

Independent/Mid-Term Review of “Institutional Collaboration between Hawassa and Mekelle Universities and the Norwegian University of Life Sciences - Phase IV”

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Executive summary

Collaboration between Mekelle university (MU) and Hawassa university (HU) in Ethiopia and the Norwegian university for life sciences in Norway (NMBU) has been supported by the Norwegian Government since the mid 1990'ties. Agreement to support phase IV were signed in November 2015. A five year programme was appraised, but the donor only committed funding for the first two years. Later, a bridging agreement for the third year is about to be signed during spring 2017. Funding for the two last year of the programme will be decided based on an independent mid-term review (MTR).

Terms of reference for the review can be found in ANNEX I. A review team (RT) was composed by two senior advisers from Norad and two independent consultants from Ethiopia. The review is based on document assessments and interviews with stakeholder. List of documents and stakeholders can be found in ANNEXES II and III, respectively. The review took place in Norway and Ethiopia during spring 2017.

The general goal of the phase IV is *Contributing towards Sustainable Development of the nation through quality education, research and proper use of natural resources*. The general purpose is *Strengthening the teaching and research capacities of Hawassa and Mekelle universities to contribute towards improved livelihoods of rural communities and the Rift Valley and Arid highlands of Ethiopia*

The expected outputs of the programme are:

- Capacity building;
- Reinforcing teaching and research capacities;
- Strengthening graduate studies;
- Improve female participation in learning/teaching and research;
- Intensifying development oriented research undertakings;
- Dissemination of applicable technologies to end users;
- The establishment of Centre for Ethiopian Rift-Valley Studies (CERVAS);

Human capacity will be built through PhD fellowships to university staff. The major part of those will graduate from the universities in Ethiopia, a smaller part will study in Norway or other countries. Phase IV will also support establishment of new institutes and research centers, including research laboratories. At MU, a university reform will be supported.

Development oriented research are initiated by research grants of four different volumes, duration and character. Four large scale projects at each institution are planned to be multidisciplinary in nature and to be launched by research teams composed by members for all the partnering universities.

The programme has a special focus on strengthening women's position at the universities in Ethiopia. Capacity building and recruitment of female staff is prioritized. Support is also given to gender offices who promote a number of activities that support female students. Poor female students and disabled students receive financial support from the programme.

Dissemination of technology to end users will build on research and development done at the universities. It will be disseminated through extension services and official systems in the regions of Tigray (MU) and Southern Nations, Nationalities and People's Regional State (SNNPRS) (HU).

The review team (RT) found that the programme implementation is delayed due to various reasons. However, at time of the MTR, all planned activities had started, except for the dissemination of phase IV research results to end users, which naturally build on results from the other component. In spite of a late startup, most activities have a good chance to be implemented during the programme phase. An exception is the PhD studies, which will need more time than the three years available by summer 2017. This will be a problem for all students, both those who are planned to study in Norway and those who are planned for studies in Ethiopia.

Plans for PhD students to Norway was hindered by the fact that funding for their entire PhD period of four years had not been confirmed. This was because the donor only committed funding for two years from the start. NMBU was reluctant to sign agreement for candidates who lacked funding.

All the large-scale research projects at MU but only two of the four planned projects at HU were identified. MU were working to include members from all partnering institutions, but had not fully succeeded at time of the MTR. HU had rejected two proposals because they lacked partners from the other institutions.

Dissemination of new knowledge and technology to end users in the regions are done through an established system of community service.

The launch of projects for five female PhD candidates from MU who were planned to study at NMBU were also hindered due to lower budgets for their research work than the Norwegian university was willing to accept. The budgets were re-negotiated, but had not found a solution by the time of this reporting.

The programme support to the gender offices at MU and HU were highly appreciated. They were both launching supporting activities to female students, which are of crucial importance to them. It is the RT's opinion that the offices work efficient. Attrition rate for female students has decreased which might be attributed to the works of the gender offices. Based on this good pay-off, the RT advised the gender offices to share experiences between them and to other universities in Ethiopia.

Poor female students and disabled students receive a small amount of pocket money from the programme. The support is highly appreciated, but not sufficient. Especially MU is advised to increase the amount. The sustainability of this arrangement is questionable, unless more permanent source of funding is found.

The monitoring system of the programme should be improved to measure the short time-effects (outcomes) better. Impact assessment mechanism should be in place.

It is the RT's opinion that the programme funds are used effectively and that capacity for budgeting, use and reporting of funds are reliable. Expenditures in some budget lines could have been explained in more detail.

The university partnership is not working as intended and should be improved.

Based on the review, a list of ten recommendations for improvements for the last period of the programme is displayed in the following chapter. More in-depths findings and reflections can be read in the subsequent chapters.

Recommendations

1. The last period of the programme should be funded. The decision should be taken as quickly as possible and conveyed to the partners. This is important to enable them to sign the necessary contracts, in particular for the PhD studies.
2. PhD candidates for studies in Norway must connect to Norwegian supervisors as quickly as possible. Studies must not start later than July 2017. Written commitment from MU and HU to take responsibility for those who will not be able to finish within the programme period must be secured.
3. Large-scale multidisciplinary research project teams must be established with participation from all the three partnering institutions as quick as possible.
4. The function of the gender offices at the universities could be presented as a role model for other universities in the region, and the offices in MU and HU could learn from each other. The model of *Big Sisters* could be considered by MU. It is advised that the MoFEC recommended two percent of the recurrent administrative budget of the universities is used for gender specific purposes.
5. The support to poor female students and disabled is highly appreciated by the students and should be continued. MU should consider increasing the *pocket money* given by the programme to 200 ETB per month. More tailor-made support to students with disabilities should be discussed. The long-term sustainability of the support should be discussed.
6. Dissemination of knowledge and new technology should be re-designed in order to target the poorest part of the population better. RT's reflections can be read under the *Impact* chapter of the report.
7. Systems for sustainable outreach should be discussed, to secure spreading of improved technology beyond the programme. More involvement of government staff in the projects would improve impact and sustainability and help in upscaling and spread of new technology. The universities are also advised to work closer with developmental NGOs in the outreach programs in order to learn more about livelihood approach.
8. The monitoring system should be improved in order to measure achievements towards intended outcomes better.
9. Systems for impact assessment should be developed as an integral part of the programme. Both MU and HU could provide small research-grants, for example to MSc-students, to study of impacts of knowledge and new technology. This will also gain insight about what function for different groups like women, youth and the poorest of the population, which could be valuable for future programmes.
10. The three universities should collaborate better. The underlying intention of the programme is mutual partnerships and all three partners are responsible to facilitate this. In the continuation of the programme, PhD projects, large-scale-research projects and other potential collaborative projects must be openly discussed between the partners and revisions made when necessary. It is advised that the collaboration itself is reported and discussed in every annual meeting.

Background

Norway, through the Norwegian Embassy, has supported Mekelle University (MU) and Hawassa University (HU) since the mid 1990'ties. The core focus has been capacity building of human resources at the universities, research and infrastructure. Norwegian partner institution has been Norwegian University of Life Sciences (NMBU). The institutional cooperation agreement has completed three phases of the programme between 1996 and 2013.

Phase III of the institutional cooperation run from 2009 until 2013. The end review (CMI, 2014) states that the selection of project inputs, activities and the result framework have remained more or less constant throughout the phases. It is the concern for food security in Ethiopia that has been driving the Norwegian development cooperation with the country, and this was also the original concern for the academic support.

Through the phases, the Ethiopian universities have grown tremendously, and, according to CMI, the Norwegian collaboration has become less important. Focus has shifted from improving agriculture and food security in Ethiopia, to building stronger academic institutions. The Norwegian university has, during Phase III, become more of a service provider than a collaborative partner. CMI recommended that a renewed partnership build on a more mutual platform.

Emphasis of phase III has been on PhD education. Most candidates have returned to the universities in Ethiopia, and thus, contribute to capacity building of the institutions.

The Norwegian support has also played a positive role in engendering of the institutions. The situation for female students has received particular attention since the beginning of the cooperation and the two universities have addressed issues with regard to the academic, social and personal situation of female students. Since the project started the attrition rates for female students have been substantially reduced in the two universities.

The universities have created gender offices with particular responsibility for female students. New national policy will now apply to affirmative action approaches at the universities. As indicated in end review of phase III, all universities are required by the national regulation to allocate two percent of the recurrent budget to gender-specific activities. This information was confirmed by MoFCC and MoE during the MTR. Institutional cooperation has also played a role in the establishment of an Institute of Environment, Gender and Development at both universities.

Collaborative research between Ethiopian and Norwegian researchers has not been substantial so far. It has been important to conduct research that is relevant for the needs in Ethiopia, and a great deal of the research has been published in local journals. According to CMI, research in Ethiopian universities could have benefitted from being more ambitious with regard to publishing results in international refereed journals.

In phase III, both Ethiopian universities have had substantial outreach programs approaching farmers in the regions. However, according to CMI, the results of these efforts have not shown any advantage

compared to what other development agencies have achieved. In their view, the university collaboration should have brought something additional to bear on such projects. They also point at the difficulties to measure short time impacts on the ground from academic activities.

Phase IV of the collaborative programme started in 2015. Like former phases, it is justified by the need to improve livelihoods and food security in Ethiopia. It includes the same partners, and builds on achievements from earlier periods. The programme proposal covers five years, but initially only two years were granted with an option of granting the last part of the period after a review and a positive progress. Bridging funding is given for year 3.

The general goal of the phase IV is *Contributing towards Sustainable Development of the nation through quality education, research and proper use of natural resources*. The general purpose is *Strengthening the teaching and research capacities of Hawassa and Mekelle universities to contribute towards improved livelihoods of rural communities and the Rift Valley and Arid highlands of Ethiopia*

The expected outputs of the programme are:

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- Dissemination of applicable technologies to end users;
- The establishment of Centre for Ethiopian Rift-Valley Studies (CERVAS);

The programme has two components; one at each of the two Ethiopian universities.

