Final evaluation of the Institutional University Cooperation with Jimma University

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SHARING MINDS, CHANGING LIVES

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ACRONYMS

AP	Annual Programme
AR	Annual Report
CBE	Community Based Education
GIS	Geographical Information System
HRD	Human Resources Development
ICT	Information and Communication Technology
IR	Intermediate Result
IUC	Institutional University Cooperation programme
IUC-JU	Institutional University Cooperation programme with Jimma University
JU	Jimma University
JYCAVM	Jimma University College of Agriculture and Veterinary Medicine
KRA	Key Results Area
KU Leuven	Leuven Catholic University
MDG	Millennium Development Goals
NGO	Non-governmental organisation
SDG	Sustainable Development Goals
TOR	Terms of Reference
UGent	University of Gent
VLIR-UOS	Flemish Interuniversity Council - University Development Cooperation

PREFACE

This report presents the final evaluation of the Institutional University Cooperation programme of Flemish universities with Jimma University, Ethiopia.

Very early in the evaluation process, the evaluation team learned that this IUC programme was considered a success by key all stakeholders involved. The evaluation findings do not only largely confirm this claim but, above all, could benefit from the positive atmosphere and continued commitment of the programme key stakeholders who unconditionally cooperated with the evaluation team and did their best to address its multiple requests.

While an end of programme evaluation is often implemented in a mental setting that wants to finalize a long process, the situation among the partners of this IUC programme is different: the hearts and minds of virtually all key stakeholders go in direction of continued cooperation that often constitutes a substantial outreach of initiatives that started (very) small. As such and while the evaluation had essentially a retrospective focus, the evaluation team was dragged into interesting reflections on the future, which it has tried to do justice in this report.

In that way, this end of programme evaluation turned into a unique and above all forward-looking exercise. The evaluation team sincerely thanks everybody who has contributed to the evaluation process and hopes that this report will enrich the existing dynamics that were generated by the programme, both at university and society level.

EXECUTIVE SUMMARY

Background

The IUC programme with **Jimma University (JU)** is a long-term (12 years) institutional partnership that started in 2007. Its second phase lasted from 2011 till 2016 and the partnership has since then entered the phase-out phase that will last for an additional two years**.** JU figures among the major public higher institutions in Ethiopia. Its vision is to be the leading public premier in the country, renown in Africa and recognized in the world. JU is Ethiopia's first innovative community-oriented educational institution of higher learning, which is translated into its motto '*We are in the community'* that is omnipresent in its campuses and truly engendered in the university's structures and ways of thinking. The university has witnessed a massive institutional growth over the last decade. In a relatively short period of expansion that roughly coincided with the implementation of the IUC programme, JU changed from an institution running a few diplomas in the fields of health and medicine and agriculture to offering 45 degree programmes in various fields and 49 post-graduate programmes. Currently the university has about 43.000 students and 2.600 academic staff.

From the Flemish side**, Ghent University (UGent)** is the coordinating university of the partnership. The team leaders of the eight projects that constitute the IUC team are from four universities (UGent, KU Leuven, UCL and UHasselt); in each project academicians from at least 2 and maximum 5 universities or other academic institutions are taking part. In total, more than 70 academicians from Flemish universities have been involved in varying degrees in programme implementation.

The IUC partnership with JU consists of a coherent set of interventions (projects) geared towards the development of the teaching and research capacity of the university, as well as its institutional management. Under phase II, the IUC with JU was composed of eight projects that constitute to a major extent the continuation of the Phase I projects; as all projects were quite successful in phase I, there was no reason to substantially change the programme set-up. However, at the level of the subprojects there have been some rather considerable changes (see the analysis at project level in the main report for more details). Five of the projects are so-called 'classic' projects aiming at the improvement of the quality of research, teaching and extension in areas that are considered strategic by the partner university. These projects dealt with zoonotic and animal diseases, child health and nutrition, environmental health, infectious diseases and soil fertility. Three so-called 'transversal projects' complete the IUC programme and focus, among others, on the improvement of ICT and library services, of statistical skills and of research coordination. The transversal projects cater for about 15% of total programme expenditure (budgeted at 3,060,000€ for phase II), the classic projects for 68%, the remaining part are costs related to the programme support unit.

While JU leadership points to the VLIR-UOS IUC programme as being highly instrumental for its institutional development, the gradual growth of JU has allowed it engaging in a broad range of international cooperation programmes and diversifying substantially its donor portfolio. As such, the support of VLIR-UOS has become relatively less important over the last years. The cooperation with VLIR-UOS and the Flemish Universities is however regarded highly as if JU never wants to forget the crucial role the Flemish university community has played in the past. This consideration continues to play an important role in new initiatives, as part of the Phase Out phase but also more broadly, aiming to continue the partnership with the Flemish academic world in various ways.

This final evaluation had three different standard purposes: *learning* in view of improving the quality of on-going and future IUC-programmes, *steering* to support decision making processes and *accountability* via an independent assessment of programme performance. The main specific objective of the evaluation was to assess the performance of the IUC (both at programme and project level). More specifically, the performance of the IUC needed to be evaluated on the basis of the OECD-DAC criteria for development evaluation (and one additional criterion): scientific quality, relevance, efficiency, effectiveness, impact, and sustainability. A particular focus needed to be given to sustainability and effectiveness (progress towards the achievement of the specific objectives). Furthermore, the follow-up plan of the programme for the post-IUC period needed also to be evaluated.

A team of two evaluation experts, an international expert and a country expert, was in charge of the evaluation. Considering the relative short period available for the field visit, the evaluation team had to be selective in its focuses. As most project outputs were clearly and unambiguously documented, the evaluation team preferred to give priority to focusing its discussions on issues related to the future sustainability and the development of future cooperation initiatives. The evaluation team used mainly the following data collection methods: study of key documentation, interviews with key stakeholders in Flanders and in Ethiopia, and focus group discussions.

Major findings

At programme level, the evaluation team agrees with the opinion of most stakeholders contacted that the IUC programme with JU figures among the most successful cooperation programmes of VLIR-UOS; from the perspective of JU, the cooperation with VLIR-UOS is regarded as more successful than other international university cooperation initiatives. Initiated at a key moment in JU's institutional development, the programme has been able to significantly contribute to major change processes related to the improvement of the teaching and research capacities of JU. It has, among others, been largely instrumental in establishing a research culture in the university, has allowed the initiation of more than 50 PhD (of which 23 are completed and 26 expected to be finalized in 2017) and created six centres of excellence. Via the IUC, JU has also been able to amplify and diversify its international partnerships. Last but not least, other universities in Ethiopia have benefitted from the IUC via JU's continued efforts to share its competence and expertise with others and support the growth of other academic institutions.

While the results and impacts achieved are the result of a broad range of factors that were blended together in a powerful dynamic of institutional growth, a few factors can be highlighted that have been crucial. Over the entire programme period, JU has provided an excellent institutional framework for hosting the envisaged change. In particular its continuous drive to address the academic and developmental challenges of the country has been remarkable, a drive that is operationalized via well-thought strategic choices by the university leadership but that also seems to be engendered in many senior staff members of the university. A second factor were the key characteristics and unique attributes, as such, of the IUC programme with its long-term focus that allows a gradual built up and institutionalization of capacities and a combined support to strengthen both research, educational, infrastructure and extension functions via a series of projects with both a 'classic' and 'transversal' focus. As such and without exaggeration, one can state that the IUC and JU found in each other an ideal partner to realize their respective ambitions. Last but not least, the success of the IUC-JU cannot be entirely explained without mentioning the effective programme coordination and leadership both in the North and the South that has been assumed by two key figures who have remained programme leaders over the entire programme implementation period assuring as such the stability and continuity that is much needed in this type of programmes.

The assessment *at project level* learned that the eight projects that constitute this IUC programme have all reached significant results that often go beyond their initial targets. While every project has its own characteristics which imply that its success can to a major extent be attributed to the project leaders and other academicians involved, all projects have benefited from a careful preparation and initial assessment that constituted a guarantee for their relevance, from adequate strategic steering and coordination by the two programme coordinators (adequately supported by the so-called Project Support Unit at Jimma University and the ICOS in Ghent), and from substantial and continued institutional support for JU. As such, project leaders in Flanders and Ethiopia could valorise their expertise and commitment in a truly enabling environment.

When looked at more in detail, the *relevance* of all projects can be considered high or very high in the sense that they all addressed important problems/needs of the Gilgel Gibe dam area and/or at the level of JU as an academic institution, whereby adequate flexibility allowed to address specific needs that became apparent during implementation. In terms of *scientific quality,* most projects cannot be considered 'cutting edge' in the full sense, but were nevertheless truly innovative and the first of their kind in Ethiopia; more than 120 publications in internationally peer-reviewed journals is another positive indicator in this regard. The fact that most projects managed in surpassing the targets of most key result areas (and where they did not, this was mainly because of constraints beyond their control) illustrates the very *efficient and cost-effective* way of working. Most projects were further not only *effective* in reaching their key academic and developmental objectives, but, above all, showed the potential of substantial *academic and societal impact*, as demonstrated by an impressive number of spin offs that became already apparent well before the end of the programme. Last but not least, the high level of programme and project ownership together with JU's institutional and financial capacities constitutes a guarantee not only for benefit *sustainability*, but also for further benefit expansion.

Main lessons learned

While the common saying that 'success has many fathers' might not always be true, the IUC-JU experience reveals that a complex initiative such as an IUC 'needs many fathers' to achieve a substantial level of success. In addition, these 'fathers' need to combine a broad range of qualities and skills that go beyond academic excellence. Furthermore, financial resources might be important but their importance should not be overestimated. Academicians at JU level (but also at the level of the Flemish universities) clearly stated that the distinctive effects of the IUC and their longer-term impacts have little to do with the financial resources that were availed. While academic excellence plays a crucial role, in the end it is the quality of the partnership and the 'commitment beyond' which created the major difference with (for instance) other university cooperation projects that often dispose of more financial resources. Quite ironically, the fact that the IUC-JU has not been that financially attractive might have generated a kind of self-selection mechanism resulting in the participation of academicians that combined their scientific ambitions with a genuine sense for partnership and solidarity. Finally, the unique attributes of the IUC make the IUC to a form of university cooperation that presents a high potential, in particular for relatively young universities that combine sound institutional ambitions with major challenges.

At the organisational level, it has become clear that long-term partnerships as the IUC provide the partners with enough time and opportunities to fine-tune administrative issues so that these do not overly complicate programme implementation and do not become a disincentive for programme involvement. This IUC has further confirmed that compatibility of management cultures of the northern and southern

partner universities is maybe not a prerequisite but certainly a facilitator for coherent programme management. Finally, the JU-IUC has demonstrated that adequate strategic steering of IUCs can be assured without the organization of regular steering committee meetings in case the IUC disposes of a strong and recognized leadership that is capable to strike the right balance between participation and top-down decision making.

Main recommendations

The key recommendations of this evaluation include the following:

- While the programme has undertaken considerable efforts to avoid that PhD students had to perform substantial additional tasks so that they could focus on their research, fresh PhDs are so far granted little time before they are vested with a broad range of responsibilities not only in the areas of education and research, but also with regard to organizational and human resources management, the JU experience calls for additional support to the PhD students that allows them to acquire necessary additional competence, preferably with the support of experienced senior colleagues from both the North and the South. The recent set-up of a doctoral programme is certainly an important step to address this problem and, in addition, the challenge of keeping talented PhDs at JU, but is even so insufficient.
- The IUC programme partners should consider providing targeted support to JU PhD students that are supported by the Ethiopian government but lack the resources to conduct their research properly. For this purpose, they can liaise with VLIR-UOS that has funds available for such purpose (a possibility that seems to be largely ignored by programme implementing partners). The IUC partners can in that way foresee specific budgets that are meant to provide critical targeted support for such PhD scholars, e.g. to conduct expensive laboratory tests in JU laboratories set-up by the programme, or to foresee short visits (2-4 months) to Belgium to conduct well delineated research under the guidance of a northern academician. This type of support should however be based on a clear research plan and terms of reference and connected with the dynamics and research focuses of the IUC programme and projects (e.g. embedded in centres of excellence) so that synergies and complementarity can be sought and meaningful joint research
- Gender has so far constituted a major blind spot in the IUC programme and also in the phase out measures. Both JU and VLIR-UOS should therefore engage in a coordinated effort to mainstream gender in the recently initiated cooperation programmes. The latter may be considered as a pilot effort (both for VLUR-UOS and JU) allowing to conceive supporting tools, instruments and regulations that contextualize the large body of existing gender mainstreaming expertise and experience with the specific mandate of academic institutions in the areas of research, teaching and service to society. In these efforts, contributing to gender equality should be put upfront as the eventual aim of the efforts undertaken.
- JU should engage in clearly delineating the level of its involvement in community development activities. In this regard, JU has a distinct task that is complementary to that of other actors, which needs to be specified further and become a guideline for all staff involved in development activities. Second, if JU wants to live up consistently to its motto ‘we are in the community’, a more coherent approach should be developed to incorporate, from the very start of the design of new research, considerations with regard to the eventual application of the research results. Third, clear policies are needed to deal with the management of the many spin offs that can also be commercially exploited and generate substantial income for the university. JU should invest in further expanding its expertise in this

area (among others via its sustainability unit) and thereby mobilize experience and expertise from northern counterpart universities but probably also from well-established NGOs that have experience with social profit ventures.

- At the level of VLIR-UOS, IUC programmes should be continued as VILR-UOS' major cooperation instrument without substantial modification. Key attributes that should in all cases be maintained are the long-term focus of the cooperation and the mix of regular academic cooperation projects with transversal projects aimed at strengthening key university services.
- VLIR-UOS should engage in a consistent effort to simplify the present project and programme management system towards a genuine results based management. In the short run, the combined use of both the logical framework and Key Results Areas should be reassessed as it leads to confusion and unnecessary overlap. Furthermore, the use of the KRAs should be combined with a more careful definition, ex ante, of the specific developmental and academic objectives. In line with the generic TOC of the IUC programme and projects, these objectives should not be limited to outputs (the provision of products and services), but imply a change in practices/policies that are within the sphere of influence of the programme and project.
- Finally, IUC programmes and projects, in particular in their second phase and where considered relevant, should, from the planning and budgeting phase onwards, address more explicitly the extension phase and for that purpose include a budget provision that can be used as seed capital for high potential outreach initiatives that build on IUC results and can generate substantial societal impact.

1. Introduction[1]

1.1. Background

IUC as a concept

An Institutional University Cooperation (IUC) programme is a long-term (12 years) institutional partnership between a university in the South and Flemish universities and university colleges. Based on country-level and local institutional priorities, it aims at empowering the local university in its triple function (education-research-service to society) and supports the local university in fulfilling its role as an active actor of change and progress in society.

The objectives and content of an IUC partnership between one partner institution in the South and Flemish universities and university colleges are outlined in a *partner programme*. All IUC programmes combine objectives of institutional strengthening and strategic thematic capacity building (linked to both institutional priorities and developmental priorities of the country). Each partnership consists of a coherent set of interventions (projects) geared towards the development of the teaching and research capacity of the university, as well as its institutional management. The IUC programme is demand-oriented, and seeks to promote local ownership through the full involvement of the partner both in the design and implementation of the programme. Although the identification of the fields of cooperation is demand-based, as it concerns a partnership, the match with the available interest and expertise for cooperation at the Flemish side is crucial.

The IUC cooperation with a partner institution covers a period of 10 to 12 years with 2 main project phases of typically 5 years each. The IUC partner programme is subdivided in a number of constituting projects (research, capacity building and extension related) that are composed of a number of interlinked activities to be realized in the framework of a partner programme phase of 5 years (see scheme below). *This final evaluation came after the conclusion of the consolidation phase at a moment follow-up activities were already initiated via a phase-out programme (see below).*

Figure 1: Phases of a country level IUC

Country level Institutional University Cooperation																
Programme Cycle	Phase In - Pre Partner Programme	Phase 1 – Capacity Building					Phase II: Consolidation					Phase Out: Valorisation		Post IUC opportunities		
Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Partnerships																

The identification, formulation and implementation of each project is managed by project leaders: academics from both the Southern and Flemish Higher Education Institutions. Flemish project leaders are designated by VLIR-UOS on the basis of an open competition, taking into consideration the advice of both the Flemish and local coordinators.

Key to the IUC approach and its potential added value are a set of core attributes and distinctive characteristics that can be summarized as follows:

[1] This section, in particular parts 1.1 and 1.2, draws mainly on the introductory part of the terms of reference of this evaluation that are presented in annex 1.

- **Institutional support:** The VLIR-UOS programme for IUC aims at the provision of substantial support to a limited number of carefully selected partner universities in the developing world. This support is mainly geared towards the institutional development of the partner university, the upgrading of the quality of local education and research; the development of local postgraduate education and the reinforcement of south-south linkages. A key characteristic of the support is the mandatory inclusion of one or more institutional strengthening projects aiming at improving the administration and management (managerial capacity, HRD, International Relations) of the university as a whole and to support internal service delivery (ICT, library) and policy needs in research and educational reform.
- **Long-term cooperation:** in order for institutional cooperation to be effective, long-term partnerships are needed. Institutional partnerships are to cover a period of at least ten years, consisting of two phases of 5 years.
- **Ownership**: apart from their required participation in the process of project formulation, partner institutions from the South are also fully involved in the process of implementation at all levels in view of the sustainability of the benefits of the cooperation projects. The alignment to the institutional needs and priorities of the partner universities in the South and the support by the leadership of the university should support this ownership;
- **Relevance**: development relevance is linked to the role of the institution in its environment and the potential of strengthening this position as development actor. This is also linked to the fact that an IUC is typically not a first tier institution in a country, but a mid-range institution with sufficient academic capacity to build upon, a mission or at least potential for playing the envisaged role of driver of change and with a number of clear needs in terms of projected capacity building.
- **Concentration and donor coordination**: concentrating efforts in a limited number of partner institutions in a given country leads to advantages in terms of programme management, but the programme approach is actually also meant to stimulate synergy between different project interventions - apart from the IUC programme - and to add value in terms of the expected broader institutional impact of the programme intervention. Through donor coordination at international and Belgian level, results can even be further increased.
- **Partnership:** each partnership is broad in orientation, and includes different components (projects), brought together in a synergetic and coherent way. All projects aim at a thorough institutional impact and each partner programme consists of a coherent set of interventions geared towards the development of the teaching and research capacity of the partner university, as well as its institutional management. The identification of the fields of cooperation within the partner programme is based on the partner university's demands.
  The spirit of dialogue, mutual respect and true partnership is considered as a crucial factor for success.

The IUC Partner Programme being evaluated

The IUC programme with Jimma University being evaluated is the second phase (years 6-10) of the programme that was started in 2012. The second phase is composed of eight projects, five 'classic' projects and three 'transversal' projects. The total budget for the second phase was 3,060,000€**.** UGent is the Flemish coordinating partner

IUC implementing partners

Jimma University is among the major public higher institutions in Ethiopia. Its vision is to be the leading public premier in the country, renown in Africa and recognized in the world. The establishment of the university dates back to 1952 when Jimma college of Agriculture was founded. The university got its current name in December 1999 following the amalgamation of Jimma College of Agriculture (founded in 1952) and Jimma Institute of Health Sciences (founded in 1983). JU is Ethiopia's first innovative community-oriented educational institution of higher learning, which is translated into its motto '*We are in the community'* that is omnipresent in its campuses and truly engendered in the university's structures and ways of thinking.

Currently the university has about 43.000 students and 2.600 academic staff. And has presently four campuses: the main campus, the College of Agriculture and Veterinary Medicine campus, the Business and Economics campus and the JU Institute of Science and Technology campus. A fifth campus is under construction in Agro Town, some 45 km from Jimma Town. The university consists of 7 colleges, 1 school and 1 institute (Jimma University, 2016). JU has witnessed an incredible rate of expansion and student enrolment. It has 56 undergraduate programmes, 103 degree and postgraduate programmes and 10 PhD programmes. These programs are offered in different disciplines including Medicine, Engineering, Agriculture, Business, Social and Natural Sciences. Over the entire period of programme implementation, the management of Jimma University has been closely involved in IUC –JU policy matters.

Ghent University (UGent) is, in Flanders, the coordinating university of IUC-JU that via its ICOS office is also in charge of the administrative and financial follow up. The team leaders of the eight projects that constitute the IUC team are from four universities (UGent, KUL, UCL and UHasselt); in each project academicians from at least 2 and maximum 5 universities or other academic institutions are involved. In total, more than 70 academicians from Flemish universities have been involved in varying degrees in programme implementation.

- **Main objectives of the IUC**

The **overall academic objective** of the IUC is *'To enhance the quality of teaching and research undertaken in Jimma University through planned and targeted development of human resources and collaborative and multi-disciplinary research of an international standard that addresses the priority problems of the local community and the country at large'.* This objective has remained unchanged since the start of the programme in 2007 and is closely related to the vision, mission, strategic directions (goals) and objectives of the University as stated in The Transformation Agenda, the ten year strategic plan of JU that constituted the main guidance at the start of the IUC. The objective is also in line with JU's strategic objectives as formulated in its 2011-2015 strategic plan[2].

The **overall developmental objective** of the IUC is**: '***To improve the life of people in the Gilgel Gibe dam area and promote sustainable development through research in problems and issues of human and animal health, environmental health and ecology, food and nutrition and soil fertility and promoting evidence based interventions in the target area in collaboration with different stakeholders'*. Acting along its motto 'We are in the community' JU since long plays an active role and supporting sustainable development efforts in the community in close cooperation with the community itself. Community involvement, community empowerment and inter-sectorial collaboration are key principles promoted by the

[2] These objectives read as follows: (1) Academic excellence; (2) Excellence in Research, technology transfer; (3) Excellence in Service; (4) Institutional Transformation and good governance (Jimma University, BSC-Strategic Plan (2011-2015)

University in its relationship with the community. Serving the community and society at large is reflected in the mission and vision statements of the University and further operationalized in its strategic objectives.

- **IUC project portfolio in Phase II**

Under phase II, the IUC with Jimma University was composed of eight projects that constitute to a major extent a continuation of the Phase I projects; as all projects were quite successful in phase I, there was no reason to substantially change the programme set-up[3]. However, at the level of the subprojects there have been some rather considerable changes (see the analysis at project level for more details).

The table below presents an overview of a few key data related to the eight projects, including the lead university and the initial budget. The first five projects are so-called 'classic' projects, whereas the three last projects are 'transversal' projects. The latter cater for about 15% of total programme expenditure, the classic projects for 68%, the remaining part are costs related to the programme support unit. The project leaders of the last project (Kora Tushune and Luc Duchateau) are also those in charge of overall programme coordination.

