

## National Workshop on Demand Driven Research for Sustainable Development



31 May-2 June, 2012

Jimma/Gilgel Gibe-I

## Table of Contents

|   |           |
|---|-----------|
| <b>Introduction.....</b>  | <b>7</b>  |
| <b>Field Visit to Gilge Gibe-I watershed catchment .....</b>                  | <b>7</b>  |
| <b>Reflections from the field visit .....</b>                                 | <b>14</b> |
| <b>Presentations by Universities.....</b>                                     | <b>17</b> |
| <i>Jimma University (JU).....</i>   | <i>17</i> |
| <i>Mekele University (MU) .....</i>   | <i>18</i> |
| <i>Bahir Dar University (BDU).....</i>  | <i>18</i> |
| <i>Hawassa University (HU) .....</i>  | <i>19</i> |
| <i>University of Gondar (UoG).....</i>  | <i>19</i> |
| <i>Haramaya University (HaU).....</i>   | <i>20</i> |
| <i>Questions and Answers after the presentation of the Universities .....</i> | <i>20</i> |
| <b>Presentations by Government Organizations .....</b>                        | <b>30</b> |
| <i>Ministry of Water and Energy.....</i>                                      | <i>30</i> |
| <i>Gilgel Gibe-I Hydro Electric Power Dam.....</i>                            | <i>32</i> |
| <i>Ministry of Women, Children and Youth Affairs .....</i>                    | <i>32</i> |
| <i>Environmental Protection Authority .....</i>                               | <i>32</i> |
| <i>Working Groups .....</i>   | <i>34</i> |
| <i>Closing Remark .....</i>   | <i>36</i> |

**Acronyms and Abbreviations**

|          |   |
|----------|---|
| AfDB     | African Development Bank  |
| BDU      | Bahir Dar University  |
| CBO      | Community Based Organization                                    |
| CSO      | Civil Society Organization                                      |
| DDR      | Demand Driven Research  |
| EEPCo    | Ethiopian Electric Power Corporation                            |
| EIA      | Environmental Impact Assessment                                 |
| GG       | Gilgel Gibe   |
| GO       | Government Organization   |
| GTP      | Growth and Transformational Plan                                |
| HaU      | Haramaya University   |
| HEI      | Higher Education Institute                                      |
| HEP      | Hydroelectric Power   |
| HIV/AIDS | Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome |
| ICT      | Information Communication Technology                            |
| JU       | Jimma University  |
| m.a.s.l. | Meters Above Sea Level  |
| MDGs     | Millennium Development Goal                                     |
| MoU      | Memorandum of Understanding                                     |
| MoWE     | Minister of Water and Energy                                    |
| MSF      | Multi-Stakeholder Forum   |
| NGO      | Non-government Organization                                     |
| PHE EC   | Population, Health and Environment Ethiopia Consortium          |
| R&D      | Research and Development  |
| REDD+    | Reducing Emissions from Deforestation and Forest Degradation    |
| SLUF     | Sustainable Land Use Forum                                      |
| WASH     | Water, Sanitation and Hygiene                                   |
| WB       | World Bank  |
| WHO      | World Health Organization                                       |

## Executive Summary

Higher education institutions, research centers, government and non-government organizations (NGOs) could be deployed to determine and prioritize the challenges related to generating and utilizing research to strengthen policy decisions and program implementation. Each of these institutions has the responsibility to contribute their part to demand driven research (DDR) in their areas of capacity and expertise. To ensure that research is useful and utilized, research needs to be reoriented to be more collaborative, demand-driven, action-oriented and responsive to societal needs. The implications of this will be far reaching and will affect growth and development in fundamental ways while having a broader and cascading impact on the economy of the country.

Jimma University in collaboration with PHE Ethiopia Consortium (PHE EC) organized a workshop preceded by a field visit to Gilgel Gibe-I Reservoir with the aim of discussing and deliberating the key challenges of building demand driven and participatory research for solving some of Ethiopia's outstanding problems associated with environmental degradation, food security, sustainable growth and adaptation to the impending climate change, thus contributing to the attainment of the Millennium Development Goals (MDGs) and the Growth and Transformation Plan (GTP). Participants of the workshop were invited from universities, government organizations (GOs), NGOs and other stakeholders.

The field visit to Gilgel Gibe-I catchment rehabilitation activities was organized as a prelude to inspire appreciation of the relevance of collaborative and demand driven research to solving development challenges and how the participating institutions each have unique skills and comparative advantages that they can contribute.

Following the field visit, the delegates gave brief presentations on their respective research profiles, capacities and research approaches and funding sources. It transpired that universities in Ethiopia have varying research capacity gaps and needs and it was recognized that they are charged with the responsibility to identify, articulate and address these gaps in order to strengthen the teaching-learning process and address societal problems. Universities have tremendous capacity to conduct research and have diverse funding sources at their disposal. These sources include: capital and recurrent budget from the government treasury, collaborative research conducted with foreign universities and competitive grants awarded from donor organizations. Foreign universities, which fund collaborative research, do not always design their research to answer questions related to addressing societal problems, which can lead to a lack of knowledge accumulation and transfer.

The presentations demonstrated that there are some institutions, such as the Ethiopian Electrical Power Corporation (EEPCo), which are mandated to conduct research and have well defined processes for selecting and funding research and disseminating results. Research in some GOs is affected by limited capacity and or lack of mandate and expectations.

The participants of the workshop were split into two working groups, one consisting of delegates from universities and the other consisting of delegates from GOs, NGOs and other stakeholders. Each group deliberated on the presentations in detail.

The delegates from universities admitted unanimously that research institutes have not played a role in translating successful research and development (R&D) results into tangible products or solving societal problems. The delegates identified a lack of 'demand-driven' research, and poor links between research institutes and the private sector as the main culprits of the failure of research to respond to societal problems. It clearly transpired that there are many useful research outputs on the shelves and libraries of many universities that have not been shared with policy makers or implementers.

The consequences of the poor links between research institutes are redundancy and duplication of research projects and inefficiency in resource utilization. The dearth of inter-university collaborative research and lack of development research programs have also undermined the basic principle that research must be both valuable and relevant to its intended beneficiaries. This has resulted in a recent trend toward a more demand-driven approach.

The issue of demand driven/development research programs was thoroughly debated. It was argued that research should seek to achieve relevance not only through specifying who defines the research agenda or even who carries out the research but also by shifting emphasis to a broader approach that seeks to achieve predefined objectives by focusing on social needs which can support government efforts. Demand driven research helps to meet a range of broad societal challenges, including food security, climate change and energy supply, environmentally sustainable products and practices and productivity of public services.

While the Ministry of Education (MoE) has made significant strides in harmonizing the teaching and learning process in the universities, similar efforts to harmonize research in the universities are wanting. Thus far each university receives discretionary budget support which gives them the flexibility to determine, finance, and manage fragmented research agendas without any information on whether the same agenda is being considered by other universities. Drawbacks of lack of inter-university collaboration in research include piecemeal distribution of funds to all universities irrespective of the prevailing comparative advantages and different capacities, plagiarism and lack of responsiveness to prevailing local problems of graduate research, lack of agreement on societal problems and conflicting views on who should define the societal problems that need to be addressed.