Mekelle

The project goal for the MU programme is *Improved livelihoods of the rural communities of the arid highlands of northern Ethiopia*. The programme is composed of three components.

- i. The capacity building component includes establishment of new PhD programs, strengthening of existing PhD programs, establishment of two new institutes and strengthening of ICT, library and other transformation efforts. 25 PhD fellowships are planned to be granted in addition to five fellowships specifically dedicated for female candidates. In addition, support will be given to PhD scholars who are in different phases of their education.
- ii. The research component aims to support development-oriented research, dissemination of research and development products/findings, and recognition of outstanding research and development works. Priorities shall be given to climate change, environmental studies, energy technology and conservation agriculture. There are plans for four university level large scale multidisciplinary projects, eight medium scale, college level projects, 150 small scale and 120 master thesis projects. There are plans for dissemination and outreach, both to research communities and to the society.
- iii. The third component will focus on support to female and disabled students, HIV/AIDS awareness and tutor/mentor programs. There are plans to support female instructors in

teaching and research, female students at the university (through the Women's Affairs Office), high school female students through mentoring and disabled students.

Hawassa

The goal of the Hawassa part of the programme is *Improved livelihoods of the rural communities in the Ethiopian rift valley region* and the purpose is *Enhanced expertise in science and technology and the Ethiopian rift valley region*.

- i. The first component intends to increase the capacity of HU to deliver quality education and research. It includes support to PhD students from the former phase, three new PhD students, and support to 50 staff who are doing their PhD's at local universities. Further, staff exchange with NMBU, training of laboratory technicians, short courses and on-the-job training of administrative staff. Support to Norwegian students in Hawassa will also be given.
- ii. The second component aims to strengthen PhD and MSc programs of HU. It includes strengthening PhD programmes and establishing new MSc and PhD programmes and support contribution from professors from Norway and south universities to teach in these programmes. Further, support 10 staff from HU and 15 staff from other local universities to conduct their PhD studies at HU, and support MSc research projects, ICT and books.
- iii. The third component aims to strengthen gender sensitive educational development and increase female participation and achievements. It includes support to 8 PhD fellowships to female students, support to female MSc students and other support to female students and administrative staff. The components also include support to disable students and to awareness raising.
- iv. The fourth component aims to increase the capacity at HU to deliver high quality research. Research support will be granted in competition based processes. They shall build on achievements from earlier phases (the technology villages), be interdisciplinary in nature and be linked to MSc and PhD student training. There will be large (4), medium (8) and small-scale (120) projects.
- v. The fifth component aims to establish center for Ethiopian Rift Valley Studies. The mission of the center will be to advance excellence in multidisciplinary research with development relevance. The center will be staffed by scientists from six different departments at HU, and they will collaborate with international organizations and other universities in Ethiopia. They will carry out research and give courses.

Reviews

The agreement between the Norwegian *Ministry for Foreign Affairs* (MFA) and Ethiopian *Ministry of Finance and Economic Development* (MoFEC) states that a mid-term review focusing on progress to date and the effectiveness of the programme i.e. the extent to which the purpose is/has been achieved, shall be carried out by August 2017. An assessment of the programme's impact may also be included in the reviews. In addition, MFA decided that an independent review of phase IV should be done before decision of funding of the final two years of the programme is made.

This review combines the two requested reviews, and is guided by the Terms of reference (ToR). (see ANNEX I in this report).

Review team

The mid-term review team (RT) is led by Norad with assistance from Ethiopian firm, *Conscientia, Training, Consultancy and Research PLC*. Senior adviser Dr. Anne Wetlesen from Norad has been the team leader. Senior adviser Bodil Maal was the other team member from Norad. Dr Melaku Bekele and Dr Tadesse Woldemariam were assigned from Ethiopia.

Methodology

The review was conducted by analysis of relevant documents and interviews with partners, stakeholder and beneficiaries.

Kick-off activities included communication and collection of project documents and other relevant sources were made available by Royal Norwegian Embassy in Addis Ababa (RNE). A written inception report was submitted and approved by RNE.

Desk review for the inception report was done on basis of the documents made available by the RNE and the archives for MFA and Norad. Further relevant documentation and relevant literature were collected during interviews with partners. Documents reviewed are listed in ANNEX II.

During the desk review, focus was on assessing what has been achieved, successes, challenges and lessons learned, including an overall assessment of achievements of the program goals. Key findings of the desk review was sought to be verified through follow up of key actors and stakeholder's interviews, visits and consultation.

Stakeholders interviewed are listed in the meeting schedule in ANNEX III. Interviews were conducted individually and through focus groups.

Findings

Written documentation of the progress of phase IV were reports from year 1, which was the period from signing of the agreement on November 19th 2015 until July 7th 2016. There were also minutes from the annual meetings in October 2016 where the progress was discussed. Updated information of the progress until the time of this MTR were provided during and after interviews. Some additional written documentation was also handed out during the field visit or submitted after. Among others, a financial report for the first half of year 2 was made available. The findings below aim to give information of progress until the time for the MTR.

The RT learned that implementation of the programme was delayed in relation to the original plan. One general explanation is that the agreement was signed late in 2015, when the academic year was almost half gone. None of the partners started to use funds before the agreement was signed. For students and PhD candidates who relied on the Norwegian support this meant that one semester of courses was lost.

Effectiveness

Mekelle - progress

Capacity building

At the time of the review, establishment of the two planned new institutes had been settled and directors were about to be appointed. The institutes will be staffed with faculties from existing departments at MU. Deadline for the establishment is set to July 31st 2017, and according to the coordinator, the progress is in line with this deadline.

Two new PhD programmes, one in *Energy engineering* and the 2nd one in *Plant breeding* were approved and announced for proposals during year 2 of the programme.

The 25 PhD fellows for studies at MU had been selected. They were equally divided over five different PhD programmes: *Public health, Energy engineering, Climate change and rural development, Soil science and Plant breeding*. (PhD candidates and their topics are listed in ANNEX IV). Only two female candidates were selected in this group. The low number of female candidates was explained by the selection criteria, paying weight on earlier performance like publications and participation in academic and administrative activities in the university. These criteria disfavor female applicants since most of the eligible candidates have, so far, had limited possibilities of getting the required experience. Another explanation was that only less than 10 % of staff with MSc were women and thus eligible for PhD studies.

The 25 selected PhD fellows had already started their courses in the second semester of year 2. They were also working with their research proposals which were due on July 31st 2017. The original plan was to support one year (12 months) stay in Norway during their PhD study. The reason for this stay has been to expose students to new technologies, advanced courses and discuss with their co-supervisors. Since there was a need to increase the budgets for the five female PhD students who were going to Norway on full-time (see below), it was decided to reduce the budgets and the stay for these 25 students to six months. None of the PhD candidates had, at the time of the MTR, confirmed co-supervisors from Norway.

Strengthening of ICT and library services had so far been supported by working visits and participation in national workshops for staff.

Five of ten vehicles planned were purchased during year 1. This investment took 47% of the budget for the capacity building component in year 1. No vehicle procurement had been planned for Year 2, but it is said in the action plan that purchase of the five remaining vehicles will be done in 2017.

Funds are set aside to support a university reform (output 1.7. in the RBM). The 67 activities reported in year 1 included capacity building of university leadership and staff, data and information gathering, experience sharing and image building and promotion. Funds from the ICT and library budget was also used for these initiatives. The activities are managed by the office of institutional transformation and internal quality assurance, who are required to submit an action plan on a university reform within March 2017.

Development-oriented research and dissemination of research findings

Launch of large-scale and medium-scale research projects were delayed. In addition to late signing of the agreement, the explanation was that the granting procedure took longer time than anticipated. Granting was based on open calls, expert screening and shortlisting, public defense of proposals and final selection by the implementation committee (IC). 68 proposals were received for the large-scale project call, which was a higher number than anticipated. The expert committee, although internal, was composed of members from different departments and institutes, trying to avoid conflicts of interest as much as possible. Public defense of the shortlisted proposals gave MU staff possibility to contribute to the process. There was, in addition, possibilities for appeal by those who's proposals were rejected.

The priority areas of the four large-scale projects were at the start set to be in the topics of *Mountain research and development*, *Energy issues*, *Fisheries and aquatic sciences* and *Animal and human health (one health concept)*. None of the incoming proposals on the last topic was considered good enough for funding. Instead, a proposal related to food science: *Commercialization of gluten free beer made of Sorghum, Finger Millet and Pearl Millet Varieties* was funded. RT finds that this decision is justifiable due to the intentions described in the PD (pg.46) and the thorough selection process based on quality assessments of the proposals. (Large scale projects are listed in ANNEX V.)

Medium scale projects were divided among colleges and institutes. They were granted based on open calls among staff at the college and institute. At the time of MTR four of the eight medium scale projects were granted.

Table 1. Granted small scale projects at MU the time of MTR:

	Planned	Granted at time of MTR		
		M	F (% of grantees)	Total
Small scale projects	150	19	5 (26)	24
MSc research projects	120	41	9 (22)	50

During year 1, 22 activities were reported for dissemination of research findings in international and national conferences, workshops, oral presentations and exhibitions.

MU has a well-developed system for dissemination of development-oriented research to end users in collaboration with the regional Bureau of Agriculture. General modes in earlier programme phases have been use of training and demonstration sites and development of guidelines and manuals in local languages. None of these dissemination activities linked to results of phase IV were performed at the end of year 1, but proposals and action plans were received for *Technology transfer* (2), *Dissemination of popularized crops* (5), *Dissemination of apple* (5) and *Fisheries association training* (1).