Table 1: Overview of the IUC project portfolio

	Project name	Flemish partner university	Project leaders	Budget (°)	
				€	%
1	Zoonotic and animal diseases	UGent	Tadele Tolosa Geert Janssens	359,024	12
2	Child health and nutrition	UGent	Mekitie Wendafrash Carl Lachat	325,024	11
3	Environmental health and ecology	KULeuven	Seid Tiku Olivier Honnay	561,556	18
4	Infectious diseases and epidemiology	UCL	Zeleke Mekonen Nico Speybroeck	510,520	17
5	Soil Fertility	UGent	Amsalu Nebiyu Pascal Boeckx	337,726	11
6	ICT and Library	UGent	Rudy Gevaert Gerum Ketema	165,891	5
7	Socio-economic and statistic modelling	UHasselt	Wondesson Kassahun Paul Janssens	263,530	9
8	Research coordination	UGent	Kora Tushune Luc Duchateau	32,442	1

(°) The first column related to the budget presents figures that not include the costs related to the Programme Support Unit (PSU) in JU and UGent; the column percentages relate to the *total* budget of 3,060,000€ (including PSU costs).

The Terms of Reference of the evaluation

The Terms of Reference of the evaluation (TOR) present the standard and specific evaluation purposes that read as follows.

[3] The 7th Phase I project, Research Coordination, was originally established to service other projects in particular areas including GIS, data basing and baseline assessment; it was also set up to avoid research duplication. Besides providing these services, two socio-economic research projects were started up under this project. For phase II it was decided to include these two projects in a new separate project together with the statistical modelling project. The move was also meant to allow the Research Coordination project to focus on its core task.

As a final programme evaluation, this evaluation has 3 different standard purposes:

- **Learning**: on the basis of the analyses made by the evaluation team, lessons can be learned about what worked well, what didn't and why. The formulation of these lessons learned will contribute to the quality of on-going and future IUC programmes in terms of the content and management of the programme, including the overall policy framework;
- **Steering**: on the basis of the analyses made by the evaluation team, recommendations will be formulated to support decision making processes of the IUC (at different levels);
- **Accountability**: by independently assessing the performance of the IUC programme (and validating or complementing the monitoring), different actors (HEI, VLIR-UOS, etc.) can fulfil their accountability requirements.

The main specific objective of the evaluation is to evaluate the performance of the IUC (programme level and project level). Next to this objective, the evaluation should also analyse the prospects for the post-IUC period:

- The performance of the IUC needs to be evaluated on the basis of the OECD-DAC criteria for development evaluation (+ one additional criterion): **scientific quality, relevance, efficiency, effectiveness, impact,** and **sustainability**. A particular focus needs to be given to **sustainability** and **effectiveness** (progress towards the achievement of the specific objectives).
- The follow-up plan of the programme for the post-IUC period (cf. self-assessments) is also evaluated. The follow-up plan needs to further guarantee sustainability at institutional level (and research groups), and the impact of the university on development processes in the surrounding community, province and eventually in the country. This "evaluation objective" is strongly linked to the NETWORK programme that will start in 2017.

The TOR further provide a VLIR-UOS interpretation and operationalization of the evaluation criteria mentioned above, both at programme and project level (see TOR, p. 19-23), which has constitute the main methodological reference for the evaluation team (see also chapter 1.3 below).

1.2 Context

Key social, political, economic, demographic contextual factors in the country

With an estimated population of about 100 million (CIA, 2016), Ethiopia is the second most populous country in Africa. The country registered remarkable economic growth in the past years. A double digit GDP expansion, roughly about 10% over the past decade, is coupled with massive investment in infrastructure. Notwithstanding this economic growth and large scale investments, the country still faces huge tasks and challenges in terms of alleviating poverty and improving the living standards of its citizens, strides made in the past are promising. More than 80% of the population lives in the rural areas with subsistence farming. The available bodies of water have endowed the country with high potential for irrigation, hydroelectric power (the second biggest hydropower potential in Africa), and other economic and social uses. The country also has one of the largest livestock populations in Africa.

Despite its huge natural resources potential, the country continues to be one of the poorest countries in the world, ranked nr. 174 out of 188 countries and territories in 2015 with a Human Development Index (HDI) of 0.448 (UNDP, 2016a).

Although the amount of potentially arable land is much larger, only about 20% of the total land area is under cultivation and almost all of it is dependent on rainfall. The country underwent a series of famines in the 1980s, and still experiences recurrent food shortages, drought and crop failure in some parts of the country. About 39% of the population is estimated to be below the poverty line and between 6 and 13 million people are at risk of starvation each year. Basic necessities such as clean drinking water and electric power supply are still far from adequate. Forest and soil degradation has also left the country vulnerable to natural calamities. With an average of 2.9% growth rate, population growth is regarded as one of the biggest development challenges to the country. The rural population (more than 80% of the population) is basically agrarian and subsistence, requiring the major intervention if the country is to lift itself out of its poor current state of economic and social development. Urban poverty is also serious.

In the past couple of decades, however, the country has recorded an increase of about 58% in its HDI, as well as increases in life expectancy at birth by 17.5 years, mean years of schooling by 1.1 years, expected years of schooling by 5.3 years and a GNI per capita by about 134.7 % (UNDP, 2016b).

Education is a priority sector in Ethiopia. In the past years, attention has been given to education in terms of improving the elementary education with special focus on female students' enrolment. Although there are still several challenges ahead, particularly to improve the quality of education, collective efforts by all pertinent parties would normally mean such problems are not insurmountable. Some attempts made so far in standardizing the curriculum across a few schools, colleges and universities in the country are steps in the right direction. By focusing on education and other critically important sectors like economic reforms and human resource mobilization, the government is aspiring to tackle the vicious circle of poverty within which a significant portion of the Ethiopian population are still trapped.

The Ethiopian federal, regional and local governments are concurrently responsible for the provision of education in the country. Tertiary education is predominantly the responsibility of the federal government. The federal government sets standards, provides overall policy guidance, monitoring and evaluation for the education sector. In 2013, the government spend 27% of its budget on education (World Bank, 2016), out of which a little more than half was spent on general education (grades 1-12), mainly at decentralized levels of government. Although all students joining public institutions of higher learning are obliged to pay for full costs related with boarding and lodging and a minimum 15% of tuition related costs after completing their studies, the federal government covered to a substantial degree the costs of higher education, around 22% of the total education budget in 2010.

To a major extent, the developments, over the last decade, at the level of JU are illustrative for evolutions nationwide. The educational coverage in the country has increased significantly with an increase from 2 to 35 universities and from 20.000 to 500.000 students during the last 15 years, and the Growth and Transformation Plan II 2015 – 2020 plans the establishment of several more universities throughout the country. However, the rapid expansion of the universities has aggravated the shortage of academic staff and threatens the quality and relevance of the programmes offered.

In general, the political environment in Ethiopia has been relatively stable over the IUC implementation period. However, the number of unrests and protests increased, for example after the general national election in May 2015. Increasing anti-government protests, especially in Oromo and Amhara region, led to the declaration of a state of emergency in October 2016 (The Guardian, 2016). At the moment of the field visit of the evaluation team, end March 2017, the situation in the country was calm.

In addition to a fairly impressive economic growth mentioned above, the construction of the *Grand Ethiopian Renaissance Dam,* a gravity dam on the Blue Nile River about 40 km east of Sudan in the Benishangul-Gumuz Region of Ethiopia, began in April 2011 (Water Technology, 2013). At 6000 MW, the

dam will be the largest hydroelectric power plant in Africa when completed and the reservoir at 74 billion cubic meters will be one of the continent's largest. Project completion is planned for July 2017, and the project is expected to seriously alleviate the continued power shortage in the country. The announcement of the *Grand Ethiopian Renaissance Dam* puts projects that are assessing the impact of dams on surrounding communities (like the IUC-JU) in the spotlight. As enthusiastic as a lot of communities might have gotten, the announcement also partly brought about serious constructive debates as to how effectively and efficiently a nation has to use these kinds of resources. This reinforces the high relevance of IUC-JU programme, which focuses on different aspects of the impact of the Gilgel Gibe Dam. More and more people, including experts and influential people across the ranks of government, now view such research as crucial in view of the expected and unexpected effects of the dam, which in some cases are exacerbated by the influence of climate change.

Key institutional contextual factors within the partner university under evaluation

JU, based in Jimma town (Oromia region), is one of Ethiopia's major publicly funded universities. It was established in 1999 by merging Jimma Institute of Health Sciences and Jimma College of Agriculture. Teaching, research, extension and public service are the core tasks of the university. JU is the first innovative community oriented institution of higher learning of Ethiopia. As is the case for many universities of the country, JU has witnessed a massive institutional growth over the last decade. As stated in the BSC-Strategic Plan (June 2011) … *the university from running a few diplomas in the fields of health and medicine and agriculture is now offering 45 degree programmes in various fields and 49 post graduates programmes.* JU's development has been guided by a ten-year strategic plan (The Transformation Agenda) and, more recently (2011-2015) the BSC-Strategic plan that constituted a major reference for the IUC.

The Phase II programme proposal (p. 7) described the situation at institutional level at the start of Phase II as follows: *Jimma University is currently one of the most thriving and successful universities in Ethiopia. It has grown substantially during Phase I. It was elected best university in Ethiopia in the last two years by the other Ethiopian universities. Together with the IUC-JU program, it has invested substantially in MSc programmes and is currently developing PhD schools. There is no reason why Jimma University would change this direction. It is considered by the Ministry of Education as a university that has to invest exactly in this top layer of education.* The IUC programme (Phase I) was considered to have contributed substantially to this JU's qualitative growth. Further, the mid-term evaluation of Phase II stated that the IUC programme was on its track to achieve its aims.

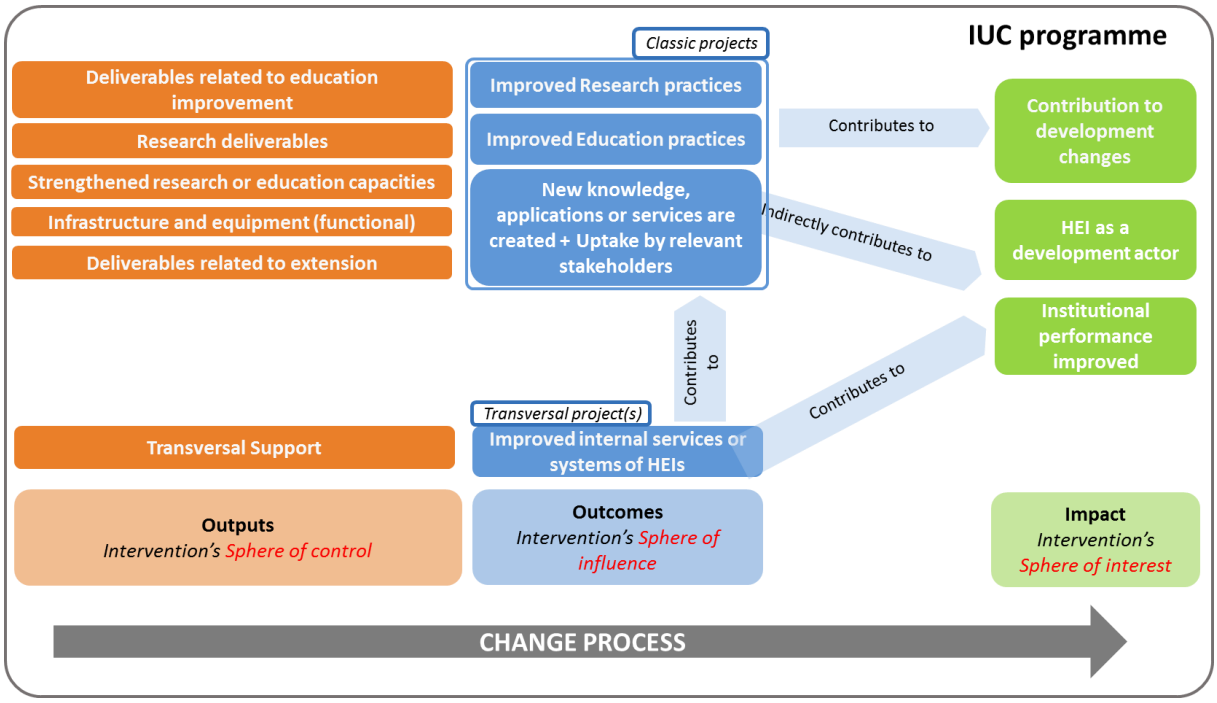
While JU leadership points to the VLIR-UOS IUC programme as being highly instrumental for its institutional development, the gradual growth of JU has allowed it engaging in a broad range of international cooperation programmes and diversifying substantially its donor portfolio. As such, the support of VLIR-UOS has become relatively less important over the last years. The cooperation with VLIR-UOS and the Flemish Universities is however regarded highly as if JU never wants to forget the crucial role the Flemish university community has played in the past. This consideration continues to play an important role in new initiatives, as part of the Phase Out phase, but also more broadly, aiming to continue the partnership with the Flemish academic world in various ways.

1.3 Evaluation methodology and process

Overall methodology

Over the years, VLIR-UOS has developed a standard methodology for IUC evaluations, which has been clearly elaborated in the TOR. VLIR-UOS' generic Theory of Change (TOC) at project and programme level provides a clear and well thought conceptual framework that has guided the subsequent elaboration of evaluation tools and data collection methods. The TOC (both at project and programme level) present a clear and unambiguous distinction between outputs, outcomes and impact that is presented hereafter for easy reference.

Figure 2: Theory of change of an IUC programme



The TOC above and the corresponding TOC at project level have constituted the key framework for the evaluation and for the development of the list of major evaluation framework and of data collection tools.

As the intervention logics (and corresponding logical frameworks) in JU-IUC projects and programme proposals do not always align with the different levels of results as outlined in the schema above, at the start of the field visit the evaluation team decided to use more extensively the tables presenting the planned (in the Action Plan) and achieved (in the self-assessment reports) outputs for each of the seven Key Result Areas (KRA): research, teaching extension and outreach, management, human resources management, infrastructure management and mobilisation of additional resources and opportunities. The systematic comparison of planned and achieved outputs on the basis of a table prepared by the evaluation team in most cases provided a good basis for dealing with some of the key evaluation criteria and engaging in a reflection on broader impact and sustainability[4]. In addition, the self-assessment reports allowed directing the discussion to the issues that needed most attention and a more in-depth discussion.

[4] In a few cases, the comparison was not easy as the KRA table of the programme proposal had not been well developed.

Considering the relative short period available for the field visit, the evaluation team had to be selective in its focuses. As most project outputs were clearly and unambiguously documented, the evaluation team preferred to give priority to focusing the discussion on issues related to the future sustainability and the development of future cooperation initiatives.

A team of two evaluation experts, an international expert and a country expert, was in charge of the evaluation. The international expert acted as team leader; he was, among others, in charge of the interviews in the North, conducted the field visits jointly with his local counterpart and was the main responsible for drafting the report. The country expert brought in his local expertise, was in charge of the preparation of the field visit, conducted the field visit with his international colleague and contributed to the evaluation report.

Data collection methods used and data sources consulted

The evaluation used the following data collection methods and data sources:

- **study of programme documents**: the key documents used by the team were the Phase II programme proposal, the latest implementation report available (AR 2015), the latest action plan (AP 2016) and the self-assessments drafted in early 2017 by the project leaders and programme coordinators;
- **interviews with key stakeholders**: the bulk of the interviews were conducted with the stakeholders directly involved in the implementation of the IUC: the programme coordinators and the northern and southern project leaders; some of the interviews with the northern leaders were conducted via Skype;
- **focus group discussions**: discussions were held with a group of PhD students (supported via the IUC and other schemes) and with MSc students of two master programmes set-up with IUC support;
- **site visits**: the evaluation team visited a selection of facilities that were constructed or expanded with the support of the IUC programme: several laboratories, a small center for psycho-motoric development, the so-called mosquito village, and the mobile animal health service

Definition of the evaluation criteria and indicators used

The TOR contain a section that clearly describes the evaluation criteria and typical indicators that VLIR-UOS uses to evaluation IUC programmes. As this section is well elaborated and of good quality, the evaluation team decided to entirely (with a very view exceptions) take over the frameworks offered for the assessments at project and programme level.

More specifically, the evaluation used the well-known OECD-DAC criteria, but added a specific criterion related to scientific quality. As such the criteria used read as follows: **scientific quality, relevance, efficiency, effectiveness, impact,** and **sustainability**. These criteria (at programme level and at project level) are further operationalized via the formulation of questions/descriptors that specify the VLIR-UOS interpretation of the criteria and which the evaluators used to develop their adapted questionnaire.

Evaluation activities undertaken

The evaluation activities were undertaken in three different phases and are shortly described below:

- ***Structuring and initial analysis***. This phase was composed of a set of often interrelated activities that allowed structuring the evaluation and conducting an initial analysis that guided the decision making process with regard to the field visit. The center of gravity was on activities in

Belgium, but some related activities were conducted in Ethiopia. Throughout the process, the evaluation team liaised with the VLIR-UOS evaluation manager. Familiarization of the two consultants and alignment between them took also place in this phase (via email, Skype).
Key activities during this phase included: a briefing meeting at the level of the VLIR-UOS headquarters in Brussels, start-up meetings with the Flemish IUC coordinator and the ICOS of UGent, structured document analysis (using a reading grid based on the evaluation framework), meetings/interviews with the project holders from the Flemish universities involved in the IUC programme, structured document analysis, a concise evaluability assessment (overall and per project) and the elaboration of data collection tools and approaches for the field visit.

- ***Field phase***. The country expert took a leading role in the preparation of the field phase. Via regular consultations with the Southern programme coordinator and programme manager, the latter engaged in drafting a tentative activity schedule in close consultation with the local stakeholders.
  The field visit started with a briefing meeting with the Southern programme coordinator and manager. Then followed data collection activities related to seven of the eight projects; the project leader of one project could only be interviewed after the actual field visit as he was abroad during the field visit. Discussions with the southern project leaders were the main focus of the field visit. However, in many cases, other university staff involved in project implementation took part in the discussions. In a few cases, staff members in charge of particular sub-projects were also interviewed. Considering JU's strong community orientation, discussions were also conducted with other stakeholders that have benefited from the broader development effects of the projects.
  The field phase ended with two debriefing meetings (one with the programme coordinator, another with the programme manager[5]) and focused on the key findings related to performance (in particular effectiveness and sustainability), overall coherence and synergy of the programme, and perspectives for the future.
- ***Synthesis phase.*** The approach followed in this phase followed the instruction of the TOR. The team drafted and submitted a first draft of the evaluation report and later on analysed and processed the comments received from the local and Flemish stakeholders.
  In line with the TOR, the evaluation needed to provide a score for every criterion using a four-point evaluation scale. The evaluation team decided to only assign these scores in the synthesis phase 'in one go' to ensure internal validity of the scores.

Limitations, evaluability, other issues encountered

The evaluation could be largely conducted according to plan, be it that during the field visit the initial schedule had to be adjusted several times. The programme manager played a key role in finding the best fit between the wishes of the evaluation team and the availabilities of the stakeholders the team wanted to liaise with. He was also highly effective in organizing the two focus group discussions that were well attended. Practical challenges related to the temporary unavailability of key stakeholders (in particular of one southern project leader) could eventually be dealt with effectively.

The evaluation team feels that there have been two major limitations to this evaluation exercise:

- **The time available for the field visit was too short**. One week of fieldwork for the end evaluation of a programme with the scale and complexity as the JU-IUC is too short, in particular if

[5] The programme coordinator was in Addis Ababa at the end of the field visit and could be met there.

the outreach dimensions of the projects/programme are to be addressed also. The JU-IUC has eight projects, but many of these projects are composed of subprojects of a rather different nature that actually should be included in the assessment to come to a balanced judgment. Due to paucity of time, this has not been possible. In addition, time constraints prevented the evaluation team from including some key data collection activities that would clearly have added value. These activities included: discussions with representatives of relevant labour market partners (companies, public sector and NGOs); a specific organizational assessment using a specific tool for assessing organizational and institutional change; a focus group discussion related to gender (with a mixed group of participants); and a specific meeting with key stakeholders of the university and key actors of the IUC around the follow up phase of the IUC. In view of these challenges, for most projects the evaluation team adopted an 'optimal ignorance' approach, whereby it avoided focusing on project dimensions that were well and unambiguously documented to deal mainly with challenging and controversial (if any) issues.

- **Limited methodological quality of key planning and monitoring documents at the level of many projects**. While VLIR-UOS has developed clear conceptual frameworks, on the basis of specific TOCs at programme and project level, that make a clear conceptual distinction between outputs, outcome and impact, these frameworks are not well adhered to by the project leaders. This is understandable to some extent, as most if not all project leaders have only limited experience in applying the specific jargon and tools of international development cooperation. On the other hand, it implied that the evaluation team in some instances had to deal in a creative way with the frameworks applied in the key documents, in particular with regard to the key notions such as the academic and development specific objectives that often included outputs instead of outcomes; similar problems were faced at output level in many projects. The bottom-line approach of the evaluation team in these cases was to 'accept' to the extent possible the intervention logic of the projects, but to also broaden their focus to the actual (often implicit) outcomes of the projects.

1.4 Structure of the evaluation report

This report is structured as follows. The next chapter presents the key evaluation findings. It starts with a general overview and assessment and then continues with an evaluation per project. Then follows an evaluation of the programme level and, finally, an evaluation of the management of the programme. The third chapter presents the conclusions and lessons learned, whereas the fourth chapter includes the recommendations for the programme at large, the projects and for VLIR-UOS. A few annexes (TOR, list of resource persons contacted, evaluation questionnaire, field mission schedule) complete the report.

2 Evaluation

2.1 General overview and assessment

The eight projects that constitute this IUC programme have all reached significant results that often go beyond the initial targets. While every project has its own characteristics which imply that its success can to a major extent be attributed to the project leaders and other academicians involved, all projects have benefited from a careful preparation and initial assessment that constituted a guarantee for their relevance, from adequate strategic steering and coordination by the two programme coordinators who have covered the entire programme period of ten years, and from substantial and continued support for JU. As such, project leaders could display their expertise and commitment in a truly enabling environment.

2.2 Evaluation per project

2.2.1 Project 1: Zoonotic and animal diseases

Description of the project (intervention logic)

As in many other parts of Africa, animal diseases and poor nutrition continue to constrain livestock productivity in the Jimma zone, including the zone around the Gilgel Gibe dam. The diseases/pathogens identified as having a possible impact on productivity of livestock (mainly cattle) in the zone are: trypanosomosis (sleeping sickness), infections with flukes (fasciololis, paramphistomosis & schistosomosis), gastro-intestinal parasitism (e.g. Haemonchus, Bunostomum) and mastitis. It is also well known that nutritional/micronutrient deficiencies are exacerbating the disease picture. Finally, livestock also creates a risk to human health and important zoonotic infections. For the Jimma zone cysticercosis, hydatitosis, brucellosis and bovine tuberculosis are considered to be important. As trypanosomosis is still a very important disease around the dam, especially as it was shown in the first Phase that severe resistance against trypanicides exist in that region; in the second phase, remedial measures needed to be developed. Finally, due to the fact that the zoonotic disease echincoccosis is common in the region, new research will be started in that topic.

The overall development objective of the project is to contribute to alleviation of food insecurity and poverty by increasing animal productivity and public health and the overall academic objective is to contribute to the increased capacity building in the field of veterinary medicine, animal nutrition and human parasitology.

The *academic specific objectives* of this project are:

- To strengthen local capacity of applied research on livestock diseases, zoonotic infections and animal nutrition
- To organize post-graduate studies for Master and PhD degrees

The *developmental specific objectives* are:

- To improve animal health and production through research in frequently occurring animal diseases and animal feed resources
- To improve public health through controlling Zoonotic diseases

- To conduct awareness creation to the community concerning important animal and zoonotic diseases as well as animal nutrition.