The participants agreed that a more effective and sustainable approach for reaching improved outcomes would be for universities, government, NGOs and other research institutions to establish a national research agenda following shared priorities which align with policy and implementation needs. Researchers should not only be busy with the problems of today but should stay alert and be fully prepared for the eventual emergence of new challenges. As

challenges Ethiopia faces changes, the research focus will need to be reoriented to utilize the emerging knowledge base. Capacity building and empowerment are central to acquisition and building a strong knowledge base. This then calls for the recognition of the need for more comprehensive research management and organizational change for enhanced client-oriented research to ensure the full and effective participation of end users in formulating, implementing, and monitoring activities.

The significant gains of collaborative and demand driven research among many others would be:

- Creating pools of expertise for specific research agenda
- Responding to research and policy needs of the government and the economy from short, medium and long-term perspectives
- Serving as an effective platform for knowledge dissemination, exchange and dialogue
- Building professional competence and capacity of Ethiopian research and beneficiary institutions

The proposed way forward calls for creating and sharing a research database to avoid duplication, strong inter-university, government and NGO collaboration to increase efficiency in fund utilization and working together to respond and genuine societal needs and gain government confidence.

At the end of the workshop, a declaration was drafted appreciating the harmonization of the teaching-learning process, being cognizant of the challenges of expanding the tertiary education and calling for building research capacity and creating an efficient system of research management. It was also decided that the declaration be presented to Ministry of Education for harmonization and mainstreaming collaborative action research to contribute to the attainment of the GTP targets and the MDGs.

The universities and ministries decided to have continued consultative discussions and to establish a national research entity that can provide research services. Members of the group come from twelve universities with the Integrated River Basin Management Project, Ministry of Water and Energy and the PHE Ethiopia Consortium. Hawassa University agreed to host the follow up of this workshop at about this time next year.

## Introduction

Jimma University and PHE EC made a great contribution to demand driven research from their practical engagement on basin rehabilitation management practices. The effort is expected to reduce the siltation problems in the basin in order to generate zero-emission Hydro Electric Power (HEP), which in turn will gear toward Ethiopia's economic growth. This effort contributes to the implementation of national GTP in social, economic and environmental aspects. The Consortium, with its members, is also working closely with different federal ministries, such as Ministry of Water & Energy, Ministry of Agriculture, Ministry of Health, Ministry of Finance & Economic Development and Ethiopian Electric Power Corporation and other partners.

It is of paramount importance to establish a tripartite partnership and collaboration among these government offices, HEIs and the Consortium to bring about sustainable change toward the successful completion of the GTP and the MDGs. The concerted efforts of these institutions can enhance the integration of PHE and reduce the prevailing problem of fragmentation.

Academic and research institutions are also treating these issues in disciplinary silos which has left a wide range of issues unaddressed or only partially addressed, to say the least. Therefore, organizing a forum that promotes a multidisciplinary approach is not only necessary but is also a timely measure especially at the time when Ethiopia is mobilizing its limited resources for accelerated economic progress. Higher education institutions have irreplaceable roles in evaluating current strategies and generating evidence for policy making and program implementation. They should be at the forefront of efforts to bring about sustainable development by producing innovative and creative solutions to long standing challenges through reliable data generation in the country.

## Field Visit to Gilge Gibe-I watershed catchment

Participants visited the Gilgel Gibe-I rehabilitation activities in the catchment areas to show them basin rehabilitation activities supported by research and how they can contribute to strengthening development activities. Ato Nigussie Mamusha, Gilgel Gibe-I Plant Manager, made a brief explanation of the conditions of the Gilgel Gibe- I Reservoir. The visit revealed that the water level of the reservoir is 1,659 meters above sea level, which is 12 meters below its maximum height of 1,671 meters above sea level. At its full height, an additional 500 meters will be inundated. The buffer zone is 500 meters (1 kilometer at some locations) behind the contour line of the reservoir. So the cattle and the farms seen near the reservoir belong to illegal occupants of buffer zone who have been formally compensated and evicted from the area and resettled elsewhere. As an indication of the severity of the problem, about 350 farmers from Bure wereda reoccupied the buffer zone. Some farmers follow the pattern of the water volume and cultivate the open area as it recedes. There have been lawsuits filed by these illegal farmers claiming compensation for losses due to the inundation of their farms during high water levels. Seeking justice while at the same time violating the law is paradoxical. This apparent paradox is not without reason. It may not be clear to the farmers

where the buffer zone for the reservoir is and there could have been gaps and omissions made during the eviction process.



Ato Nigussie shared that when they visited the area with the Honorable Minister they learned that there is much to be done to protect the reservoir and reduce siltation so that the reservoir may live beyond its expected lifespan of 50 years. The efforts made by EEPCO with the assistance of SLUF to rehabilitate and stabilize the area have increased the rate of the rehabilitation of the shorelines. This approach is a demonstration model for what could be done to achieve stabilization of the reservoir banks.

EEPCo is now collecting bathymetric data in the lake to estimate the magnitude of the siltation and preliminary information indicates that siltation is at a minimum. EEPCo welcome inputs and participation and constructive ideas on how to rehabilitate the catchment areas so that the reservoir can extend its lifespan. The rehabilitation of the Gilgel Gibe catchments ensures the viability of the other cascading reservoirs downstream.





During the field visit, a number of questions were raised regarding how saving Gilgel Gibe I will contribute to sustainability of the downstream hydropower reservoirs, Gilgel Gibe II, Gibe III and Gibe IV. The lessons drawn from the Gilgel Gibe dams could help with the rehabilitation of the Tekezze and Abay watersheds. Ato Negash Teklu, PHE Ethiopia Consortium, commented that the group is a witness to the commendable efforts to rehabilitate the catchment area. One area where efforts could be strengthened is to involve the surrounding community more. There can be no doubt that the catchment will be rehabilitated faster and more sustainably if there is community ownership.

Because of parliamentarians last visit of the reservoir and the discussion with the Minister of Water and Energy, Ato Alemayehu Tegenu, a consensus was reached to pay special attention to rehabilitate Gilgel Gibe Reservoir and draw pertinent lessons for the other reservoirs.

The field visit was intended to educate participants about the challenges the dam is facing as well as the success of its rehabilitation. Visitors have been charged with the challenge to determine how community participation and ownership can be used to maintain the integrity of this and others similarly threatened reservoirs. This visit helped participants anticipate the role of research in proposing the modalities of community participation in watershed rehabilitation. Views forwarded by the participants related to the need for integration of activities through participation of the different stakeholders for the common goal of the rehabilitation of the reservoir and to draw lessons from this experience and apply them to other dams. Most commented that issues of catchment rehabilitation are multidimensional and cannot be left to one sector. Participants expressed their feeling to go back to their posts and work to integrate inputs and speak the same language of rehabilitation.



It was also emphasized that only treating the area surrounding the reservoirs will simply be a cosmetic effort. Rehabilitation efforts should also consider the catchments and watersheds in which the reservoirs are found. The Tekeze catchment and the Millennium Reservoirs cover the whole northern Ethiopia; therefore, the task of rehabilitation is colossal.