Female and disabled students, HIV/AIDS awareness creation and tutor-mentor programs

Five female PhD candidates were selected for studies in Norway and had already confirmed potential supervisors. However, NMBU had been reluctant to sign agreement with the students because they had not secured funds for their entire study period. There had also been budgetary negotiations because the budget originally set aside was too low according to NMBU. During the time of MTR, budgets were revised and sent to NMBU for approval. RT later got the message that the outcome of these negotiations were negative, and the five students were advised to search for placements in other countries than in Norway. RNE has again asked MU to rectify this decision.

Special support to female students is described in a separate chapter below.

MU has registered 58 visually impaired students and 87 with other disabilities. Interviews with ten persons in this group confirmed that the financial support they are given, although very small, is highly appreciated. The last semester, they did not receive money, but only technical support. This created problems for many of them, and they had hoped that the university would listen closer to their specific need before they (MU) decided which type of support they should get. The group is diverse and there are many different demands for support among them.

Hawassa - progress

Capacity building

Funds were set aside to support seven PhD fellows in Norway pending from Phase III. By the start of the programme, the number was reduced to five. By time of the MTR four of these five (all women) had graduated and the one remaining is in the process to defend very soon.

Three full PhD scholarships for studies in Norway were set aside under this component. In addition, the same is reserved for female students under the budget line *Enhancing participation of women and support to disabled students*. The university leadership had, at the start of the programme decided to support two PhD students who had already started their studies abroad but lacked full sponsorship. In addition, the university just prior to the MTR had decided to take up six PhD students in addition, four men and two women. Since this will demand more financial resources set aside under this programme, the university had decided to top up the funds with own sources, and thereby secured sufficient funding for all eight PhD students. (Selected candidates are listed in ANNEX IV).

The six PhD students who were granted for studies in Norway had, at the time of the MTR, not been in contact with Norwegian supervisors. This was explained by the fact that so far, funding for the entire programme period was not secured, and they had been reluctant to make agreement with NMBU before this was secured. At the time of the MTR the university leadership had decided, but still not formalized, that they would guarantee support to all grantees throughout finalization of their studies.

There are original plans to support 50 PhD students from HU staff who are studying in different universities. During year 1, they planned to support 10 and managed to support 23. This component is also partly supported by the MoE.

There are plans to support five HU staff for PhD mentorship training in Norway and six for exchange for experiential learning and joint publications. Three grantees for each group were selected by end of year 1. Plans were not further executed at the time of the MTR.

Support to Norwegian students to do research in Ethiopia was not yet launched, neither was support for sabbaticals and research leave for HU staff.

On-the-job training of 175 administrative staff is planned. By Year 1, 35 (20%) had been trained. Training of six laboratory technicians and six ICT staff was already executed.

Graduate programme support

Two planned MSc and two planned PhD programmes were at time of the MTR approved by the senate. The two PhD programmes in *Plant biotechnology* and *Ecotoxicology* are expected to enroll 10-12 candidates each, up to 25 in total. HU are expecting applications from staff from other universities or other research institutions in Ethiopia. They will be granted support to top-up their salaries, including six month's research stay in Norway. The candidates were not selected at the time of the MTR.

Out of six planned staff from NMBU for teaching at HU, two had been engaged by the time of the MTR. The two planned laboratories and two ICT centers were already established. 18 out of a total of 100 MSc students (18%) had received research support. The programme had received 90 applications for MSc research grants in year 2.

Enhancing participation of women and support to disabled students

Three female PhD candidates were selected for fellowships to study abroad (see above). Only two were fully funded to study in Norway, the third was partly funded for studies in Germany. Selected candidates are listed in ANNEX IV.

Special support to female students at HU is described and assessed in the chapter below.

HU has enrolled in total 82 visually impaired students. Approximately 150 disabled students received financial support so far, which is more than the planned 30 per year. Five students were interviewed. They expressed gratefulness for the support, but also that the support they got were far from enough to cover their needs.

Development oriented research

Proposals for the large-scale research projects were selected after open calls. Selection at HU is done by the university research committee composed by three persons with VP of Research and Technology Transfer being the chair. At time of the MTR two projects were selected and two were shortlisted, but returned for the reason that they did not include team members from the partnering universities. The two remaining were expected to deliver satisfactory proposals in short time. The research work had not yet started, but was expected to start very soon. This means that the project time is decreased from four to three years. The programme management was confident that it would be possible to accomplish the selected projects in shorter time than four years.

Four medium-scale research projects were in process after semi-open calls and 50 applications were received. One was selected, but three were pending due to insufficient information of the proposals.

At time of the MTR, 52 out of 120 planned small scale research grants (43%) were selected from 126 applications. 10 out of the planned 50 young staff had so far received data analysis and scientific paper writing training.

Dissemination of research outputs

Dissemination of research results in academic journals, manuals and national and international workshops was proceeding as planned. Last year, 45 research papers were reported to have been published in reputable journals, which is higher than the plan (40). The high performance might be due to financial incentive of 3000 ETB per publication.

Demonstration and dissemination to technology villages had not yet started, but promotion and popularization of two out of six planned technology equipment were done: *Enset processing* and *Planting material for Teff*.

Support to alumni association of Norway educated Ethiopians

Support to office supplies for one year was given as planned. No other support was given so far.

Establishment of Centre for Ethiopian Rift Valley studies.

Support to physical formation of the centre and support to rehabilitation and management of the *Lake Hawassa Watershed* was given as planned. Support to six multidisciplinary research projects were said to be in progress. The research shall be based on needs and be participatory in nature.

NMBU - progress

NMBU has a long-time relationship with both MU and HU. More than 100 PhD candidates from Ethiopia have been educated at NMBU, and there have been research collaboration on a number of issues during the years. Personal relationships and friendship through many years have been established.

The Norwegian university confirmed the situation described in the phase III report, that they had come to play a more marginal role in management of the programme during the years. They agreed that this was a natural development since the two Ethiopian universities had grown stronger. However, the coordinator and the head of the hosting institute were convinced that there was still high interest from their staff to partner in research collaboration with staff from MU and HU. They would have liked more influence in the idea and planning phases of projects than the case has been in phase III and so far in phase IV. This would have guaranteed a more mutual and equal relationship between researchers, which is proper between mature institutions. NMBU are now in the situation that they receive already selected PhD candidates with approved research plans, and have limited possibilities to influence at the starting point. Likewise, they receive invitation to participate in

research projects that are already approved by the south universities, and would have liked to influence on an earlier stage.

In phase IV, NMBU had received proposals for supervisors from female PhD candidates from MU at an early stage. However, NMBU had been reluctant to make agreements for PhD when funding for the entire period of three-four years was not confirmed. There had also been budgetary negotiations between NMBU and MU because the budget set aside for PhD candidates selected for NMBU studies were not sufficient. NMBU had not received proposals early from HU, because HU did want to propose agreements when funding was not secured. Later, when the PhD projects from HU was sent to NMBU it was too late to do revisions. NMBU has expressed worries that the topics from the HU PhD projects are not sufficiently in line with the main goal of the programme.

Although the major part of the PhD students under phase IV will take their degree at their south universities, they shall be supported by NMBU (ref. the PD). There are plans and budgets for travel and stay in Norway for 25 candidates from both MU and HU. The intentions are to expose the candidates for advanced technology and courses and discussions with co-supervisors in Norway. NMBU had, at the time of the MTR, still not received any information about such stay. Arrangement for such stay is a cumbersome process in Norway, so it is advised that the practical arrangements start as soon as possible.

The NMBU coordinator had, at our first meeting, no information about Norwegian staff being attached to large-scale research projects in the two Ethiopian universities. However, the RT found during interviews that discussions with Norwegian professors had already taken place both at MU and HU. This was later confirmed by two professors in Norway, who are ready to participate in large-scale-projects (see the full list in ANNEX V). It is the RT's impression that contacts with scientific personnel in Norway and the two universities in Ethiopia now can build on long time contacts through the years of collaboration, and that both parties acknowledge the benefit of mutual collaboration. This is apparently the case for some specific areas. New topics will need some sort of catalytic actions to facilitate a north-south collaboration. This challenge is discussed in depth in a separate chapter later in this report.

NMBU scientific staff contributes in teaching at the south universities. This is mainly performed in connection with travels for PhD supervision and research stay, and is a good way for the south universities to utilize the resources.

Support to female students at MU and HU

MoE underlined that gender mainstreaming is central in GoE policy. It is recommended that two percent of the recurrent budgets at universities are used to support gender specific purposes. Girls receive extra tutorial at all levels in the school system.

Emphasis on girl's education is central for all levels of the education system in Ethiopia. The country has made a substantial progress in recent years.¹ In 2016, the literacy rate among women 15-24 years, was 27 percent higher than the general literacy rate of 41.9 percent for Ethiopian women (15

¹ In 2004 the literacy rate for women was 27%

years and above). The general literacy rate for women is one of the lowest in Africa according to UNESCO's office of statistics. Empowering women and girls through education will potentially reduce the inequalities between boys and girls, and men and women

The universities put emphasis on creating an enabling environment for female students, in order to encourage families to allow their girls to attend university. Boys and girls are accommodated in separate areas at campus. Muslim girls and boys had their meals in separate canteens at HU. HU also runs a medical clinic for females.

Programme support to gender offices

The situation of female students has received special attention in the Norwegian supported programme. From interviews with female students, gender offices at the two universities and various instructors, the RT's impression is that results from former phases of this part of the collaboration programs have been good. The attrition rates for female students are reduced. For instance, attrition rate at Hawassa University declined from 8% in year 2015/2016 to 4% during this academic year.

