Senegal	1
13.	Ireland	1	29.	South Korea	1
14.	Israel	2	30.	Tanzania	2
15.	Italy	4	31.	Uganda	4
16.	Japan	1	32.	Turkey	1
Total of the two columns					**168**

After about nine years of training the faculty members of the new universities, some of them such as Haramaya, Hawassa, Mekelle, Bahir Dar and Jimma have launched PhD programs in limited areas and have started to share the burden of capacity building with AAU. This is highly gratifying to both AAU and Sida that have been putting so much effort and resources into it to reach at this noble goal and proceed beyond. It is also a great achievement as a nation that the expansion of higher education in Ethiopia as stated in the GTP I have been successfully implemented.

Short-term International Stay for PhD Candidates

One of the pillars of ensuring the quality of the in-house PhD programs at AAU is to prepare condition by which students are able to face the challenges of international academic systems and assess their status vis-à-vis the status of PhD students elsewhere. One way to ensure this is by enabling researchers to participate in international conferences whereby PhD candidates present their research findings, collect feedbacks and learn from others. Such venues are also ideal for establishing linkages with eminent experts as they bring a large pool of global experts together and create linkages for the development of their carriers. Thus several PhD students from AAU were sent to conduct parts of their research in facilities that could not be made available at AAU and attend conferences. In other words, each time AAU PhD candidates go abroad they perform multiple activities ranging from seminar presentations with challenging questions to analysis of samples using advanced facilities and write up of dissertations in consultation with international advisors.

This procedure has been taken as the yardstick to measure the academic excellence of the in-house PhD program at AAU for which Sida has allocated substantial amount of fund.

In the first phase of the block Grant period, AAU has supported 160 PhD students and faculty to travel abroad to present their research findings at international workshops and conferences. To this end, five PhD students travelled to different countries and presented their research results on diverse conferences. Through the fund AAU has also supported 40 PhD students travelled abroad to use modern laboratories and get close assistance from their advisors.

Table 9: Short-term international stay of PhD candidates by destination country and by college or institute

No.	Hosting Country	No. of PhD Candidates	Colleges/Institute /Program	No. of PhD Candidates
1	Canada	5	IT Doctoral Program	5
2	USA	11	College of Health Sciences	8
3	South Africa	2	College of Law and Governance Studies	2
4	Germany	5	College of Development Studies	1
5	Sweden	4	College of Natural Sciences	19
6	United Kingdom	2	Addis Ababa Institute of Technology	2
7	Belgium	2	College of Education and Behavioral Studies	2
8	Korea	1	College of Business and Economics	1
9	Portugal	1	College of Humanities, Language studies, Journalism and Communication	1
10	Spain	1	Ethiopian Institute of Architects, Building Construction and City Development	2
11	Yemen		Institute of Peace and Security Studies	1
12	India	1	College of Social Sciences	1
13	Kenya	1		
14	Italy	3		
15	Finland	1		
16	Czech Republic	2		
17	Nigeria	2		
18	Brazil	1		

Total	45	Total	45

The figure below indicates the mobility of PhD candidates to different destinations of international academic excellence to exchange experiences between 2014 and 2015.
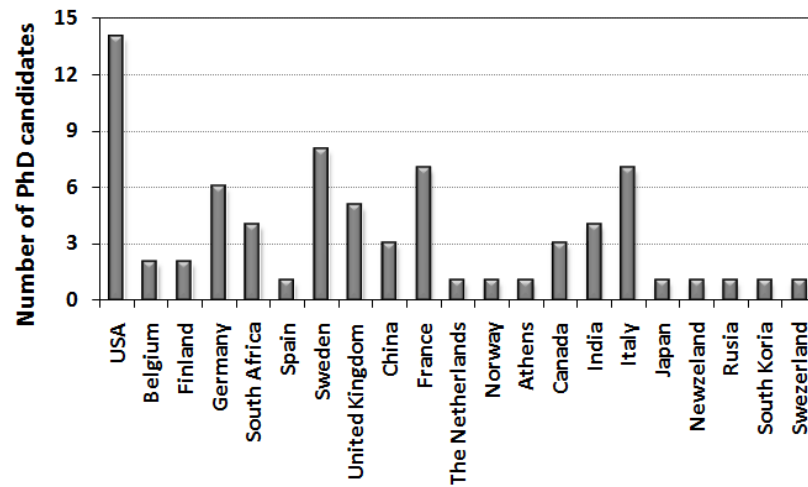

Fig. 7: PhD candidates who traveled for short research visits abroad by destination: 2013/14 and 2014/15
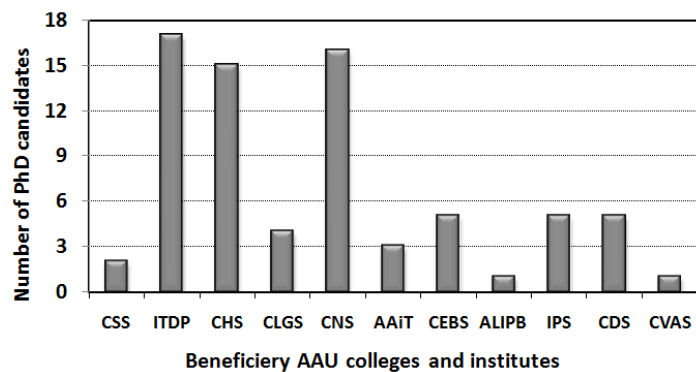

Fig. 8: PhD candidates who traveled for short research visits by user colleges and institute of AAU: 2013/14 and 2014/15

Through this exercise AAU once again has recorded that a big leap forward has been achieved from 45 to 74 PhD candidates sent abroad in the last two consecutive AAU-Sida agreement years of 2013/14 and 2014/15.

EXPANSION OF GRADUATE PROGRAMS

Program Development between 2009 and 2016

In addition to the many MA and MSc programs, AAU increased the number of PhD programs from 8 to 43 (between 2007and 2009) and during the Sida block grant period (2009-2016), from 43 to 70.

Table 10: Some of the new PhD programs launched since 2009

New PhD programs	
1. Anatomy	14. Peace, Federalism and Human Rights
2. Applied Linguistics in Teaching Ethiopian Languages	15. Pharmaceutics
	16. Pharmacology
3. Development Studies	17. Political Science
4. Earth Science	18. Public Administration and Policy
5. Economics	
6. Environmental Planning	19. Social and Administrative Pharmacy
7. Environmental Science	
8. Ethiopian Literature	20. Social Anthropology
9. Folklore	21. Sociology
10. International and Comparative Educations	22. Water Resource Engineering and Management
11. Mathematics	
12. Mental Health Epidemiology	23. Managing Peace and Security Studies
13. Special Needs Education	
	24. Teacher Education in Science and mathematics

Table 11: Masters' programs at AAU

Masters' programs	
1. African Studies	2. Tran -boundary Animal Disease Management
3. Clinical Health Psychiatry	4. Urban Development and Urban Challenges in East Africa
5. Computational Linguistics	6. Urban Settlement Studies
7. Educational Leadership	8. Water Resource Engineering and Management
9. Emergency Medicine and Critical Care Nursing	10. Rail-way in Civil Engineering
11. Field Epidemiology	12. Rail-way Technology in Chemical Engineering
13. Food Security Studies	14. Leather Technology in Electrical Engineering
15. French as a Foreign Language	16. Leather Technology
17. Geodesy	18. Health Informatics
19. Health Psychology	20. Supply Chain Management
21. Human Rights	22. Executive Management
23. Marketing Management	24. Paleontology and Paleo-environment
25. Tourism and Development	