Dr. Mengistu Sime, Dean of Research at Adama University of Science and Technology shared his awareness of issues relating to dams has been raised. He reiterated that although Ethiopia has other options for generating electricity, the primary source of electricity is hydropower. The first hydropower dam in Ethiopia, Koka, along with Melka Wakena, are deteriorating rapidly and Koka is almost silted up beyond repair. There is intensive agricultural activity in catchments of these reservoirs. Although these reservoirs are small compared to those under construction, Dr. Sime feels that these reservoirs also need similar attention so that they may keep delivering electricity and water for irrigated agriculture. He then asked if there are efforts to save Koka Dam and Melka Wakena and the government's plans for engaging in extensive watershed management.

Ato Asmamaw Kume, Ministry of Water and Energy, Watershed Administration Directorate Expert responded to this question. He said, "We need to replicate the activities here in all watersheds, but before then we have to emphasize the concept of integration. Yes, there are efforts at the national level to rehabilitate watersheds all over Ethiopia."



Ato Kume continued by saying, “Watershed rehabilitation is done at two levels. The first level involves farmers to work on their farm land to boost productivity and production in order to ensure food security. The second level is to protect the watersheds through mobilizing communities in campaign. We also have to pay similar attention to lakes in the Rift Valley as well as highland lakes, wetlands and irrigation canals, rivers and well fields as part of managing our water resources for various purposes.

“This effort needs the integration of several institutions to achieve far reaching results. The Ministry of Water and Energy is in the process of conducting a workshop on watershed protection at the national level. The outcome of the workshop is not only to integrate stakeholder activities but also to propose strategies for mainstreaming watershed management into development activities.”

Ato Negash explained that the work of Sustainable Land Use Forum (SLUF) in gully stabilization has been for demonstration. Gully stabilization methods include the use of vetiver grass, elephant or Sudan grass and gabion sacks filled with soil or gravel. The hope is that these efforts by SLUF will show what the communities could do if they fully own the rehabilitation process.

There was a debate on the pros and cons of filling the gabion with soil. Some suggested it would have been ideal to fill the gabion with gravel or use plastic bags filled with soil.



A participant from Bahir Dar University spoke against research on the rehabilitation of gullies because there are already proven technologies that can be used to rehabilitate soil. Conducting research on these issues would be a waste of time, which is quickly running out. The participant suggested instead the focus should be on scaling up these proven technologies and engaging in work on the ground without delay.

The group visited one of Jimma University's (JU) experimental sites, where the communities participate in research on the behavior of mosquitoes and the incidence of malaria with respect to distance from the reservoir.



Sixteen villages were selected in the area near the reservoir and were divided into two groups consisting of eight villages each. Group one was designated a risk area and the second group was as the control. Children under the age of five in each group were screened for occurrence of malaria. Mosquitoes were collected from the randomly selected homes using CDC light traps and human baits each month. Since there has been indiscriminate spraying of insecticides, mosquitoes have developed resistance to all insecticides. Community members wear hats designed to control the inlet and exit of mosquitoes and collect data on the feeding behavior and efficacy of the mosquito nets. The hats are designed to study the efficacy of mosquito nets impregnated with insecticides. The windows and entrances are designed according to WHO recommendations. Volunteers from the villages slept in the hats and the behavior of insects were recorded. The preliminary results indicate that *Plasmodium falciparum* occurs all over the area without any regard to distance from the lake, whereas the occurrence *P.vivax* decreases with distance from the lake. The information on insecticide resistance and the differential occurrence of *Plasmodium falciparum* and *P.vivax* with respect to distance from large water bodies have been communicated to the Ministry of Health and WHO. As a result there has been a change in the malaria control policy in different parts of the country.

The drive continued to another experimental site where different treatments were applied to rehabilitate an extensive gully. The efficacy of different species of grass species such as vetiver grass, *Pennisetum*, elephant grass, tree species including *Syzigium guniense* (which is

growing extensively in the area outside the gully), *Jatropha curcas*, *Grevillea robusta* is being tested. These species were planted in rows following a randomized block design. Although the experiment is not yet complete, some species of plants have shown promising performance.



## Reflections from the field visit

Ato Negash invited participants to give their reflections at the end of the visit. Dr. Tsegay from Wondo Genet College of Forestry and Natural Resources expressed his gratitude to PHE Ethiopia Consortium for creating this wonderful opportunity and to the researchers from Jimma University for working strenuously to generate pertinent information on malaria and community participation. He then shared his wish to raise the issue of integration in the real sense of the word, ownership, apportioning responsibilities and forging a united front to solve these intricate and multidimensional problems and ensure continuity.

Prof. Zerihun expressed his appreciation of the efforts of PHE and JU for making this visit a reality. He then expressed his worries about the speed in which the Gibe valley has degraded in a very short period of time. He stated that he knew this valley when it covered by a thick cover of vegetation not very long ago. The threat of this rapid degradation to the Gilgel Gibe III dam is very high. The implication of this rapid degradation and its effect on other watersheds downstream is daunting. Because the watersheds of Abay and Tekezze include the whole of northern Ethiopia, they need to be addressed in a holistic way, not only around the reservoirs. If we only focus on reservoirs, our task will be diminished to focusing on only

the part of the Abay watershed in Benshangul that surrounds the Millennium Reservoir. He said, “Considering the extensive watersheds of these two reservoirs, the task ahead of us colossal and I am sure we have to keep working for generations to protect our environment to ensure sustainability.”



Ato Negash then directed the question to Parliament members present. Parliamentarians are very aware of the problems associated with Gilegel Gibe-I and the Parliament Standing Committee is working together with EEPCo to find solutions. As seen today there are problems with the human interference and encroachment in the buffer zone. I hope we are going discuss issues related to executing duties and responsibilities in protection of the reservoir, the achievement so far and the way forward in the presence of the responsible authorities.

Participants from Mekele and Bahir Dar Universities expressed their admiration about the commitment and hard work of PHE EC and JU in organizing this workshop and this particular visit where important views on watershed management, conservation of reservoirs, the significance of demand driven research and the place of community participation in research were discussed.

Mr. Patrick, Director and donor of Hienrich Boll Foundation expressed his admiration for the well-organized field visit in which he understood what he heard and read about reservoirs and the problems associated with reservoirs.

The Ministry of Women, Children and Youth and journalists expressed their admiration for the commitment and the coordinated efforts made by JU and PHE EC to bring together people from various backgrounds to discuss issues which require concerted actions to prevent the situation in Lake Haramaya from being repeated in other places.

The Ethiopia Radio and Television service said he has been to many places to film but this unique in the sense that people from various backgrounds are sharing experiences and knowledge to solve a common problem which is threatening the sustainability of development.

A participant from the EEPCo Environment Protection team, who has worked at the Gilgel Gibe reservoir for the last 11 years, expressed his admiration for PHE EC and JU for bringing the problem associated with the sustainability of dams to the attention of government and the public at large and for generating research outputs. The case of Gilgel Gibe I can be used as input for learning how to protect the other reservoirs. Sharing information and exchanging views with people from universities, journalists and NGOs is a good start. He then took the opportunity to acknowledge the staff of EEPCo who have worked so hard to scale up the use of vetiver grass to cover a large area of land around the reservoir.