Support to the Women's Affairs Office in MU and the Gender Office at HU started in previous phases, and has continued under phase IV. The two offices prepare action plans with various activities: assisting female students through assertiveness training, workshops, tutorial classes, photocopy services and pocket money in order to ease their burden. The action plans cover economic and social support to female undergraduate students.

The Women's Affairs Office in MU has five staff. In addition, each college has a part-time gender focal person, so in total 17 staff work on gender issues at MU. HU's Gender Office has 12 staff and additional part-time staff at each campus – in total 18 staff. Staff at the offices are paid by the universities, while funds for female-support are covered by the recurrent budget and by funds from development partners. At MU the gender office receives 1.5 million ETB and at HU 800 000 ETB annually from the recurrent budget.

At both universities, the gender offices give mandatory training on gender issues in the first semester. HIV/AIDS and reproductive health are lectured to both male and female students. At MU, assertiveness training to students is provided twice per year, and 5500 fresh male and female students participated in training with support from the project. It was believed that gender awareness training reduced barriers that female students face.

Programme support to female master students

Both MU and HU support female students for their MSc thesis through the programme. MU plans to support 25 female students, while HU will support 50 female students.

At present, there are 935 MSc students at MU, out of whom 145 are women. In order to motivate more female students for Master studies, MU planned to provide small research grants to 25 female students during phase IV. By March 2017, 17 students had obtained such grants. The female students interviewed said that girls had fewer opportunities to receiving financial support than boys, and funds from the programme were welcome. However, they had received the support very late in the semester and were worried they would not be able to finalize their studies within the deadline.

At MU, the research grants for female masters have been provided within science and technology. This motivates girls to enter subjects dominated by male students. The financial incentive encourages both the female student and her family. The female students become role models and encourage other female students to enter the technical subjects. The technical subjects are important for the industrial development of Ethiopia.

HU plans to support 50 female master students - 10 each year, with 60,000 ETB during phase IV. 30 students had applied but only six had received grants so far. The reason for the low numbers during the first year was that the grants were announced late in the semester due to late signing of the agreement. The number of proposals was therefore lower than expected. In addition, only six proposals fulfilled the criterion. It is expected that the number will increase in the following years.

Programme support to needy female students

The poverty levels among many students at MU and HU are severe. The universities provide students with three daily meals and lodging. However, they also need money for buying soap, hygienic articles, pens, clothes, additional food, transport and last but not least for photo-copying teaching material. The lack of cash put vulnerable and shy female students in a situation where they are prone to sexual harassment. A small support of "pocket money" relieves the female students for worrying about how to finance their basic needs. In 2016/2017 338 female students at HU received 200 ETB per month for 8-9 months in a year. HU received applications for more than 700 students. At MU 350 ETB was provided to 1000 female students per semester. In addition, some students are provided with sanitary articles. According to the students interviewed, the support is a good contribution, but not enough.

Most females selected for support come from poor rural smallholder households with many children - often from single-parent households. Some students are orphans. Many girls are the first in their family going to university. Some have been motivated by local council staff to apply for university. One girl interviewed by RT had run away from her family who wanted to marry her off.

In HU, the RT was told that the communication problems among students within the universities are difficult. The diverse cultures and languages related to Ethiopia's 83 different ethnic groups is a challenge for both students and the universities. Many rural poor youth lack competences in both English and Amharic. Since many girls are shy, vulnerable and have problems communicating, many misunderstandings and conflicts arise, especially in the dormitories.

The gender offices arrange regular social events for girls, where they can discuss challenges with each other. At HU they have established a system of guides called *Big Sisters*, who mentor and assist newcomers and needy female students. Among other things, they helped to solve conflicts and misunderstandings among the girls. The Big Sisters assisted the girls in case of sexual harassment. If problems were beyond their capacity, they reported it to the gender office. At HU, three male teaching staff had been fired due to sexual harassment of students, and four other cases were under investigation. A committee was collecting information and investigating these four teachers. The RT advise that the *Big sister* system should be copied by other universities, for example MU.

Tutoring female students in high schools

Both Universities have programs directed towards female pupils in nearby high schools. MU works with nine high schools. The high-school girls receive training in assertiveness, study technic and

training on *how to survive*. There are tutorial mentoring programs by female students from MU to female high school pupils in science. The students receive pedagogical training and ETB 100 per month from the programme.

Monitoring and reporting system

The monitoring system is based on result based frameworks (RBF) outlined in the programme document. The framework displays three levels of result: Outputs, Outcomes and Impact, which is in line with the MFA regulations. Output indicators are good tools for following progress of the programme. Outcomes are short time effects and Impacts are long term effects.

Both MU and HU have developed lists of output indicators with baselines and measurable targets. These are good tools for measurements of the year-to-year progress. However, links between these achievements and the expected effects of them are not easily tracked. After a five-year programme, some short-term effects (outcomes) should be possible to measure. Example 1: How will MU measure the effect (outcome) of the support to existing graduate program? (outcome 1, indicator 4). Example 2: How will MU measure the effect of the university reform? (outcome 1, indicator 7). Example 3: How will HU measure the effect of research leaves of HU staff? (indicator 1.5.). The RT advises that indicators on outcome levels are developed as far as possible.

The monitoring system displays impact goals but the programme document is not describing measures to monitor impact. The RT realize that impact from phase IV alone is difficult within a programme period of five years. However, this support has been going on for more than twenty years, so impact from earlier phases would be possible to assess. Results would be very interesting, not at least from Norwegian government's side. Since this is partly a research programme, the RT think that there is a unique possibility to assess impact by using the programme resources, for example by using the small scale research support or the MSc research grants to work on impact.

The budgets in the PD and the agreement annex were set up with columns following the calendar year (January 1-December 31), while implementing and reporting follow the Ethiopian fiscal year (July 7- July 6 of the following year). This was a mismatch that made it difficult to follow progress matched with use of funds the first year. This has later been rectified, and the budget plan as well as the report is now following the Ethiopian fiscal year. The embassy could consider to revise the budget set-up in the agreement annex the same way.

Both MU and HU have systems for reporting from projects to management. The set-up differs between them, but as far as the RT was able to assess, they have been working well until now. The project agreement requires annual financial and external audit reports. On top of this, financial reporting of the project in both universities also abide by control systems of the universities. Hence, monthly bank reconciliations and quarterly financial reports are generated. The accountants and coordinators said they have not encountered any irregularities or delays in the financial management of the programme.

Different stakeholders (Colleges/institute/project grantees/PhD grantees) were asked for their opinion about the monitoring systems, but so far, there was little experience since the activities in general had not started to use funds yet.

Efficiency

Compared to previous phases, fund utilization efficiency of the universities has improved. For instance, the overall budget utilization rate of phase II was 67% for both HU and MU. From the audit and financial reports of the first year, it is evident that both universities have utilized around 84% of the allocated funds (table 2). Estimates for HU was lower for first half of year 2, but it must be noted that the report is only throughout January 2017 (table 3).

Table 2: Summary of income and expenditure of Year 1

Income and expenditure	MU	HU
Income-Disbursed on 10.12.15	2,000,000.00	2,000,000.00
Income-Disbursed on 12.04.16	3,957,193.00	4,000,000.00
Total income Year 1	5,957,193.00	6,000,000.00
Equivalent ETB	15,041,748.00	15,513,691.30
Expenditure	12,651,898.00	13,073,957.21
Remaining balance	2,389,850.00	2,439,734.09
Percent expenditure year1	84.11	84.27

Table 3. Summary of income and expenditure of Year 2 (till February for HU and March for MU)

Income and expenditure	MU	HU
Income-Disbursed on 13.12.16	5,000,000.00	5,000,000.00
Equivalent ETB	13,176,500.00	13,176,500.00
Balance carried forward	2,389,850.00	2,439,734.09
Total balance	15,566,350.00	15,616,234.09
Expenditure + commitments	13,335,636.26	11,071,783.79
Remaining balance	2,230,713.74	4,544,450.30
Percent expenditure year2 1st half	85.67	70.90

The expenditures follow the plan of the different budget lines, with some exemptions for the first year, which are due to late startup. The capacity building component spending was lower during the first year, because the PhD appointments were not done. The same was the case with research programs which were not granted. Fewer funds were used on female and disabled students because the agreement was signed as late as November in 2015, were the semester was already towards the end.

Almost half of the expenditures on the capacity building budget line was on car purchase the first year. Five out of ten planned cars at MU and all six planned vehicles at HU were purchased. This is justifiable, because the availability of cars is important at the start of the other programme activities start, like fieldwork for the research projects.

At MU, funds are set aside and spent on an activity called *University Transformation*. We understand these are meetings and workshops for learning and experience exchange intended to improve quality on several areas at the university. Intended outcomes of these activities are not included in the result

based framework of the proposal and monitoring effects of this transformation is difficult. The RT advises that indicators on the university transformation at MU are developed.

Most of the fund was spent on programme expenditure when compared to management expenditure (table 4). This is another good indicator for effective use of funds.

Table 4. Proportion of program and management expenditures

		MU		HU	
		ETB	%	ETB	%
Year 1	Programme expenditure	11,339,967.00	89.63	12,635,984.74	96.65
	Management expenditure	1,311,931.00	10.37 *	437,972.47	3.35
Year 2	Programme expenditure	12,833,276.86	96.23	10,714,395.53	96.77
	Management expenditure	502,359.40	3.77	357,388.26	3.23

**This information is taken from the audit report. It is later modified by the coordinator at MU, giving a more acceptable share between programme expenditure and management expenditure. RT assess the suggested modification as valid, but has chosen to refer to the information of the audit report.*

Impact

The RT disagree with the statement of the phase III end review, that the results of university outreach had not shown any advantage compared to what other development agencies have achieved. The RT saw clear evidence that knowledge developed through research was disseminated and used. One example is the university improved seed system that was disseminated and used at the Shewit cooperative in the Tigray region.