New Medical Specialty Certificate Programs	
1. Gasto-enterology and Hepatology	2. Neonatology
3. Paediatric Cardiology	4. Pediatrics Surgery Sub-specialty program
5. Adult Cardiology	6. Cardiothoracic Surgery
7. Urology	8. Emergency Medicine and Critical Care Nursing

Graduate Program Review

Since the launching of the Sida-supported Block Grant back in 2009, the PhD programs at AAU have been expanding both in the numbers of PhD students enrolled and PhD programs opened. Thus, there was a need for launching of periodic graduate program reviews in order to assure the relevance and quality of this high-level capacity building process. Thus in 2012, as part of the exercise, centre for academic standards and quality enhancement has developed

has developed program review schedules whereby every two or three years national and international stakeholder meet and update the PhD curricula. Consequently, the AAU developed quality enhancement framework and guidelines for program design, approval at review sessions. The framework and the guidelines was discussed and approved at a one-day workshop organized by the centre. Accordingly, since 2011, all colleges and institutes of AAU have conducted periodic program review processes again with the kind support of Sida

In connection to this, a Swedish expert, Mr. Lennart Stahle from Hogskoleverket has been employed to assist the University with its endeavor to set up a well functioning and relevant PhD program review procedures. Mr. Lennart Stahle has conducted two short visits to Addis Ababa University. During his stay in Addis, the consultant had a preliminary review of the ongoing PhD programs with emphasis on the program delivery and administration. In the review, Mr. Lennart Stahle has consulted college deans, faculty and students who were involved in the PhD programs. The consultant had follow up visits in the year of the Sida-supported Block Grant.

The University level committee also made a site visit and organized discussion sessions with the stakeholders - the students and teachers - and conducted desk review of the entire curricula and reported its final findings to the management of the University. The Desk review of curriculum documents of the programs targeted identification of area of proliferation of programs, similar program titles, program titles joined by and" and so on and those with shady/dubious titles, program objectives, program course contents, and levels of Coherence and viability of programs. Finally, the University management consulted the findings of the study with the deans, department heads and senior academic staff.

The results of the review revealed that the expansion of the PhD programs is impressive and new programs have developed within a short time. AAU is moving in the right direction in expanding the program. One probably small drawback could be that the programs are new and they require some more years to clearly identify the weak points. Starting the exercise early on has been taken as a wise step, since it makes all actors involved, particularly instructors and the host departments alert to control quality of the programs. Despite this, all have realized that there are:

- Shortages of resources and advisors for doctoral researches,

- Insufficient budget allocation for the cost of PhD projects/researches,

- Still high expectations on library services,

- Shortage of laboratory equipment,

- Lack of transparent communication between staff and students, and

- PhD student taking more time than the planned three year to complete their studies.

The following recommendations were also forwarded for the effectiveness of PhD programs:

- There is a strong need to review the number of PhD programs and increase of enrollment of students to avoid redundancies and loss of control on quality

- Establishing new PhD programs must be done with consideration to availability of supervisors and facility resources for doctoral research;

- the University should develop methods to assess the annual performance of PhD students, and the allocation of sufficient budget for the PhD research from the Ethiopian Government Each faculty needs to have a better control over: the number of candidate per advisor, the work load of each advisor per semester, the number of foreign advisors and their performance; and

- The University must create a realistic plan for promotion and development of the academic staff.

In general, it was believed that the feedbacks from the consultants are crucial to serve AAU as inputs for the ongoing program review processes.

Increased Graduated Students

One of the greatest accomplishments of AAU over the period of the Sida Block Grant agreement has been the increase in PhD students' enrolment and graduates. The enrolment of PhD students in 2009/10 was merely 667; it has increased to 1,745 in 2013/14. The numbers of PhD students who graduated from AAU in 2009/10 and 2010/11 were 15 and 19, respectively. In the year 2012/13 and 2013 /14, the figure increased to 103 and 144, respectively. Over those few years, AAU has produced 345 PhD graduates.

By 2013 and 2014, AAU was able to offer over 70 undergraduate programs and 217 graduate programs, out of which 69 were PhD, 126 Masters, 13 specialty and 9 sub-specialty programs. The number of overall student population admitted to the University also reached over 48,683 out of which 14,847 are engaged in graduate programs. Among these, the number of PhD students was 1731. Thus in 2013/2014 academic year AAU has graduated a total of 8,142 students in different levels, of which, 5,305 graduated with first degree, 2,692 in second degree and 145 PhD of which 11 were females (7.6%). Similarly, in 2014/2015 academic year AAU has graduated a total of 8,229 students at different levels, of which, 5,305 graduated in first degree, 2,692 are in second degree and 232 PhD of which 11 were females. Out of the total 8,229 graduates (undergraduates and graduates), 2,221 (27%) were female, with this number thinning out up the ladder. Indeed the progress in graduate number particularly in the PhD program of 2014/15 academic year is beyond the

expected number of 172, rising to 232, which is a jump from 142 of actual graduates of the previous year with a difference of 90.

This remarkable growth was obviously facilitated by the Sida support to AAU in providing the necessary inputs and partly enhanced due to the decision of the AAU management that PhD candidates who have been lagging behind with four to five years stay on campus were required to complete their work in that academic year. Out of the 232 PhD graduates 11 were females (See the figure   below).
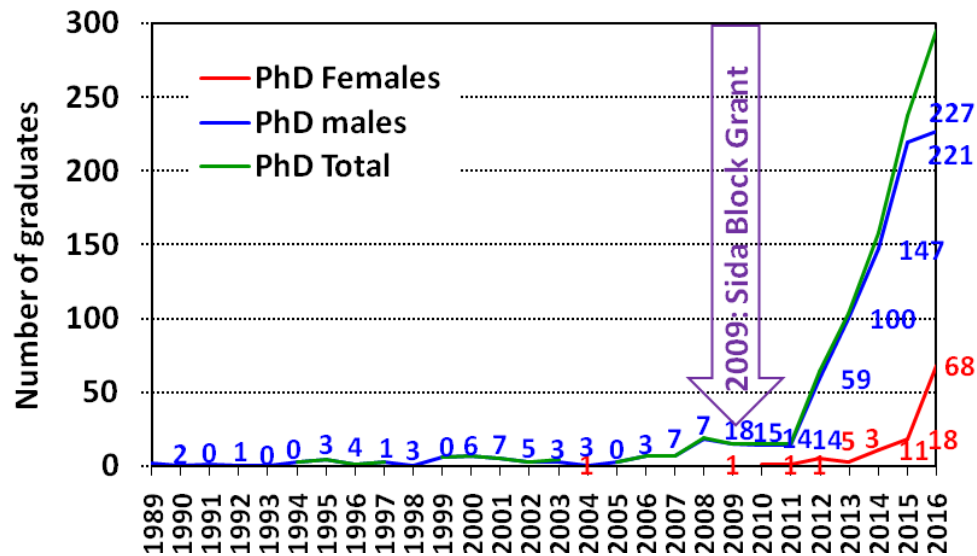

Fig. 9: PhD students' graduation statistics with actual numbers from 1989 to 2016. The Arrow in the figure indicates the intervention made by Sida and the impact it made on PhD program outcomes thereafter.

TOWARDS EQUITY AND INCLUSIVENESS: DEALING WITH GENDER DISPARITY AND CREATING SPACE FOR DISABILITY LEARNING

On Female Students

As it is true in developing countries, the number of females in schools is very small and it is still worse in higher education systems. That does not make Ethiopia and AAU any different. However, recognizing the need to develop a gender-balanced society for the advancement of the country in this changing globalized world is already a big step. AAU and Sida have taken steps to improve the involvement of female students in AAU, particularly at the graduate programs levels. In the first three years of the agreement, over 400 scholarships have been given to female students with outstanding performance in their undergraduate studies and to students with disabilities.