### **Welcoming address**

Ato Negash Teklu, Executive Director of PHE Ethiopia Consortium, welcomed the participants on behalf of the Consortium. He remarked that the Ethiopian development strategies should be supported by multi-sector demand driven research and stated his appreciation for Jimma University and the other stakeholders for their participation in the workshop.



Dr. Fikre Lemessa, President of Jimma University, made the opening speech following the welcome address. He emphasized that the topic of the workshop is timely and most important topic. He underlined the importance of creating tripartite collaboration for demand driven research engagement in the country.







On behalf of the Minister of Water and Energy, Alemayehu Tegen, who could not attend the workshop because of an urgent commitment, Ato Fekahemd Negash, Basin Directorate Director, read the Minister's keynote address. He acknowledged the collaborative efforts of higher education institutes, ministries and CSOs to generate research based quality information in all sectors to support the government's development initiatives which is very important to support decision making.

## **Presentations by Universities**

The delegates of the universities and federal offices gave brief presentations on the research activities, capacities, research approaches, funding sources and challenges in their respective universities. The federal government offices, such as Environmental Protection Authority, Ministry of Water and Energy, Ethiopian Electric Power Corporation, Ministry of Women, Youth & Children, NGOs and other stakeholders presented their activities related to research.

### ***Jimma University (JU)***

Ato Kora Tushune stated that Jimma University was established in 1983 by merging two institutions of higher education, Jimma College of Agriculture and Jimma Institute of Health Sciences. The mission of Jimma University is to engage in teaching and learning, conduct research on pertinent societal issues and disseminate the information to concerned parties, provide service to the community through participatory engagement and generate income to sustain its programs.

Jimma's research activities are funded by two sources: the capital and recurrent budget from the government treasury covers 3.2% of expenses and the rest (20 million Euros per year) is covered by non-treasury sources.

About 21% of the academic staff at JU participates in 18 collaborative research projects conducted in partnership with federal and regional government organizations and universities in Ethiopia and abroad.



There are eight thematic areas of research at Jimma: food security, health care and

population, climate change, education, development and appropriate technology. The thematic research activities also address cross cutting issues such as gender, community engagement, HIV/AIDS, capacity building and infrastructure development

The presentation of JU on research and community services demonstrated that the research in JU is highly organized. The university has a database on each thematic area and research project and the outputs and deliverables of the research projects are disseminated to all concerned.

### ***Mekele University (MU)***

The MU presentation informed participants that Mekele University was established in 2000 by upgrading the College of Dryland Agriculture. It has rapidly grown into one of the major centers of higher education in Ethiopia.

Research at MU is conducted using financial support from the capital and recurrent budget from the government treasury and non-treasury sources, such as collaborative research grants

with Norwegian universities. Research at MU is conducted in 16 research institutes, centers and units. MU has identified 200 thematic areas of research which are in line with the GTP and MDGs. Graduate student research projects are required to fall in one of the 200 identified priority research areas in order to qualify for funding. MU hosts four reputable journals in which peer reviewed research articles are published. About fifteen research outputs have been tested and validated for dissemination to end users. Two of these outputs on controlled dairy reproductive technology and improved barley seeds have attracted public interest and attention.



### ***Bahir Dar University (BDU)***

BDU was established in 1999 and has become one of the prominent universities in Ethiopia with current annual intake that exceeds most universities in Ethiopia. BDU has identified seven priority thematic areas of research. BDU has a comparative geographical advantage for conducting outstanding research on issues related to water technology, fisheries and limnology and collaborating with Abay Basin and Tana sub-basin authorities because of its proximity to Lake Tana. BDU is investing massively in ICT to advance its teaching-learning programs, to establish strong connections with the outside world and to enhance its research activities. BDU houses two recognized journals in which peer reviewed research articles can be published.

BDU is currently facing serious limitations in modern laboratory equipment, capacity in conducting research and transport facilities which are essential to conducting cutting edge research. As a strategy to overcome some its limitations, BDU is striving hard to establish collaboration with other universities in Ethiopia and outside.

### ***Hawassa University (HU)***

Hawassa College of Agriculture, formerly under Addis Ababa University, is now a full-fledged university. It has four colleges. The College of Agriculture and the College of Health Sciences are in central Hawassa. HU also has the Wondo Genet College of Forestry and Natural Resources and is developing a campus Yirgalem.

The total student population is 25,000 enrolled across 33 departments. There are 66 undergraduate and 44 graduate programs in the university. The graduate programs focus more on climate change and development. A total of 190 research projects are being funded by the recurrent and capital budgets and funds obtained through collaboration with funding agencies in Europe, USA and Canada. HU has a community outreach and service wing which is used to engage the community in problem identification and development research undertakings.

HU has established six technology villages or districts to conduct community-based research and development activities by concentrating efforts on selected sites and scaling up best practices. Technology villages are selected places where appropriate technologies are developed/introduced, demonstrated, improved and evaluated.

Technology villages offer clear advantages such as the consolidation of efforts to demonstrate visible changes, service as a model (foci) of change, involvement of the community in problem identification, as well as research and development undertakings and integration of graduate and undergraduate student learning and research to produce socially, environmentally, culturally, and economically conscious and competent graduates.

### ***University of Gondar (UoG)***

UoG was born as a full-fledged university in 1999 from the Gondar College of Health Sciences under Addis Ababa University. It is conducting about 200 research projects categorized under 20 thematic research areas. Thirteen of the research projects are being conducted in collaboration with CBOs, government bureaus (tourism, health and agriculture) and local and foreign universities. Funding and research articles published in the UoG have increased exponentially over the years.

UoG intends to work vigorously to build its capacity in research and engage in participatory research to improve the relevance of research outputs and promote a research culture among its staff.

### ***Haramaya University (HaU)***

Haramaya University was established as full-fledged university through upgrading the Alemaya College of Agriculture of Addis Ababa University. There are three distinct areas of research at HaU. These are agriculture including crops, soil, livestock and environment; health including HIV and nutrition; and socio-economics including gender, food security and education. There is a mix of research approaches in HaU, i.e. some are thematic, some are discipline based and others are geared towards problem solving. Local partners include private firms/companies/farmers, GOs (Bureaus of Agriculture, Education, Health) and NGOs (operating in the region). Research outputs are disseminated through publications (proceedings, scientific articles, etc), demonstration and scaling up, seminars and workshops.

### ***Questions and Answers after the presentation of the Universities***

**Chair person: Ato Abiti Getaher, Research & Development Directorate Director of MoWE**

The chair recognized five participants to give their comments and questions.

#### **Ayele Kebede from Hienrich Boll Foundation**

My question is directed to all presenters. From the presentations, I have come to understand that successful and demand driven research is being conducted in all universities. What is the truth on the ground and how is the exchange of information taking place? The undeniable fact is that we often meet individuals in the universities presenting themselves as researchers and issuing flashy business cards as part of their normal activities. We also realized that the research outcomes of some students are reflections of the respective researchers. How can these problems be rectified and improve the quality and relevance of research and the exchange of information?