There has, so far, been no impact monitoring for phase IV. However, impacts are observed as a result of the over 20 years Norwegian support. It is assumed that focus on human capacity building would produce sustainable impact. During RT discussions at HU, the names of some ministers were mentioned as products of the past three phases. The impact is probably more than that, and it should be presented in clear figures and facts in future assessment.

The universities in Ethiopia have community service as part of their mandate. Some examples are presented below.

MU cooperates with the regional Bureau of Agriculture in Tigray. The office has established a “platform” where MU-researchers, agriculture extension workers and farmers work together. As an example, the Bureau selected 29 who were trained at MU in nutrition and food processing and works now as home economists in the Woredas.

MU works with five cooperatives in Tigray with a seed-program which is developed under the Norwegian supported university collaboration. The purpose has been to improve and up-grade the quality of different seeds. In Ethiopia, the custom is that farmer’s household inherit seeds for generations. The farmers have different seeds for different plots. There is a well-developed system of seed exchange between farmers. Women are the main actors in seed keeping. MU selects the best seeds and multiply them, thereafter spread them. Barley, maize, legume, potatoes are some of the

crops that the MU has assisted in improving. The RT met with a cooperative consisting of 60 male-headed and 25 female-headed households which produced seeds and potatoes for the market. The cooperative is in the process of starting a potato-chips factory with the plan to sell chips in Mekelle and other towns.

The *Science, Technology, Engineering and Mathematics centers* –STEM- are training centers for high school teachers and pupils. STEM exist both at MU and HU, and many of the instructors are graduated from the Norwegian supported programmes.

HU works with the agriculture extension officers in the Woredas, and has appointed a number of technology villages (Kebeles) as targets for their demonstration of new technologies. It is expected that successful new technologies will be spread out from these villages. Some HU programs targets women and female-headed households. In addition, there have been projects on improved sheep, poultry and beehives.

The RT met with a potato cooperative, which had received training on potatoes diseases from HU. Access to improved seeds is a problem and HU has introduced new seeds for both potatoes and vegetables. The women have formed a vegetable cooperative. The RT met with villagers from the cooperative of potatoes and sheep-project.

The RT had some questions related to the activities. First, to which extent the introduced technologies would benefit the poorest part of the population. Livelihood resources like poultry, sheep, inputs for vegetable gardens etc need to be accrued to poor households, usually female-headed, in order to stop the processes of impoverishment. Second, the sustainability of the activities after end of the university programme should be a concern. The Potato-cooperative had problems selling the potatoes, since all farmers had their own potato-seed. Third, the relevance: HU has introduced crops like improved barley and wheat with irrigation, improved varieties of potato-seed, seeds for carrots and other vegetables, as well as chemical fertilizers in the technology villages. The local community in most technology villages are, however, perennial crops producers. To solve problems of the community and be more relevant, it should be based on crops and agricultural systems of the area.

Sustainability

Policy and framework conditions

The programme follows policy and frameworks set by the Government of Ethiopia, for university sector. They also have ethics and anti-corruption offices, since it is a requirement by all government organizations, due to Proclamation 433/2005. From the RT discussions with the university management, both HU and MU have active ethics and anti-corruption offices. It was reported that so far, no sign of corruption is indicated

Probability of long-term benefits to the three universities

Both presidents of HU and MU assured the RT that activities initiated by the Phase IV project (Centers and Institutes) will continue after the project ended. Both universities have increased their capacity for research, education and community services through PhD and MSc scholarships to staff

members. Further, they are establishing new institutes and centers to meet the challenges of the country. They are also building laboratories and strengthening ICT and library services, followed up with training of staff who will be able to maintain capacity on long term. The capacity built is sustainable, and will benefit a higher number of students with higher quality education in the future.

Technical (lab) technical staff turnover has been discussed to be a serious problem at HU because the staff trained to MSc often had higher scientific ambitions and progressed further when the opportunities came. HU therefore decided to upgrade technical assistants through practical training, using the IC programme as an opportunity, since visiting Norwegian professors often come with experienced technicians to train researchers as well as HU lab technicians. So far, this seems to have been successful at least in one laboratory visited by the RT.

Gender issues

It is the policy of Ethiopia to increase the rate of female students at the universities. MU and HU are following this policy, and female students are supported under this university collaboration programme. Recruitment and support to female MSc and PhD students are also supported under this programme, and it is expected that the share of women among staff at both universities will increase as a result.

The programme supports female students from poor background with pocket money and other items. This support is most needed, and helps the student through the studies. However, the arrangement is not sustainable when it is a part of a donor programme. A more sustainable system could be based on support from GoE or on income generating activities at the institutions.

Environmental, climate change, human rights and technological aspects

The impact level goals of the programme at both universities are to improve the livelihood of people in the regions, and the main focus is on sustainable natural resources management. Introduction of new practices like irrigated farming, renewable energy, early maturing crop varieties, watershed management and improved livestock management enhance climate resilience capacity of the beneficiary communities. Therefore, environmental sustainability and climate change issues are central in research projects. MU is in process of establishing two new multidisciplinary institutes where environment, renewable resources and climate adaptation will be central issues. HU is establishing a research centre on sustainable management of water resources in the rift valley region.

The universities are strengthening technology on campus related to ICT and laboratories. This technology will contribute to increased capacity in teaching and research. The sustainability of these investments beyond the programme period relies on maintenance and upgrading on long term. The universities should discuss how this will be taken care of when programme funding is finalized.

Improved technology disseminated to farmers and other stakeholders in the community is done on introduction and demonstration basis. It is important for the universities to take into account how such technologies can be sustained and up-scaled when university support has come to an end, and advise extension services and communities on how to take this further. It is advised that they also consider measures to include the poorest in these initiatives.

Project and risk management

Risks management

The first risk of PhD students not being able to finish their studies during the programme period has become high as the programme time passed and the candidates have not yet started. The measures are about to be taken at the time of the MTR. This issue is discussed above. The risk of research projects not able to deliver intended results because of time limitations is taken care of by good planning and very thorough and qualified selection procedures.

Risks of natural hazards and conflict have to be handled when they occur. A conflict situation has been the case in 2016, which partly affected HU. The programme implementation might have been somewhat affected because of change of leadership, but this will require only minor adjustments.

Delays of release of funds by RNE has not occurred so far. It has been a disadvantage for the programme that funds for the last half period was not committed at the start. This has affected PhD studies in particular, but measures are now taken to overcome this challenge, given that decision for funding is taken as soon as possible after approval of the MTR.

The RT did not identify other risks than those described in the programme document.

The integrity of HU and MU and their partner

It is the RT's opinion that the integrity of the three universities is good.

At MU, the programme implementation committee (IC), is chaired by the president's office. The IC approves action plans and progress plans. Project leaders report every six months to the IC. Granting procedures are open and transparent and there are time and possibility for appeal. Requests for funding are directed to the department who owns the project. MU support their staff when they participate in workshops outside the university. Presence at workshops are checked by signature. Use of cars is controlled by registration of mileage against the amount of petrol used. MU also has registered fixed assets. Anticorruption work at MU is handled by a separate anti-corruption center, which also take care of whistle blowers. So far, no case of corruption accusation is registered under this programme phase.

At HU, the programme IC is chaired by the president or academic vice president. Similarly, the programme IC is responsible to propose annual work plans and budgets, to review progress reports including financial expenditures, and to prepare report to the Annual Meeting. The IC also proposes modifications to the work program included in the Project, and approve extension of activities beyond the proposed duration in the work program and Project. The NORPIC shall meet at least quarterly.

There is well established system and procedure for proposals appraisal, fund request and authorization of payments. There are standard formats that are filled and documented, approved at different levels.

Capacity and capability of financial management and audit systems

The RT was informed that there are active internal audit departments at both universities. Further, the internal auditors report directly to MoFEC and are independent, not supervised by the university officials. Both universities also conduct procurement for the program in strict conformity with existing government and university regulations. The requesting departments are also involved starting from the preparation of specifications and proceeds along the process until the procured items are received and their conformity with the original specification is duly authenticated by the user.

The RT has noted that the financial management activities of the projects are fully integrated into the financial management systems of the universities. Both universities have separate bank account for the program. The universities have adequate competent staffs with relevant qualifications. Both universities have adequate internal control systems and measures to prevent and avoid financial irregularities in the use of project funds.

The first year accounts and financial reports of both universities were audited by external auditors authorized by the Office of the Federal Auditor General of Ethiopia to conduct auditing services. In both cases, there were no serious comments worth mentioning.

The programme has an implementation committee that proposes annual work plan, budgeting and review of progresses. It is the RT's opinion that both universities have sufficient capacity and well established systems for budgeting and disbursing funds to partners.

The university partnership

The programme is built on collaboration between MU, HU and NMBU. One of the conclusions of the end report from phase III, was that the Norwegian partner university's role in management of the programme had become increasingly marginal as the two Ethiopian institutions have established a well-functioning management system. The value of the partnership lies more on the potential for mutual benefits, and a renewed partnership platform should allow all stakeholder an equal voice.

This recommended transition does not seem to be developed in phase IV of the programme. PhD topics and candidates are developed and selected without participation from others than the host institution. The same is in general valid for the large-scale research projects. The RT saw few signs of collaboration in other areas, although we met two Norwegian guest lecturers at Hawassa.

Collaboration between MU and HU did not seem to be much. No satisfactory response was given during interviews in spite of questions raised by the RT. Lack of visible collaboration among MU and HU may be explained by the physical distance between the institutions, and the collective research activities (large scale) have not yet started. It has to be noted also that it is not in the tradition or culture of such centers to work together at institutional basis.