In 2009/10 there were only 648 female Mater's students all of whom were in the regular program. The figure has dramatically increased to 2,491 in 2013/14. The number of female candidates in PhD programs has also doubled. In general, the scholarship has been fruitful, as it has now raised the number of female students in the graduate program from 10 to over 20% of the total graduate student population.

The university planned to have females share up to 25% of the 1500 PhDs enrolled within the first two and half years of the Sida Block Grant project period. This has not been materialized as the number of females educated at masters level is still around 10%. To raise the number of female students in the PhD programs, we need to raise their ratio first in the masters programs. The scholarship continued in a more strengthened way throughout the grant period.

The number of female students in the graduate program has been very small at AAU. In order to alleviate this problem, AAU has launched the graduate female scholarship scheme supported by Sida. The scholarship has been fruitful, as it has raised the number of female students in the graduate program from 10% to 17.33% of the total graduate student population. The scholarship opportunities target MA or MSc. female students and students with disabilities that have high academic achievements, and as a result who are likely to join the PhD programs in the future.

Between 2013 and 2014, 184 female and 34 students with disability scholarship awardees received their monthly scholarship awards. However, a large number of candidates in both the female and the disability scholarship schemes were not able to use this opportunity due to their inability to pay their cost sharing debt during their first-degree studies. The following figure shows the progress made up until 2014.
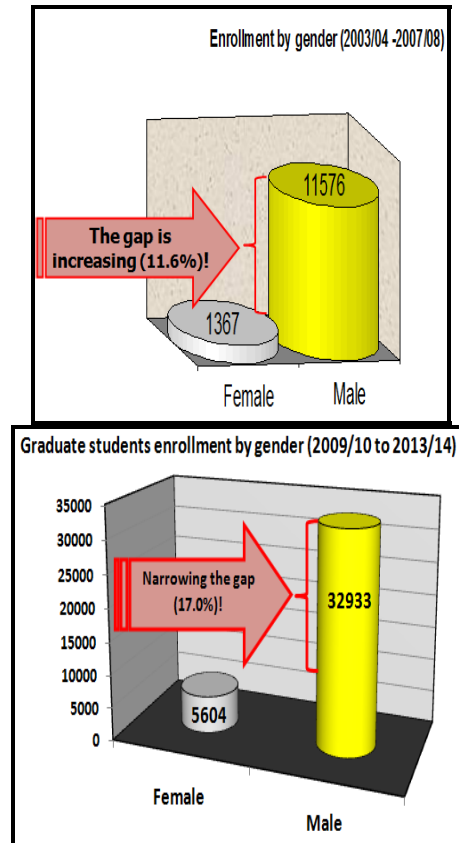
Fig. 10: The progress made between 2003/04
and 2013/14 in female students enrollment in
the graduate programs of AAU

A considerable move in the year towards the genders issue in the University during this year was the fact that Addis Ababa University which has been working on developing a gender policy succeeded by its team of five members preparing a draft policy document. The validation workshop, assessments and finalizing the document was completed by the end of August 2014. The university also conducted the Environmental Impact Assessments of Sida grant, which showed that the support has positive environmental and societal impacts.

The support of Sida to increase female student's admission continued and in 2015, out of a total of 6887 female regular students, 285 or 4.2% only receive additional support from Sida besides what they get like any other regular graduate students. Although the number of students who get this special support is very small, it is once again important to reiterate that Sida and AAU are on the right track in supporting female graduate students although both institutions realize that more engaging actions must be taken to make the nation a gender balanced system. See the figure below.
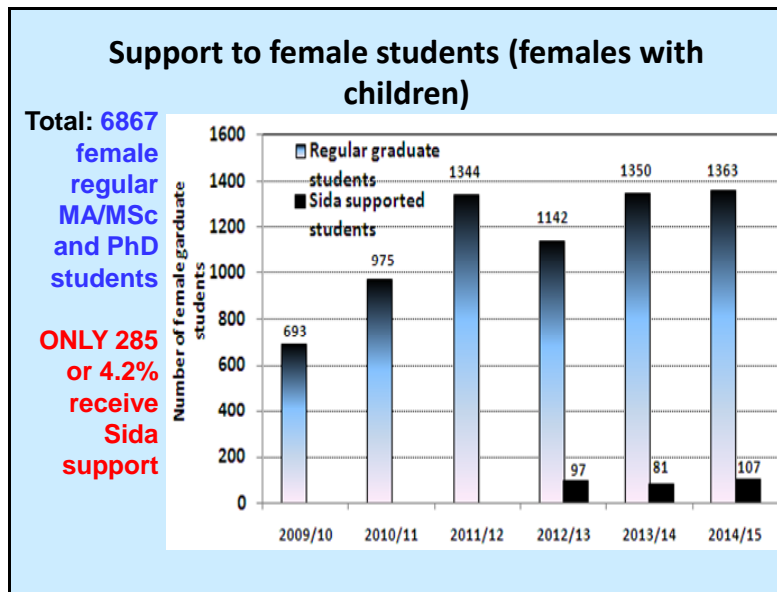

Fig. 11: Female graduate students obtaining Sida support compared to yearly enrollments

On students with disabilities

Addis Ababa University is known throughout Africa for the large number of students with disabilities it enrolls. The University has over 400 students with disabilities in its undergraduate student population. There are also tens of students both in the masters and PhD programs.

AAU has given due emphasis to ensure better services to its students with disabilities. This is evidenced by the establishment of the Center for Students with Disabilities, which offers wide ranges of service to students with disabilities and the opening of the Department of Special Needs Education in 2003. It is with the Sida support that the establishment of the center for disabilities opened new BA programs in Sign Language and Special Needs Education, and offered computational skills development training for visually impaired graduate students.

Since 2010 the University has launched graduate scholarships for candidates with disabilities. In 2010, for instance, 10 students were beneficiary of the scholarship scheme. The University has increased that to 14 in 2011 and aims to raise it to 50 in subsequent years.

The establishment of the Department of Sign Languages and subsequent graduation of its first batch of trainees after completing a four-year undergraduate study in July 2011 makes AAU the first African University in this regard. The Department of Special Needs Education also offers masters and PhD programs.

Consistent with its mission of ensuring to inclusive development in the country, AAU offers various support services to students with disabilities. In March 2011, for instance, the Office of the Vice President for Research and Dean of the School of Graduate Students and the School of Social Work (SSW) launched a pilot project and offered computational skills development training for visually impaired graduate students at the University. About 27 masters and PhD students took the training for 22 days.

AAU with the support of Sida has extended its support to MA/MSc students with disabilities. Out of 709 disadvantaged students Sida supports 34 of them only (4.8%), mainly selected based on their academic performance,

family financial status, distance from their hometown, ability to cover their cost-sharing debts at undergraduate studies, etc.