The project formulated initially six *intermediate results* (with the 5th result abandoned later) that read as follows:

- IR1: Investigate the epidemiology of zoonotic parasites
- IR2: Investigate the epidemiology and control of bovine trypanosomosis
- IR3: Investigate the epidemiology and control of mastitis and milk quality
- IR4: Investigate feeds and animal nutrition
- IR5: Investigate reproduction in cattle[6]
- IR6: Development of the capacity building of the school of Veterinary Medicine and department of Animal Science

Overview per KRA

The table below presents for each KRA a comparison between the initial targets (as included in the Phase II programme proposal) and the key achievements in phase 2 (as presented in the recently drafted self assessment)[7]. This comparison allows concluding that:

- the research outputs achieved remain below the initial targets which were actually quite ambitious (in terms of articles and conference abstracts in particular); some sad events (passing away of one researchers; serious health problems of another researcher) and other problems (initial PhD candidate that did not fulfill the requirement) also had a major impact on this output;
- there are substantial differences between the teaching and extension outputs planned and achieved (the latter include two outputs that were listed under KRA 4 in the self-assessment, but belong more to KRA 3 in our view), but the overall level of outputs seems to match those that have been planned; in addition, the set-up of a doctoral school in animal nutrition is an important spin off;
- the actual number of PhDs equals the initial planning but a training for high-tech diagnosis has apparently not taken place;
- the rather ambitious infrastructure target with four laboratories installed and operational, has been achieved to a major degree;
  the KRA 7 related achievements are different from those targeted but can be considered as being more substantial. The project leader among others succeeded in winning a cooperation project with the USA Centre for Disease Control (CDC). In addition, 2 PhDs were initiated (with funds from other sources) that can be considered a spin-off of this project.

[6] IR 5 planned the identification of the main causes of poor reproduction in cattle and potential solutions as its key activity. Due to the delay in PhD launching, the activity was not implemented. Instead, initiatives were taken on aquaculture, because there was the combination of promising researchers and opportunities to increase food security through promotion of fish.

[7] A similar approach will be followed for all other projects included in the IUC (with the exception of project 8), as it proved an adequate approach to start the analysis of project performance. In a few cases however, the initial programme proposal and/or the self-achievement lacked crucial information; if this has been the case, this will be clearly indicated in the analysis below.

Table 2: Comparison between the targets and key achievements of the KRAs of the Zoonotic and animal diseases project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 1: Research	• 32 articles in international peer reviewed journals • 2 articles in national peer reviewed journals • 0 conference proceedings (full paper) • 40 conference abstracts • 1 chapters in books (based on peer review) • 0 books with international distribution (author or editor) • 5 working/technical papers/popularising literature/articles in national journals, electronic journals etc. • 40 conference contributions (posters, lectures)	• 20 articles in international peer reviewed journals (not including papers by MSc. students) • 3 articles in national peer reviewed journals • 15 conference abstracts • 0 chapters in books • 0 books with international distribution (author or editor) • 2 working/technical papers/popularising literature/articles in national journals, electronic journals etc. • 15 conference contributions (posters, lectures)
KRA 2. Teaching	▪ Manual in local language on diary cattle husbandry can be used by staff, students and stakeholders ▪ PhD school in veterinary and animal sciences ▪ Manual for trypanosomosis lab available ▪ training of staff in research techniques	▪ 1 courses/training developed ▪ 2 new or substantially updated curriculum (MSc. and PhD) ▪ 2 learning packages developed (distance learning, CD-rom etc.) on slaughterhouse management and dairy management
KRA 3: Extension and outreach	▪ Manual in local language on diary cattle husbandry can be used by staff, students and stakeholders ▪ Local radio broadcasts used for informing stakeholders on research outcomes	▪ 1 manual/technical guide ▪ 1 workshop on publication methods and ethics ▪ 1 CD rom (audio-visual extension material)
KRA 4: management		▪ 3 research protocols developed ▪ awareness, sensitisation campaigns etc. on slaughterhouse hygiene and dairy ▪ 1 business plan for ambulatory clinic
KRA 5: Human resources development	▪ 11 PhD students, master students and technicians have been trained for high-tech diagnostics ▪ At least 5 PhDs successfully defended	▪ 4 PhD; one pending
KRA 6: Infrastructure Management	▪ Laboratory for animal nutrition is fully operational ▪ Laboratory for trypanosomosis is fully operational ▪ Laboratory for zoonotic parasites is fully operational ▪ Laboratory for mastitis is fully operational	▪ 4 laboratories: ○ animal nutrition is established and functional ○ research laboratory for post-graduate students (trypanosomosis and other zoonotic diseases) ○ laboratory for mastitis is fully operational

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 7: Mobilisation of additional resources/ opportunities	▪ 1 Flemish PhD ▪ funding from sustainable development divisions at companies ▪ funding from Gates Foundation (provisional)	▪ 1 Flemish PhD (slaughterhouse) ▪ 10 travel grants (VLIR-UOS and others) ▪ 1 other PhD (Biruk Kebede, BSF UGent) ongoing ▪ 1 aquaculture centre being built

Analysis of the project performance

The table below presents our main findings and analysis with regard to the project performance.

Table 3; Analysis and ranking of the performance of the Zoonotic and animal diseases project using qualitative criteria

Evaluation criteria	Comment	Score[8]
Relevance	• A very important problem area is addressed in an applied way (high prevalence of the diseases); Ethiopia has the largest cattle in Africa • There is a high demand for the research findings and competence (from many actors in Ethiopia); the systematic linkages established between research outputs and strategies to put these into practice (e.g. via the Communication Centre for stakeholders to disseminate translated research information, CD rom with guidelines on slaughterhouse management), constitutes a key feature of the project • The project addresses important issues that are part of national policies/SDGs • What the college does and stands for is also important for JU (capacity building, …) • Clear provisions for transfer of know-how and technology (labs) • Important synergies and complementarities (many leaders interested in follow-up actions, etc.)	4
Scientific quality	• First programme of its kind in Ethiopia (Jimma area) using existing knowledge and research approaches • Laboratories and curriculum are first of their kind in the country and are new for Ethiopia • The project has developed expertise that is acknowledged and sought after in the country; JU is the leading university of the country in this domain	3[9]
Efficiency	*Assessment of the intermediate results:* • *IR1 (Investigate the epidemiology of zoonotic parasites):* the work under this IR is virtually completed, but so far could not be finalized due to the passing away of the main researcher. Several attempts were already undertaken to find ways to continue and finalize the research, but so far without success; the project team attempts finalizing the work in the post-IUC period; • IR2 *(Investigate the epidemiology and control of bovine trypanosomosis):* the aim to identify the occurrence of bovine trypanosomosis and reduction strategies has been achieved, but the laboratory has not been established as initially planned; the PhD student who completed his study left for the US immediately and did not finalize his policy brief;	3[10]

[8] The scale to be read as follows: 1 = (very) poor; 2 = insufficient/low; 3 = sufficient/good; 4 = very high/excellent. The scores expressed in quantitative terms an overall and synthetic yet differentiated qualitative judgment and should only be read in conjunction with the comments in the second column of the table.

[9] This judgment incorporates the consideration that factors beyond the project's control affected its performance. In addition, the initial targets in terms of scientific outputs have been very high.

[10] Idem.

Evaluation criteria	Comment	Score[8]
	• IR3 *(Investigate the epidemiology and control of mastitis and milk quality)*: the aim to identify the occurrence of mastitis in the area and to get an idea of the milk quality and of strategies to increase that quality has been entirely achieved; a paper and policy brief were issued, urging for action to deal with the serious public health problems related to the spread of mastitis; • IR4 (*Investigate feeds and animal nutrition*): a substantial number of articles has been published under this result, illustrating its success in identifying the limiting factors in nutrient and energy supply from feed resources and strategies to increase utilization efficiency; health problems prevented the PhD student to finalize his study before the end of the programme. Another successful PhD student left for Arba Minch University and will cooperate there with the Northern project leader in the framework of the new IUC programme with that university; • IR5 *(Development of the capacity building of the school of Veterinary Medicine and department of Animal Science):* this result has been largely achieved via the establishment of four laboratories that can be used by Master and PhD students, and via the set up of a veterinary extension service. Overall, there have been substantial modifications with shortfalls at the level of the teaching but also innovative products that were not initially planned (e.g. related to slaughterhouse management and development of an MSc curriculum). The four laboratories are key intermediate results that are in line with the initial targets. A few unexpected events have affected programme efficiency and effectiveness (beyond the project's control).	
Effectiveness	• Fair level of achievement (notwithstanding serious setbacks) of academic objectives (strengthen local capacity of applied research on livestock diseases, zoonotic infections and animal nutrition; post-graduate studies for Master and PhD degrees) • Good relationship with key stakeholders (farmers, slaughterhouses, …) in research activities is strong indication of achieving the specific developmental objectives: improved animal health and production; improved awareness in the community concerning important animal and zoonotic diseases as well as animal nutrition • No data could be found with regard to the potential effects of the project on improved public health through controlling zoonotic diseases	3[11]
Present and potential impact	• Increased outreach of university (serving as guest lecturer, trainer, …) towards other universities and sectorial stakeholders (consequence of increased quality of education via increased number of PhD holders) • Increased outreach to outside stakeholders such as dairy farms, slaughterhouses and society at large, with tangible effects (e.g. in terms of milk productivity, leading to the further expansion of dairy farms in the neighbourhood of Jimma); similar expansion expected with regard to aquaculture; much will depend on how spin offs will develop and on capacity to liaise with other funding agencies	3
Sustainability	• Some of the sub-projects have a high prospect of being sustained, as there are already initiatives that could allow building on the achievements of the sub-projects. For example, in connection with animal disease treatment, JU is currently building one of the largest veterinary hospitals and its premises will be funded by the government. • Maintaining trained staff by the project at JU will remain a huge challenge, affecting the sustainability of some of the sub-projects and their continued effects on JU and other beneficiaries. • Keeping the laboratories operational thereby assuring quality services for students, researchers, internal and external clients will probably remain a constant	3

[11] Same as above.

Evaluation criteria	Comment	Score[8]
	challenge and issue of concern. So far, the challenges are dealt with successfully, but rather on an ad hoc basis. • Some of the sub-projects have started to show their potential to generate spin offs and thus being picked by the private sector as well by different government bodies. The ambulatory clinic is already in wider use among dairy farmers in Jimma area (on average 450 animals treated per month) despite being provided without transport support from JU to conduct house-to-house visits.	

Assessment of follow-up plan (way forward) and recommendations

There is no overarching follow up plan nor a well-crafted sustainability strategy for this project, which is understandable in view of the different nature of several of its components. Nevertheless the evaluators agree with the rather positive sustainability scores in the latest self-assessment. The results achieved by most project components are well embedded in the JU structures and/or leading to follow up initiatives whereby often a broader range of stakeholders is involved. In addition, the cooperation between northern project leaders and their southern counterparts continues in many instances, also because of good interpersonal relationships.

In some cases and despite notable efforts undertaken, the further translation of research results into findings and recommendations that can be readily used by other stakeholders might be a challenge.

Some of the subprojects struggle with challenges that are rather typical for scientific domains that are addressing issues that are of key importance for the overall development of university itself and/or society at large, e.g. how to assure the sustainability of laboratories and the relevance of their services; what should be the underlying management principles of the provision of services to society (subsidy approach, social profit approach, private sector approach). While there might not be a standard answer to these questions, the units concerned would benefit from some overall guidance from the university, with or without the support from an external partner.

2.2.2 Project 2: Child health and nutrition

Description of the project (intervention logic)

Ethiopia has a long history of food insecurity and nutritional problems affecting large proportions of the population caused by successive droughts. Even during a relatively good non-drought year, levels of malnutrition in children and women in Ethiopia were extremely high putting the survival of these groups of the population at a great peril. The child health and nutrition project aims to address two major problems. The first one is trying to improve child survival, growth and development through understanding of the determinants of nutritional status in the community and designing appropriate and locally adapted interventions. Work will focus on improving clinical management of malnourished children in the health facilities and spreading the documented successful experience of hospital management to lower health provision levels. At the same time preventive and promotional strategies will be developed to improve in particular child feeding practices. For this an optimized weaning food will be developed. The second and yet most important problem to be tackled is the lack of research capacity mainly in human nutrition, food science including food technology. Therefore the project will focus on addressing the two problems in an integrated manner so that both the problem of child survival and growth and development will be improved at the same time as the development of both human and physical capital in the university.

The *overall objectives* of the project as included in the phase II proposal are to build capacity in the area of nutrition research (overall academic objective) and to contribute to improved child growth and development (overall developmental objective).

The academic *specific objective* is to develop human and physical capacity of Jimma University for research in child health and nutrition.

The *developmental specific objective* is: infant feeding and child development improved in the target dam region, inter-linking with interventions with improved household food security.

The project formulated initially six *intermediate results* that read as follows:

- IR1: Enhanced complementary food intervention to support child growth, immunity and cognitive development tested
- IR2: Psychomotor stimulation during nutrition rehabilitation of children is developed and tested
- IR3: Effect of food insecurity on mental health and health related quality of life of adolescents in Jimma zone Southwest Ethiopia
- IR4: Community based nutrition education activities to improve child care and development developed and tested
- IR5: Mycotoxins contamination in selected foodstuffs assessed and prevented
- IR6: Capacity of Jimma University for nutrition and child health research unit strengthened

During implementation, modifications were however introduced at the level of some of the outputs presented above (reformulation of IR 4 and drop of IR 5; see below for more details).

Overview per KRA

The table below presents for each KRA a comparison between the targets and key achievements in phase 2. This comparison allows concluding that:

- The research outputs experienced a serious delay as the underlying studies took more time as planned (problems with the import of products); as a result the output at the level of internationally published articles is so far substantially below target;
- As a result of this delay, there is also a substantial delay at the level of human resources, with so far nobody who has been able to defend his PhD thesis;
- In terms of teaching outputs, the joint master with Gent University is the most outstanding achievement; one the PhD students will have graduated, they will be included
- In terms of outreach, a training module for psychosocial/psycho-motoric stimulation training (via play therapy) was prepared and the unit started to become operational to serve children with motoric problems as a result of severe malnutrition or other causes (e.g. cancer treatment);
- The lack of adequate trained staff implied that also planned nutrition lab could not yet be completed;

Concluding, it can be stated that this project component experienced implementation delays. The potential to eventually achieve most targets is clearly present however and there seems to be a clear drive among project staff to catch up.

Table 4: Comparison between the targets and key achievements of the KRAs of Child health and nutrition project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 1: Research	• 15 articles in international peer reviewed journals • 4 articles in national peer reviewed journals • 4 conference proceedings (full paper) • 4 conference abstracts • Chapters in books (based on peer review) • Books with international distribution (author or editor) • Working/technical papers/popularizing literature/articles in national journals, electronic journals etc. • Conference contributions (posters, lectures) • Patents • Other	• 4 articles in international peer reviewed journals (Intervention studies took more time than planned and the write up and publication couldn't be completed within the given time period. However, eight manuscripts are written and five are submitted for publication and expected to be out before the end of the year). • 0 articles in national peer reviewed journals (for the past years the focus was on getting published on the international journals. But, there is ample data to publish on the national peer reviewed journals). • 0 conference proceedings, because of lack of time and opportunity by the PhD scholars. • 0 conference abstracts, because of lack of time and opportunity by the PhD scholars
KRA 2. Teaching	• 2 courses/training programmes developed • New or substantially updated curriculum • Textbooks development • Learning packages developed (distance learning, CD-rom etc.) • Laboratory manuals • Excursion guides • Accreditation (labs, programmes etc) • Other	• 2 courses/training programmes developed (one graduate and another post-graduate programme were designed and implemented in phase II nutrition unit of JU); two cohorts of students (50 students in total) enrolled already as Master students
KRA 3: Extension and outreach	• Leaflets, flyers or posters for extension • Manuals or technical guides • 1 workshop or training modules package • Audio visual extension materials • Consultancy • Policy advice/papers • Other	• A training module for psychosocial/ psychomotoric stimulation training was prepared in collaboration with the practitioners from PXL department of Health Care in Hassel

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 4: management	• New institutional procedures / policies • 1 lab or departmental management inputs • Systems development (e-management, software etc.) • Research protocols • Awareness, sensitization campaigns etc. • Business plan • Other	• A nutrition research unit has been organized in the nutrition unit of JU. All research materials and equipment used in this collaboration are used also for the routine teaching purpose. The planned nutrition lab couldn't be completed due to lack of trained staff. However, adequate space has been acquired from the university.
KRA 5: Human resources development	• Bsc. • Msc. • 5 Phd. • Pre-doc • Training in Belgium (technical, administrative, …) • Other	• 0 Phd. Five PhD scholars were expected to be completed within phase II, however, due to the reasons explained in KRA1 none of them could defend before Dec 31-2016. However, all of them are on the right track and expected to defend before the year ends. • there are now about 30 PhD students who have been enrolled both in the joint (10) and local programs (around 20).
KRA 6: Infrastructure Management		

KRA 7: Mobilisation of additional resources/opportunities	• 1 Flemish travel grants
	• 1 Flemish PhD
	• 1 other PhDs
		• One Flemish student joined the team to follow a PhD study using additional fund obtained from several sources:
		  • Nutrition Third World
		  • Project funding obtained from Action Contre La Faim (France)
		  • Project funding obtained by DSM
		  • Michiels Fabrieken NV in Belgium
		• The Flemish PhD scholar couldn't continue her study using the study conducted in Jimma as a result of significant delays in the startup and she couldn't get enough travel grant for the extended period time. However, she continued collaborating in the startup and implementation of the study from a distance.
		• Partially materialized: there was a plan to sustain the center for play therapy (psychomotor /psychosocial stimulation) in the pediatrics and child health department of the hospital through opening of such service in the hospital so that routine services can be offered for children with severe malnutrition or those with developmental delay. It would also

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
	• Spin off projects • Institutionalizing the playground/play room	serve as a training center for other institutions to take the same experience. This was not materialized fully.

Qualitative assessment of project performance

The table below presents our main findings and analysis with regard to the project performance.

Table 5: Analysis and ranking of the performance of the Child health and nutrition project using qualitative criteria

Evaluation criteria	Comment	Score
Relevance	• The research on nutrition are highly relevant for JU, SDGs, GTP II and the country as whole; there has been very limited research and higher level trainings done on nutrition in the country before this project • Some of the sub-projects are working on unique nutrition problems of the country • The PhD program on nutrition is the first of its kind in the country and is currently serving the PhD level training needs of the entire country; quite surprisingly for very long 'nutrition' was an under-researched domain in the country • The labs established under the project are poised to support a wide range of research at JU and other universities and research institutes in the country • The capacity built under the project is leading to the establishment of an MSc in clinical nutrition which is new to the country	4
Scientific quality	• The PhD program is the first of its kind in the country and a reference for other universities • The labs established under the project have equipment and other capacities not available even in Africa • Some of the research in the project (or as a spin off) can be considered as cutting edge as they have addressed and resulted in changes in international procedures and practices • The project managed in demonstrating overlooked aspects in nutrition (e.g. the underlying problem of environmental enteropathy that may hamper the beneficial effects of nutrition interventions) • The academic spin off of the project (via the former project leader) led to scientific articles of the project; more than the planned target are to be published in international peer-reviewed journals	3
Efficiency	*Assessment of the intermediate results:* • IR1 (*Enhanced complementary food intervention to support child growth, immunity and cognitive development tested*): the tests conducted allowed reaching important conclusions in terms of acceptance of the food supplement and its effects on the nutritional status of children; no data are available yet on whether or not this output contributed already to improved child nutritional status (see also below) • IR2 *(Psychomotor stimulation during nutrition rehabilitation of children is developed and tested)*: the unit has been established and stimulation activities started and developed (and the test results published), but there is still a major challenge with the integration of the unit in the hospital; other more sustainable options are now being considered • IR3 *(Effect of food insecurity on mental health and health related quality of life of adolescents in Jimma zone Southwest Ethiopia):* this output is being realized in	2

Evaluation criteria	Comment	Score
	cooperation with Brown University (USA); most of the (project related) academic outputs with regard to this result are however delayed • IR4 *(Community based nutrition education activities to improve child care and development developed and tested)*: this result has been reformulated as: *Effect of play therapy to improve growth and the development of children in poor households assessed):* the study has been completed successfully, but there is a delay in the finalization of the PhD • IR5 *(Mycotoxins contamination in selected foodstuffs assessed and prevented):* this result has been dropped • IR6 *(Capacity of Jimma University for nutrition and child health research unit strengthened):* 5 PhD students are still working on their study, mostly because the follow-up studies took more time than expected. The non-achievement of the intermediate results relates mainly to substantial delays in implementation that have various causes. There is good hope that eventually all results will be achieved however, but this will require a continued commitment from the staff involved and from the JU leadership.	
Effectiveness	• Achievement of the academic objective experienced a serious delay (see above) so that finalization of the studies took far more time than foreseen. • Achievement of the developmental objective has been substantially hindered by the serious delays in the implementation of the academic research. The key study results are now identified but only very partially published. Some of these results are however already used for policy purposes (a.o.). • Despite the rather negative judgment at the end of the IUC programme, this project as a very high potential to produce highly meaningful results, both at the academic and developmental level (a process that actually is taking shape at this moment); the PhD scholars are already actively involved in teach for the master students in human nutrition.	2
Present and potential impact	• Via joint programmes (cooperation with UGent, University of Copenhagen), master and PhD programmes were designed and managed to attract other funding for students who want to conduct their PhD in Jimma. • A former PhD scholar of the project managed (among others) to attract major funding via the ENGINE project with the funding of 8 PhD students as a major component • The problems with the ethical clearance related to the import of goods for research purposes allowed undertaking sensitization on the need to harmonize the existing legislations with regard to clinical trials. • Several other projects are in the pipeline centred around thematic research in nutrition • The project is engaged in complementary research with some of the IUC projects and others outside of IUC-JU (with soil and infectious disease projects, for example) • The psycho-motoric centre is unique in Ethiopia and set to initiate and spread an approach that is highly innovative for Ethiopia • The outputs of the project are already influencing policies at the country and international levels (e.g. with major impact on national nutrition policy of the Ministry of Health which only lately has been formulated; the proposed policy change is presently being fast-tracked in the parliament); at the international level, the project research contributed on reviewing the body mass index for developing countries.	4
Sustainability	• There is a high level of ownership by JU: the nutrition laboratories are established with strong support from the university and there is already strong commitment to expand the laboratories • The project has already won a number of funds from additional organizations and networks; there are promising funding prospects that the project is working on • The project has already secured approval from JU to launch undergraduate (psychomotor child stimulation) and MSc programs to further build on some of the successes of the project	4

Evaluation criteria	Comment	Score
	• Concerned government agencies in the region have expressed strong support already to further scale up the outputs of the project • To sustain the research funding from JU, the nutrition unit has started implementing thematic research approach whereby the research funds of the staff and graduate students are pooled together to conduct thematic research by both the staff and students under research teams. The approach has already influenced the Government to increase the research budget of JU substantially.	