#### **Mekonnen Gemechu-Bureau of Land and Environmental Resources Protection, Jimma Zone**

We all recognize that research is conducted to update as well as generate new knowledge and bring about attitudinal changes in societies to get at the desired goals. This being the case, I understand that all universities conduct research in collaboration with foreign governments or universities who provide the required funds. How successful would these endeavors be in lieu of the fact they are conducted without the full participation of other stakeholders such as farmer's research groups? Is the research being conducted for the fulfillment of academic requirements? What are the plans to bring a paradigm shift in research from business as usual to a participatory engagement which yields the desired outcome of food security and

sustainable management of environmental resources which does not compromise the needs of future generations. What are the gaps in the research approaches to instill ownership in the end users and engage them right from the inception of the research?

A member of the Parliament Standing Committee of Natural Resources Protection and Development remarked on the high quality research on agriculture, health and technology which is being conducted in the universities. The expansion and growth in the number of universities have brought about a modest increase in research outputs. The learning from these outputs lead to more questions to be addressed.

However, the research activities of the universities are limited to narrow domains and coordinated and integrated efforts to solve national problems are minimal. Is there a plan to integrate efforts among universities and with other research institutions such as the Ethiopian Institute of Agricultural Research to solve pertinent national problems such as boosting production and productivity? What are the tangible research outputs so far produced by the universities that would attract the attention of the Ethiopian Government and solve national problems? What exactly are the challenges and how do we overcome them to improve our relevance to the Growth and Transformation Plan and formulate a shared view for creating a common economic society?

#### **Question from Mekele University**

I am glad that the universities have provided us with the highlights of their research activities and the processes in which they are conducted. It is gratifying that the universities are focusing on research by identifying priority thematic areas and that the government is investing heavily on research in universities.

My question relates to alignment and integration in Jimma University. We understand that Jimma University is skewed more towards health sciences and agriculture while its focus on the social science is weak. What is the reason for this discrepancy? Could it be because of a lack of experienced researchers and the proliferation of young staff like in Adama University of Technology or is it because Jimma University does not recognize the relevance of research in the social sciences?

My question to all Universities relates to collaboration: research in the universities is inclined more towards collaboration with foreign governments or universities while the linkage with local universities is either non-existent or loose. We understand that the GTP requires integration and putting heads our together to successfully implement it. How then can we reduce redundancy in research topics and bring about the integration of thematic research agendas through focusing on regional comparative advantages and selecting centers of excellences to improve the relevant research in universities?

#### **Question from Yonas Teklemichael from the Federal Environmental Protection Authority**

My question is directed to Ato Kora. The effort being made by JU and the research group on the objective realities of the problems related to health, particularly on mosquitoes and malaria must be applauded. In relation to that, I think I heard about the lack of baseline data before the construction of the dam. As far as I know there is a well-documented environmental impact assessment on the physical, biological and socioeconomic conditions of the area prior to the construction of the dam. I would therefore like to suggest that it would be very appropriate to recognize the existence of the EIA and fill the gaps through research instead of denying the obvious facts.



Though the effort is to be congratulated, related to the research work being undertaken to rehabilitate degraded gullies, there is a serious concern about the lack of knowledge of the biological properties of some of the plant species being used. What is the guarantee that vetiver grass and the other non-indigenous plant species do not turn out to be invasive under Ethiopian conditions and reduce biodiversity instead of giving the intended results? I would like to urge all concerned not to be guided by institutions disregarding scientific approaches and who are not getting to the root of the problems and providing pertinent solutions.

A second concern of mine is directed to all the universities—apparently the universities are engaged in research of one sort or another. However they do not seem to respond to Ethiopia's immediate needs for drought and flood resistant crop which would be useful to intensify the climate resilient green economy. I think that they should integrate efforts and engage in more focused research on the national priorities and the needs of the country instead of spending resources on fragmented issues which are not responsive to the short and long-term problems of the country. How can we make effective use the potentials in the universities?

### **Prof. Zerihun Woldu**

The research issues and directions of the old and young universities are very encouraging. The presentations have demonstrated the strong sides of the universities, not to mention their weak sides which will be removed given time. The virtue of the strong sides is their engagement in their determination to engage in problem solving research. It is very gratifying that there are members of the Parliament among us representing the government to discuss issues and to share their views.

A critical issue here is the definition of problem solving research. Whose problems are we trying to solve? Who in the first place communicated its problems and called for solutions? Can we simply assume the mandate to prioritize national problems and try to provide solutions without any consultation with concerned bodies? It is the responsibility of government to define and prioritize problems and call on all concerned to provide practical solutions. Universities will then have to team up and present themselves as viable alternatives and demonstrate their capacities using pilot research projects. I think we have to suggest that government takes note of this capacity. Government must be inclined to build courage and determination to trust the capacities in the universities and engage in mutually beneficial problem solving exercises and building local capacity. This is therefore a two-way street. We have to approach each other in more than one way to be useful to the nation and to ensure sustainability. The way research is being conducted in the universities is more donor driven than demand driven. It is very likely that we will be side-tracked from our main goal of being responsive to societal problems if we do not guard ourselves from being trapped or lured by donor driven research.

#### **Question by Patrick from Hienrich Boll Foundation**

As far as I understand, the questions so far revolved around how universities may improve their collaborative efforts. But I would like to raise a question from a slightly different perspective. While talking about demand driven research, from the presentations this morning, I remember only two universities mentioned that they have programs in place to engage with people who have the desire to work on demand driven research, like the government. For instance, the private sector (unfortunately we have no one from the private sector). These would be my questions to the universities—are you ready for demand driven research? Are you ready to engage with people who have demands? Do you speak their languages?

I would like to illustrate this using an example. Scientists can often be like artists. They focus on something very special. They focus on the detail though no one around them can understand why they do it. They take a lot of pride and interest on that particular issue. I was asked to be a member of the jury in an art competition for two years successively. In the first instance, the artists were asked to propose what ever they like to do and there were tons and tons of proposals which made it very difficult to make a choice. The next year the artists were asked to submit proposals on a specific topic like the environment. Only a few proposals were submitted and half of the



proposal had nothing to do with the environment.

It seems that artists find it difficult to accept when someone tells them what to do. I am afraid this could be the same problem for many scientists. Instead of doing what you want to do you are supposed to answer the questions of somebody else. Here I think there is a need for someone to liaise or translate between these two worlds. Let us say as scientists you are happy to find a piece of knowledge. The government will ask you if this would help to achieve its development goals. The private sector will be interested if the finding will help in making money. Rewinding to my first question, are the universities ready to engage with people who think in completely different terms?

### **Question by Mesfin from PHE-Ethiopia Consortium**

I have two brief questions: We understand that the universities, particularly the older ones, have a lot of research outputs which they have collected over the last twenty years or so that are waiting for implementation. We have learned such is the case during visits we made to ten universities. How can we use this wealth of information for advocacy, societal development and to attract funds for research. It would be extremely beneficial if we could identify the outputs and design strategies to make use of them for these triple objectives.