Under the Sida Grant, 12-14 Master's scholarships are awarded to eligible candidates every year from all universities in Ethiopia. In 2013/13 the number of the candidates who took up the scholarship dropped to only 5, and continued to decrease thence. This drop occurred because of the policy of the students' inability to pay.
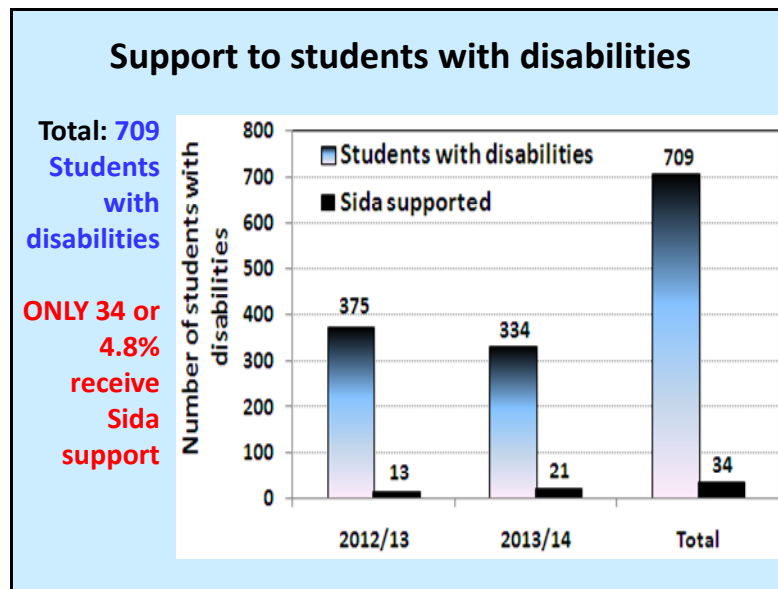

Fig. 12: Students with disabilities obtaining Sida support compared to yearly enrollments

In general the experience shows that such efforts to support females and students with some form of disabilities was also taken as experience to be extended in the support of such students in the undergraduate and high school programs, where most are lost, particularly the females.

TURNING AROUND AAU's RESEARCH CULTURE

One of the objectives of Sida Block Grant support is to enhance research program activities of the University. The outcomes of a research that is not disseminated to build a systematized body of knowledge to the academia and that dos not solve current and anticipated problems of end users is as good as a research that is not conducted. In fact, Addis Ababa University has been working to make research meaningful and outcome oriented and to avoid fragmented and isolated research.

In a major departure from AAU's traditional research culture of operating within discipline and by individuals, -the university forged ahead with interdisciplinary and demand-driven program with the motto of 'thematic research'. By this action AAU has taken a transformative step, using a rigorous process to establish research groups around themes of national importance as described in the background Section of this report and at same time AAU intended to accommodate PhD students with alignment of their research proposals into thematic research. By 2010, it has undertaken the task of identifying priority thematic research areas in a consultative process. Proposals submitted following the first call have been grouped into twelve thematic research areas that brought together over 300 researchers from across departments, faculties and colleges of the university.

After the refinement processes by the researchers themselves, the proposals were given to panel of assessors nationally and internationally. After these long processes, which took nearly two years, AAU launched eleven thematic researches in a workshop in a national workshop sponsored by Sida. The workshop brought together over 300 researchers, officials from various universities, ministers, members of the international community and others. Parallel to the workshop, a poster exhibition was held as showcase the synopsis

of the planned research endeavors in the 11 thematic researches. At this stage, AAU has committed itself nationally and for the first time in its history, by outlining its thematic research areas based on national development goals. Subsequently, the Ethiopian Government allotted close to 19 million ETB for thematic research and currently these research projects are being conducted.

It is probably wise to look briefly into the outcome of one of the thematic research project, namely, Water Thematic Research, that was addressing the water and land-use issues of the Zwai-Shalla Basin, which happened to be under enormous pressure from population increase, uncontrolled development effort, climate change impacts and even some natural cause as Earth movements. After seven years, twelve PhD students, around eight mater students, over thirty-five publications and research outcomes have been disseminated user communities and the Ministries of Environment, Agriculture, Oromia Research and Health Bureaus. Special national workshop sponsored by Sida was also organized to provide the basis for the conservation and sustainable use of the Zwai-Shalla Basin. In due course, a book will be published out of the scientific papers presented and the discussions made at the end of the conference to positively change the development direction of the basin in question.

Some of the areas covered by the first batch of thematic research project were:

- Enhancing food security through improved productivity, nutrition and marketing in Ethiopia
- Human health improvement: Combating HIV/AIDS and promoting maternal and child health
- Investigation towards intervention on major endemic and emerging livestock diseases of economic and zoonotic importance

- Restoration of Upper Awash and Gibe Watersheds, and Western Escarpments of the Central Rift Valley: Mechanisms for re-establishing biodiversity, ecosystem functions, and livelihoods
- Search and development of drugs, diagnostic tools and vaccines from natural products for control and prevention of human and animal diseases
- Studies towards integrated prevention and control of malaria and other parasitic diseases in Ethiopia
- Water resources management and sustainable use in the Main Ethiopian Rift Valley

Later in the year, additional four thematic research proposals were given sponsorship. These were:

- Animal diversity, ecology, conservation and sustainable use of animal resources in Ethiopia
- Building resilience to climate change: from geologic record to current mitigation and adaptation options
- Quality of education in Ethiopia: Assessment, intervention and development
- Solar energy conversion and utilization based on conducting polymers, nano-materials and zeolites for sustainable development in Ethiopia

During the second call for new thematic research call in January 2013, around 40 projects were evaluated and 20 of them fulfilled the criteria. Thus in the 2013/14 academic year, these 20 thematic researches have been conducted in different colleges and institutes of the university. The third call for new thematic research projects were announced in January 2014 and 46 new projects were evaluated. Accordingly, a validation workshop for the new 20 thematic research projects was conducted on 25 June 2014 with the presence of

different stakeholders, university community and ministries. During the workshop scientific poster presentations were made; and major objectives and goals of the thematic research projects were discussed and understandings were made among the presence of University management, AAU board members, deans and academic communities at large. Other areas in the social sciences, such as, economics; appropriate technology; language and humanities; peace and security, conflict-resolution and disaster; federalism, democracy and governance; gender relations and gender awareness are encouraged to study national gaps in the respective fields and develop proposals.

In 2013 /2014, AAU had increased the number of its activities related to research with the support of Sida block grant. The activities were in addition to organizing the thematic research programs, research disseminations, workshop and local conference support, etc. were major achievements that had been made during the year in particular was on research dissemination and thematic research projects support.

Addis Ababa University lead by the Director of Research is committed to recognizing innovation, intellectual property ownership and technology foresight. Accordingly, it encourages its staff and graduate students to engage in meaningful research, publish their findings in local, regional and international journals, and present their research findings at international workshops and conferences.

It is worth mentioning that the University runs numerous workshops, conferences, panel discussions, stakeholders meetings and organizations of open-days every year so that the knowledge generated in the University reaches end users. In view of this aim, locally AAU conducted a research day in the college of natural science to disseminate research findings of the college to different end users on June 16, 2014. On the other hand, a College Day also carried out on June 12 and 13, 2014 at the College of Development Studies

portraying and popularizing its activities in the arenas of learning and teaching, research and community services to its various stakeholders and the public at large. Besides, research conferences were conducted in the Institute of Educational Research, Institute of Ethiopian Studies and the College of Education was conducted. The meetings conducted and the conferences held contributed to knowledge sharing to communities outside universities and collaborations with various institutions.

Fig. 13: Sida supported Research Output Marketing Exhibition (ROME), Natural Science Arat Kilo Campus of Addis Ababa University, 2015

Fig. 14: One of the research outputs on Aquaponics being demonstrated to public by aquatic science researchers, Addis Ababa University, 2015

Back in 2014, with Sida support the Office of the Vice President for Research and Technology Transfer commissioned a South African company Thomas Reutter to conduct bibliometric assessment of AAU. The following figures show the outcomes of this work that was mainly based on the impact the thematic research linked to doctoral research projects brought to AAU.

With regard to the amount of research that took place at AAU between 2010 and 2014 the following was presented.