Assessment of the follow-up plan (way forward) and recommendations

Despite the serious delay in implementation (partially related to constraints beyond the immediate project influence) an important range of follow-up actions has already been initiated in parallel with the PhD students finalizing their studies. The potential range and outreach of these actions is substantial because of the project's (including former scholars') capacity to attract major funding, engage in cooperation with other academic institutions and the substantial support and backing of the university. As such, one can expect that pending constraints (such as the adequate institutional embedding of the psycho-motoric centre) will find a satisfactory solution.

The development of stronger cross-sectorial linkages remains apparently the major challenge. Nutrition, by definition, is an area where meaningful sustainable results can only be achieved via interdepartmental collaboration that so far only to a minor degree has materialized, one of the reasons being that programme synergies were not proactively sought at. In addition, the limited number of nutrition experts in the country are overwhelmed by the tasks they have to perform as the area was neglected for decades.

2.2.3 Project 3: Environmental health and ecology project

Description of the project (intervention logic)

Rapid population growth in Ethiopia, directly or indirectly, causes high loss of natural forest cover and of the biodiversity depending on it, increased risk of erosion and increased siltation at different hydro-electric power dams, such as the Gilgel Gibe dam. In addition, increasing industrial activities and use of agrochemicals result in environmental pollution, reduction of aquatic resources, and a general deterioration of public health.

To improve the ecosystem and environmental health in Jimma town and surroundings, and Gilgel Gibe area, the following four complementary priority areas of research were identified: (1) Aquatic ecology and river-dam interaction, whereby aquatic ecosystems will be characterized based on biotic (macro invertebrates) and physical-chemical parameters and determine residues of pesticides (such as DDT) in different compartments of the aquatic environment; further this component includes the study of interactions related to land use patterns (farming, grazing and deforestation) and level of urbanization on the river Gilgel Gibe and its tributaries, and evaluate how these factors affect the ecology of the dam; (2) Forest ecology and animal-plant interaction, whereby the age structure, composition and regeneration patterns of three economically and/or ecologically important tree species will be characterized and the level of natural seed dispersal and its effect on reproductive success and genetic diversity both within and between forest fragments analysed. Based on these results, practical management guidelines for successful forest restoration and conservation were to be formulated; (3) Environmental health and sanitation. Factors that affect the provision and utilization of water supply and sanitation facilities

will be identified and the needs and constraints assessed. Sources of surface water pollution will be located, and a detailed study of solid and liquid waste treatment at Boye pond undertaken. Based on these results, sound waste (water) management technologies and strategies will be developed for Jimma town. (4) Spatial analysis and modelling of land use dynamics via the construction of detailed GIS models of all the study areas and mapping of the present-day land use patterns in the Gilgel Gibe catchment. Past and present land use changes will be studied and possible impacts of land use change on environmental problems evaluated.

The *Overall Academic Objective* reads as follows: The development of a centre of excellence in research and education in environmental health and ecology.

The *Overall Developmental Objective* is to improve the environmental health and provide guidelines and incentives for the conservation of biodiversity and the restoration of Afro-montane rainforests and wetlands.

The *specific academic and developmental objectives* are:

- Acquire insight in the ecosystem services provided by wetlands
- Quantify the role of biodiversity of the Afro-montane rainforest in the provisioning of ecosystem services
- Disseminate water and waste processing technologies
- Improve environmental health
- Increase insights in how to restore biodiversity
- Understand the socio-economic drivers and consequences of land use change in general and of deforestation in particular
- Academic capacity building in environmental health and ecology

The project has *five intermediate results* that read as follow:

- IR1: Better understanding of the ecosystem services provided by Wetlands
- IR2: Better understanding the role of biodiversity of the Afro-montane rain forest in the provisioning of ecosystem services
- IR3: Water and waste processing technologies are disseminated
- IR4: Understand drivers and consequences of land use change
- IR5: Academic capacity in ecology and environmental health enhanced

Overview per KRA

The table below presents for each KRA a comparison between the targets and key achievements in phase 2. This comparison allows concluding that:

- the project has been able to achieve its ambitious research targets, among other via the publication of 34 articles in international peer review journals; the innovative technology related to was management is outstanding and directly applicable;
- the KRA table in the Phase II programme proposal did not include teaching targets, which implies a comparison with the achievements is possible; a comparison with the initial targets as mentioned in the self-assessment allows concluding that those have been met; most outstanding is the opening of 2 MSc programmes via the PhD students;

- using the same approach allows concluding that the targets related to extension and outreach have been surpassed; an important achievement is the development of the management for the dam area;
- the same can be stated for the management KRA (which actually would better have been included in the extension/outreach section);
- in terms of HRD, an overall assessment allows concluding that the ambitious targets have been achieved also; key project staff consider the success in achieving the broader targets of the project;
- the project allowed the establishment of an extra laboratory; the laboratories (a.o. via unique equipment) established play a key role in research and also as an exposure for teaching and learning and for community services;
- the project was more successful than planned in terms of the mobilization of additional resources/opportunities whereby the launching of 6 spin off projects seems the most outstanding achievement;

The systematic comparison of achieved KRA outputs with their targets allows concluding that these (rather ambitious) targets have been well achieved or even surpassed.

Table 6: Comparison between the targets and key achievements of the KRAs of Environmental health and ecology project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 1: Research	• at least two peer reviewed articles per PhD student • conference proceedings (full paper) : priority will be given to peer reviewed journal articles, but also communication in conference proceedings will be encouraged. One per PhD student is realistic. • conference proceedings (as abstracts): priority will be given to peer reviewed journal articles, but also communication in conference proceedings will be encouraged. One per PhD student is realistic. • conference contributions (posters, lectures) • research protocols: integral part of PhD dissertations • working/technical papers/popularising literature/articles in national journals, electronic journals etc.	• 34 articles (initial target: 30) in international peer reviewed journals and 1 article in national peer reviewed journal (initial target: 0) • 6 full papers (initial target: 5) • 20 conference abstracts (20 initially targeted) • 4 (initial target: 10, but not mentioned in programme proposal KRA table) • 4 (initial target: 2, but not mentioned in programme proposal KRA table)
KRA 2. Teaching	▪	▪ 4 courses/training programmes developed (initial target 2, but not mentioned in programme proposal KRA table) ▪ 2 new or substantially updated curricula (initial target 2, but not mentioned in programme proposal KRA table)

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
		▪ 1 learning package developed (distance learning, CD-rom etc.) (initial target 1, but not mentioned in programme proposal KRA table) ▪ 2 laboratory manuals (initial target 2, but not mentioned in programme proposal KRA table)
KRA 3: Extension and outreach	▪	▪ 6 leaflets, flyers or posters for extension (4 initially planned) ▪ 16 manuals or technical guides (15 initially planned) ▪ 2 workshop or training modules package (2 initially planned) ▪ 4 consultancies (3 initially planned) (Bio-economy Africa & Hunger project) ▪ 3 policy advice/papers (1 initially planned)
KRA 4: management	▪	▪ 6 awareness, sensitisation campaigns etc. (initial target 5, but not mentioned in programme proposal KRA table)
KRA 5: Human resources development	▪ 7 PhDs are running; 3 additional to be started + 3 others in the local PhD schools ▪ pre doc: depends on master degree of the candidates and host university in Belgium ▪ training in Belgium: not only for PhDs but also for postdocs and staff advising local PhDs ▪ development of a postdoctoral framework for human resources development	▪ 8 PhDs; there are 3 on-going joint PhDs ▪ 2 trainings in Belgium (in accordance with initial planning) ▪ 1 other (digital and hard copy aerial photographs and topo-sheets) for the whole south-west Ethiopia (in accordance with initial planning)
KRA 6: Infrastructure Management	▪ Laboratory equipment that is present is fully functional	▪ 3 laboratories equipped (initial planning: 2)
KRA 7: Mobilisation of additional resources/opportunities	▪ Grant scheme for postdocs developed in terms of local supervision	▪ 6 Flemish travel grants (6 were planned) ▪ 1 Flemish PhD (1 was planned) ▪ 2 other PhDs (NSS) (2 were planned) ▪ 6 spin off projects (3 were planned)

Qualitative assessment of project performance

The table below presents our main findings and analysis with regard to the project performance.

Table 7: Analysis and ranking of the performance of the Environmental health and ecology project using qualitative criteria

Evaluation criteria	Comment	Score
Relevance	• The project addresses key problems that are presently experienced in Jimma region, among others via rapid population growth and industrial activities; if not	4

Evaluation criteria	Comment	Score
	addressed, these problems affect the development potential offered by the Gilbel Gibe dam • The themes of the project (ecology, environmental sanitation) are not well addressed elsewhere in Ethiopia; JU as such can become a hub for other universities to develop their capacities (including via the laboratories established) • The attempts to conserve the wild Arabica coffee gene is an outstanding objective in view of conserving world natural heritage • Some of the focuses of the project (environmental health for example) are key components of the sustainable development goals, of the strategies of JU (focus on the ecosystem), and of the Northern partners in the IUC-JU • The project's research and academic program are all in response to prevailing gaps of the region till this very day • The research focuses of the project are still of high interest to the North IUC-JU partners and constitute the foundation for continued collaboration between the project members and North partners	
Scientific quality	• The research results of the project have been published in reputable journals • The holistic approaches of the project is well credited by the university and others stakeholders • After initial difficulties, good quality research is presently conducted at JU • The coffee gene research generated ground breaking results with regard to the coffee gene pool and its preservation • The project has established MSc programs that are the first of their kind in the country	3
Efficiency	Key achievement has been a substantial built up - via eight PhDs successfully completed - of scientific capacity in domains (environmental health and ecology) that are new for the country, thereby achieving a high retention rate of PhD-ers which also constitutes the basis for further expansion ('*we have learned to fish'*, as one resource person stated it). A more detailed assessment of the intermediate results achieved reveals the following: • IR1 *(Better understanding of the ecosystem services provided by Wetlands)*: this result has been achieved and operationalized in the development of a management plan for the Gilbel Gibe dam area • IR2 *(Better understanding the role of biodiversity of the Afro-montane rain forest in the provisioning of ecosystem services)*: this result has also been achieved via the development of a guide for forest conservation and sustainable management • IR3 *(Water and waste processing technologies are disseminated):* also this result was successfully achieved via the establishment of a guide with waste management strategies that can be applied in Jimma and similar towns in Ethiopia • IR4 *(Understand drivers and consequences of land use change*): the main social and economic drivers of land use change have been identified and the results diffused via four publications • IR5 *(Academic capacity in ecology and environmental health enhanced)* (dealt with under effectiveness)	4
Effectiveness	The project succeeded in producing 8 PhDs in line with its academic target. The establishment of a centre of excellence in research and education in environmental health and ecology (which we can consider as the actual development objective) has been well achieved via the launching of several new MSc and PhD programmes that provide a broad range of highly needed services to internal and external clients, backed by several well functioning laboratories. From the developmental perspective, the project has managed to produce a set of interrelated guidelines to address the broad challenges of human ecology and environmental health. These guidelines constitute valuable assets to address important challenges in the area; their full 'uptake' is however not guaranteed yet (see below).	3
Present and potential impact	• The successful completion of 8 PhD's combined has enhanced the quality of teaching and research in the Department of Environmental Health Science and Technology, the Department of Geography and Environmental studies, and the	3

Evaluation criteria	Comment	Score
	Department of Biology and Horticulture. The related establishment of several MSc and PhD programmes and the set-up of several laboratories with specialized equipment has created an enabling environment for follow-up initiatives to unfold. As such, a platform for multidisciplinary research of international standard addressing key problems of local communities has been created. Other projects and institutions make use of the facilities created by the project. • The capacity building efforts also led to the set-up of a platform for multidisciplinary research of international standard that addresses the priority problems of the local community and the country at large. • The project has engaged in transfer of knowledge and experience that should contribute to the sustainable improvement of the livelihood of local communities. A major achievement has been the conservation of the valuable wild Ariabica coffee gene pool via the creation of a bio-reserve site recognized by UNESCO. Other highly potential project spin offs include policy advice, support to waste management and the development of related compost production) via several initiatives: the Abdi Jimma Community based waste management and composting micro-enterprise that employs several dozens of workers, the Abamilki micro-enterprise (recycling municipal waste) and the Greening Jimma project. In addition, some project partners acquired additional project funding, among others from the King Baudouin foundations. These initiatives need to be further explored and exploited to create significant impacts	
Sustainability	• With the current low financing capacity of JU and the global funding constraints of the day, the financial sustainability of an important challenge. Nevertheless, the units concerned have been successful in winning some external projects, e.g. funding from King Baudouin foundation and from the Foundation for the Future. Furthermore capacities to gain additional funding are increasing whereby the good laboratories for ecosystem are an important asset. • Technical and policy briefs are beginning to influence government policies; for example, the establishment of the Yayu coffee bio-reserve site that aims to preserve the genetic diversity of Arabica coffee that originated in Ethiopia. • The MSc programs established by the project are now owned and run by JU, ensuring their sustainability.	3

Assessment of the follow-up plan (way forward) and recommendations

As is the case with most other projects, follow-up activities, always by nature, have been built in since project implementation. As such, staff involved in the project has not waited for project completion to engage in follow-up activities. For instance, funding has been secured for a North-South-South (VLIR-UOS funded) project dealing with floride remediation of groundwater using small-scale technologies, whereby JU cooperates with Tanzanian institutions. The subproject related to waste management also succeeded in winning an important prize, be it that the use of the price money led to an internal conflict that so far have has not been settled.

The overarching feeling is that more could have been done in terms of reaching out and undertaking follow-up actions; at this moment, only a few joint projects are being implemented (though others are in the pipeline). A major constraint seems to be the lack of a clear framework (financial, institutional); guidelines seem to be developed (and further elaborated) at the level of JU in this regard, but they are not known well by the staff concerned. A major challenge lays in the development of spin offs in the economic sector: there is often a clear economic potential, but the capacities and skills (and a supporting institutional framework) are lacking to make full use of the opportunities offered.

2.2.4 Project 4: Infectious diseases and epidemiology project

Description of the project (intervention logic)

About 80% of Ethiopian peoples' health problems are due to communicable diseases and malnutrition. Malaria is the number one cause of morbidity and mortality in the nation followed by tuberculosis/HIV (as cause of mortality). Intestinal parasites, particularly soil-transmitted helminths (STH), are also widely distributed affecting the health of all age groups of the community, mainly children and pregnant women. The epidemiology and control of these infectious diseases is also affected by the supply and distribution of poor quality medications due to weak drug regulatory system and its implementation. Moreover, poor personal and environmental sanitation, low socio-economic status, limited access and availability of health facilities, poor community awareness, ecological changes due to various development projects (dam construction) are linked with changes in the epidemiology of infectious diseases.

Against this background, the project aims at two overall objectives. Its *overall academic objective* is to develop a centre of excellence in infectious disease epidemiology and control research, and to develop research related to drug quality attributes and regulatory affairs as well as the discovery of therapeutic agents against infectious diseases. *The overall developmental objective* is to reduce the spread of infectious diseases and its burden to improve human health and the productivity of the society.

The *specific academic objective* is to develop human capacity at Jimma University for training, research, and service to the society (building of statistical capacity needed to support the scientists that are involved in the study of infectious diseases and needed to create a master programme in biostatistics), whereas the *specific developmental objective* is to study the epidemiology and control of infectious diseases (Malaria, TB/HIV and STH) in order to reduce the morbidity and mortality related to these diseases.

The project has *five intermediate results* that read as follows:

- IR1: A better understanding of the epidemiology and control of malaria in relation to the vector Anopheles leading to interventions that reduce the morbidity, mortality and spread of malaria infection
- IR2: A better understanding of the epidemiology and control of TB and HIV leading to interventions to reduce the morbidity and mortality related to these diseases.
- IR3: A better understanding of the epidemiology of soil transmitted helminths and their control.
- IR4: Assessment of drugs quality attributes and the discovery of therapeutics agents against infectious diseases.
- IR5: Build capacity in Infectious Disease and Pharmaceutical sciences

Overview per KRA

The table below presents for each KRA a comparison between the targets and key achievements in phase 2. This comparison allows formulating the following key conclusions:

- The research outputs include an impressive amount of articles published in international and national peer review journals that by far exceeds the initial targets; in terms of publications, no institution in Ethiopia is doing better;
- A similar conclusion can be made with regard to the teaching outputs; the project has introduced joint PhDs (with Gent University) and launched PhD programmes in collaboration with project 3; there might be similar programmes elsewhere, but the programmes offered by JU are considered highly attractive in the country;

- With regard to extension and outreach, an important amount of extension materials has been published and disseminated (see also under KRA 4); in terms of policy influence, the main achievement of the project relates to the changes in the national and WHO anti-malaria policy for the country on the basis of project research; a broad audience has been reached via the production of outputs using modern media and putting the results on youtube;
- The actual number of PhDs by far outnumbers the initial targets, completed by appreciable results in terms of mentorships for MSc students and training courses in Belgium;
- Important additional resources were mobilized via 12 spin off projects.

Table 8: Comparison between the targets and key achievements of the KRAs of Infectious diseases and epidemiology project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 1: Research	• About two to three new Articles per new PhD will be published in international journals during Phase II and one to two articles per PhD in progress.	• 55 articles in international peer reviewed journals and 11 articles in national peer reviewed journals (directly from IR of this project or related) • 56 conference abstracts (national and international conferences) • 1 chapter in book (based on peer review) • 11 conference contributions (posters, leaflets, …)
KRA 2. Teaching	• Laboratory manuals will be updated and written in line with the creation of a new laboratory	• 13 laboratory manuals (including lab SOPs) • 7 courses/training programmes developed • 9 new or substantially updated curriculums • 7 learning packages (distance learning, CD-rom etc.) • 2 accreditations (labs, programmes, etc.) in progress (ongoing/passed preliminary assessments)
KRA 3: Extension and outreach	• Policy advice/papers to be developed based on mature research output	• 2 leaflets, flyers or posters for extension • 6 manuals or technical guides • 5 workshops or training modules packages
KRA 4: management	• Formal research protocols developed	• 2 new institutional procedures / policies • 4 labs or departmental management inputs • 10 research protocols • 5 awareness, sensitization campaigns etc. • 7 audio visual extension materials • 3 consultancies • 2 policy advice/papers
KRA 5: Human resources development	▪ At least 4 PhDs successfully defended	• 16 mentorships support for MSc • 10 PhD of which 6 successfully completed • 14 trainings in Belgium (technical, administrative, , …)
KRA 6: Infrastructure Management		• 1 computer room • 5 labs • 2 classrooms
KRA 7: Mobilisation of additional resources/opportunities		• 5 Flemish travel grants • 2 other PhDs • 12 spin off projects

Analysis of project performance

The table below presents our main findings and analysis with regard to the project performance.

Table 9: Analysis and ranking of the performance of the Infectious diseases and epidemiology project using qualitative criteria

Evaluation criteria	Comment	Score
Relevance	• The focuses of the sub-projects are part of the strategies of JU, the sustainable development goals (focus on infectious diseases that are a major health problem in the country and impact heavily on economic productivity), and GTP II of the country • Research activities, already by design, are meant to influence existing policies (country and WHO) via the inclusion of policy briefs • Use of modern media provides the potential of producing wide impact • Spin offs from some of the sub-projects are being taken up particularly by government, while the MSc and PhD programs associated with the project are in high demand in the country	4
Scientific quality	• Nearly all publications of the project are in peer reviewed international journals, totalling 55. Some of them attracted international attention, among others because of the cost saving research methods being used • A world-class molecular biology lab established, allowing JU to participate and receive recognition in competitive and international drug control tests. • The lab is also resulting in a significant amount of cost saving both for JU and external clients in the country by curbing the need to send samples oversees for testing. At the level of Ethiopia, this molecular biology is to be considered cutting edge, although the lab faces problems in maintaining its stock of reagent and other highly needed inputs.	4
Efficiency	An assessment of the level of achievement of the project's intermediate results learns the following: • IR1 (*A better understanding of the epidemiology and control of malaria in relation to the vector Anopheles leading to interventions that reduce the morbidity, mortality and spread of malaria infecti*on): this result was largely achieved, among others via the description of the malaria vector bionomics, the determination and mapping of the insecticide resistance and the development of an overall malaria control strategy. The findings of these activities resulted in an important number of publication that largely surpassed the initial targets. • IR2 (*A better understanding of the epidemiology and control of TB and HIV leading to interventions to reduce the morbidity and mortality related to these diseases):* This result was also successfully achieved, as evidenced equally by a higher than expected output in terms of the number of publications. The improved research facilities and availability of up-to-date lab equipment in the myco-bacteriology lab and the strong commitment of the research groups facilitated follow-up activities. • IR3 (A better understanding of the epidemiology of soil *transmitted helminths and their control):* the result was achieved entirely via the assessment of the epidemiology of soil transmitted helminths and the assessment of anti-helminths drugs (see also below), which allowed in developing new guidelines to among others standardize laboratory procedures. • IR4 *(Assessment of drugs quality attributes and the discovery of therapeutics agents against infectious diseases):* this IR was also successfully achieved, via, among others, the provision of a pharmaceutical quality testing service, the determination of anti-malarial and anti-helminths, and contributions to the assessment of the national drug regulatory approval system. • IR5 (*Build capacity in Infectious Disease and Pharmaceutical sciences)*: this IR was also successfully achieved, in line with the JU strategic plan to establish standard research centres and laboratories.	4

Evaluation criteria	Comment	Score
	Excellent cooperation between the Northern and Southern project members, strong support from JU and good cooperation with relevant government agencies seem to have played an important role in the high level of efficiency reached by this project.	
Effectiveness	• The project achieved a substantial improvement of JU academic capacities (10 JU staff enrolled as PhDs student, of which six already completed; only one left the university so far) that allowed installing a culture of research and engaging in high quality research according to international standards. • Another illustration of the academic performance is the launching of 7-8 MSc programmes (e.g. MSc in medical parasitology, MSc in Clinical laboratories under the Department of Medical Laboratory Technology and Pathology, MSc in Pharmaceutical Quality Assurance and Regulatory Affairs, MSc Pharmaceutical and Medical Supply Management under Department of Pharmacy and the first Joint PhD program, PhD in Tropical and Infectious Diseases under Department of Medical Laboratory Technology and Pathology) blending local capacities and motivation with (decreasing) specialist inputs from Flemish partners and support by high quality facilities (well equipped labs, such as the laboratory for molecular biology, the laboratory for drug quality). Problems with the availability of chemicals and reagents sometimes have affected the timely progress of research and education outputs. Ad hoc support from the Northern partners has been instrumental in alleviating the effects of these problems. • Various results of this project (related to drug quality, malaria and helminths control) have led to contributions to national and international workshops and modifications in existing policies, e.g. the development and evaluation of national guidelines at the invitation of government agencies (for example, Food, Medicine and Health Care Administration and Control Authority (FMHACA), Guidelines for Insecticide resistance management (IRMM). • The project managed to attract substantial support via 12 projects, which also offers a future funding potential.	4
Present and potential impact	Several research initiatives undertaken produced an important impact on society and national guidelines, e.g. related to the epidemiology and control of infectious diseases (malaria, TB/HIV, helminths) and the formulation of a guideline related to counterfeit drugs. In addition, the project has supported operational programmes to reduce the impact of the above-mentioned diseases and contributed to their increased effectiveness (e.g. an intervention where by mass drug administration has been undertaken for deworming in collaboration with concerned local health offices; the revision of guidelines on how to improve vector control tools using a combination of long-lasting insecticidal nets or long-lasting insecticidal net). The use of modern media might further have led to important impacts which so far have not been assessed.	3
Sustainability	• The project has achieved remarkable results in various areas. However, ensuring the benefits of some of these results might prove challenging in the post-IUC period, notwithstanding the important capacities acquired at the level of JU. There is a feeling among JU staff, that the partnership with Northern counterparts will continue to be important for quite some time (for attracting funding, for getting publicized articles in international journals, …), in particular in view of the high and ever increasing competition for grant funds. • Maintaining the molecular biology laboratory in the long run would be particularly challenging unless alternative long term sources of funding to keep operational the advanced laboratory equipment and provide the imported laboratory supplies/consumables, all requiring hard currency. Here also, some support from Northern partners (e.g. to facilitate access to reagents) might still be needed. When the project succeeds in guaranteeing key services of its labs, these can become an important means to generate additional funding for the continuity and expansion of the laboratory activities. • There is strong academic interest related to the joint PhD programme in Tropical and infectious diseases with young JU staff enrolling as well as students from	3

Evaluation criteria	Comment	Score
	other research and academic institutes and government departments. Such interest inevitably creates a strong constituency basis key policy makers cannot ignore. • On the other hand, the project's participation in international drug testing studies and winning funds from different sources are illustrations of the institutional potential it developed. In addition, there are good policies to ensure good staffing of the project's laboratories via employing university graduates. • On a broader developmental scale, the same can be stated in view of the image the project has built up by highly significant policy interventions establishing important linkages with relevant key authorities and the project's capacities to use mass media for effective communication. • On the medium term, retention of qualified staff can become more difficult unless attractive schemes and incentives are provided by JU.	