For example the REDD+ project, which supports research on forestation, forestry and forest cover could be linked with the research outputs of Wondo Genet College of Forestry and Natural Resource, Hawassa University and other higher learning and research institutes. How can we use the information in these institutions for the benefit of this important global initiative?

Many foreign universities and researchers conduct research in collaboration with universities in Ethiopia. For example researchers from other countries in Africa, Europe and America are coming to Ethiopia to collaborate with research programs in the universities in Ethiopia. Obviously this kind of collaboration would be beneficial to obtain financial and other resources for the researchers. On the contrary, are there instances when Ethiopia researchers travel abroad to engage in research activities in other countries to exchange experience, share knowledge and gain recognition? Do our universities have the capacities to engage in this kind of reciprocity?





**Question by Tariku Abera** from Ministry of Women, Children and Youth Affairs

Most universities have mentioned that gender and climate change are cross-cutting issues in their research programs. We know that more than one half of the population (women and youth) are in the frontline and are both part of the problems related to environmental degradation as well as part of the solutions. They become part of the problem on fuel wood and charcoal consumption. There are a number of women and youth organization ready to participate in development projects. Projects will not yield the desired output without the participation of this important sector of the society. What then are the plans in the universities to involve women and youth in climate change research for the successful attainment of the MDGs?

**Question by Jimma University**

I have three very short questions - We know our country is poor and cannot afford to equip each and every university with expensive and cutting edge instruments for research and teaching and learning. What would be the most likely scenario to pool all resources in a way they can be available to all for research? There was a mention of redundancy and repetition of research activities in all universities. What kind of network should we put in place to control this undesirable situation? There is a problem with the end users and research in that one does not even know about the existence of the other. My students work on waste management, something which should interest the municipality in one way or the other. There is not even a single incidence of the municipality showing any interest in our work and it does not consult us on its problems. What mechanisms are there to remove the barriers between researchers and end users?

**Question by Asaminew Kume from the MoWE**

A number of universities send their students to our organization seeking hydrological data and information. Despite the fact that each watershed deserves equal attention, we see a heightened interest in some selected watersheds. Students would like to conduct research in the Rift Valley lake areas because of its proximity to Addis Ababa. There are twelve watersheds in Ethiopia, eight of which have master plans and data at basin level. Reconnaissance surveys have been completed for a number of dry watersheds. A certain PhD student visited our office to obtain data on a watershed and visited a university to get some more information. To his dismay he learned that there is an ongoing research on that specific topic and got shocked by the bad news.

Why do student like to pick easy topics and shy away from more challenging and demanding topics? This trend would easily lead to repetition of research activities and waste of efforts, resources and time. How concerned are the universities about this devastating menace?

**Reponses and Answers to the questions**

## Jimma University

The chair indicated that there were only two questions specifically directed to JU while most of them could be answered by any one of the universities. Dr. Birhanu from JU was given the opportunity to respond to those questions concerning JU.

The first question related to the perceived lack of participation of the Social Science Faculties compared to the Colleges of Agriculture and Health. It is possible to see this question from two angles. One is that Colleges of Agriculture and Health have been around for relatively longer period of time, College of Agriculture is more than 50 years old while the College of Health is over 30 years old. It therefore follows that they have better staffed, equipped and have better experience in research and teaching. On the other hand the Social



Science College and Faculty of Business and Economics did not have staff members with PhDs until recently. The situation has improved a little bit now. The other reason for the apparent disparity is the global and the national focus on food security and delivery of health services. The priority of the donor agencies and the government is inclined more to these research areas. I think it is also same in MU.

We have a good explanation for gender being a cross-cutting in research programs in JU. There are eight thematic research programs in JU. Gender and capacity building are cross cutting issues in quality of education, food security and democracy and governance. Gender being a cross-cutting issue in the research projects in JU simply implies that it is appropriate to address gender in all sectors of development because it paves the way for attaining the MDGs and success of the GTP.

Dr Dilnesaw admitted that he has a copy of the Gilgel Gibe Dam EIA and he has examined it thoroughly. The health impact assessment is included in the feasibility study and only mentions that malaria is endemic to the area and there is the occurrence of some water borne diseases. The document does not include any quantitative data which is necessary for the purpose of comparison. Since JU's community based health and environmental research started in 2006, long after the dam was operational, the next best option was conducting a longitudinal study to collect data and compare it across years to observe trends.

## Adama University

Dr. Mengistu supplemented information about the research capacity and staff profile of Adama University. The university has grown from a modest beginning in 2006 from when it

was the Technical Teachers College of Adama. Currently Adama University has the Social and Natural Science Faculties in Adama and two other campuses in Assela. The College of Agriculture and the College of Health opened in 2008. Out of the 13,000 students in all the faculties, 8,000 are enrolled in science and engineering due to the recent shift of emphasis to these disciplines. One important fact you should all know is the facilities in the universities did not expand in the same rate. As you know, other well developed universities in the country have the comparative advantage of recruiting young staff from among their own graduates who would be promoted into higher ranks in the well-developed, diverse and rich culture of research and heritage of teaching and learning. Adama University had to get its young and inexperienced staff from the market. Adama University has to build its equipment and the capacity of its staff from scratch and could not talk about research outputs in the same way as the other universities. We hope to get there in due course, at a fast rate.

### **Hawassa University**

A participant from Hawassa University responded about the situation of demand driven research and the capacity of resourceful staff members who collaborate in research projects abroad. In Hawassa University, PhD and academic staff research is made to align with the thematic research areas and the concept of the Technology Villages which are designed to serve communities while undergraduate and master's level research are conducted only as requirements for partial fulfillment of their graduation and most do not qualify to be demand driven.

The comment concerning inter-university collaborations, redundancy and repetition of research topics, resource mobilization and capacity building relates to a serious national problem. It would therefore be appropriate to create a common platform and resolve the problem together instead of each university grappling to tackle the problem in its own unique way. How the platform can be established and how would it operate sustainably instead of being a one-time affair is a matter of agreement among the university management bodies at a national level.

Currently there is a conspicuous difference among the universities. Some universities have comparative advantages, better opportunities and long history since establishment, better staff profile and better equipment while others are not as privileged in these respects. There is therefore a need to strive hard to bring the universities to the same standard through a series of dialogues and exchange of experience, resource mobilization, nurturing and support.

Most international collaborations are not initiated by the Ethiopian universities. The universities welcome the requests that knock at their doors and they respond quickly so as to not to miss opportunities for obtaining funds and equipment. That why it appears that there is more focus and interest in collaborative research with foreign universities.

Concerning the question whether there are academic staff conducting collaborative research in foreign countries in any of the universities, it is a matter of judgment. There are staff

members in Hawassa University who travel abroad and engage in research activities, exchange experience and provide expert services in foreign universities. Most of these interactions probably are not necessarily through institutional arrangements but through individual efforts. This is also one additional reason to create the platform and design a strategy for collaborative efforts both locally and internationally.

### **Bahir Dar University**

Most of the issues have been raised and I only want to reinforce some points. The question of whether universities engage in demand driven research comes from the identification of thematic areas for research. In BDU, we first conduct surveys to identify problems and analyze gaps for further research. There is also a strong Community Service wing in BDU which works hand in hand with communities and we transfer available knowledge to the end users and conduct research if a gap exist.