Between 2011 & 2014, AAU's number of publications increased by 63% (from 256 to 417 publications). The proportion of publications relative to world output has increased from 0.017% in 2010 to 0.023% in 2014.
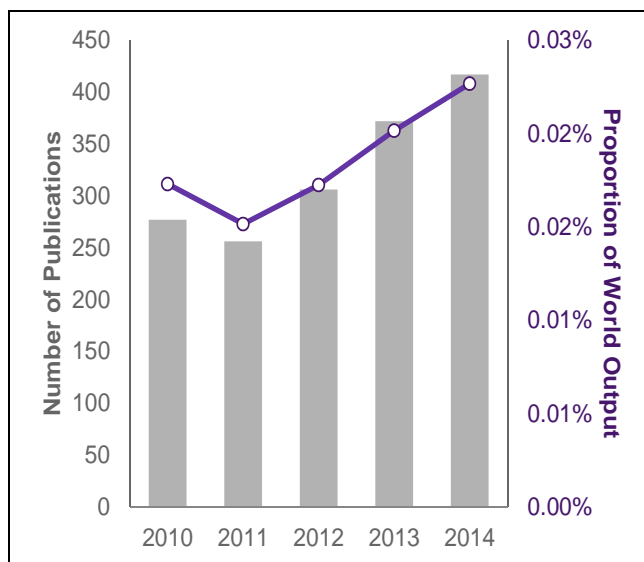

Fig. 15: Addis Ababa University's output in publication output and its share of world output, 2010-2014

The next level of assessment was citation impact of AAU research between 2010 and 2014. With respect to citation impact, AAU research in the fields of Economics and Business (2.06), Molecular Biology & Genetics (2.22), and

Materials Science (2.29) was more than twice the global average and exceeds the baseline for Ethiopia. AAU surpasses Ethiopia and the world also in the fields of Clinical Medicine, Psychiatry/ Psychology and Geosciences as shown in the following figure.
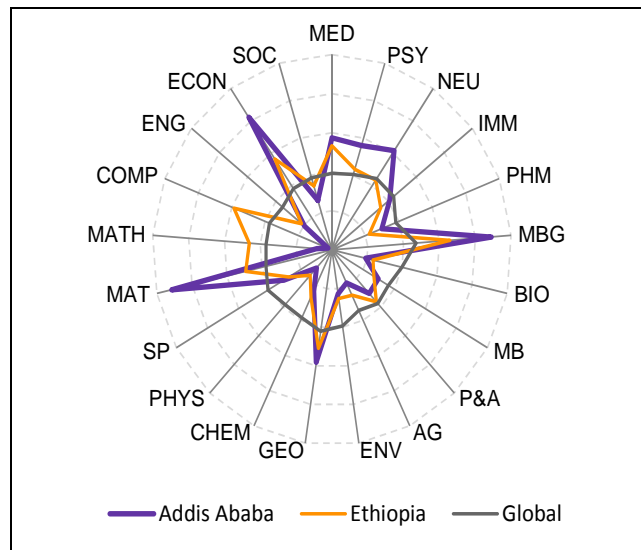

Fig. 16: Research Footprint®, citation impact by Subject Category for Addis Ababa University, (the world average is shown as a solid grey line) 2010-2014

Another level of assessment was to see how the publication outputs of Addis Ababa University compare against comparators, namely, other purposefully selected universities, namely, University of Dar Es Salaam, University of Nairobi, Cairo University, Makerere University and University of Cape Town.

The data indicate that AAU outperforms two of its comparators, namely, University of Dar Es Salaam and University of Nairobi for number of publications. AAU outperforms Cairo University in citation impact. One

notable fact is that AAU has more highly cited publications than Cairo University despite the latter having approximately five times more publications.
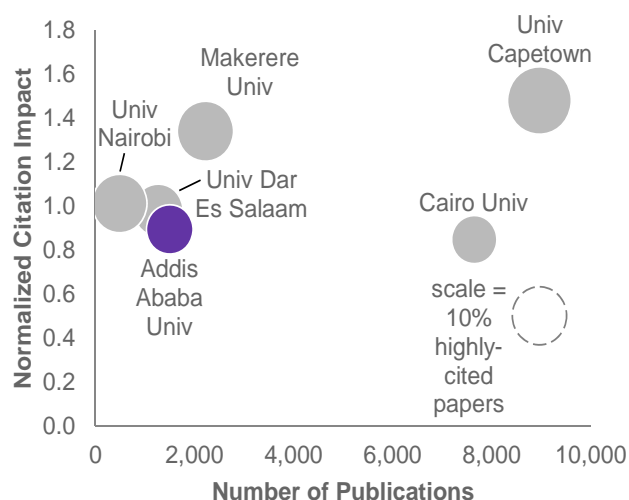

Fig. 17: Publication productivity and relative citation impact normalized to world output, by institution, 2010-2014

In general, in the realm of research AAU is performing as planned despite the speed at which the research and graduate program expansions are going. In other words, the assumption that when expansion in research and graduate programs was speeded up to meet national development goals, the risk was quality would be compromised. From the data above, it seems both quality and quantity are going well, although on the part of AAU to be alert and be watchful of the progress is vital for the long-term perspective.

Dissemination of Research Results to End Users

Addis Ababa University is committed to recognizing innovation, intellectual property ownership and technology foresight. Accordingly, it encourages its

staff and graduate students to engage in meaningful research, publish their findings in local, regional and international journals, and present their research findings in international workshops and conferences. Publication of research findings in reputable journals is a major condition for promotion of the academic staff. The University extends support to publications, such as *SINET: Ethiopian Journal of Science*, which has appeared uninterruptedly for the last 35 years. Many of the professional societies housed at AAU have peer-reviewed scientific journals, which enjoy numerous supports from AAU and serve as major research outlets to the staff and graduate students of the University. For instance, the *Bulletin of the Chemical Society of Ethiopia* has acquired international repute and now serves not only the scientific community of Ethiopia but also scientists from all over Africa. Similarly, the *Journal of Ethiopian Studies, Ethiopian Journal of Biological Sciences, HISAB-Ethiopian Journal of Mathematics*, *Ethiopian Journal of Education, Ethiopian Pharmaceutical Journal, Ethiopian Journal of Development Research* and *ZEDE*: *Journal of the Association of Ethiopian Engineers and Architects* have made tremendous contributions in communicating and disseminating research findings to the larger scholarly community and in enhancing basic sciences education in the Ethiopian school system and to the communities at large.
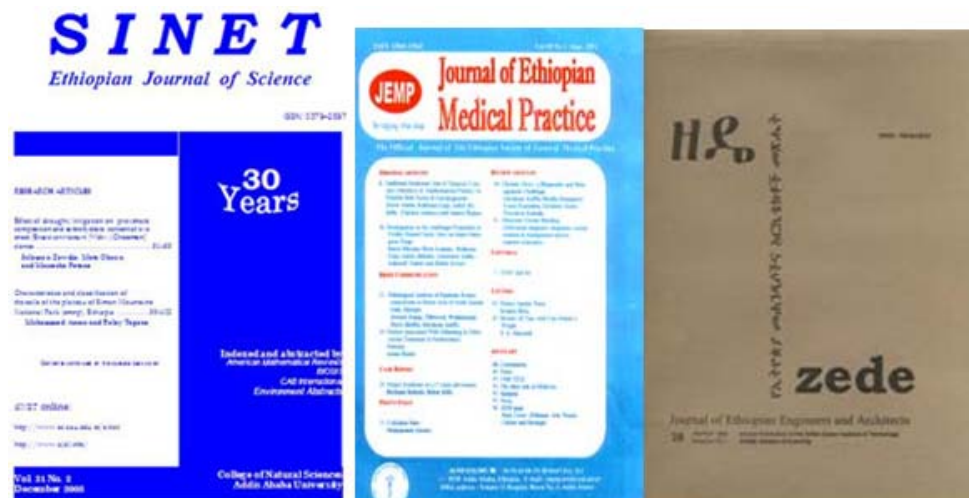
Fig 18: Some of the prominent journals of AAU from among twenty or so such peer reviewed internationally acclaimed journals

The total number of journals in the university has now a little over twenty. Most of these journals publish original works of the faculty and PhD students of the University and other researchers in the region and elsewhere in the world. Sida has contributed a tremendous role to fund the issuance of these academic publications along with the Ethiopian Government's budget and improve their quality. Regarding the later, Sida sponsored a two-day workshop to upgrade the quality of some of the marginal journals that failed the regulations set by the University Senate for the assessment of the reputability of AAU journals. At this workshop, renowned journal editors from Germany, USA and South Africa were invited to share their experiences and provide training. Below are given some information on the Senate regulations for journal assessment and list of journals recognized by AAU as reputable for two years (2014 and 2016).