Assessment of follow-up plan (way forward) and recommendations

Over the period of project implementation, strong linkages have been created between Northern and Southern academicians that allowed the creation of a solid core of academic capabilities at JU level. In various ways the project has also been able to create a strong network of internal and external partners, among others via its ability to provide highly valued services via its laboratories, via its substantial outreach and via bringing to the forefront important public health problems, which in the meanwhile have led to policy modifications. The constituency base created in these ways should be able to guarantee success for follow-up attempts to further continue and expand activities. The project has, as such, managed to be included in the networking programme initiated by VLIR. Furthermore, possibilities to generate local funding and engage in related consultancies might provide a sound basis for further development of the relevant units thereby keeping key staff members.

This project is (to our knowledge) the only one using in a systematic way 'unconventional' (from an academic perspective) ways of communicating key results from its research and extension services. It might be interested to engage in a well-designed effort to assess the effects of the use of modern media, in particular in the present context of Ethiopia (in particular the still prevailing constraints related to internet use). The results of such a study should be used to inform JU's policies with regard to its service to the community.

2.2.5 Project 5: Soil fertility

Description of the project (intervention logic)

Low land productivity and subsequently low incomes threaten the ability of 85% of Ethiopians to meet their basic human needs of food, shelters and clothing. Food insecurity is a major barrier to development in Ethiopia. This is partially due to the degradation of renewable natural resources, such as land, water and forests. The 4225 km² Gilgel Gibe dam catchment area provides water for the Gilgel Gibe hydroelectric power plant (the largest hydroelectric power dam in the country). As such, the land resources of this area are an important asset to address the low productivity of the land and are of great economic importance for the country. The catchment area is occupied and cultivated by a large number of smallholding farmers. Poor land management practices coupled with the rugged topography and erosive rainfall in the area pose major threats both to the livelihood of the farmers and the life span of the dam.

These considerations and the potential for synergies with other projects, led to the inclusion of a soil fertility project in the IUC program, that is hosted within the JU College of Agriculture and Veterinary Medicine (JUCAVM) that has its roots in the Jimma Agricultural Technical School, a pioneer higher education institution in Ethiopia. The major goal of JUCAVM is to contribute to capacity building for sustainable development of land resources through the scholarly endeavours of education, research and public service.

The *overall academic objective* of the project is formulated as follows: “A research and teaching centre of excellence in integrated soil fertility management is established at JUCAVM”.

The *overall developmental objective* reads as follows: “Land productivity in the Gilgel Gibe catchment area is improved through integrated soil fertility management systems, and the lifespan of the Gilgel Gibe hydroelectric power plant is extended by minimizing sediment deposition in the reservoir”.

The *project’s specific objective* is formulated as follows: the research capacity of JUCAVM to develop agricultural technologies that improve soil fertility is strengthened. In addition, the following specific academic and developmental objectives have been formulated:

- Quantify the rate of siltation and the level of accumulation of major nutrient elements in the Gilgel Gibe dam
- Develop appropriate soil conservation measures and agroforestry practices
- Optimize legume-cereal rotation in the catchment
- Study the land use dynamics of planosols
- Study soil and climate effects on coffee quality
- Establish a research and teaching center of excellence in soil fertility

The project has *six intermediate results* that were formulated as follows at the start of phase II:

- IR1: Soil degradation diagnosed and opportunities for interventions identified
- IR2: Appropriate soil and water conservation measures and agroforestry practices identified
- IR3: An improved cropping system involving grain legumes is developed and tested
- IR4: Soil and climate effects on coffee quality and traceability determined
- IR5: Research capacity strengthened by training and by soil lab establishment
- IR6: Technology dissemination and extension

Overview per KRA

The comparison of the main KRA in terms of initial targets and actual achievements reveals the following:

- Key research outputs in terms of articles in international peer reviewed journals have been achieved, but secondary outputs (chapters in books, technical papers, popularizing literature, …) have not been achieved; on the other hand, most of the research involved stakeholders whereby beneficiaries at the grassroots were invited to assess, evaluate and select the technologies proposed on the basis of their own preferences;
- The same applies for the teaching outputs, but, again, the course material included findings from the applied research activities in cooperation with the population; as such, innovation was brought in; in addition the teaching material included attention for the effects of climate change;

- The extension and outreach KRA included the elaboration of technical guides that are already shared with development workers; while there exists a high demand for consultancy services, this could not be fully addressed as the unit lacks the license to do so;
- The capacity of the existing laboratory was substantially increased via the project that now is able to analyse a broader set of parameters. The laboratory is serving a broad range of internal stakeholders and avoids reaching out to external stakeholders (exception made for other academic institutions and their students) in view of the high internal demand[12]. As is the case with other laboratories under this programme, the lack of consumables and reagents is a constant issue of concern for which so far no solution has been found. Some other JU and JU related stakeholders remain critical towards the laboratory's performance.

Table 10: Comparison between the targets and key achievements of the KRAs of Soil fertility project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 1: Research	• 10 articles in international peer reviewed journals • Articles in national peer reviewed journals • 5 conference proceedings (full paper) • Conference abstracts • Chapters in books (based on peer review) • Books with international distribution (author or editor) • Working/technical papers/popularizing literature/articles in national journals, electronic journals etc. • 2 conference contributions (posters, lectures) • Patents. • Other	• 11 articles • not planned • 5 • 2 contributions
KRA 2. Teaching	• 2 courses/training programmes developed • 1 new or substantially updated curriculum • Textbooks development • Learning packages developed (distance learning, CD-rom etc.) • Laboratory manuals • Excursion guides • Accreditation (labs, programmes etc) • Other	• Lecture notes/material developed for 2 courses • 1 new curriculum by March 2017
KRA 3: Extension and outreach	• Leaflets, flyers or posters for extension • 2 manuals or technical guides • Workshop or training modules package • Audio visual extension materials • Consultancy • 2 policy advice/papers • Other	• 2 manuals ready by April-May 2017 (1 on cereal-legume and 1 on gully stabilization) • 1 • 2 Policy briefs to be ready by April-May 2017 (1 on cereal-legume and 1 on gully stabilization)

[12] Note that JU does not have a policy that excludes serving external stakeholders. The reason for excluding external stakeholders here is *temporary* due to existence of high demand from internal stakeholders.

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 4: management	• New institutional procedures / policies • Lab or departmental management inputs • Systems development (e-management, software etc.) • Research protocols • 1 awareness, sensitization campaign, etc. • Business plan • Other	• Awareness creation on watershed management via local FM radios and field visits
KRA 5: Human resources development	• Bsc. • Msc. • 3 Phd. • Pre-doc • Training in Belgium (technical, adm, …) • Other	• 5 PhDs; 1 in a local university; 1 because of inclusion of a new IR in Phase II and he will finalize by 2018
KRA 6: Infrastructure Management	• Computer Rooms • Laboratories • Classrooms • Libraries • Other	• Existing soil lab improved
KRA 7: Mobilisation of additional resources/opportunities	• Flemish travel grants • Flemish PhDs • Other PhDs • Spin off projects • Other	• Small projects have been obtained due to the spin-off effect of the project (1 on sediment sources from H2020 and 1 on legume diversity from the McKnight Foundation)

Qualitative assessment of programme performance

The table below presents our main findings and analysis with regard to the project performance.

Table 11: Analysis and ranking of the performance of the soil fertility project using qualitative criteria

Evaluation criteria	Comment	Score
Relevance	• The focuses of the project on various aspects of soil fertility are at the heart of the sustainable development goals and the GTP II • The research on (among others) sedimentation management is key for the Gilgel Gibe dam catchment area and the sustainability of the developmental effects the dam is supposed to generate • The PhD subjects are highly tailored to meet the current needs of the country in soil resources management with innovative courses and delivery modes • The soil laboratory and the PhD program on soil science/soil fertility are in line with the strategic goals of JU; the laboratory is providing support across departments of JU, other public universities of the country, and other external stakeholders in the region • The project offers a major potential for inter-disciplinary research with other projects of this IUC programme and beyond.	4
Scientific quality	• The sub-projects in this project employ action research that involves other stakeholders and partner institutions such as the Ethiopian Institute of Agricultural Research; it builds on outstanding research by other academicians from KU Leuven (who are not included in the project)	3

Evaluation criteria	Comment	Score
	• The research on sediment management attracted a lot of attention at the national and international level from the point of view of water management (among others resulting in members of parliament visiting the project's working area) • Research experiments allowed validating experimental results on the role of flexible vegetation such as grasses in reducing the velocity and shear stress near riverbanks. • All the scientific articles of the project (more than the planned target) are published in international peer-reviewed journals	
Efficiency	Assessment of the level of achievement of the intermediate results: • IR1 *(Soil degradation diagnosed and opportunities for interventions identified):* an important amount of data were collected related to sediment sources and transport, landslide susceptibility areas, sediment loads of sub watershed areas, and the genesis and use of planosols; due to the passing away of the principal researcher, the result could not be fully achieved; • IR2 *(Appropriate soil and water conservation measures and agroforestry practices identified)*: key activities related to the selection and performance testing of promising agroforestry trees, shrubs and grass species were implemented; data compiled and being processed with regard to the role of paint roots to increase soil shear strength along riverbanks and gullies and with regard to the best approaches to stabilize gullies and riverbanks; • IR3 *(An improved cropping system involving grain legumes is developed and tested):* key results with regard to this output (in terms of cereal legumes rotation) were already achieved in Phase I; in phase II peer reviewed papers were published or prepared for publication; the planned tests on Soil and climate effects on legume performance were not conducted • IR4 *(Soil and climate effects on coffee quality and traceability determined)*: this result has been introduced at the start of phase II; initial progress was slowed down because of a conflict with the PhD researcher; since his replacement good progress has been realized. The new PhD-er is expected to finalize his work in 2018 • IR5 *(Research capacity strengthened by training and by soil lab establishment)*: this result has been entirely achieved (number of PhDs, improved laboratory capacities, completion of draft curriculum early 2017) • IR6 *(Technology dissemination and extension)*: 11 peer reviewed of papers has been published; extension manuals are expected to be ready in March-April 2017. A national workshop on integrated watershed management will be organized in September 2017. With relatively limited resources, the project was able to produce a substantial number of quality scientific outputs in three different domains (soil degradation/conservation, improved cropping systems involving legumes, and soil and climate effects on coffee traceability) that were achieved in combination with strengthening the research capacity and technology dissemination and extension.	3
Effectiveness	• Establishment of academic capacity (5 PhDs) in different soil fertility related disciplines that were not yet present at the level of JU, capable to publish in international journals and attracting external funding. Substantial (beyond target) strengthening of research capacities related to soil fertility and generation of scientific evidence that should allow tackling key agronomic challenges in the area in the near future. • Achievement of important developmental knowledge related to sediment sources and the root causes of erosion and siltation. Major results have been shared with a broad range of institutions that can all assimilate these and convert them in action.	3
Present and potential impact	• The project has generated a substantial and immediate potential to address the root causes of erosion and siltation in the area, via cooperation with key stake-	3

Evaluation criteria	Comment	Score
	holders including the relevant government institutions and the donor community. There are encouraging indications that these results are being taken up by several stakeholders (NGOs and GOs who are working on integrated watershed management including PHE: Population, Health and Environment-Ethiopia, the Ministry of Water, irrigation and energy, the Bureau of Environmental protection and rural land administration, the Ministry of Agriculture and natural resources, the local administrations and communities) with whom the collaboration already started three years ago and practical actions are undergoing within six districts of the Gilgel Gibe catchment. A multi-stakeholder platform put in place by the project is expected to play a key role in this regard, whereby continued exchange can further trigger the development of impacts on the medium term. Further, the project results can support the current activity started by the government to register coffee quality for Geographic origin identifications • Complementary research with other IUC-JU projects (projects 2 and 3) also can lead to broader impact on the medium term. • The outputs of the project are currently being considered for adoption by different government agencies and parliamentary bodies of the country	
Sustainability	• A high level of institutional support already has been generated by concerned government agencies in the region to further scale up the outputs of the projects and, above all, by JU itself. The project, in cooperation with the universities of Gent and Plymouth succeeded in attracting major donor funding using the results on the identification and characterization of sedimentation processes (part of the Horizon 2020 initiative). • Another success in attracting additional funding related to a project promoting legumes bio-diversity (cooperation with Cornell university) • There has been a significant contribution from JU in building the soil laboratory and the PhD program, increasing the chances of sustaining the lab and the program by JU in the foreseeable future. • Some of the sub-projects of the project have started to gain access to new funding sources and concerted efforts to bring in more funds to extend the activities of the project are being undertaken in various directions. Continued collaboration with staff from the Northern partner universities constitutes an important asset in this regard.	3

Assessment of follow-up plan (way forward) and recommendations

Main follow-up activities already were initiated during the project implementation period and imply that project partners show a high level of optimism in terms of the perspectives to ensure follow-up of the project results and expanding outreach and impact. Focusing on land degradation and sediment source management appears to provide substantial potential for expanding the breadth and depth of the initial project. Close collaboration with the Ministry of Natural Resources will probably generate in budgets being availed by this ministry and in increased cooperation with local government and some NGOs.

While this project is considered a success, considering the long period for ecological changes to materialize, one might wonder whether the inclusion of a third cycle of 3-4 years would not have allowed creating an even bigger impact. It would have provided the project initiators in the North and the South the necessary financial comfort to fully focus on further deepening and enlarging their research focuses and engaging in network expansion. The creation of a strategic fund facility could be considered as an instrument to make this possible[13].

[13] This will be dealt with more in detail further in the report.

2.2.6 Project 6: ICT and library project

Description of the project (intervention logic)

ICT and library are considered to be the key factors in academic institutions to improve quality of education. As such, a project on ICT and library was included in the IUC since phase I to address the many challenges in these areas. In the first phase, the IUC ICT/library project has focused on the basic problems that limited the ICT services and library facilities. New services were developed through capacity building of the local staff. A lot of new ICT-tools, such as smart classes and a dedicated webmail server were developed. Apart from this, the project has also been very active in providing training, both at Ghent University as well as in Ethiopia itself. However, the university still has critical problems in these areas. Shortage of skilled professionals (both ICT and library) poses a great challenge regarding quality service provision. The other problem is inadequate coverage of the ICT facilities. A large chunk of the university community, including students, has still a limited access to ICT facilities and the internet. Similarly, the traditional service provision system of the library has made the library to be difficult to be inaccessible.

Phase II in essence endeavoured to build on the results of Phase I to further enhance the quality of the services thereby focusing on key problem areas.

The *overall developmental objective* is to enhance the ICT/Library infrastructure and services to a standard level and hence increase its utilization by users to improve quality of education.

The *specific developmental objective* of the project is to use a strategy that ensures sustainability of the activities performed in this project. The specific objective of the project is improving the ICT infrastructure and services through collaborative implementation of services and intensive capacity building processes. It also aims at building the Information Technology capacity of the library.

The major areas the project wanted to emphasize in Phase II are: improving security of the ICT infrastructure; providing centralized data storage for users; implementing redundancy and monitoring tools to increase availability of services; implementing a standardized data centre; improving user support services; realizing automated library services; providing digital resources; providing multimedia resources; and building capacity of staff to undertake additional responsibilities and introduced them to modern technology so that they can handle services on their own.

The project aims to achieve the following *intermediate results*:

- IR1: ICT Infrastructure and Services Improved
- IR2: The university data centers standardized
- IR3: Identity management system Implemented
- IR4: Provision of user support improved
- IR5: Web application development capacity improved
- IR6: All branch libraries are fully automated
- IR7: Library service provision strengthened
- IR8: Capacity of ICT/Library professionals built
- IR9: The other IUC projects supported

Overview per KRA

The table below presents an overview of the KRA, whereby it is important to take into account the particular nature of this project. A comparison of the phase II targets with the key achievements gives the following results[14]:

- At the level of research and teaching, it is important to mention that PhD in ICT has been started, which was not planned but was in line with the retention strategy that is part of the project and aims at keeping capable and motivated staff. Furthermore, core staff of the project has an 'in-built' interest in innovation and system development towards finding solutions for new challenges and updating existing systems. Finally, improvement of ICT services have generated important educational spin offs as it contributed to change or complement traditional teaching and learning processes, e.g. via the 'affordable smart classrooms approach;
- In terms of extension and outreach, the capacities built at the level of the project have led to JU becoming a role model for other universities of the country; ICT and library staff is, hence, involved in a broad range of support activities at the level of other universities;
- The project, in collaboration with the Computer Science Department of JU, has started an MSc in Computer Networking a couple of years ago that attracts many interest from within JU and other universities.
- The project succeeded in mobilizing important internal and external support, to among others improve the ICT infrastructure; this process is not yet finalized and will continue in the post IUC phase.

Table 12: Comparison between the targets and key achievements of the KRAs of the ICT and library project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 1: Research		• One PhD student (about to finish)
KRA 2. Teaching		
KRA 3: Extension and outreach		• Substantial outreach and extension achievements (a.o. sharing of best practices with at least 15 local universities
KRA 4: management	• Develop a security policy • Automatic lab management system • Develop and Implement at least 5 additional systems	• 7 additional systems developed
KRA 5: Human resources development	• 10 Local masters • 10 trainings (in Belgium/Jimma)	• 10 training sessions conducted
KRA 6: Infrastructure Management	• Centralized storages (Primary and secondary) • 10 more libraries	• 6 more computer rooms • All realized
KRA 7: Mobilisation of additional resources/ opportunities		• 5 additional grants, incl. ICT infrastructure fund (1) and CTG outreach (1)

[14] We also took into account a few achievements that were not included in the self-assessment table.

Qualitative assessment of the project performance

The table below presents our main findings and analysis with regard to the project performance.

Table 13: Analysis and ranking of the performance of the ICT and library project using qualitative criteria

Evaluation criteria	Comment	Score
Relevance	• ICT and library are crucial support services for a university to facilitate further growth of the quality of its teaching and research • The focuses of the ICT and library project, more in particular integration of open source software into the various functions of the university, are currently among the primary issues of interest across the universities and other higher education institutions of the country • In line with the policy of JU, the ICT/library project includes a broader outlook of integration of open source software into the teaching learning and service functions of the university via the development of in house applications • With the experience and capacity built around open source software, JU is the main university capable (and ready!) to address the ICT and library needs of the majority of universities in Ethiopia and some partner universities in Africa	4
Scientific quality	• The MSc program in network administration that the ICT/library project initiated in partnership with Computer Science is one of the first of its kind in Ethiopia. • The smart classroom concept constituted an important innovation in Ethiopia in terms of using ICT applications to enhance teaching quality.	3
Efficiency	With a budget that has been substantially lower than the other projects, this project managed in providing a substantial contribution to building the capacity of ICT and library professionals thereby using an original problem solving approach. As far as the library is concerned, this achievement was compromised by the loss of well trained and qualified personnel. 'Merging' ICT and library services in one project has both advantages and disadvantages. The setup worked well in this case because of the goodwill of all parties involved. One might however wonder whether it would not be better to work out a specific structure and working mechanism in such cases. A closer look at the intermediate results reveals the following: • IR1 *(ICT Infrastructure and Services Improved)*: an important number of new equipment, services and tools were introduced in Phase II: a new tool for configuration management; additional storage (including training on how to use it); instalment of a proxy load balancer; instalment of LDAP servers with a load balancer; instalment of a monitoring server to increase service reliability; automatic software deployment system; … • IR2 *(The university data centres standardized)*: during the design of a new state-of-the art data centre, the JU management decided to host the data center in the new university head quarters that are presently under construction so that the initial design had to be reviewed. It is expected that the design will be finalized before the end of 2017, together with the building. • IR3 *(Identity management system Implemented)*: a new open LDAP server has been put in place as authentication server and staff trained to set up and manage the open LDAP. As such, all authentication requests can now be handled effectively. • IR4 *(Provision of user support improved)*: because of the complex structure and size of the university, there was a great need to reorganize the ICT user support service. Via different steps, help desk units are now installed and operational to provide the support services at college level, with the college ICT and central ICT coordinators are able to follow up the quality of service provision. • *IR5 (Web application development capacity improved)*: an important number of applications was developed in-house using open source tools; these include a	4

Evaluation criteria	Comment	Score
	User Administration System, a Student Academic Record Management System, a Student Service Management System, a Human Resources Management System, a Balanced Score Card Automation (to measure staff performance), a property check point, … • IR6 (*All branch libraries are fully automated)*: the library has adopted a specialized software (ABCD) since phase I of the programme and has realized online public access catalogue and loan modules; the services are now accessible from everywhere in the university. • IR7 (*Library service provision strengthened)*: a digital library has been created containing now more than 16,000 books and an institutional repository is put in place to store research outputs of students and staff which is however not yet functioning in an optimal way. • IR8 (*Build capacity of ICT/Library professionals)*: the establishment of the Masters programme in Networking allowed the training of ICT professionals at the level of JU itself. Furthermore, important training efforts were conducted at the level of JU itself to update the skills of staff (e.g. when a new system is put in place). In addition, experts from Belgium come to JU to train ICT and Library professionals; finally some JU staff have come to Belgium for additional training. • IR9 *(Support the other IUC projects)*: this result implied the set up and running of a programme website, which as been achieved. The project also provides support to the other projects and the PSU.	
Effectiveness	There has been a substantial improvement of the ICT services at central level and of library ICT services (automation, digital library, repository) that are further developed and maintained at minimal cost (open source software) by a team of excellent ICT professionals. Key indicators in this regard include: reduced outage (approximately 2 hours per month), improved security with the use of certificates; at library level, the digitization of the library catalogue has been completed. Key to this achievement is the constant effort to build the capacity of ICT and library staff coupled with good ICT infrastructure. Both project components face challenges in terms of staff turnover (with unavoidable impact on project performance), notwithstanding the fact that measures are taken to retain staff and to extensively document all services provided.	3
Present and potential impact	• The JU ICT services have become a model for more than 15 local universities that have been supported in the development of their ICT infrastructure and services with the support of the JU professionals. The JU support has made significant changes in the way these universities manage their ICT environment, with important spin offs at the level of teaching approaches (e.g. smart classroom approach). • Related to the previous point, JU has started a movement at the level of the country's higher education system to use open source software to develop ICT and library services. • The Ministry of Education selected the BSC Automation software meant to measure performance of employees to be used by all public universities • The project has established close cooperation with the Computing department (ICT) and the Information Science department (library) to motivate students to get acquainted with the tools and software JU is using. After their graduation, students will be able to use these skills in their working environment.	4
Sustainability	• The consequent and comprehensive option to make a choice for open source software and build the capacities to develop in-house applications, implies investment and operational costs are at a low level and will remain so in the future. • The project has put in place efficient staff knowledge retention practices to ensure that qualified staff of the ICT directorate leave in the office the experience and skills they have accumulated through the project (via a so-called Wiki site),	4 (ICT) 3 (Lib.)