I also endorse the information that there is a glaring lack of linkage, communication and exchange of information among universities, NGOs and GOs and we the need to work hard to establish these linkages. The loose partnership with NGOs and industries can be explained by fact the industrial sector in the country is not well developed due to the objective realities on the ground. It is also regrettable that there are research outputs on the shelves which we could effectively put into use to make a difference. The solution to this is to work together, design a package at the national level both in identifying thematic areas of research based on comparative advantages of each university and in creating mechanisms for dissemination of knowledge.

### **Haramaya University**

Much has been said about the drawbacks, challenges and opportunities of research in the universities. I would, however, like to pick two points. The questions concerning whether research projects are demand driven, participatory or the contrary and what measures are being taken to make research projects nationally relevant are basic and fundamental. I definitely share the previous comment about the definition of problem solving research and the lack of a central and responsible body to prioritize and coordinate research projects and resource mobilization. It is interesting to note that all questions and comments revolve around these fundamental issues.

More fundamental questions that have not been raised so far include the challenges of research in the universities. A primary challenge in all universities is brain drain. Brain drain has been the cause of the loss of experienced researchers and premature interruption of research projects. A second important challenge is lack of infrastructure, specifically the absence of complete sets of modern laboratory equipment. This relates to absence of designated centers of excellence organized around the comparative advantages of universities. The problems related to lack of infrastructure would be partially resolved if there were centers excelling in specific disciplines and if there were established mechanisms for

building capacity. Research laboratories, even in advanced countries, are not fully furnished with sophisticated equipment but instead rely on sharing resources.

A third hurdle constitutes problems related to shortage funds and management of available financial resources. Developed countries have a well established research system which manages resource mobilization according to research priorities of the country and the relevance of the research project to solving national problems. It is no use to disburse funds equitably to all project proposals received without paying due attention to its relevance and the availability of capacity to conduct the research.

We can start thinking about how to establish national research institutes responsible for prioritizing thematic areas and managing research funds. The research outputs on the shelves of many universities could be compiled into a centrally managed database and made available to the public and graduate student research. The redundancy of research activities would be minimized if we could emulate the Ethiopian Institute of Agricultural Research for every discipline.

**Dr. Bayou Chane (Integrated River Basin Management Project, Addis Ababa University)**

As a senior university staff, I would like to give my reflections on the evolution of research at AAU. In the early days, research at AAU was far from relevant to national problems. In the Faculty of Technology, staff members who went abroad for further education conducted research on aeronautic engineering, off-shore stability and nuclear physics. It was only two decades and half ago that a paradigm shift from research dictated by influence of foreign universities to research influenced by national problems started to emerge. I remember that one of my instructors carried with him a huge amount of soil as a sample to Israel. Some uninformed people made fun of this incidence. Then a sandwich system of research in which the candidate studied the theoretic aspects of his research in universities abroad and then conducted research on local material in their home university was the turning point in the history of demand driven research. Currently, graduate research has made remarkable progress and is at higher stage of development in considering demand driven problems, though it is not adequate yet.

When it comes to research in universities at large, the strict meaning of thematic research is seriously violated. Every university is conducting research in what it considers to be societal problems without having any knowledge of what the other university is doing. So the importance of a university wide platform which could coordinate research activities comes into perspective here. Ideally, the Ministry of Science and Technology could assume this role, but I must confess I am not sure about its exact mandate. Although the Ministry of Science and Technology could help in coordinating and regulating research activities and facilitating resource acquisition, the universities will always remain as centers of knowledge generation and dissemination. Universities must therefore assume the indispensable role of opinion

making, and influence development and management in the country. Universities must be the forerunners in identifying problems. They should be able to determine the problems and show them to government and other concerned bodies. Government on the other hand must allocate resources and issue or modify policy to regulate research. This is how it is done in developed countries. Leaders obtain briefings and regular updates on current issues to build their capacity to become movers and shakers of development in the international arena. The role of universities in Ethiopia should come to that level.

I would like to share my opinion on releasing research outputs. I think we should exercise caution. Every research output is not to be released in its entire form and content. Mishandling strategically research outputs will have a far reaching consequence on our national security and economy. We therefore need a protocol of releasing research outputs which we all have to strictly adhere to. I think the Ministry of Science and Technology could effectively play the role of deciding on content, details and access to research outputs as a means of safeguarding ownership and security. A case in point is research conducted on the Nile by Egyptians. No one knows what strategic information they have on the Nile. It is only after they get carried away by emotions during negotiations that they utter a few words about the information they have on the Nile. Otherwise information on the Nile is highly classified and access to the information is completely denied to ordinary people and researchers.

## **Presentations by Government Organizations**

### ***Ministry of Water and Energy***

#### **Abiti Getaneh, R & D Directorate Director**

The Ministry is divided into technical and supportive divisions at the state ministerial level. There are a total of 32 different sections or directorates. The Research and Development Coordination Department (Directorate) was established in 2003 because:

1. Water research was highly fragmented, uncoordinated, and lacked vision when compared to other sectors
2. The role of research in guiding sector investment that was indicated in the development of Country Water Resources Assistance Strategy, WB, AfDB
3. The importance of research on Water, Sanitation and Hygiene (WASH) Multi-Stakeholder Forum (MSF)
4. International experience and other initiatives

The goals and objectives of Research in Ministry of Water and energy include:

1. Provision of effective service with respect to research undertakings and coordinating R&D related activities in Ethiopia
2. Improve the quality of service delivery with respect to research undertakings and coordinating the research effort so that water R&D activities in Ethiopia are resulted oriented.

Mission and mandates:

1. Provide leadership for Water and Energy Research and Development through:
  - i. Solving water related problems which are critical to the country situations on sustainable development and economic growth
  - ii. Different activities (problem identification to the actual execution of research)
  - iii. Support knowledge creation, transfer and application by engaging stakeholders
  - iv. Promote better quality of life
2. Promote the research undertakings, coordination, cooperation, and communication of water and energy sector institutions in R&D
3. Promotes dissemination and technology transfer of research results
  - a. Major tasks accomplished
4. Identification of national water research priority areas
5. The establishment of National Research Advisory Council composed of all sector organizations (two types)
6. The establishment of contact with higher education institutes and other organizations (MoUs with different institutions/u)
7. The establishment of various guidelines and formats
  - i. Proposal evaluation
  - ii. Grant award procedures and agreement format
8. Establish bilateral and international contacts
9. The provision of a number of research grants
  - i. Donors, bilateral relations
  - ii. National Treasury

The directorate has a set of procedures for the identification of research priorities and defining thematic areas. Proposal evaluation and selection follows stringent criteria set by the directorate.

#### **Ato Asamamaw, Basin Study & Master Plan Preparation**

The basin study and preparation of master plan is based on the Ethiopian Constitution and the realization of the Ethiopian water resources management policy. Both the constitution and the policy ensure equitable water resources allocation and utilization, optimum and sustainable natural resource utilization and aim to bringing about socioeconomic transformation.