Table 12: AAU journals reputability status assessment results in 2014

No.	Journal	Status after assessment
1.	Journal of the Chemical Society of Ethiopia	Reputable for three years
2.	Ethiopian Journal of Economics	Reputable for three years
3.	Ethiopian Journal of Health Development	Reputable for three years
4.	Ethiopian Medical Journal	Reputable for three years
5.	Ethiopian Pharmaceutical Journal	Reputable for three years
6.	Ethiopian Veterinary Journal	Reputable for three years
7.	The Ethiopian Journal of Education	Reputable for three years
8.	SINET: Ethiopian Journal of Science	Reputable for three years
9.	Zede: Ethiopian Journal of Engineers and Architects	Reputable for three years
10.	Ethiopian Journal of Biological Sciences	Conditionally recognized as reputable for one year to be assessed again after one year
11.	Ethiopian Journal of Development Research	Conditionally recognized as reputable for one year to be assessed again after one year
12.	Journal of Ethiopian Law	Conditionally recognized as reputable for one year to be assessed again after one year
13.	Journal of Ethiopian Studies	Conditionally recognized as reputable for one year to be assessed again after one year
14.	Ethiopian Journal of Social Sciences and Humanities	Not reputable to be assessed after two years
15.	Journal of Education for Development	Not reputable; to be assessed after two years
16.	Journal of Ethiopian Statistical Association	Not reputable to be assessed after two years
17.	The Ethiopian Journal of Business and Economics	Not reputable; to be assessed after two years
18.	The Ethiopian Journal of Higher Education	Not reputable; to be assessed after two years
19.	Zena-Lisan: Journal of Academy of Ethiopian Languages and Cultures	Not reputable; to be assessed after two years

Table 13: AAU journals reputability status assessment results in 2016

No.	Journal	Status after assessment
1.	Journal of the Chemical Society of Ethiopia	Reputable for three years
2.	Ethiopian Journal of Economics	Reputable for three years
3.	Ethiopian Journal of Health Development	Reputable for three years
4.	Ethiopian Medical Journal	Reputable for three years
5.	Ethiopian Pharmaceutical Journal	Reputable for three years
6.	SINET: Ethiopian Journal of Science	Reputable for three years
7.	Journal of Ethiopian Studies	Reputable for three years
8.	The Ethiopian journal of Education	Conditionally recognized as reputable for one year to be assessed again after one year
9.	Zede: The Ethiopian Journal of Engineers and Architects	Conditionally recognized as reputable for one year to be assessed again after one year
10.	Ethiopian Journal of Biological Sciences	Conditionally recognized as reputable for one year to be assessed again after one year
11.	Ethiopian Journal of Social Sciences and Humanities	Conditionally recognized as reputable for one year to be assessed again after one year
12.	The Ethiopian Journal of Business and Economics	Conditionally recognized as reputable for one year to be assessed again after one year
13.	Zena-Lisan: Journal of Academy of Ethiopian Languages and Cultures	Not reputable; to be assessed after two years
14.	Ethiopian Journal of Paediatrics and Child Health	Not reputable; to be assessed after two years
15.	Ethiopian Journal of Development Research	Not reputable; to be assessed after two years
16.	Journal of Ethiopian Statistical Association	Not reputable; to be assessed after two years
17.	Journal of Ethiopian Law	Not reputable; to be assessed after two years

In 2014, some restructuring was made within the University and the former Graduate and Research Office was reorganized as the Office of the Vice President for Research and Technology Transfer (VPRTT). Accordingly, the major task of this office of AAU was to facilitate the conduct of research, manage the outcomes and deliver the outcomes to the scientific community in the form of publications and technologies that can be used to make impact on the lives of Ethiopians and the people of the region in general. In this regard, the office has assisted the smooth running of projects of PhD and masters students and other international collaborative projects.

One of its earliest and most pronounced achievements of the Office was facilitating the research undertaking of the University. The VPRTT has searched around for the most appropriate software that can automate the research process at AAU and interface it with the international knowledge exchange systems whereby authors from AAU are appropriately referred to and they also receive the desired research materials from reputable sources. With careful scrutiny, OVPRTT has selected the appropriate software called *Converis* from a South African company by the name Thomson Reuters. This has been purchased and installed by the ICT Directorate of AAU with financial support of Sida. This software is being introduced to AAU faculty members and graduate students. With this software in place, the VPRTT is trying to complete the whole process of announcing of

- Calls for proposals,
- Collection of proposals online,
- Conducting assessment of proposals in most transparent ways by publicizing the criteria,
- The announcement of assessment results and so on,
- The granting of funds,

- Monitoring of the flow and use of funds,

- Generating financial reports and

- Even collecting research outputs, publications and dissemination of the same to the scientific community and end users. In all these endeavors, the Sida provided the financial support.

Besides this, the VPRTT has conducted various workshops, conferences and panel discussions on issues of national, regional and global importance. Among the regional conferences the ones that dealt with the Nile Basin issues with the title of "*The Nile: Opportunities for Regional Development*" and "*Financing Young African Entrepreneurs*" stand out to have far reaching impacts in the region.

Fig.19: Prof. Tassew WoldeHana (left standing) delivering the welcome speech and His Excellency Joseph Chilengi, President, AU – ECOSOCC, Africa Union (sitting far right) at the "*Financing Young African Entrepreneurs*" Conference.

Fig 20: Prof. Jeffrey Sach presenting public Lecture at the "*Financing Young African Entrepreneurs*" conference.

Another prominent event again connected to the Nile Basin is the agreement reached between AAU and the University of Khartoum (UoK). The two academic institutes have exchanged high-level delegations between Addis Ababa and Khartoum whereby extensive agreements have been signed to collaborate on Nile Basin research and wise use of natural systems technology exchanges. In this effort, both universities agreed to exchange faculty members and PhD students who would work collaboratively towards generating research outcomes that would be useful to the two countries and the Nile riparian countries.

Fig. 21: A glimpse of the meeting of the AAU and University of Khartoum (UoK) delegation: On the right row are the AAU delegates and opposite to them are the UoK delegates.

AAU based on its policy of promoting research dialogue and knowledge exchange, has supported some prominent conferences such as: "*Water, Energy and Food Nexus in Eastern Nile or Sustainable Water Resources and Environmental Management for Eastern Nile*", which was run jointly by the Ministry of Water, Irrigation and Energy and the Ministry of Environment, Forest and Climate Change.