Evaluation criteria	Comment	Score
	minimizing the negative impacts of staff turnover. At the level of the library, the problem of staff turnover is more substantial, in particular when well trained staff is leaving. The low status of senior library staff compared to their academic counterparts is a major issue in this regard. • Ethiopian policies with regard to library development and management are both a constraining and facilitating factor. On the positive side, there is a guarantee for continued support, on the other side the dependence on central policies implies that problems (e.g. related to the rapidly expanding student population) often cannot be adequately addressed. • The capacity developed through the project has allowed the ICT directorate to generate reasonable income that can partially be used to motivate and retain staff (who get extra compensation out of the consultancy fees received) and supplement the budget it receives from the university. • The library and, in particular, the ICT services are a priority area of attention and concern for the JU and its colleges' leadership. As such, it is that the university itself will cover the expenses required for infrastructure and equipment, in as far as needed, as was already the case to a major extent during project implementation. • The existence of an ICT development directorate and computing department together with the setup of a Masters in Networking ensures that at JU level services and training opportunities exist that will allow catering for the ICT and library capacity building needs.	

Assessment of follow-up plan (way forward) and recommendations

The project can build on a series of achievements that have gradually been achieved over the last ten years. As such, a strong foundation for the future has been laid down. In particular JU's ICT support unit will further develop its capacities to consolidate and expand its services and engage in external projects that will generate extra income that can be used for additional investments (provided a formal license to engage in consultancies can be obtained). The future inclusion of the key equipment in the central office headquarters (supported by the IUC network project) constitutes a guarantee for the further development of ICT services in line with future requirements. From its side, the library efforts will be undertaken to further optimize initiatives that were undertaken (repository, e-learning platform, digitalization…). The ICT and library project is further included in the network programme whereby it will continue to focus on building the capacities of ICT professionals of partner universities.

2.2.7 Project 7: Socio-economic and statistical modelling project

Description of the project (intervention logic)

Both public and private universities in the country are growing rapidly and are facing complex challenges of offering quality education and supporting the research process. Research carried out by graduate students and the academic staffs in these higher learning institutions can only make a contribution to the development of Ethiopia if proper research methods with the support of appropriate statistical methods are implemented. The key role of statistics and statisticians comes into play at this juncture, where the higher learning institutions struggling to discharge their dual responsibilities of delivering quality education and producing relevant and high standard research outputs. Despite the high demand of statisticians for the fulfilment of these missions, at the inception of this project, there was no public or private higher learning institute that was mandated to run statistics programs at PhD level. There are also very

few universities that are running graduate programs in the area of applied statistics at a Masters level. This absence of training centres at higher level aggravates the shortage of statisticians required by higher learning institutions, research centres and statistics offices further.

It was with the aim of addressing this critical need of statisticians in the higher learning institutions including Jimma University that during the first phase an MSc program in Biostatistics was successfully launched. But, still there is chronic shortage of statisticians at PhD level to run the already established graduate program at MSc level in JU and also to further open the same program. Against this context, the aims of the project for phase II have been formulated as follows:

The *specific academic objective* of the project is: human capacity developed at Jimma University in the areas of biostatistics and socio-economics.

Its *specific developmental objective* reads as follows: to study the epidemiology of important infectious diseases (HIV/AIDS, malaria, etc.) in order to reduce the morbidity and mortality related to these diseases

The project has nine *intermediate results*:

- IR1: The development of new statistical methodology and the correct application of existing methods to model spatially correlated time-to-malaria.
- IR2: Extensions of modelling longitudinal survey data by combining longitudinal data analysis methodology with specific survey design aspects such as: clustering, weighting and/or stratification.
- IR3: Methodological work on joint modelling of multiple outcomes in relation to longitudinal infectious disease and epidemiological datasets.
- IR4: A better understanding of the epidemiology and management of HIV leading to interventions to reduce the morbidity and mortality in dually infected patients
- IR5: An appraisal of the health extension workers programme of Ethiopia
- IR6: A critical overview of male involvement in family planning: couples perspective in Jimma Zone Southwest Ethiopia
- IR7: Spatial survival analysis applied to malaria data
- IR8: Early marriage and its consequences among rural women of Ethiopia: an experience from Jimma Zone, Oromiya Region
- IR9: The existing MSc program in Biostatistics will be reinforced further and also a PhD school in Biostatistics will be organized in JU.

Overview per KRA

The comparison of planned and achieved results on the basis of the table below learns the following[15]:

- The research outputs in terms of articles published in international peer reviewed journals remained below the initial targets, but the project is going to have more number of publication outputs by the end of 2017. The project has made adjustments to its PhD training plan by funding a PhD training in a area that has more demand.
  In addition, other research outputs were produced related to conferences; for publication in international journals, local staff remains dependent on northern counterparts, but there is a gradual shift to southern partners taking up a leading role. Retaining trained staff is also a major concern in this

[15] The comparison below includes information that is not included in the table.

project; the project has just finalized a proposal for funding a postdoctoral scheme meant to help retain trained staff at PhD level.

- In terms of teaching, the MSc programme is further extended with 8 courses/training programmes developed (6 of these courses are now provided by JU staff) and 1 new PhD curriculum is being developed. The MSc programme is considered an important asset for the university and will be further strengthened via the development of the PhD programme curriculum.
- Some important results were achieved in terms of outreach and extension. The more than 70 graduates of the MSc program are currently working at different institutions for higher education throughout the country and some of them launched a similar master program. Important outreach outputs were achieved via successful international conferences/workshops that attracted renowned scholars in Statistics and allowed expanding the university's network, and where a course on research methodology was given to practitioners. The project has also won an award for best collaboration between the North and the South at an international conference in Dublin (end of phase I).
- The number of PhDs that are completed or will be finalized remains slightly below target (one PhD cancelled because of serious differences of opinion between the candidate and his promoter that finally led to complete breakdown in communication between both).
- The project managed in setting up a fully equipped Bio-statistics data centre, besides the planned expansion of its own mini library.
- Four PhD opportunities (not included in the table below) have been were secured from a Chinese university whose officials were at the international conference that the project organized during the IUC project period.

Table 14: Comparison between the targets and key achievements of the KRAs of the Socio-economic and statistical modelling project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 1: Research	• 8 articles in international peer-reviewed journals in statistics • 5 articles in international peer-reviewed journals in sociology • 3 articles in international peer-reviewed journals in health economics	• 11 articles in international peer reviewed journals • 1 conference proceedings (full paper) • 4 conference abstracts • 5 conference contributions (posters, lectures)
KRA 2. Teaching	MSc programme in Biostatistics stands by itself and only invites lecturers for expert material	• 8 courses/training programmes developed • 1 new or substantially updated curriculum (PhD curriculum being developed)
KRA 3: Extension and outreach	MSc programme is further extended with courses such as experimental design, Bayesian data analysis, analysis of a longitudinal non-Gaussian data, etc.	• One international conference and one workshop organized • Project members are engaged in consulting activities • Policy advice: an appraisal of the health extension workers program of Ethiopia
KRA 4: management		
KRA 5: Human resources development	5 PhDs finalised, together with an extra 4 (3 in stats, 1 in sociology).	• 3 PhD completed, 4 PhD (iof which one with a changed focus) are ongoing, and 1 is canceled
KRA 6: Infrastructure Management	The library in statistics is further extended and contains at least 80 of the most crucial books in statistics.	• Library: more than 100 books • 1 fully equipped Bio-statistics research center

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements phase 2 (Self-assessment)*
KRA 7: Mobilisation of additional resources/ opportunities		• 4 PhD opportunities secured via a Chinese university

Analysis of project performance

The table below presents our main findings and analysis with regard to the project performance.

Table 15: Analysis and ranking of the performance of the Socio-economic and statistical modeling project using qualitative criteria

Evaluation criteria	Comment	Score
Relevance	• The research focuses of the project are critical to the SDGs and GTP II. • The capacities developed and the services the project is expected to render (statistical support to the different research being done at JU) are key for JU's strategic goals. • Some of the research outputs of the project are being considered for implementation by relevant government offices due to their relevance to the entire population of the country. • The MSc in biostatistics is that relevant for the country that it is being replicated by a number of other public universities in the country. • The project envisages cooperation with almost all of the projects of IUC-JU program and members of the project. • The project included an innovative set-up of the pilot MSc with three components: a home course, a distance course (online) and a Spring School for face-to-face courses of one month duration, involving three Ethiopian and one Belgian university; as such, the programme was to award two MSc degrees.	4
Scientific quality	• The MSc in biostatistics is filling in a longstanding gap in practical knowledge in statistics; 6 out of 8 main courses are now in the hands of JU staff. More than 70 graduates currently working at different institutions for higher education throughout the country.	3
Efficiency	A look at the level of achievement of the nine project outputs reveals the following: • IR1 (*The development of new statistical methodology and the correct application of existing methods to model spatially correlated time-to-malaria)* : the research related to this output was finalized and two related articles published in peer reviewed journals. • IR2 *(Extensions of modelling longitudinal survey data by combining longitudinal data analysis methodology with specific survey design aspects such as: clustering, weighting and/or stratification)* : the activities related to this output are also completed, including the publication of 4 articles in peer reviewed journals. • IR3 (*Methodological work on joint modelling of multiple outcomes in relation to longitudinal infectious disease and epidemiological datasets)* : work related to this output is still going on, with one article already published and four other papers being drafted for submission. • IR4 *(A better understanding of the epidemiology and management of HIV leading to interventions to reduce the morbidity and mortality in dually infected patients)*: work on this output has been discontinued because lack of progress of the scholar; • IR5 (*An appraisal of the health extension workers programme of Ethiopia)* : this activity is still ongoing, with a review paper on the policy process related to the health extension workers programme being drafted;	3

Evaluation criteria	Comment	Score
	• IR6 *(A critical overview of male involvement in family planning: couples perspective in Jimma Zone Southwest Ethiopia)*: this output has been achieved with 3 articles published in peer reviewed journals; • IR7 *(Spatial survival analysis applied to malaria data)*: this activity is still ongoing, with one article already published and another 2 papers being drafted for submission; • IR8 *(Early marriage and its consequences among rural women of Ethiopia: an experience from Jimma Zone, Oromiya Regio)* : the planned research has not been realized; • IR9 (*The existing MSc program in Biostatistics will be reinforced further and also a PhD school in Biostatistics will be organized in JU)*: the library has been established with more than 100 specialized books; the course material for eight courses has been developed and the staff trained. The PhD school is not yet realized (expected for late 2017 or early 2018), but the PhD curriculum is being developed. • IR 10 (Bayesian methods for the inclusion of historical data in Phase I and Phase II studies): a new PhD student has started work recently and will only conclude his work after the phase out[16].	
Effectiveness	• Despite loss of two of its PhD holders, the project is on the way to meet its academic targets with the completion of the three ongoing PhDs at the end of 2017 or early 2018. • Some of the academic goals have not been met (for example, 5 peer reviewed journals in sociology) because the targets were overambitious • The envisaged integration between the statistics and sociology components of the project is not fully evident • Due to loss of senior members of the project, some of the outputs of the project are still waiting for closure (the biostatistics center which requires final touches to start provision of service is an example) • Some contributions were made to the developmental specific objectives of study of the epidemiology of important infectious diseases (HIV/AIDS, malaria, etc.), mainly in terms of support in the study design and statistical analysis; this proves the new way of statistical education of 'theory with practice'.	3
Present and potential impact	• Government and other relevant bodies in the country consider the policy briefs and recommendations from the research outputs of the project (e.g. related to the health extension workers strategy). • JU is now self-sufficient in statistical support to its researchers. • More than 70 graduates of the MSc program work currently in different higher education institutions of the country, some of them launching a similar master programme • The biostatistics MSc program is now being replicated as a model program in other parts of the country. • Project staff members are co-authors of most of the articles published by the IUC-JU program	4
Sustainability	• The MSc in biostatistics is now fully owned by JU and the university is giving the unreserved support to implementation of the plans of the project. JU recognizes the importance of statistical experts in the university, which guarantees continued support. • The formula of the pilot delivery of the MSc in biostatistics (i.e., online and face to face lecture based courses) had to be discontinued for various reasons related to differences in course administration rules, lack of involvement of some relevant JU offices and lack of readiness at the level of students to engage in online courses.	3

[16] This IR was not included in the initial Phase II planning.

Evaluation criteria	Comment	Score
	• The project members have developed the capacity to compete for international funding opportunities to continue supporting the activities initiated under the IUC-JU program. • Cognizant of the challenge of retaining staff trained under IUC-JU program, the project has finalized a project proposal for funding a postdoctoral program as a means to retain trained staff. • The members of the project are taking more and more leadership in preparing project proposals and manuscripts for publication in international peer reviewed journals, compared to the early days of the IUC-JU program when northern project leaders did much of the work. The completion of the IUC-JU program will imply that academic staff from Belgium will not be involved anymore in teaching, but local staff is confident they can cope with this challenge. • The project members are ready to take over the teaching responsibilities in the MSc in biostatistics, which has been so far conducted largely by professors from the North • The project has finalized the curriculum for a PhD program which is expected to fill in the gap in qualified teaching staff for the MSc	

Assessment of follow-up plan (way forward) and recommendations

The project's major ambition was to build human capacity in the area of statistics, biostatistics in particular. Despite difficulties (key staff leaving JU), the MSc in biostatistics will be further consolidated, among others via the development of a PhD curriculum. So far, the project seems not to have developed clear ideas related to the future, besides developing a stronger focus on staff retention. It is further stated that south-south collaboration should be developed and that the project should optimize its participation in the network programme.

The evaluation feels that it will be important to further explore how the specific competence of the project can be better used by other departments of the university, in particular in relation to their services to society. The project has already gained some positive experiences in this regard that could be used to fine-tune the approach.

2.2.8 Project 8: Research coordination

Description of the project (intervention logic)[17]

In each of the 7 IUC research projects, some general scientific skills, infrastructure and logistic support are required. The research coordination project aimed to support these general requirements from the different projects in a more efficient way than what could be achieved if each of the projects would have to organize this for itself. Furthermore, the research coordination project was meant to bring interesting and parallel ideas from different projects together, and thereby it endeavours to assure synergy between the different projects so that societal problems that often require a multidisciplinary approach can be effectively addressed. In order to achieve the above-mentioned general objectives in the best possible

[17] The evaluation team has come across different versions of the intervention logic as far as its higher-level objectives are concerned. We mention hereafter these objectives as they have been formulated in the phase II proposal, but will base our analysis on the basis of the self-assessment report of early 2017 that addresses the achievements at the level of the intermediate results. Some of the findings below overlap with those already made under the previous sub-chapters.

way, this project was led by the two programme coordinators as they have the best general overview of what is happening in the different projects and which requirements exist and can be put at the global IUC-JU level.

The first contribution of the research coordination project is at the level of scientific writing and thinking. The research coordination project wanted to establish a centre that provides training in different research skills. The centre organized such trainings using teams of researchers from North and South, so that the courses are established in a sustainable way.

The *overall academic objective* of the project is: Jimma University is renowned for its academic output and inspiring research culture.

The overall developmental objective is: Jimma University generates research output with high societal relevance and quality, and provides this to the scientific society and communities in a sustainable way.

The *specific developmental objective* is formulated as follows: IUC generates integrated, publishable research results with high efficiency and societal relevance.

The project has three intermediate results:

- IR1: IUC-JU promotes research culture at Jimma University
- IR2: UC research results are efficiently used and stored for future reference
- IR3: A central Molecular Biology Laboratory at Jimma University is established

Overview per KRA

The overview and analysis per KRA has only little added value for this projects as its KRA outputs to a major extent overlap with those already dealt with above. A few outstanding outputs (overlapping mainly with those of other projects) include:

- In terms of research and teaching, the project has managed to establish a laboratory infrastructure to perform an important number of analyses in Jimma that in Phase I had to be performed in Belgium;
- This infrastructure has generated a large institutional and societal impact in various sectors, and has resulted also in policy briefs that have been instrumental for policy change in several areas.

Table 16: Comparison between the targets and key achievements of the KRAs of the Research coordination project in Phase 2

Key indicators	*Targets for phase 2 (programme proposal)*	*Key achievements (Self-assessment report)*
KRA 1: Research		
KRA 2. Teaching	• 4 courses/training programmes developed	• 6 courses/training programmes developed
KRA 3: Extension and outreach		
KRA 4: Management		
KRA 5: Human resources development		
KRA 6: Infrastructure Management	• 4 laboratories	• 6 laboratories

KRA 7: Mobilisation of additional re-sources/opportunities		

Qualitative assessment of the project performance

The assessment under this heading is succinct, as most of the findings have already been assessed under the previous chapters. Key achievements of a rather cross-cutting nature and mentioned in the self-assessment report are presented hereafter and completed in some cases with some comments:

- the promotion of a research culture in JU: this achievement has been mentioned at the level of several projects and evidenced, among others, by the scientific training that nearly 80 JU staff has received resulting in a high number of successful PhDs;
- the setup and upgrading of a series of laboratories constituted an important trigger for higher-level scientific research but also education;
- an IUC data centre has been established but due to shortage in human resources it could not be fully developed yet;
- furthermore, a 'specific' result that can be attributed to the project are the efforts undertaken to bring together interesting ideas from different project and promote synergy among these pro-jects. While project resource persons confirmed the progress made in this regard, others also pointed to lost opportunities;
- the project, finally, has also tried to play a role in addressing the challenge of retaining qualified staff, in particular those having completed their PhD by providing them challenging assignments (e.g. via a postdoctoral programme that is presently developed).

Last but not least, it is important to underline that the continued commitment and support from JU and its colleges has been highly instrumental in the achievements of the above. Flemish support in all cases has been matched by local contributions.

Assessment of follow-up plan (way forward) and recommendations

All elements mentioned above will receive attention in the post-programme period. The laboratories have adopted a practice of generating internal and external funding, often via prolonged cooperation with Flemish professors, among others. The network programme builds further on the achievement of the IUC projects (and this project in particular) via its focus on creating synergies and addressing cross-cutting constraints and challenges (such as addressing the brain drain and the application of research results at the level of society) that also constituted part of the core of this research coordination project

2.3 Evaluation at the programme level

2.3.1 General assessment

The evaluators agree with all other key stakeholders that the IUC –JU programme has been successful and constitutes in many ways an example of good university development cooperation. While the results and impacts achieved are the result of a broad range of factors that were blended together in a powerful dynamic of institutional growth, the evaluators want to highlight a few factors that in their opinion have been crucial throughout the entire period of programme implementation:

- the role of Jimma University over the entire programme period, in particular its continuous drive to address the academic and developmental challenges of the country, a drive that is operationalized via well-thought strategic choices by the university leadership but that also seems to be engendered in many senior staff members of the university;
- the key characteristics and unique attributes, as such, of an IUC programme with its long-term focus that allows a gradual built up and institutionalization of capacities and its combined support to strengthen both research, educational, infrastructure and extension functions via a series of projects with both a 'classic' and 'transversal' projects;
- without exaggeration, one can state that the IUC and JU found in each other an ideal partner to realize their respective ambitions and, maybe rather coincidentally, that this happened at the right junction in time;
- last but not least, the success of the IUC-JU cannot be entirely explained without mentioning the effective programme coordination and leadership both in the North and the South that has been assumed by two key figures who have remained present over the entire programme implementation period assuring as such the stability and continuity that often is much needed in this type of programmes.

2.3.2 Qualitative evaluation

Relevance

The criterion of relevance includes different aspects which for the sake of clarity will be addressed separately below.

Extent to which the programme is addressing immediate and significant problems and needs of the partner university

Programme (and underlying project) objectives were mostly defined during the programme inception stage via a process whereby ideas and perceptions of the North and the South were included. As an emerging university dealing with formidable challenges (notably the rapidly increasing student population) JU stressed the need of capacity building, whereas the Flemish partner felt they could contribute most significantly in improving academic excellence. Merging these two views in a coherent IUC approach that was in line with the university strategy and needs proved to be a relatively easy. The key consideration of academic capacity building became a key consideration in the formulation of in each project, including the transversal projects.

The need for the (further) development of academic excellence has remained constant over the entire IUC programme period. On the other hand, there are some changes in emphasis in terms of local (and country) needs. Over the last five years the emphasis of the country has shifted towards engineering and technology, which did not come up high in IUC programme. In view of the evaluation, this should not be considered a problem in the sense that all projects lived up to the expectations so that there were no margins to substantially alter the programme's project portfolio.

Extent to which the programme is addressing regional and national policies (with reference to the MDGs/SDGs and national policy documents)

In the programme formulation process Jimma University's motto 'We are in the community' has constituted a guiding principle in the institution's will to change, via academic collaboration, the lives of the

communities. A key factor in this regard was that many team members were as passionate about development impact of their work as they were about the scientific collaboration, thereby realizing that bringing change at community level might require efforts that go beyond the level of commitment (in particular northern) partners might not be able to show. An important weakness in this regard was however that the programme has been virtually gender blind, not only at institutional level (the university), but above all in terms of addressing the specific needs and problems of women that can significantly differ from those of men[18].

As the university strategy is compatible with national strategies and policies both in terms of higher education and broader development goals (including the SDGs and other policy frameworks), the programme can considered highly relevant in addressing key educational aims related to the qualitative and quantitative higher education expansion. At the project level, the relevance of the issues addressed can be easily understood by looking at the key project objectives that are addressing priority areas of local communities such as animal health and nutrition, child health and nutrition, environmental health and ecology, infectious diseases, and soil fertiltiy. These issues do not only deal with local problems but are also of national significance because they are related to key issues as elaborated in GTP I & II, the Health Sector Transformation Plan, the Climate Resilience Green Economy initiative and other plans and strategies of the country.