The RT see various reasons why collaboration between the university partners has not come to the expected level. The programme management agreements are not detailed enough to secure the intended collaboration. Expectations might have been wrong in the first place due to the given role of each in the PD. HU and MU are running or managing independent programmes with no obligatory

conditions in the PD on activities and corresponding financial support. There is little incentive to collaborate, and little disincentive not to. If conditions of collaboration were attached to some expenditure it might work, for example, no spending is acceptable on large scale research without joint written agreement of the three universities.

It is the RT's opinion that it is critical that the collaboration between HU and MU on one hand and NMBU on the other are kept alive and active. Although the Ethiopian universities are growing in size and quantity, their capacity has yet to be supported to grow in quality through collaboration with more experienced universities. This can be done by giving a voice to NMBU on decisions concerning some activities and expenditure that require collaboration

Since the programme is half gone and time is running fast, the RT do not recommend that selection of PhD candidates and topics and selection of large-scale-research projects are reversed, but we will suggest some initiatives that can improve the collaboration. Norwegian PhD supervisors and co-supervisors should get a chance to discuss and possibly suggest revisions to PhD projects. Those large-scale research projects that still lack participation from all the partnering institutions should immediately start inclusion of new partners. New areas of collaboration should be thought through by all partners and brought to the table. The collaboration should be reported in the annual reports and discussed openly as one specific agenda point at each annual meeting.

Monitoring systems and the reporting of results

Both MU and HU follow administrative and financial rules of the government. Each unit is required to produce a quarterly report of its activities and monitoring is done through reports. Monitoring of research activities, field visits, submission of progress report and end results are left to departments and colleges in the case of MU. In HU the Vice President for Research and Technology (Community Service) looks also through the process, starting from research proposal approval to publishing of articles in a journal. It is the RT's opinion that the system functions well regarding the university collaboration programme.

Synergies with other projects supported by the government and other donors

The PD list other partnership projects at the two Ethiopian universities in the natural science areas. There are a number of projects that will contribute to strengthen the capacity at the institution and hopefully also contribute to new knowledge useful for the people of Ethiopia. We in particular mention projects under *Norwegian Programme for Higher Education and Research for Development (NORHED)*. Both MU and HU had won several NORHED projects in the area of natural resource management, and several in collaboration with NMBU. The RT learned, especially in HU, that there were synergies with laboratories supporting several projects at teaching staff exchanged to benefit courses and supervision in common. We also learned that the individual capacities built with the support through the years, has enabled individuals at the Ethiopian institutions to win research projects in international competitions.

Summary of RT assessments

- Programme implementation is in progress, but delayed. All the planned activities are now followed up. Delay is due to three main factors: i) Late signing of the agreement in 2015 where one academic semester was lost ii) Thorough granting procedures which contribute to openness and fairness, but slow down the progress iii) Lack of commitment from the donor to fund the entire programme period, which created reluctance to start long term projects as PhD studies.
- All the planned capacity building and research activities have a good chance to be achieved except for the PhD studies, both in Norway and in Ethiopia which will need specific measures.
- Launch of the large-scale research projects are lagging behind schedule, but will be done in the nearest future. Inclusion of researchers for all three partners is not yet in place for all projects. Launch of medium and small-scale research grants are progressing as planned. Dissemination of research outcomes to the different groups is ongoing.
- The general support to female students at the two universities is good. The financial support to female MSc students is in line with the plans, but came too late in 2017.
- Support to needy female and disabled students is necessary and highly appreciated, but not sufficient. Disabled students need more tailor-made support related to the nature of their disability. The need for support to these groups is continuous and sustainability must be considered. Income generating activities at the institutions could be part of a solution.
- The monitoring system of progress does not reflect intended outcomes satisfactorily. There is no system for monitoring impact.
- Funds are used efficiently. The financial reporting systems are transparent and reliable. Some budget activities could have been better explained.
- The universities in Ethiopia have impact on their local and regional societies through established culture and mandate for community services and dissemination of knowledge and development. More knowledge about sustainable up-scaling and to reach the poorest part of the population is needed.
- The academic capacity built at the universities is sustainable. Network and contacts established through the partnership have spin-offs after programmes are finalized.
- The identified risks are managed well, and the RT has not discovered additional risks. The integrity and financial systems at both universities are well-functioning.
- The collaborating partnership between the universities has not developed according to the intentions of the programme.

ANNEX I

Terms of Reference

Independent/Mid-Term Review of “Institutional Collaboration between Hawassa and Mekelle Universities and the Norwegian University of Life Sciences-Phase IV”

BACKGROUND

Institutional Cooperation between Hawassa and Mekelle Universities and the Norwegian university of Life Sciences- Phase IV, hereafter IC, is a programme supported by the Norwegian Embassy in Addis Ababa and implemented by Hawassa and Mekelle Universities through the Ministry of Education. The Norwegian University of Life Sciences (UMB) is a partner in the programme.

IC is a 5-year programme. The total budget frame is NOK 88.5 million. An agreement was signed on 19 November 2015 to support 2015 and 2016 with the amount of NOK 22 million with intention of supporting 2017-2019. For 2017, MFA decided to support NOK 26 million but for 2018 and 2019, the support shall be decided based on the outcome of an independent evaluation.

The main goal of the IC is “to contribute towards Sustainable Development of the Nation through quality education, research and proper use of natural resources”.

The purpose of the programme is “Strengthen the teaching and research capacity of Hawassa and Mekelle Universities to contribute towards improved livelihoods of rural communities in the rift valley and Arid Highlands of Ethiopia”.

The expected outputs of the programme are as follows:

- Capacity building;
- Reinforcing teaching and research capacities;
- Strengthening graduate studies;
- Improve female participation in learning/teaching and research;
- Intensifying development oriented research undertakings;
- Dissemination of applicable technologies to end users;
- The establishment of Centre for Ethiopian Rift-Valley Studies (CERVAS);

Main indicators

- Food security and environmental sustainability achieved in 10 years’ time
- Provision of basic services such as health and education ascertained

Norway/the Norwegian Ministry of Foreign Affairs (MFA) has supported phase I, II and III of the institutional cooperation programme through agreements dated 11.06.1996, 23.07.2003; and 30.11.2009.

PURPOSE, context and intended use

The purpose of the review is to contribute to the quality and delivery of the remaining phase of the IC programme. The mid-term review is a contractual obligation and will inform the Norwegian Embassy, the Government of Ethiopia, IC partners (Mu, HU and NMBU) about the programme's achievements and challenges and guide possible improvements. It has three main objectives:

1. The review shall assess the programme thoroughly and inform MFA whether further support for 2018 and 2019 is required or not
2. The review shall assess the progress of the programme towards its goals, based on the guiding questions in scope of work below.
3. The review shall give recommendations for improvements to be implemented in the last phase of the programme.

SCOPE OF WORK

Whenever possible, the review shall make concrete recommendations for improvement.

EFFECTIVENESS

- The review shall assess the extent to which the programme purpose and outputs have been achieved, or are expected to be achieved as planned.
- The review shall assess technical quality of Programme activities and the effectiveness of the implementation methodologies/approaches.
- The review shall assess the effectiveness of the monitoring and reporting systems.
- The review shall also assess the progress for the various activities and comment on possible needs for special measures to ensure delivery of results according to the time plans.
- The review shall assess if there have been any unexpected results/impacts (positive or negative) as a result of the programme.

EFFICIENCY

- The review shall assess whether the expenditure is justifiable when compared to the plans, progress and output of the programme, or whether it could have been implemented with fewer resources without reducing the quality or quantity of the results (e.g. areas of non-priority, wasteful or unnecessary expenditure, or alternative ways to achieve same results).

IMPACT

- The review shall assess to what extent the main Goal is likely to be achieved.

SUSTAINABILITY

- The review shall assess
 - Policy and framework conditions (including corruption)
 - Probability of long-term benefits to the three universities arising from the institutional capacity building and if necessary suggest changes to strengthen this part.

- how gender issues have been addressed, and if these are likely to create any changes as well as recommend any changes in the program that can strengthen the gender focus.
- Environmental, climate change and human rights aspects
- Technical and technological aspects

PROJECT AND RISK MANAGEMENT

- The review shall assess how the programme has addressed the risks outlined in the programme documents and mitigation actions
- The review shall assess if there are any risks beyond the ones mentioned in the programme document that may threaten project implementation and (if applicable) how these are being or can be addressed
- The review shall assess the integrity of HU and MU and their partner in terms of how the integrity system is (including but not limited to the code of ethics, code of conduct, rules and regulations for dealing with corruption and irregularities, whistle blower protection, openness and transparency into the institution and its engagement (annual report/plans), procurement rules, employment practice, travel allowances and other applicable allowances, asset control).
- The review shall assess the capacity and capability of financial management and audit systems, including timeliness and efficiency in formal administrative requirements (e.g. work planning, budgeting, financial and administrative reporting), and suggest any necessary changes.
- The review should assess level of expenditure and the reasons for this and suggest recommendations for either more realistic planning and /or ways to increase activity level- .
- The review should further assess the programme's systems and capacity for budgeting and disbursing funds to individual projects and to partners. The review should make recommendations as to how delays in project implementation can be avoided.
- The review shall assess how MU, HU and NMBU work together (e.g. organizational structures, coordination, management, division of roles, administrative capacities, human resources, technical support, etc.), and suggest any necessary changes.
- The review shall assess monitoring systems and the reporting of results and suggest recommendations for improvement.
- The review shall assess synergies with other projects supported by the government and other donors

Implementation of the evaluation

Methodology

The Review Team is expected to propose an effective methodology to undertake the assignment in inception report. The preferred methodology for the assignment is a Utilization Focused Evaluation focusing on facilitation of use of the review findings.