TOWARDS DIVERSIFYING DONORS WORKING WITH AAU

The support of Sida to AAU is not only one that has transformed the graduate programs of AAU, but it is also historical as it were ever since Swedish medical doctors were taking care of war casualties when Ethiopia was engaged in a bitter war against the invading Italians. This relation between Ethiopia and Sweden continued to this day. This has been demonstrated at the convocation of AAU in July 2015, when the Ambassador of Sweden in Addis Ababa was awarded with honorary diploma.

While Sida was doing all these efforts, it has always motivated AAU to create linkages with other donors so that resource can be optimally used and duplications of effort can be avoided. At the same time, if any one donor comes across any changes in fund flow, there will always be alternative source for AAU to turn to. on the other hand, donors can also sort out alternative ways as to how they can make sufficient fund available for AAU. As a result, Sida has always supported AAU in its efforts to create new links with international donors.

The effort to get more international donor organizations continued in 2014. Thus, dialogue was initiated between the Office of the President and the Norwegian Ambassador in Addis Ababa. The later visited AAU in July 2015. The basis of the initiative of the visit of the ambassador to AAU was to step up cooperation in development research between AAU and Norwegian universities. This initiative prompted the visit of Professor Admasu Tsegaye, President of AAU and Professor Brook Lemma, Coordinator at the GCO to travel to Norway and Sweden to create collaborations with Swedish and Norwegian universities. This tour has taken some 12 days in late July 2015. The

complete report of this trip of 32 pages was submitted to Sida at the Embassy of Sweden and the Norwegian Embassy for further follow up. Below is one of the images captured during the visit.

Fig. 22. 24 June 2015 AAU visit to the University of Oslo (UiO), Norway: Back row left to right: Senior adviser Einar Meier; Chair of CEES Professor Nils Christian Stenseth; Rector Ole Petter Ottersen; President Admasu Tsegaye, AAU; Professor Janne Bondi Johannessen, Chair of Multilingual, Professor Elizabeth Lanza. Front row: Professor Brook Lemma, AAU; Senior Adviser Marit Egner. Photo: Anette Løken, UiO.

UiO has extensive research collaboration with AAU and also contributes to the education of PhD students from AAU through the Quota Scholarship Scheme. UiO in 2015 UiO has 46 quota students from Ethiopia, of which 20 are from AAU (14 PhDs and 6 Master's students).

Through the NORHED program funded by Norad, AAU and UiO are partners in a major research project, "Linguistic Capacity Building - Tools for the inclusive development of Ethiopia". The project is led by Dr Binyam Sisay from AAU and Professor Janne Bondi Johannessen from Multi Ling, one of

UiO's Centers of Excellence. The project works to document a number of minority languages in Ethiopia, so that they can be employed in writing as well as oral communications. Although much of the project content is basic research, the project will also enable more people to receive basic education in their mother tongue. Ethiopia has 89 different languages.

UiO has research collaboration with Addis Ababa University in a wide range of fields, including biology, computer science, education, medicine and public health. Amongst others, the Centre for Ecological and Evolutionary Synthesis (CEES) has extensive research collaboration with Ethiopian institutions, and Professor Nils Christian Stenseth, the chair of CEES, is an honorary professor at AAU.

UiO has extensive research collaboration with AAU and also contributes to the education of PhD students from AAU through the Quota Scholarship Scheme. UiO currently has 46 quota students from Ethiopia, of which 20 are from AAU (14 PhDs and 6 Master's students).

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has extensive research collaboration with Ethiopian institutions, and Professor Nils Christian Stenseth, the chair of CEES, is an honorary professor at AAU.

Given such fertile background, AAU seeks to build on this collaboration and diversify resources both in financial and scientific personnel terms to enhance the quality of education at AAU.

Fig. 23: Meeting international students at SU: Left: Professor V. Chinapah, middle Professor Admasu Tsegaye, AAU, President, and at the right end Professor Brook Lemma (GCO, Head) and all the rest are African students at SU, Stockholm

A similar effort was conducted to solicit funds from the World Bank that made call for proposals on 31 July 2015 to support Eastern and Southern African universities, except those in South Africa, if they can form consortia of universities to establish centers of excellence that run PhD programs based on regional problems to bring about positive impacts on the livelihoods of the people and produce marketable PhD graduates. The GCO was assigned by the university management committee that distributed the calls for proposal to all AAU colleges and institutes and made special visits to each to clarify what the minimum requirements could be to win grants ranging between five to eight

million dollars per project for five years from the World Bank. Based on this initiative, proposals for the establishment of twelve centers of excellence were developed for submitted to the Ministry of Education, which was the responsible coordination body selected by the World Bank.

The question of establishing a consortium of funding organizations to support AAU has also been encouraged by Sida as indicated in the conference held at Gulele Botanical Garden Conference Room back in 2014. Following that initiative, action of substance went to ground level to get professors of AAU and international universities of Africa and the rest of the world to come together to develop winning proposals to obtain funds from the World Bank and NORAD, Norway. The overarching goal for AAU was therefore:

- when financial resources from various donors are mobilized and the research and technology development efforts are interfaced to address national development agenda and
- when redundancies are cut to the minimum,

resources are used optimally and development agenda are addressed to the best satisfaction of:

- donors,
- researchers,
- private institutions that promote technology outputs and
- Most of all the people of national governments of Ethiopia and the region of Eastern and Southern Africa.

As the World Bank did not provide any seed-money to cover the costs of proposal development, Sida covered all costs of proposal development (retreats of five to seven days for proposal development, international trips to create the consortia for the respective fields, taking part at World Bank meetings and the launching program for the projects won).

After a length and rigorous assessment made by the World Bank) Finally AAU succeeded in winning three African Centers of Excellence (ACE), unlike any other university in Africa. The projects are:

- ACE for Water management
- ACE for Railway Research and Education
- ACE for Innovative Drug Development and Therapeutic Trials for Africa (CDT-Africa)

Thanks for the initiative made by AAU management, the faculty members that developed the proposals and Sida that supported the process, since mid-2017 all of the above projects have received their first disbursement for the first year in amounts of one million one hundred thousand dollars.

BILATERAL PROJECTS BETWEEN AAU AND SWEDISH UNIVERSITIES

While the Block Grant is going to strengthen the PhD programs at AAU, there are also bilateral projects supported by Sida focused on specific areas of specializations to address social problems in Ethiopia. A few are on-going while a couple of them are newly initiated, but finalized to be launched by January 2018.

The on-going ones are:

- Management-Economics PhD Program in collaboration with Jönköping University (JU), Sweden

- International and Comparative Education PhD Program with Stockholm University (SU) and now replaced by Gutenberg University (GU), Sweden

- Commissioned Education Program with Jönköping University (JU), Sweden

Brief summaries on the purposes and objectives of the above Sida-supported bilateral programs are given below.

The Management-Economics PhD Program

The Management-Economics PhD Program has become a pivotal program in researching the status and future trends of the economic development of the country and the management of the same. It suffices to mention the titles of the three PhD graduates of the program.

- *Access to bank loans, income distribution and economic growth in agent-based modelling: Evidence from evolutionary perspective* by Atnafu Gebremeskel, supervisors: Professor Almas Heshmati from JU and Assoc. Professor Tadele Ferede from AAU

- *Welfare implications of credit constraints and climate change adaptation strategies on Ethiopian farm households* by Hailu Elias, supervisors: Professor Pär Sjölander and Assoc. Professor Kristofer Månsson from JU and Associate Professor Assefa Admasie from AAU

- *Industrialization of economies with low manufacturing base* by Atlaw Alemu, supervisors Professor Borje Johansson, Professor Ghazi Shukur and Assoc Professor Kristofer Manson, all from JU

It is these kinds of graduates that are armed with contemporary knowledge and the development trends who are added into the workforce of promoting the development of the country to lead it to join the middle-income countries by 2025 as indicated in the GTP.