Comments

Without any doubt, the programme and the underlying projects all address issues that are highly relevant, both in academic and developmental terms. The fact that, within JU,research and education objectives are intimately linked to 'service to society' implies that potential tensions between these focuses are virtually excluded and do not compromise overall relevance of the programme and its individual projects.

The evaluation team feels further that 'relevance' should also include attention for the legitimate needs and interests of the northern partners. In particular in situations where partners that have grown out of the (academic) infancy stages, it should be recognized that sustainable cooperation is to build on the basis of a sound partnership that implies *mutual* benefits and reciprocity. Continued quality and sustainability can only be achieved where both the local and the Flemish partners gain from the engagement and, hence, are ready to continue investing their time and energy in the cooperation. Thereby it should not be forgotten that the incentive structure for cooperation with the South differs in Flanders from that in other countries (e.g. the Netherlands) where substantial financial support is available. Abstraction made from (possible) follow up projects, benefits for Flemish partners are only to be found at the scholarly level/scientific level.

Achieving developmental relevance might not that much be a conceptual challenge, but operational constraints might prove a serious hindrance to realize the full potential of the programme achievements. This will be dealt with more in detail below.

Efficiency

The criterion of efficiency covers a vast area of aspects that cannot be comprehensively addressed in this evaluation. We focus below on the major aspects (in line with the key elements included in the

[18] We will come back to this later, in particular in chapter 4; it should also be noted that gender has not been included in the TOR of this evaluation either.

TOR). Furthermore the analysis below should be read in conjunction with chapter 2.4 that deals with the programme management.

Extent to which 'economy' considerations have guided programme implementation and adequacy of programme means

A major characteristic of the programme was that in all cases programme contributions have been matched by JU contributions (in kind and in cash), in line with JU's strategic priorities and budget allocations. As such, the institutional culture almost by nature was geared to optimize the (scarce) resources and that the key weakness of a project – an initiative that begins and ends – was virtually absent in programme implementation.

JU-IUC also disposed of clear guidelines, adhered to in practice, with regard to standard rates for typical expenditure, competitive procurement, authorization procedures for expenditure and a strict practice to avoid wastage and fraud. Local per diem and salary of Programme Support Unit (PSU) staff in the South were kept low. While each project had substantial autonomy in implementing its research and educational activities, programme equipment and infrastructure such as cars and laboratories were kept under the research coordination project and made available to all via the coordination of the local PSU. In addition, project implementation, including the infrastructure and equipment it brings in, is entirely embedded in the institution. Laboratories for instance are linked to university units to discourage evolutions that particular individuals think they 'own' the labs, start to control access, etc.

Laboratory management got a particular attention in the programme in view of its substantial contribution in this regard. Measures have been taken to pool, to the extent possible, the labs and the use of its most expensive equipment among different departments and to find adequate solutions for the difficulties related to timely purchase of reagents and consumables for the laboratories. A specific IUC procurement committee has been set up for that purpose.

Results orientation of programme management and level of achievement of intermediate results (outputs)

The JU-IUC programme coordinators and most project leaders of university cooperation programmes are not well acquainted with the typical development programme management tools and approaches that are used within VLIR-UOS, which are, in addition, not well regarded and often considered as overly complicated. Nevertheless, the programme management mechanisms applied have allowed a fair level of results orientation in program (and project) planning and implementation. The use of an intervention logic approach, with a clear distinction between higher-level academic and developmental objectives and so-called Key Result Areas (KRA) has been fairly well adopted in the programme, some exceptions notwithstanding. The consistent yearly reporting along these KRA's and their all-in-all adequate use in the self-assessments drafted at the end of the programme (some of them being submitted with a delay) illustrate the adequate results orientation at programme and project level.

The self-assessment reports further learn that most projects have succeeded in achieving their KRA's or even surpassing the initial targets. In case this was not achieved, factors beyong the control of the programme/project constituted the main explanation. This is another important finding in view of assessing the efficiency of the programme: not only were resources adequately sourced and used, their use also led to the achievement of the planned outputs.

While the programme has been implemented along clear principles and working principles, with a clear results orientation, there has always been room for flexibility. This was much needed during the early years, but continued later on, e.g. via adjusting budgets within and among the projects and sub-projects,

the initiation of new sub-projects and the 'relocation' of some sub-projects. Further, the high demand and competition for PhD scholarships made programme management to redesign the standard approach and reduce the number of months spent in the North from 18 to 12.

Comments

The evaluation team has very little comments as far as efficiency is concerned and agrees with the programme management that 'efficiency' has been a constant preoccupation during implementation, allowing an adequate use of the resources available. One remark relates to the strong focus on PhD students as the most important means to achieve higher-level objectives. While there is no discussion that capacity building via PhD support is key to improve academic and research quality, the evaluation's findings (a.o. via discussion with PhD students) have learned that some broader support is desirable to prepare future academicians to deal with the broad range of duties they will be supposed to take up. As such, additional support (ideally tailor made, i.e. in view of the duties that are/will be taken up) would have been adequate and, in the end, would have allowed higher and more diversified capacity building results in terms of (e.g.) improved pedagogical qualities, institutional and human resource management capacities, etc.

Effectiveness

Level of achievement of the academic objectives

The IUC with JU has achieved remarkable results at the academic level. Most of our resource persons acquainted with the Jimma University IUC Programme (JU-IUC) state clearly that the programme has been one of the most successful VLIR-UOS and university cooperation programmes at large. First of all, the programme boosted the human capacity of the university with over 50 PhDs (of which 23 are completed and 26 expected to be finalized in 2017) in various disciplines and an important additional number of PhDs that will be soon completed. These PhDs have been instrumental in building a research culture at Jimma University while maintaining also its focus on education and service to society. The relative importance of the 'PhD' track in the programme has also implied that the IUC has been instrumental in improving policies for (e.g.) PhD candidate selection that were based on academic merit.

An important number of so-called 'centres of excellence', set up by PhD scholars, have been established via the IUC in areas including animal nutrition, human nutrition, coffee, malaria, soil transmitted helminths, drug quality, tuberculosis and soil science. Two MSc programmes in nutrition and biostatistics, and three PhD programmes have been set up that have so far enrolled over 150 masters and 90 PhD students from JU and other universities in the country. In an attempt to address the challenge of academic retention (see also chapter 3 below), a postdoctoral framework was developed with VLIR-UOS, in an attempt to keep PhD students on board and give them important responsibilities once they finished their PhD.

The program has also improved the institutional management capacity of the University through the transformation of its ICT and library services. The adequate development and application of ICT technology has allowed the automation of key functions and services including planning and monitoring, human resources, finance, procurement and property administration, transport, health care and institutional repository.

The fast development of JU, via the IUC and other partners' support, has not remained unnoticed. First of all, at JU level, programme achievements attracted the attention of different sectors of the University including its leadership. Good programme practices were largely adopted and experiences that are

thought to be impressive such as core laboratory development, thematic research, use of open-source software, are being mainstreamed in institutional policies and strategies.

Jimma University has been the leading university in the country for five consecutive years. As such, nearly every university in the country has paid visit to the program for experience sharing, the achievements of the program were presented on national forums prepared by MOE, and the program inspired many universities in the country to adjust their practices and policies and, also, to apply for VLIR-UOS funding (Ethiopia is one of VLIR-UOS most important partner countries).

Level of achievement of the developmental objectives

For reasons already explained above, JU only undertakes research with a clear (potential for) societal value. While JU has also shown a strong community outlook (e.g. via community based education, inclusion of community activity in the tasks and duties of staff and students), the IUC programme has added a new dimension by integrating high research standards for the sake of community. As such, JU has the potential to take up its distinctive role as a development actor and create specific added value that is different from that of (among others) NGOs, international development organisations and government services.

Bringing previously unnoticed or undocumented problems to the forefront via research and make research findings accessible to the public via publications was however only a first step in most cases. As a rule, the programme tried to go a step further via organizing conferences, using research findings for policy papers and soliciting in that way the attention of both the local and national authorities. As such, it can be safely stated that all projects have piloted with interventions to solve societal problems (see project analyses under chapter 2.2 for some outstanding examples). Often, the process has however stopped there, as it often takes a long time and substantial efforts before research findings can be turned into interventions that address the problems at the community level. Human resources and financial limitations and – simply - the huge challenges related to establishing a bridge between innovation and its application in society[19], implied that JU could not engage in the implementation of community interventions as it would have wished. Apparently project leaders have either conceived their projects as limited to innovation and immediate application only, either they have underestimated the challenges (in social, financial, technical, … terms) related to actual 'uptake' of innovation results at the level of society.. In addition, many project researchers at JU were new to this level of research and focused mainly on finalizing their research work. As such, they might not have had any clue as to what would happen three years down into their research in order to prepare for effective innovation transfer to society.

[19] An interesting consideration (but going beyond the scope of this evaluation) can be found in studies analysing the gap between (basic) research and commercializing the results of that research. In this specific context of commercial products, the "Valley of Death" concept has been developed, a phenomenon that occurs in the presence of 'non-economic' investments (such as government expenditures on basic research or, in our case: VLIRUOS funding) that are made in very early stage research without sufficient attention to the likely investment decisions at later stages of the innovation process. For more details, see T Randolph Beard, George S Ford, Thomas M Koutsky and Lawrence J Spiwak, A Valley of Death in the innovation sequence: an economic investigation, Res Eval (2009) 18 (5): 343-356.

Comments

Both the study of programme documents and discussions with key programme stakeholders have revealed that many struggle with the notions of (specific) academic and developmental objective, be it for different reasons.

At the level of the academic objective, the problem is that this objective is often equated with the (output of) 'capacity building'. While building capacities is certainly key to achieving improved academic performance and change, it is too narrow a concept to cover the various dimension of what is envisaged in the framework of an IUC programme. We think that the concept of 'centre of excellence' that seems to be used more frequently over the last years might be helpful in finding alternative formulations of the academic objective, in the change that such centres embody changed academic practices via the combed use of improved infrastructure/equipment, strengthened human resources and managerial practices, North-South partnerships, … that are blended into a coherent entity which, on top, provides an attractive opportunity for talented staff to foster their academic career.

At the level of the developmental objective, the challenge is to delineate clearly the task and role of the university: where does 'service to society begins and where does it end'? Should there be policy guidelines developed in this regard or is this question to be addressed on a case-to-case basis. And in case the university opts for operational developmental commitment, what is it specific role compared to that of other actors. Should the university invest in developing a 'development arm', including specialized skills, targeted efforts for the mobilization of funding, etc.?

Impact

Under this section also, we try to make a distinction between the different dimensions of the impact the programme has generated (or is expected to generate). At the level of the immediate impacts, the distinction with effectiveness is rather thin.

Added value of the IUC programme for the institutional performance of the university

The IUC has been highly instrumental in establishing a research culture in the university that was absent before the IUC programme and in making of JU one of the main universities of the country. This has allowed the university to generate additional funding that is further increasing its institutional performance. The Ministry of Education has put JU forward as a role model. Consequently, the Ministry has taken the initiative for a tripartite agreement including Jimma University, Ghent University and the Ministry itself to fund up to 100 PhD students to perform PhD research in a joint PhD school setting. JU is now working with the Ministry to extend the programme with the aim to review the modalities for financial support for the PhD students as in the present set-up the students dispose of insufficient support to conduct their research properly.

As a sequel to that agreement, the Ministry has also signed a ten-year (2017-2026) funding agreement to support the project proposal entitled, 'Network for Advancement of Sustainable Capacity in Education and Research in Ethiopia (NASCERE)' to support the continuation of initiatives started under IUC program particularly the launching of more joint PhD program and increasing enrolment in PhD programs. Besides, the University has won VLIR-UOS NETWORK program in collaboration with three other national universities and University of Gent being the coordinating university in the North[20].

[20] See Self-assessments of the programme coordinators for more details.

A few new international projects have been granted to Jimma University through proposals written by former IUC PhD students.

Finally the changes in the research culture also trigger changes in the institutional environment to more consistently promote innovation in the direction of setting up innovations centres (with research groups with spin offs, start-ups, …not necessarily high-end but with a strong local focus) that should find their way into the regular thinking and acting of academic staff and university leadership.

Contribution to developmental policy and practice changes

The program was developed around investigating the impact of Gilgel Gibe Hydroelectric Dam on its surrounding and the impact of natural and human activity on the ecology and economic life of the dam. In reality the research projects of the program went beyond the immediate dam environment and covered many other related issues. In most projects, efforts were undertaken to liaise with local and national authorities in bringing the IUC JU results to the forefront with a view of influencing decision making and practices. Most often, dissemination of project results took place through workshops influencing the practices of a broad range of development actors.

The problems brought to the forefront via the IUC have had their impact on local and national policies and strategies that were better informed and often adapted. A few key achievements with clear policy impact include[21]:

- IUC-JU research demonstrated that because of insecticide resistance the common vector control tools such as indoor residual spraying and insecticide treated bed nets had become ineffective. As a result, the national vector control policy and WHO guidelines were adapted.
- It was demonstrated that sedimentation in the Gilgel Gibe reservoir was so dramatic that the proper working of the hydro-electric dam in the coming years will be jeopardised due to siltation. Relevant government agencies have committed themselves to take action. The findings constituted the basis of a national dialogue and movement that got the attention of the parliament, and led to establishment of Omo-Gibe Basin Authority and the allocation of a budget by Ministry of Water, Irrigation and Energy (MOWIE) for watershed management activities.
- The dairy sector in Jimma has been strongly supported by the mastitis and nutrition research that highlighted serious health problems; project advice allowed increasing productivity.
- A psycho-motoric stimulation programme has been launched and includes an entirely new approach for the country; the centre is still to find its institutional embedding but has a clear potential to support malnourished children and other children (e.g. under chemotherapy) with similar problems.
- Science based guidelines were provided for the conservation of the important wild Arabica coffee gene pool, present in the moist tropical forests of South West Ethiopia. These guidelines are integrated in management advice provided to local farmers and will benefit local farmers in the long term.
- The municipal solid waste management project (Greening Jimma project) has the potential to contribute to the proper management of solid wastes in Jimma town, and the project has won the African Entrepreneurship Award.
- The advancement of ICT capability has promoted the use of open-source applications in Ethiopian higher education, which has reduced initial and maintenance costs of software used by universities

[21] Largely taken over from the Self-assessment document of the southern coordinator.

and colleges (many of these open-source software are developed in JU, nearly 20 public universities benefited from ICT services of JU). The IUC program has also supported the establishment of community resource centres (CRCs) where computer labs with internet access are set up in health centres and towns for use by health professionals and youth to access knowledge and online resources.

Synergy and Complementarity with other development activities

The IUC has also been instrumental to promote *joint* developmental activities. Nearly 30 local and international partners have allocated different level of funding. These partners are government institutions, local and overseas universities, civil society organizations and international institutions in research and intervention and cooperation efforts relate to the ecology of the dam, community-based watershed management, infectious disease, maternal and child health and nutrition, biodiversity and terrestrial ecology, environmental health and waste disposal. An important role is played by the civil society organizations that take up important roles in dissemination of research findings, advocacy, and community mobilization of CSOs. JU-IUC closely cooperates with the Population, Health and Environment (PHE) consortium that houses nearly 30 NGOs working in Ethiopia.

The program has also attracted more than 20 international partners who were involved in the research projects in different forms. These are international agencies like WHO, bilateral organizations such as USAID and EU, universities (Flemish universities, Imperial College, University of California…), foundations (Bill and Melinda Gates, Vestergaard, and McKnight) CDC, NIH and others who are currently working with the program.

Concluding comment

The immediate impact generated by the IUC programme is impressive, whereby it should be underlined that many impact spin offs have started to develop during implementation. Key explaining factors are undoubtedly the high level of relevance of the issues addressed by the projects, calling often for immediate follow up and action at community level, the community orientation engrained in JU and the latter's excellent network and relationships with a broad range of actors including relevant government services, NGOs and CSOs, international development organisations and other funding agencies.

The fact that many impact generating processes could be supported during the IUC implementation (making use, at least indirectly, of programme resources), creates a challenge for the future in the sense that JU needs to look for additional funding if it has the ambition to maintain the level of outreach.

Sustainability

JU leadership and project leaders have the strong conviction that programme benefits will continue to be delivered because the projects and program activities of IUC are aligned with JU's institutional and national policy priorities and strategies from the very beginning. The University fully owns the projects and programme and has been providing support throughout all programme phases, including the allocation of budget, the deployment of human resources working and the provision of administrative support. The Ministry of Education is well aware of the program and has been very supportive and has shown clear commitment to continue cooperation in the future (see above).

The research infrastructure that was created or improved with IUC support will further continue to serve as a foundation for future research and teaching capacity. Future support to the programme achievements is guaranteed via the budgets earmarked in the strategic plan for all centres and laboratories that

are fully integrated in the university's structure and are receiving funds from the government's recurrent budget. JU has further started to invest in developing further its capacities to raise external funding (via a sustainability unit that was initiated by the IUC and in which the southern coordinator and administrator play an important role).

The University has also adopted good practices of IUC program including thematization of research, multidisciplinary research teams, development oriented problem-solving researches, and networking with other partners. Even so, processes to ensure transfer of experience, expertise and techniques to gradually build capacity in the south have now led to a situation where JU takes the lead in most activities and programmes, often however with critical but focused support from northern counterparts. The main challenge as viewed by northern professors (but also by some southern counterparts) to ensure the continuation of quality research efforts is that former PhD students, now PhD holders and often professors, overestimate their own capacity and don't see the need for collaboration anymore. On the other hand, southern counterparts further develop their networks and engage in new projects with other partners. While this is a desirable evolution, it can be steered in such a way that opportunities for creating win-win solutions with the former northern counterparts can still be explored.

Brain drain has constituted an issue of concern since long, both within the IUC programme and at the level of JU at large. The programme has lost qualified staff that benefited from PhD support whereby some projects were more vulnerable to brain drain than others. While there does not exist a clear and single strategy to address this problem, actions are undertaken at different levels. PhD students are academic staff of Jimma University and as such have to sign a contract that they will give service to the university for 2 to 3 years, In addition, JU with VLIR-UOS support has engaged in several other activities including the set-up of a postdoctoral framework where successful PhD students can be employed with JU funding. There are also other efforts to address the situation including interventions at improving the work environment and the creation more collaborative projects to engage the graduates.

2.3.3 The added value of the programme level

The programme level has offered added value at different levels. First of all – and this will be addressed under the next chapter mainly – the programme platform including its supporting structures (the PSUs at the level the Flemish lead university and JU) creates an effective mechanism for overall planning, implementation and follow-up and for the organisation of the necessary administrative and financial supporting mechanisms.

In terms of the contents of the programme, the programme scope '*Investigating the Impact of Gilgel Gibe Dam: A Multidisciplinary Approach Towards Capacity Building*', has created a framework within which five thematic research projects were identified, formulated and implemented. While these projects address all relevant issues that are part from the global programme scope, creating synergies among them could not be done straightforwardly. On the other hand, the research conducted by the five thematic projects all addresses dimensions of human and animal life in the dam's watershed areas and connected river basins. As such, there is a 'programmatic unity in the sense that all projects have contributed to a better understanding of the nature, magnitude, and impacts of the dynamics in the area. The crosscutting projects of ICT and library, and the research coordination project were facilitating and supporting the smooth running of the five projects by ensuring connectivity and sharing of resources which were crucial for efficiency and synergy. Thereby it should be noted that the ICT and library project has been designed and implemented to improve the overall quality of these services that are not only crucial for the thematic projects but for the university at large.

Considered from a rather strategic angle, the projects responded to the strategic issues as indicated in the strategic plan of the University. Ensuring access, quality, and relevance of education; enhancing quantity, quality and impact of research and scientific outputs; boosting institutional effectiveness; and developing sound teaching and research infrastructure were among the strategic issues prioritized in the strategic plan and addressed by the IUC program.

The synergy and complementarity of thematic and transversal projects of JU-IUC program is facilitated by research coordination project that was created by the program coordinators and project leaders. The project provides thematic projects with a shared platform for data collection, storage and analysis. It organized capacity building training common to all projects and paid specific attention to ensuring optimum performance of the laboratories that dispose of indispensable equipment for key research activities.

Comment

While the programme level undeniably has produced synergies and contributed to efficient implementation, it would be exaggerated to consider the programme as a model of an integrated programme approach producing optimal synergies. Several interviewees pointed, rightly in the eyes of the evaluation team, to missed opportunities.

This being stated, for two major reasons, the evaluation team does not see any reason to deeply deplore the achievements in terms of an integrated programme approach. The first reason is that cooperation and synergies should grow from the bottom up. In other ways, they cannot be imposed top-down. In our view, the programme coordinators have found the right balance in this regard in creating what we would call an 'enabling environment' via ensuring good communication within the programme and facilitating moments of (predominantly informal) exchange, thereby leaving the initiative for (increased) cooperation entirely to the project leaders themselves.

A second reason is that all projects have been implemented with a view for external opportunities for cooperation and establishing linkages that sometimes evolve into structural exchange and joint implementation of projects. Against this background, searching for synergies with other IUC projects for the sake of (IUC) synergy entails the danger of becoming counter-productive. Indeed, while the projects under this IUC programme undeniably offer opportunities for synergy, these might be offered more obviously by other actors.

2.4 Evaluation of the management of the programme

2.4.1 Evaluation of the cooperation and coordination between all parties

Overall, management of the programme has been a joint responsibility with JU and UGent ensuring overall steering and management in close collaboration with each other. Partners in the North and the South state that the partnership can be considered as a true symbiosis. There has been a high level of cohesion and synergy between South and North, and the current plans on launching joint PhDs provides the best proof.

In addition to VLIR-UOS guidelines, JU-IUC has management manuals that are proposed by the program coordinators and approved by the Joint Steering Committee (JSC). All decisions are taken based on VLIR-UOS and program manuals and guidelines. These documents are circulated to project leaders

in north and south; they are also placed on the website open to all those who would like to refer to or apply them.

The programme has a JSC that is composed of project leaders from both the north and south, VLIR-UOS and other relevant bodies. The JSC has met rarely for several reasons. First, it appeared difficult to fix a timing that was adequate for the large group of project leaders. Second, and probably more importantly, both programme coordinators have developed and implemented over the years a more informal steering approach thereby following-up closely the developments of the programme, organizing informal consultation and trouble shooting and taking decision after consultation with the programme stakeholders that had to be involved in decision making in their view. Not all project leaders were enthusiastic about this rather informal style of steering, but none complained about major mistakes being made. In addition, the strong personality of both coordinators, their long-standing commitment and extensive knowledge about the programme vested them with an authority that has remained virtually unchallenged during the entire period of programme implementation.

The quality of partnership was very good in most projects and at programme level. The harmony between the north and south coordinators was exemplary. Conflicts and differences were handled in amicable manner. The spirit of partnership was also very good at project level. Considering that there were over 170 Ethiopian and 75 Belgian researchers involved in the partnership, the few instances of misunderstanding that were witnessed in between individual members should not overshadow the successful and exceptional productive partnership between the north and south.

Furthermore, as mentioned earlier, the project leaders were granted a high level of autonomy both related to substantive and financial issues. Again, this seems to have worked well in the sense that commitment of the project leaders has been adequate throughout the entire second phase.