The methodology should be highly participatory with Ethiopia-based stakeholders, especially the Project implementers (referred to as the IC programme team). The Review Team shall undertake, but not be limited to, the following activities in order to reach the main objectives of the assignment:

- i. Meet with the Embassy to discuss the methodology for the review and expectations for the assignment.
- ii. Meet with the IC Project team to discuss the methodology for the review and expectations for the assignment.
- iii. Review all technical documentation related to the Projects (Project Document, Agreement, Progress Reports, Work plans, Formal Meeting Minutes, and technical outputs, end review of phase III), as well as other relevant literature from related projects and financial documentation as required.
- iv. Prepare a stakeholder analysis to be reviewed by the Embassy and the IC Project team to ensure that all key stakeholders are included in the independent/mid-term review.
- v. Collect data/information from relevant stakeholders (interviews, focus group discussions, field visits); including the IC programme team at both Hawassa University (HU), Mekelle University (MU) and NMBU, researchers and other participants and beneficiaries in the projects. The review team shall visit HU and MU and a selection of the individual projects. Project visits must include interviews with farmers, local government officials and other relevant stakeholders.
- vi. Analyze and synthesize data/information in consultation with the Implanting partners to ensure ownership of review results.
- vii. Facilitate prioritization of recommendations and develop a practical plan for implementation of recommendations. This may require a revision of the current work plan. This should also be done in consultation with the IC programme team.
- viii. Prepare draft and final independent/mid-term review report incorporating comments from stakeholders.
- ix. Present the independent/mid-term review together with the IC programme team to the Embassy and key stakeholders (final selection to be invited by the Embassy)

Responsibilities

The division of responsibility for the review is defined according to the following table:

Stakeholder	Responsibilities
The Review Team	Norad, with assistance from Ethiopian consultants, will be responsible for the full implementation of the review, including practical arrangements such as: organizing appointments; lead development and implementation of review methods and write-up; verification of findings; ensure timely submission of outputs and timely incorporation of review comments. The entire team will participate in the field visit in Ethiopia Norad will write the inception report and draft report with input from the Ethiopian consultants.
Embassy	Assist in providing contact details for persons to be consulted; provide inputs and documentation to consultant team; give input to draft reports and endorse inception report and final report.

HU, MU, NMBU	Provide inputs and any required documentation to consultant team; logistical assistance with field trips; review draft reports and provide comments. Assist arrange meetings with government stakeholders (MoFEC and MOE); provide inputs and any required documentation to consultant team; review draft rep.
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Scheduling and resourcing

The following table suggests the timing of the review and delivery of outputs.

Tentative dates	Activities
10.2.	Signed agreement with Ethiopian consultants
20.2.-24.2.	Work with Inception report
24.2.	Inception report sent to the Embassy
1.3.	Feedback/approval of inception report from the Embassy
3.3.	Meetings at NMBU
6.3.-17.3.	Field visit in Ethiopia
- 7.3.	- Meeting with the Embassy
- 8.3.-11.3.	- Meetings at Mekelle
- 12.3.-15.3	- Meetings at Hawassa
- 16.3.	- Closing meeting at the Embassy
20.3-3.4.	Work with draft report
3.4.	Draft report sent to Embassy and partners for comments
11.4.	Deadline for comments from Embassy and partners
21.4.	Final report sent to the Embassy

The right is reserved to make changes to the schedule.

REPORTING

- An **Inception Report**, not exceeding 10 pages, within 10 days of signing the contract. The Inception Report should include preliminary findings from review of documentation and literature as well as from initial interviews and discussions with stakeholders. The report should include brief description of the approach and methodology of the review. The inception report will be discussed with the Embassy.
- A **Draft and Final independent/Mid-term Review Report**, not exceeding 25 pages plus relevant annexes, with following sections:
 - i. Summary of key findings

- ii. Introduction and background
- iii. Methodology
- iv. Review Results
- v. Conclusions and recommendations

Reports should be delivered in English and submitted in both soft and hard copy (3 copies).

Team composition

The review team will consist of two staff from Norad and two Ethiopian experts.

Team members should collectively display the following qualifications:

- Relevant academic background.
- Relevant experience from university collaboration and partnerships with local and international partners, as well as experience of higher learning institutions specializing in natural resource management, agriculture and climate change, and gender;
- In-depth experience in conducting reviews or evaluations of a similar size and nature, with knowledge of relevant methodologies, risk analysis, value for money analysis, theory of change and impact assessment; and
- Excellent writing and communication skills in English language.

The Ethiopian experts should in addition display the following qualifications:

- Adequate understanding of relevant institutional frameworks in Ethiopia covering natural resource management, agriculture, energy and climate change; and knowledge of socio-economic challenges and development issues in Ethiopia, knowledge of financial management;
- Excellent writing and communication skills in Amharic language.

ANNEX II: DOCUMENTS REVIEWED

1. Programme document of Phase IV
2. End review of phase III (CMI 2014)
3. Progress reports from programme Year I (2015/2016)
4. Audit reports for Year I
5. Work plans and budget for Year II (2016/2017)
6. Minutes from annual meeting in October 2016
7. Institutional collaboration project between HU, MU and NMBU. An academic partnership for improving the rural livelihoods of Ethiopia Field assessment report by MoFEC (2017)
8. Hawassa University in the Community (2010-2017) - Excerpt from draft booklet by- Hawassa University Community Services Directorate
9. Outreach at Hawassa – Draft report 2017

ANNEX III: MEETING SCHEDULE FOR MID-TERM REVIEW TEAM

NMBU (March 3rd)
Dept. for environmental science (host of the programme) Jan Vermaat – Professor, Head of department Kjell Esser – Programme coordinator Christel Celine Nguyen – Accountant
Dept. of International Studies (Noragric) Josie Teurlings -PhD coordinator Darley Kjosavik -PhD supervisor
Gerd Vegarud –Professor (after field trip – on telephone) Muyiwa Sam Adaramola – Professor (after filed trip – on email)
NORWEGIAN EMBASSY ADDIS ABABA (March 6th and 16th)
Morten Heide – Councillor Sisay Nune Hailemariam – programme officer
GOVERNMENT OFFICIALS (March 7th)
Ministry of finance and Economic Development Mr Zewdu Tamirat - European countries cooperation team leader Mr Haftom Wolday - Desk Officer (Norwegian partners)
Ministry of Education, Planning Directorate Mr. Getachew Admasu,
MEKELLE (March 7-10)
Programme coordinator Dr. Desta Berhe Sbhata,
University leadership Dr Kindeya Gebrehiwot (President), Professor Fetien Abay (Vice President for Research and Community Services) and Dr Abdelkader Kedir (Vice President for Academics)
Programme accountant Mr Tewolde Halefom
Gender office Mrs. Rahel Tsegai (On behalf of Mrs. Mebrat Yohannes)
Institute of Environment, Gender and Development Studies Mr Mesele Abera
Mekelle University Library Director Dr Gezae Haile
Mekelle University ICT Director Mr Yemane Seged
College of Dryland Agriculture and Natural Resources: Dr Kidane Giday (Dean) and Dr Dereje Assefa
Institute of Energy: Mr Petros Gebray
Office of Postgraduate & Research Programs: Dr Mulubrhan Balehegn (On Selection of Research Proposals)
Large-Scale Research Grantees: Dr Mekonnen Teferi, Mr Tesfakiros Semere, Dr Kiros Weldegerima, Mr Mesele Hayelom
Female MSc Thesis Researchers: Shewit Maasho, Zantana Berhanu, Gidena Redae, Lemlem Meresa, Meseret Redae, Maaza Hailu, and Danait Afeworki

<p>PhD Students and Graduates (Male): Dr Enquebaber Kassaye, Dr Gebrekidan Mebrahtu, Mr Mache Tsadik, Mr Mebrahtu Haile and Dr Hadush Tsehaye</p>
<p>Female PhD Scholarships: Girmanesh Abreha, Merkeb Weldu, Tsegabirhan Kifleyohannes, Tsedal Asres (at NMBU), and Kidan Abraha (in-House)</p>
<p>Astbi Field Visit Respondents: Mr Girmay Kiros and Mr Harife Asgede</p>
<p>Local Government Representative: Mr Fisseha Bezabih (Tigray State Bureau of Agriculture)</p>
<p>Female Student Representatives: Five Undergraduate Female Students</p>
<p>Students With Disabilities: 10 Disabled Students</p>
<p style="text-align: center;">HAWASSA (March 13-16)</p>
<p>Program Coordinator Dr Andargachew Gedebo</p>
<p>University/department leadership Mr. Ayano Berasso: President Dr Fisseha Getachew: VP Academics Dr Tesfaye Abebe: VP Research and Technology Transfer Mr Denbeshu Nuera: VP Business and Development Dr Mesay: VP Administration and Student Services</p>
<p>Gender Office Staff and students Sister Tigist Kebede: Gender & HIV/AIDS Affairs Directorate Director Female students: Needy female students five representatives Disabled students: five representatives Big Sisters: Two representatives</p>
<p>Finance Officers Mrs. Tsedalech Ashenafi: HU Finance and Budget Directorate Director Mr Tesfaye Chemere: Senior Accountant</p>
<p>Alumni Association of Ethiopians Educated in Norway Professor Etana Debela: Chairman of the Association Mr Tadele Belay: Committee member</p>
<p>Graduate programs Dr Fiseha Getachew: VP Academics Mr. Berhanu Abebe: Library Director Mr Tegegne Gobena: Alumuni and Admission Director Dr Gashaw Meteke: Head School of Plant and Hort. Sciences Mr Berhane G/Meskel: ICT Director</p>
<p>Center for Ethiopian Rift Valley Studies Dr Girma Tilahun: Centre Director Professor Zinabu Gebremariam: Founding President of HU and Center initiator Dr Mulugeta Dadi: University Industry Linkage and Technology Transfer Director</p>
<p>VP Research and Technology Transfer Office Dr Tesfaye Abebe: Vice President for Reserch and Technology Transfer Mr Yohannes Yuna: Community Services Director</p>
<p>Discussion with HU Staff participating in the program and laboratory visits Dr Mestewat Taye: NMBU Graduate who established Dairy Science laboratory and Molecular Biology Laboratory Dr Meseret Tesema: NMBU Graduate who established Plant tissue culture laboratory</p>