The International and Comparative Education PhD Program

The International and Comparative Education PhD Program: The implementation of the Growth and Transformation Plan (GTP) of the country is based on recognition that the planned economic and social transformation could not take place without a reliable stock of skilled human power and in this case capacity in education. To this end, the government had to expand education to respond to the new demands and put in place the necessary policy and implementation capacity to do educational change in practice. Moreover, it was also necessary to learn how educational reforms and changes were managed in the process of rapid economic growth and social transformation from other developing countries. However, it was clear that the education sector lacked such innovative education policy analysts, planners and both international and comparative professionals to plan national demands in comparison to international trends and experiences. Thus, developing an in-house program with an international and comparative focus has become an agenda on the national stage.

The Commissioned Education Program

The Commissioned Education Program: This program is different in the sense that it is not about capacity building at any degree level, be it at bachelor, masters or PhD levels. It is about capacity building of civil societies in Ethiopia that have direct access to community development. In other words, it is about directly helping those that help the society, particularly the rural societies of Ethiopia who are challenged with poverty, climate change impacts, and health problems from old diseases such as malaria, lack of access to education, improvement of local languages and so on.

Fig. 24: Discussions of the presidents of AAU and JU at the inauguration ceremony of the Commissioned Education Program Project

Again, while these are underway, Sida is also committed to assist AAU address in addressing some development areas that are pertinent in the GTP documents of the country. These are as follows.

- Biotechnology Research and Capacity Building PhD Program by the Institute of Biotechnology of AAU and SLU of Sweden,
- Electric Power and control Engineering PhD Program by Addis Ababa Institute of Technology of AAU and the Swedish universities of KTH, Chalmers and the Swedish private company ABB.

Biotechnology Research and Capacity Building PhD Program

Based on a long history of collaboration between AAU and Swedish universities in biotechnology (dating back to the 1980s with AAU faculty who studied biotechnology at the Swedish Universities such as the University of Agricultural Sciences (SLU), Lund University and the Royal Institute of Technology (KTH). Biotechnology used to be a Centre at AAU but after the Ethiopian government identified biotechnology as one of the pillar priority areas for development in 2012 in its GTP, it was upgraded to the status of Institute.

Under this new agreement to be supported by Sida as of January 2018, research and capacity building will be conducted in climate-smart agriculture and development of improved technologies in the leather industries to avoid the use of heavy metals that pollute the environment and other health related technologies. The Swedish partners included in this project are SLU, Stockholm University and the Karolinska Institute (KI). The agreement is that Swedish faculty members come to teach at AAU and PhD students at AAU travel to Swedish universities for consultations with their respective professors and for conducting research in the state-of-the-art laboratories for a period of three to six months stay at one of the above mentioned Swedish university.

Electric Power and control Engineering PhD Program

As planned in the GTP, Ethiopia is forging ahead with the production of clean electric power from hydro-power, thermal energy, wind, solar and from organic wastes. This is now being expanded into building the big Renaissance Dam on the Nile River and smaller but a series of dams on the Gibe-Omo River. Currently, Ethiopia is producing excess clean energy that requires researched knowledge and capacity to efficiently manage this resource that will be

sufficient to Ethiopia and also be exported to neighboring countries such as Djibouti, South Sudan and Kenya.

CONCLUSION

The support of Sweden to the development of Ethiopia is a longstanding one. History traces it back to the difficult and at the same times glorious days of Emperor Haile-Selassie. Those were difficult days because of the war wedged on Ethiopia by the Italians. It was at this time that the Swedish support came in to help Ethiopians affected by poison gas. Those were again glorious days because immediately after the war and the re-instatement of the Government of Haile-Selassie, elementary schools were built with Swedish support in rural Ethiopia where road access was difficult.

This support continued to find that today Sida is supporting PhD programs in Ethiopia. The current support transformed AAU completely from an ordinary African University to one that is based on research and internationally recognized higher education institute. Its ranking among African Universities has improved since 2009 when Sida provided the support for the expansion of the in-house PhD programs under the Block Grant Agreement. Prior to 2009, Sida's support to PhD training in Ethiopia was either through full-time studies in Sweden or in the form of sandwich programs involving close collaboration between AAU and Swedish universities. These schemes were replaced by the in-house program, since it was expensive when the cost was calculated per student, the student enrolment could not go pace-to-pace with the demand for high capacity in Ethiopia, and worst of all was that many of those who completed their PhDs in Sweden were not returning home.

Today, the outcomes of this collaboration between AAU and Sida are glaring. The number of PhD programs covering apparently all possible fields required for national development totaling to 70 are open now and PhD graduates in excess of 200 have started to walk through the convocation ceremonies of AAU annually.

The support of Sida in those years has transformed AAU, not only in the number of PhD and masters programs launched, the number of candidates admitted into the programs and in improving quality of the programs, but also in the academic and administrative reform processes that create conducive conditions for smooth running of the PhD programs. The support complemented AAU's big stride forward by offering block grants and regular assessment schemes that kept AAU on the right truck. Today, the new universities are filled qualified faculty members who graduated from AAU with sufficient knowledge and links with their professors at AAU and abroad.

Another angle of looking at the impact of Sida on the PhD programs at AAU is to look at the distribution of the research outcomes of the graduates and how these are linked to the national priority areas for development.
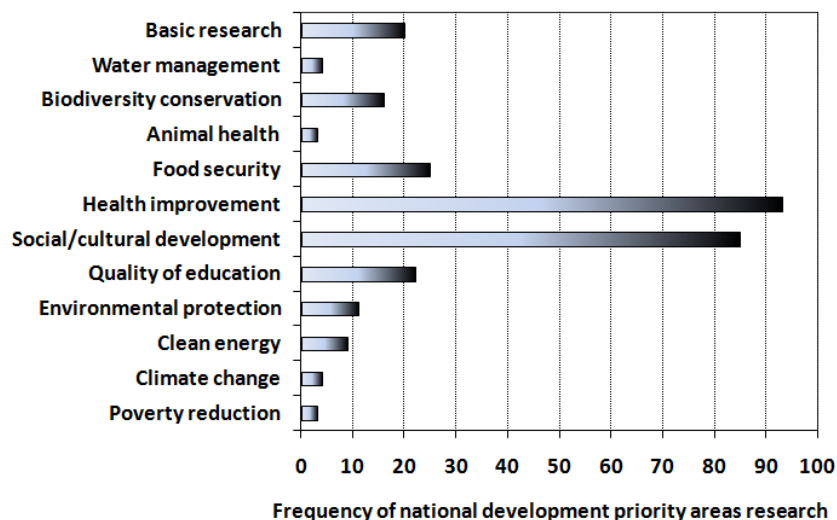

Fig. 26: national development priority areas as stated in the GTP (Y-axis) and frequency of PhD dissertations (X-axis), 2015/16 academic year at AAU

Finally, AAU continues to acknowledge Sida and the Swedish Government for all the support provided to it and continues to provide to see Ethiopia grows and its people reap the fruits of its development by making their last departure from hunger and poverty. At the university level,

- The upgraded PhD programs,

- All the new universities that are filled with qualified staff,

- The AAU e-library now open to all Ethiopian Universities,

- The AAU administration that has started to efficiently serve the PhD programs,

- The improvement in ICT and the software developed for student services management and financial transactions,

- Enhancing the research process and administration

The female graduate students and students with disabilities that have joined the national workforce with confidence and all the long list of contribution Sida did to AAU is simply invaluable and has now become well engraved in the history of AAU and that of Ethiopia.