So far 12 basins have been studied, nine of which are at the master plans level while three of them are at the reconnaissance survey level. Those whose master plan has been completed include: Mereb River Basin, Tekeze River Basin, Abbay River Basin, Baro-Akobo River Basin, Omo-Gibe River Basin, Wabe-Shebelle River Basin, Genal-Dawa River Basin, Rift Valley Lakes Basin, and Awash Basin. Three other basins studied at the reconnaissance level include: Denakil, Ogaden and Aysha dry basins

The master plans include development interventions, pre-feasibility and feasibility documents for the main water resources development projects and a number of numbers of mathematical models that have been developed to support and guide the Master Planning Process.

The Ministry faces a number of challenges for conducting research, all of which are attributable to a lack of capacity and absence of collaborative efforts with research institutions and universities. The way forward would be to quickly capture the opportunities and capacities in universities to conduct collaborative research which would help in attaining the MDGs and the timely execution of GTP.

## ***Gilgel Gibe-I Hydro Electric Power Dam***

**By Nigussie Mamush, GG-I Power plant Manager**

The names and the power plants feeding the power grid in Ethiopia and the year of the year of their establishment were given.

Specific information on Gilgel Gibe I was given using pictures and tables. The reservoir of the power plant has live storage of 668 cubic meters operating between 1,571 and 1653 meters above sea level. There is 171 cubic meters of water available as dead storage below 1,761 meters above sea level that will be filled by sediment after the economic lifespan of the reservoir. The reservoir occupies 51 square kilometers of land at its full height.

A description of the neighboring weredas, the buffer areas of Gilgel Gibe I, the prevailing conditions concerning encroachment and the different attempts to overcome degradation such as planting trees were demonstrated with the help of photographs.

## ***Ministry of Women, Children and Youth Affairs***

**By Tariku Abera**

**Duties and responsibilities** of the Ministry include:

1. Create awareness on the issues of Women, Children and Youth;
2. Collect, compile and disseminate information for stakeholders on the objective realities faced by women, children and youth;
3. Ensure that opportunities are created for women and youth to actively participate in the political, economic and social affairs of the country;
4. Facilitate conditions to speed up gender equity
5. Ensure enjoyment of the fruits of their labor or performing public functions and to become decision-makers;
6. Coordinate efforts of all stakeholders for protection of the rights of women, children and youth and also the well-being of children;
7. Carry out national research on the problems of women, children and youth and design intervention strategies.

## ***Environmental Protection Authority***

**By Yonas T/Michael**

EPA has so far made good progress in developing and realizing the Environmental Policy of Ethiopia, various environmental proclamations, environmental guidelines and the CRGE. In Article 6, sub-article 14 of the Environmental Protection Organs Establishment Proclamation, EPA is mandated to coordinate, promote and, as may be appropriate, carry out research on environmental protection. However much has not been done in line with this activity due to the enormity of other responsibilities and activities vested on the authority.

Concerning environmental protection and rehabilitation, EPA has funded for 42 pilot projects which were implemented in the nine regional states and the two city administration of the country. Some of



the stakeholders who received funds and successfully carried out the activities include Sustainable Land use Forum (SLUF).

It is hoped that the outputs of the findings of the pilot projects can be used to select and prioritize those issues of concern that require further research to enhance and strengthen environmental management and protection activities.

## ***Working Groups***

The workshop participants were divided into two groups according to their affiliation to universities and NGOs and government offices. The presentations were discussed and opinions were collected so that an agreement in the form of a declaration could be produced to be submitted to all university councils and other stakeholders. It was learned that the universities have different capacities and diverse funding sources and research approaches. Most however indicated that the fund sources include capital and recurrent budget from government treasury, collaborative research with foreign universities and competitive grant awards from donor organizations.

From the discussion, the delegates of the universities admitted unanimously that inter-university collaboration with local universities were either very little or non-existent. The consequences of the lack of inter-university collaboration have been redundancy, duplication and inefficiency in resource utilization. Moreover, foreign universities which covered the expenses of collaborative research sometimes encouraged local universities to meet their own research agendas instead of responding to societal problems in Ethiopia.



While efforts are being made to normalize the teaching and learning in the universities, similar efforts to normalize research in the universities are not considered yet. As a result, each university has its own thematic research agenda without any information about whether the same agenda is being considered by other universities. Drawbacks of lack of inter-university collaboration in research include piecemeal distribution of funds to all universities, irrespective of comparative advantages and capacity and challenges with duplication, plagiarism and lack of responsiveness to the prevailing local problems of graduate research, lack of indisputable agreement on societal problems and conflicting views on who should define societal problems.

The presentations of government organizations, NGOs and other institutions indicated that research in some government organizations is affected by limited capacity and/or lack of

mandate. There are some sectors, such as EEPCo, where research is a part of their mandate and have well defined processes for selecting and funding research and disseminating results.

The proposed way forward calls for creating and sharing a research database to avoid duplication, strong inter-university and government and NGO collaboration to increase efficiency in fund utilization and working together to solve pertinent societal problems and attract government confidence.

The following are outlines of the outcomes of the discussions from the two groups:

1. Strength and challenges of research in Ethiopia

- Knowledge gap
- Shortage of resources
- Absence of a comprehensive research institute

2. The way forward:

- Create efficiency in resource utilization
- Create coordination among universities to significantly contribute to the Growth and Transformation Plan
- Give a mandate to different sectors to conduct research
- Build capacity of researchers
- Conduct research on demand driven issues

3. Avoid duplication of research topics

- Give PHE EC the mandate to coordinate activities
- All sector organizations and regions draft research agendas and bibliographies
- Create a website by coordinating Ministry of Education, Ministry of Information and research institutes in which research agendas, topics, results and implementation will be posted

4. What needs to be done to enhance the relevance of research outputs?

- Establish local community, GO, NGO, university, research development and extension technical committee
- Create bilateral or tripartite relationship among institutions
- Create a task force
- Draft memorandum of understanding
- Draft duties and responsibilities and assign to the task force
- Create a discussion forum
- Urge PHE Ethiopia Consortium to take the responsibility for organizing meetings until the forum becomes strong enough
- Solicit for financial support for this activities
- Report to the Council of Universities

- Report the outcomes of the workshop and the need for integration of research in the universities
- Work together on watershed management and protecting the reservoirs and watersheds of all dams and the Millennium Dam in particular.

### ***Closing Remark***

The workshop was closed with a speech by H.E. Ato Alebachew Lakew, Natural Resource and Environmental Protection Standing Committee from the House of Peoples' Representatives emphasizing the need for collaborative demand driven research for sustained economic growth and development among all the stakeholders.



After the closing remark, a visit was made to Gilgel Gibe-I Power Station for participants who did not have the opportunity to visit it. Ato Nigussie guided the participants to the EEPCo station and explained some of the facilities and the various control measures and took the group to the tunnel where the power is being generated. The visit in the tunnel was very amazing and breathtaking. The group was divided into two for the sake of acoustics in the tunnel and interference with the sound coming from the turbines. Detailed explanation was given on the different compartments and the different stage of power generation and the safety and control systems. The group left the tunnel with great admiration and imagined what it will be like when the Millennium Dam is complete.