Dr Amsalu Gobena: NMBU Graduate, Winner of small scale research project and who established Plant Cell Biology Laboratory
Institute of Environment Gender and Development Studies Mr Markos Adde: Current Director of the Institute Dr Andargachew Gedebo: The former Director
Hula Woreda Office of Agriculture Mr Ayele Funte: Deputy Head of Hula Woreda Agriculture Office and Crop Production Coordinator Mr Beyene Legide: Animal husbandry and feed development process leader
Farmers at Hula Woreda Farmers Training Centre Women working in the sheep genetic improvement program: three representatives Male farmers working on potatoes program: four representatives Farmers working in the potato Cooperative: four representatives
Discussion Group I PhD Candidates Selected (6) Rahel Abraham (F) Woldemicael Somano (M) Yidnekachew Ayele (M) Habtam Getnet (M) Hanna Tadesse (F) Tegegne Gobena (M)
Discussion Group II Applied for PhD support and not selected (2)

ANNEX IV: PHD STUDENTS

Name	Topic
Mekelle staff for PhD studies in Norway	
Kidan Abraha Teferi (F)	Health science
Tsedal Asres (F)	Anthropology
Tsega Birhan (F)	Veterinary medicine
Merkebet Woldu (F)	Agriculture
Girmanesh Abrha (F)	Gender, environment and development
Mekelle staff for PhD studies at Mekelle	
Kidan Abrha (F) Alemseged Aregay (M) Girmatsion Fisseha (M) Mengistu Welday (M) Mache Tsadik (M)	Public health
Michael G. Yesus (M) Angesom G. Egziabher (M) Dawit Abay (M) Ephrem Yohannes (M) Hailekiros Abadi (M)	Energy engineering
Bereket G. Medhin (M) Birhanu Mansebo (M) Mebrahtu Haile (M) Biruh Abebe (M) Hadgu Hishe (M)	Climate change and rural development
Tesfaye Gebre (M) Yohannes Desta (M) Mulugeta Sebhatleab (M) Abraha Gebrekiros (M) Solomon Amare (M)	Soil science
Tesfakiros Semere (M) Rahel Hagos (F) Hayal Lemma (M) Hailekiros Tadesse (M) Habtamu Hagos (M)	Plant breeding
Hawassa staff for PhD studies in Norway	
Rahel Abraham (F)	Education and Training
Woldemicael Somano (M)	Agriculture
Yidnekachew Ayele (M)	Law and Governance
Habtamu Getnet (M)	Business and Economics
Hanna Tadesse (F)	Business and Economics
Tegegne Gobena (M)	Technology/Informatics
Hawassa staff for PhD studies in Germany and Ireland	
Ayano Beraso (M)	Poverty Dynamics in Ethiopia (Ireland)
Fitsum Assefa (F)	Optimal water use and household welfare (Germany)
Hawassa staff for PhD studies in Hawassa	
Not yet selected (10-12)	Ecotoxicology
Not yet selected (10-12)	Plant breeding biotechnology

ANNEX V: LARGE SCALE PROJECTS

Mekelle

TITLE	TEAM MEMBERS (AT TIME OF THE MTR)
Livelihood Improvement Through Efficient Injera Mitad Technology in Ethiopia	<ol style="list-style-type: none"> 1. Prof. Muiyiwa Sam Adaramola (Department of Ecology and Natural Resource Management, NMBU, Ås, Norway) 2. Mr. Alula Gebresas (School of Mechanical and Industrial Engineering, MU) 3. Dr.-Ing. Gebremichael Te-ame (School of Electrical and Computer Engineering, MU) 4. Amdom Gebremedhin (Institute of Climate and Society) 5. Ataklti Hailu (Department of Natural Resources Economics and Management, NREM)
Commercialization of Gluten Free Beer Made of Sorghum, Finger Millet and Pearl Millet Varieties: Linking Farmers with Industry	<ol style="list-style-type: none"> 1. Tesfakiros Semere* (PI) (Dept Biotechnology, MU) 2. Yemane Tsehaye (PhD) (Dept of Dryland Crops and Horticultural Sciences, MU) 3. Dereje Assefa (PhD) (Dept of Dryland Crops and Horticultural Sciences, MU) 4. Lijalem Tareke (Dept of Food Science and Post harvest technology)
Fishery Resource Development and Water Quality Monitoring of Zarema-Mayday and Kalema Reservoirs, Wolqait, Tigray Regional State, Ethiopia	<p>Principal Investigator</p> <p>Mekonen Teferi (PhD): Department of Biology (Fish Ecology and Fisheries Team) CNCS, MU</p> <p>Co-Investigators:</p> <ol style="list-style-type: none"> 1) Fish ecology and fisheries team <ul style="list-style-type: none"> • Yosef Teklegiorgis (PhD) –School of Animal and Range Sciences, Hawassa College of Agriculture, HU. • Solomon Tesfay (MSc) – Department of Biology, CNCS, MU • Partner from MU-UMB, Norway, will be include later 2) Microbial and Phytoplankton Ecology Team <ul style="list-style-type: none"> • Tsehaye Asmelash (PhD) – Department of Microbiology, CHS, MU • Solomon Amare (MSc) – Department of Biology, CNCS, MU • Hayal Lemma, MSc) – Department of Biology, CNCS, MU 3) Zooplankton and macroinvertebrate team <ul style="list-style-type: none"> • Tadesse Dejenie (Prof., PhD) – Department of Biology, CNCS, MU • Genet Berhe (MSc) – Department of Biology, CNCS, MU 4) Geochemistry, chemistry and nutrient dynamics team <ul style="list-style-type: none"> • Abraha G. Kidan (PhD) – Department of Chemistry, CNCS, MU • Kassa Amare (PhD) – Department of Earth Science, CNCS, MU • Belay Gebreyohannes (BSc) – Department of Biochemistry, CHS, MU 5) Socioeconomic team <ul style="list-style-type: none"> • Nahusenay Teamer (MSc) – Department of Cooperative studies, CBE, MU • Tekeste Berhanu (PhD) – Department of Cooperative studies, CBE, MU
Biodiversity, Geologic Setup	<p>Principal Investigator:</p> <p>Meheretu Yonas (PhD) - Department of Biology</p>

<p>and Socioeconomics of the Remnant Afroalpine Ecosystem in Abohay Gara Mountain, Ethiopia: Basis for Community-Based Ecosystem Conservation.</p>	<p>1. Animal Ecology Team</p> <ul style="list-style-type: none"> • Mekonen Teferi (PhD) - Department of Biology, CNCS, MU • Kiros Welegerima (MSc) - Department of Biology, CNCS, MU • Gebreegzabeher Tesfay (MSc) – Department of Anim., Range. & Wildlife Sciences, CDANR, MU • Prof. Yosef Mamo (PhD) - Department of Biology, Hawassa University • Zerihun Girma (PhD) - Department of Wildlife and Eco-tourism, Hawassa University • Prof. Leif Egil Loe (PhD) - Norwegian University of Life Sciences, Department of Ecology and Natural Resource Management, Norway <p>2. Vegetation Ecology Team</p> <ul style="list-style-type: none"> • Kidane Gidey (PhD) – Dep’t of Land Resources Management & Envir. Protection, CDANR, MU • Yemane Gebreegzabeher (PhD) – Dep’t of Dryland Crop & Horticultural Sciences, v • Hayal Lemma (MSc) - Department of Biology, CNCS, MU <p>3. Geology Team</p> <ul style="list-style-type: none"> • Miruts Hagos (PhD) – Department of Earth Sciences, CNCS, MU • Gebregiorgis Abraha (PhD) – Department of Physics, CNCS, MU • Kassa Amare (PhD) – Department of Earth Sciences, CNCS, MU <p>4. Socioeconomic Team</p> <ul style="list-style-type: none"> • Assefa Hdgot (MSc) – Dep’t of Natural Resource Economics & Management, CDANR, MU • Kebede Manjur (MSc) – Dep’t of Natural Resource Economics & Management, CDANR, MU • Dr. Tsegai Berhane (PhD) – College of Law and Governance, MU
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Hawassa

Title	Team members (at time of the MTR)
Assesment of aflatoxin contamination in the field-dairy-food value chains and extent of aflatoxin exposure of mothers and children in Sidama zone, Southern Ethiopia	Dr Mestewat Taye ARSc- HU Prof. Gerd E. Vegarud – NMBU Prof. Judith Narvhus: NMBU Prof. Barbara Stoecker: Oklahoma State Uni Dr Samson Gebremedhin: CMHS-HU Dr Andargachew Gedebo: SPLHOS-HU Dr Alemayehu Chala : SPLHOS-HU Mr Fekadu Reta: SFNS-HU Prof. Tegene Negesse: ARSc-HU Mr. Andargachew Kassa: CMHS-HU Dr Fiker Taddesse: CMHS-HU Prof. Korhonen Hannu J: LUKE-Finland Dr Joutsjoki Vesa: LUKE-Finland
Understanding problems and sustainable development options to Lake Hawassa Watershed	Kebede Wolka, HU Mesele Nagash, HU Yerico Berhanu, HU Haymanot Akilu, HU Awdenegest Moges, HU

	Yoseph Melka, HU Muligeta Dadi, HU Nils Otto Kitterød, NMBU Fantaw Yimer, HU Kahasu Gebru, HU
Not yet selected	
Not yet selected	