2.4.2 Evaluation of the management by the partner university

Project leaders in Jimma meet rather frequently to discuss programme and project related issues, without these meetings being considered formal Steering Committees meetings.

Finance and administration have been the key domains of local management[22]. In particular in phase I, management at JU level had to face some particular challenges. While project implementation was often difficult to combine with PhD work, from an administrative point of view it was an advantage that most project leaders were PhD students. Their particular position implied that they were easier to convince to follow prevailing VLIR-UOS regulations than more independent senior staff who often have their own views and priorities. Nevertheless, the local PSU unit had to closely and continuously follow up financial and administrative issues.

Particularly in phase II, financial planning and procedures could rather routinely be implemented by all partners involved. Most importantly, the IUC programme managed to use the complete budget in an efficient way every year. Yearly, project leaders sit together and communicate and try to balance. When projects do not spend their budget, budgets can be reallocated. The evolution of project expenses is put on the programme website so that everybody is informed. VLIR-UOS has always been supportive to make required changes to the plan.

[22] Strategic management has been dealt with above under chapter 2.3.2 among others.

Whenever there is a delay (e.g. in releasing the budget), the university can pre-finance. But such a move is always communicated to VLIR-UOS first.

2.4.3 Evaluation of the management by the Flemish coordinating university

Thanks to the well performing PSU, very little problems occurred; the regulations as spelled out in the management manual were followed well. There were sometimes some discussions about service contracts but they were solved in a correct way. Overall, the University Office for International Cooperation considers the management in this programme of good quality without major problems that often occur in other IUC programmes; the programme coordinators play a very positive role in this regard.

Both financial, logistic and administrative procedures have always been clear and transparent. As compared to Phase I, budgets per project remained fixed over the entire programme, which made the planning and execution of the action plans much easier for the projects.

On a broader scale project and programme leaders would have preferred a higher level of (physical) presence and involvement of the University Office for International Cooperation at the operational level, including via field visits. It is felt that such visits and the face-to-face interaction that goes along with these visits, would have allowed a more efficient administrative and financial management, in particular in the early stages and/or when new project leaders come in, such as at the start of phase II. The same can actually be stated with regard to VLIR-UOS; while the VLIR-UOS staff did visit the programme, these visits were considered too short to allow an adequate acquaintance with the programme.

3. Conclusions and lessons learned

3.1 Conclusions and lessons learned at the level of the programme and its projects

The IUC Jimma University has been a success and constitutes in many ways an example of good university development cooperation. For an IUC programme to become a success as the IUC-JU programme, an important number of conditions is to be fulfilled. This has been the case in this programme that has virtually no major weakness. While – unavoidably –setbacks have been part of the implementation process, they were largely annihilated by a range of characteristics related to the context, key features of the programme and its implementation that – partially intentionally partially unintentionally – have adequately interfered with each other to produce an impressive range of results and impacts. Major contributing factors to the programme and projects performance include:

- *at the contextual level*:
    - while Ethiopia belongs to the countries with a low development index, its educational context and policies seem to be favourable for university cooperation; as such, JU has enjoyed from continued financial and institutional public support that, obviously, was insufficient to match JU's high ambition but nevertheless provided a foundation on which JU can base its partnership with partners from the North including VLIR-UOS;
    - the challenging development context in the Gilgel Gibe catchment area that, on the one hand, calls for well-conceived interventions that are grounded in high-level scientific research, but, on the other hand, includes a range of local institutions (government departments, development actors, …) that are in demand for scientific based directions and constitute an important potential for 'taking up' the results of the IUC-JU;
- *at the level of the programme characteristics:*
    - the unique attributes of the IUC programme that, from the start, opts for a long-term cooperation and a follow-up phase; this long-term focus that allowed a realistic gradual built up of the programme starting with laying down the basics first and a process of institutionalization of capacities at a realistic pace. The IUC via its combination of 'classic' academic with transversal projects also provides *combined* support to strengthen both research, educational, infrastructure and extension functions and as such can address all key functions needed for sustainable institutional growth;
    - the identity of Jimma University as an ambitious open university with a strong drive for growth in both quantitative and qualitative terms that has been present over the entire programme period; this ambition has been operationalized in well-thought strategic choices by the university leadership that also seems to be engendered in many senior staff members of the university;
    - the high level of stability at the level of both programme and project coordination and leadership in the North and the South has added much to the performance of the programme and its projects; in addition programme coordinators were well placed to defend the interests of the programme and disposed of the authority needed to steer the programme;
- *at the level of programme implementation:*
    - in retrospect, one can state that the initiative to start up the IUC with JU was taken at the right junction in time, i.e. not too early, but not too late either. The IUC came at a moment when within JU all preconditions for implementation of such a programme were present

whereby the specific configuration of the IUC implied that it had the means to address all major constraints that needed to be addressed at that moment. In other words, the IUC presented the ideal partnership and configuration for JU at that very moment. While presently JU is engaged in a broad range of international partnerships so that the cooperation with VLIR-UOS seems 'submerged' among a multitude of initiatives, key senior figures of JU continue to recall the substantial contribution the IUC has provided to the institutional growth of the university;

- the quality and continuity of programme coordination has constituted a key success factor; it assured efficient implementation and the 'institutional calm' for effective implementation, thereby finding a delicate balance between steering and giving room to project leaders to develop their initiatives along their own ideas and priorities. It also provided an attractive framework for talented project leaders to not only valorise their skills and knowledge but commit themselves beyond what might have expected. While internal networking and exchange have never been fully developed, project leaders got the freedom 'to do their thing' and, in many cases, contributed to extraordinary results;
- JU's strong orientation towards the community combined with the capacity of the IUC projects to produce highly relevant results is a major explanation for the impressive number of spin offs and immediate impacts that have become apparent already during IUC implementation stage. While JU has a strong tradition of being active in communities (among others via its long standing experience with community based education), the outreach potential created by some of the IUC projects has not yet fully materialized, among others because of the lack of experience with dealing with spin offs in the economic domain. So far JU (or at least its staff involved in the IUC) seems to struggle with combining its commitment towards the community including private sector actors to upscale the results of the IUC cooperation.

Lessons learned

- It is often said that 'success has many fathers'. While this might not always be true, the IUC-JU experience reveals that a complex initiative such as an IUC 'needs many fathers' to achieve a substantial level of success. In addition, these 'fathers' need to combine a broad range of qualities and skills that go beyond academic excellence.

- Financial resources are important but their importance should not be overestimated. Academicians at JU level (but also at the level of the Flemish universities) clearly stated that the distinctive effects of the IUC and their longer-term impacts have little to do with the financial resources that were availed. While academic excellence plays a crucial role, in the end it is the quality of the partnership and the 'commitment beyond' which created the major difference with (for instance) other university cooperation projects that dispose of more financial resources. Quite ironically, the fact that the IUC-JU has not been that financially attractive (compared to other university cooperation programmes where the involvement of academicals from the North is often financially well rewarded) has generated a kind of self-selection mechanism resulting in the participation of academicians that combined their scientific ambitions with a genuine sense for partnership and solidarity.

- The unique attributes of the IUC make the IUC to a form of university cooperation that presents a high potential, in particular for relatively young universities that combine sound institutional ambitions with major challenges.

3.2 Conclusions and lessons learned at the level of the management of the programme and the coordination between all parties

In our discussions at various levels, programme management has never come up as a major issue, which we consider as a major indicator for its effectiveness. Indeed, while the IUCs are characterized by rather heavy administrative and financial requirements, at least in phase II those seem not to have impacted negatively on the commitment of academicians involved, among others because of adequate support from the PSU. The fact that programme implementation went smoothly and in line with initial plans constituted obviously a positive factor in this regard.

Partners in the south and the north have well understood each other throughout the entire implementation cycle. The fact that there has been a high level of continuity at the level of programme management has undoubtedly played a positive role. Furthermore, JU shares fully the VLIR-UOS concerns for high quality and transparent management which implied that project leaders in Flanders and Ethiopia got unambiguous directions, whereby administrative and financial backstopping found a good balance between being overly rigid and demanding and overly lax. Problems inevitably occurred but could mostly be sorted out informally, whereby both programme coordinators showed the needed sensibility for administrative issues and supported the PSU when needed.

The steering mechanism foreseen by the IUC, with Steering Committees in the North and the South and Joint Steering Committees, has never functioned in the way it has been foreseen in the IUC setup. This has however not hampered genuine strategic steering and involvement of project partners as both programme coordinators have developed ‘alternative’ informal approaches that seem, overall, to have worked well and to be more in line with the availability of the project partners.

Lessons learned

- Long-term partnerships as the IUC provide the partners with enough time and opportunities to fine-tune administrative issues so that these do not overly complicate programme implementation and do not become a disincentive for programme involvement.

- Smooth programme implementation alleviates substantially the administrative burden of complex programmes such as IUCs.

- Compatibility of management cultures of the northern and southern partner universities maybe not a prerequisite but certainly a facilitator for coherent programme management.

- Adequate strategic steering of IUCs can be assured without the organization of regular steering committee meetings in case the IUC disposes of a strong and recognized leadership that is capable to strike the right balance between participation and top-down decision making.

4 Recommendations

4.1 Recommendations for the programme and projects[23]

- The programme has, rightly, accorded a priority to building academic capacity via support to an important number of PhD students that already during their PhD trajectory got substantial responsibilities with regard to project implementation. While the combination of PhD research with project implementation seem to have been less problematic than was apparently the case in Phase I, as the programme has undertaken considerable efforts to avoid that PhD students had to perform substantial additional tasks, fresh PhDs are so far granted little time before they are vested with important responsibilities, not only in the areas of education and research, but also with regard to organizational and human resources management. Contacts with (among others) MSc students have revealed that fresh PhDs are often ill prepared to assume this broad range of tasks. The recent set-up of a doctoral programme is certainly an important step to address this problem and, in addition, the challenge of keeping talented PhDs at JU, but is even so insufficient. The JU experience calls actually for additional support to the PhD graduates that allows them to acquire necessary additional competence, preferably with the support of experienced senior colleagues from both the north and the south.

- Within Jimma University various PhD trajectories are presently coexisting. At the upper end we find PhD scholars that enjoy a broad range of support facilities allowing them to implement their PhD research and related activities without major constraints; most of these scholars enjoy support from an international partner such as VLIR-UOS and the Flemish universities. At the lower end there are a substantial number of PhD students with support from the Ethiopian government, which is actually insufficient to conduct their research properly. While inequality cannot be entirely avoided, substantial differences in the PhD trajectories bring along a sense of frustration and feelings of injustice.
  The Flemish university cooperation actually disposes of resources to contribute to the solution of this problem, but so far these were not used to address this problem so that it was left to JU and the Ethiopian authorities to come up with solutions or, at least, mitigating measures. It is recommended that VLIR-UOS funded programmes play a role in these efforts in the future, for instance by foreseeing specific budgets that are meant to provide critical support for PhD scholars with local funding, e.g. to conduct expensive laboratory tests in JU laboratories set-up by the programme, or to foresee short visits (2-4 months) to Belgium to conduct delineated research under the guidance of a northern academician. This type of support should however be based on a clear research plan and terms of reference and connected with the dynamics and research focuses of the IUC programme and projects (e.g. embedded in centers of excellence) so that synergies and complementarity can be sought and meaningful joint research.

[23] Most of the recommendations under this section have a broad nature and, as such, are also meant for all stakeholders, whereas the specific recommendations directed at VLIR-UOS under 4.2 are also useful for JU and its colleges, departments, … that benefited from IUC support. As this is an end-of-programme evaluation, we have not formulated *specific* recommendations at the level of each project, but rather opted for recommendations that are meant to support envisaged follow-up activities at both programme and project level.

- Gender has so far constituted a major blind spot in the IUC programme and also in the phase out measures. Both JU and VLIR-UOS should therefor engage in a coordinated effort to mainstream gender in the recently initiated cooperation programmes. These efforts should go further than mainstreaming gender via the introduction of tools and instruments in project management. Experiences have learned that such tools and instruments might be needed but only become effective when the contribution to gender equality is explicitly put upfront as a key objective. It is recommended to engage in a pilot effort (both for VLIR-UOS and JU) along these lines, e.g. in the recently conceived network project, whereby it is important to define an adequate specific gender objective and further to conceive supporting tools, instruments and regulations that contextualize the large body of existing gender mainstreaming expertise and experience with the specific mandate of academic institutions in the areas of research, teaching and service to society as outlined in the network proposal.

- The procurement of consumables and reagents for this programme laboratories has constituted an issue of continued concern and affected heavily the performance of some of the IUC projects and of laboratory related research at large at the level of JU university. IUC management has reacted to this constraint by setting up its own procurement cell, disconnected from the JU procurement office. While this move can be understood, it does not constitute a sustainable solution. Considering that it is certainly not only JU that is confronted with this problem, it is recommended that JU, as one of the leading universities of the country, take an initiative to address this constraint in a coordinated manner involving other universities and research institutes (and possibly also private sector actors) to design and implement a joint programme. This effort has major chances to be appreciated by the international donor community that might be interested to provide the necessary support (in terms of funding and expertise). As VLIR-UOS has many programmes in the country, it might be approached to take part in such an initiative.

- A distinctive feature of this IUC programme and of JU at large, is the considerable amount of spin offs generated, which is entirely in line with the university's vision and mission. While JU has a strong tradition of 'being in the community' and acquired substantial expertise and experience with community work, its continued commitment has led to what can be called a proliferation of developmental activities at community level. While this can undeniably be called a success, it brings along particular challenges. The first challenge relates to clearly delineating the level of involvement of JU in development activities at the level of the community. While everybody states that JU has a distinct task that is complementary to that of other actors, the evidence encountered by the evaluation team reveals that this is interpreted in different ways by university staff. Rigidity is certainly not a wise guiding principle in this regard, but leaving everything to the discretion of the staff concerned might also become problematic.
  Second, if JU wants to live up consistently to its motto 'we are in the community', a more coherent approach should be developed to incorporate, from the very start of the design of new research, considerations with regard to the eventual application of the research results. Indeed, the distance between research results and their eventual application (at community level, as a public or commercial good) can be very long and full of constraints and requiring additional funding.
  Third, many spin offs contain a very high potential (somebody framed it as: "they are about to explode") that can also be commercially exploited and generate substantial income for the university. The partial evidence the evaluation team gained with this type of situations revealed that JU so far has little experience in dealing with such challenges and with conceiving institutional set-ups that are beneficial for the university but at the same time provide legitimate benefits for the other partners

involved. JU should invest in further expanding its expertise in this area (a.o. via its sustainability unit) and thereby can mobilize experience and expertise from northern counterpart universities but probably also from well-established NGOs that have experience with social profit ventures.

4.2 Recommendations for VLIR-UOS

- IUC programmes are an adequate and powerful instrument of university cooperation and as such should be continued as VILR-UOS' major cooperation instrument without substantial modification. Key attributes that should in all cases be maintained are the long-term focus of the cooperation and the mix of regular academic cooperation projects with transversal projects aimed at strengthening key university services.

- Referring to a similar recommendation under 4.1, VLIR-UOS should therefore engage in a coordinated effort to mainstream gender in its cooperation programmes and supporting tools, instruments and regulations. Gender mainstreaming should thereby address both the institutional dimensions of academic cooperation and the substance of the individual cooperation projects and the programme in its entirety, whereby contributing to gender equality is an explicit aim.

- VLIR-UOS disposes of a well elaborated project and programme management system, which is derived from practices in regular development cooperation programmes and, to some extent, has factored in the specific characteristics of international university cooperation. While all tools, instruments and requirements have a potential added value, their combined compulsory use is highly demanding, which substantially diminishes their usefulness in day-to-day implementation practice. As it stands now, the system combines an input oriented approach with a results oriented approach. The evaluation recommends that a consistent effort be undertaken to simplify the present system towards a genuine results based management.

- In line with the previous recommendation, already on the short term some improvements can be considered. Two issues stand out in this regard:
    - The use of both the logical framework and KRAs leads to confusion and unnecessary overlap. In combination with the next point, the evaluation recommends that the programme would only use the KRAs as its major monitoring and evaluation instrument.
    - The use of the KRAs should be combined with a more careful definition, ex ante, of the specific developmental and academic objectives. In line with the generic TOC of the IUC programme and projects, these objectives should imply a change in practices/policies that are within the sphere of influence of the programme and project. In addition, efforts should be undertaken to monitor the envisaged changes in a more systematic and methodologically rigid way than is presently the case.

- Finally, IUC programmes and projects, in particular in their second phase and where considered relevant, should, from the planning and budgeting phase onwards, address more explicitly the extension phase and for that purpose include a budget provision that can be used as seed capital for high potential outreach initiatives that build on IUC results and can generate substantial societal impact.

ANNEXES

Annex 1: Terms of Reference

Annex 2: Mission programme

Date	Activity
Saturday 25 March	Departure from Belgium (DVE)
Sunday 26 March	Arrival in Addis Ababa (DVE)
Sunday 27 March	Journey from Addis Ababa to Jimma
Sunday 27 March	Internal preparation meeting of the evaluation team
Sunday 27 March	Interview with Mr. Kora Tushune, programme coordinator South and Mr. Kassahun Eba, programme manager South
Monday 28 March	Interview with Zoonotic and Animal health Project leader, Professor. Tadele Tolosa
Monday 28 March	Visit to Mobile Veterinary Clinic
Monday 28 March	Visit to dairy farm
Tuesday 29 March	Interview with Environmental Health and Ecology project leader, Dr.. Seid Tiku
Tuesday 29 March	Interview with Infectious diseases and epidemiology project leader, Dr. Zeleke Mekonen
Tuesday 29 March	Visit to psycho-motoric stimulation center
Tuesday 29 March	Visit to waste management and composting site
Tuesday 29 March	Visit to Molecular Biology laboratory
Tuesday 29 March	Visit to drug quality testing laboratory
Wednesday 30 March	Interview with ICT and Library project leader, Mr. Girum Ketema
Wednesday 30 March	Interview with senior library staff
Wednesday 30 March	Visit to my-bacteriology laboratory
Thursday 1 April	Focus group discussion with PhD students currently in Jimma
Thursday 1 April	Interview with Soil Fertility project leader, Dr. Amsalu Nebiyou
Thursday 1 April	Visit to gully stabilization research site
Friday 2 April	Visit to Sokoru Tropical and infectious disease research center
Friday 2 April	Focus group discussion with students from the MSc Nutrition and the MSc Biostatistics
Friday 2 April	Debriefing with Mr. Kassahun Eba, programme manager South
Saturday 3 April	Journey from Jimma to Addis Ababa
Saturday 3 April	Interview with Child Health and Nutrition project leader, Professor. Tefera Belachew
Saturday 3 April	Debriefing with Mr. Kora Tushune, programme coordinator South
Saturday 3 April	Journey back to Belgium (DVE)
Sunday 4 April	Arrival in Brussels (DVE)

Wednesday 12 April	Interview with Socio-economic and statistical modelling project leader, Mr. Belay Brilie (GK)
Wednesday 17 May	Debriefing with Vliruos staff (DVE)

(°) All activities have been conducted jointly by both team members, unless indicated otherwise

Annex 3: List of people met

People interviewed in Belgium

- Peter De Lannoy, coordinator South programme, VLIR-UOS
- Wannes Verbeeck, programme officer South, VLIR-UOS
- Koen De Koster, programme officer South and M&E, VLIR-UOS
- Luc Duchateau, programme coordinator North and leader project 8 (UGent)
- Annick Verheylezoon,, ICOS UGent
- Geert Janssens, leader project 1 (UGent)
- Carl Lachat, leader project 2 (UGent)
- Olivier Honnay, leader project 3 (KULeuven)
- Bart van der Bruggen, in charge of waste management component, project 3 (KU Leuven)
- Nico Speybroeck, leader project 4 (UCL)
- Pascal Boeckx, leader project 5 (UGent)
- Rudy Gevaert, leader project 6 (UGent)
- Egbert De Smet, in charge of library component, project 6 (UAntwerpen)
- Paul Janssen, leader project 7 (UHasselt)

People interviewed in Ethiopia

- Kora Tushune, programme coordinator South and leader project 8 (JU)
- Wondesson Kassahun, programme manager (JU)
- Tadele Tolosa, leader project 1 (JU)
- Staff members of Mobile Veterinary Clinic, project 1 (JU)
- Prof. Tefera Telachew, leader project 2 (JU)
- Melkamu Berhane, staff psycho-motoric center, project 2 (JU)
- Maresha Haringo, staff psycho-motoric center, project 2 (JU)
- Seid Tiku, leader project 3 (JU)
- Dessagegn Dadi, collaborator of project 3 *(JU)*
- Members of cooperative dealing with waste recycling and composting, project 3
- Zeleke Mekonen, leader project 4 (JU)
- Gemada, in charge of my-bacteriology, laboratory project 4 (JU)
- Staff of drug quality laboratory, project 4 (JU)
- Staff of molecular biology laboratory, project 4 (JU)
- JImma Dinsa, senior technical assistant, Tropical and infectious Disease Research Centre in Sek-oru, project 4 (JU)
- Mebrat Kiya, senior technical assistant, Tropical and infectious Disease Research Centre in Sekoru, project 4 (JU)
- Estifanos Kebede, collaborator of project 4 (JU)
- Amsalu Nebiyu, leader project 5 (JU)
- Girum Ketema, leader project 6 (JU)
- Assaye Berhanu, library technologist, project 6 (JU)
- Tadele Mulat, ICT team leader library, project 6 (JU)
- Belay Birlie, leader project 7 (JU)
- Focus group discussion with 15 PhD candidates
- Focus group discussion with 10 MSc students in Biostatistics and Nutrition

Annex 4: List of major documents consulted

- CarpenterJulie.and Gashaw Kebede, Mid-term evaluation of the ongoing cooperation with Jimma University, Ethiopia, Final report, May 2011
- IUC Phase out Programme with Jimma University 2017-2018, Jimma University, Institutional University Cooperation Programme, Investigating the Impact of the Gilgel Gibe Dam, A multidisciplinary approach towards capacity building
- IUC-JU Action Plan 2014
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- IUC-JU Partner Programme with Jimma University, Phase II,
- IUC-CU, The management manual
- Jimma University, BSC-Strategic Plan (2011-2015), June 2011
- Jimma University, Balanced Score Card for Automation, Adapted from Jimma University Strategic Plan, July 2016
- Self-assessment reports for projects 1 till 8 included
- Self-assessment report, Programme Level North
- Self-assessment report, Programme Level South
- UNDP. 2016a. Human Development Index 2016: Human Development for Everyone. UNDP. P. 200 (Available at: http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf)
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- Vliruos, Annual Report 2014, VLIR-UOS IUC Programme with Jimma University
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- Vliruos, Network Partner Program (PP): Phase 1, University collaboration for better health in Ethiopia, September 2015
- Vliruos, University cooperation between Ethiopia and Flanders (Belgium)

ABOUT VLIR-UOS

VLIR-UOS supports partnerships between universities and university colleges in Flanders and the South that seek innovative responses to global and local challenges.

We fund cooperation projects between professors, researchers and teachers. In addition, we award scholarships to students and professionals in Flanders and the South. Lastly, we contribute to strengthening higher education in the South and internationalizing higher education in Flanders.

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More information: www.vliruos.be

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