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UniLúrio: Present and Future

**A feasibility study of academic
cooperation between Mozambique
and Norway**

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Preface

Universidade Lúrio (UniLúrio) and Oslo Metropolitan University (OsloMet) have signed an agreement to promote and facilitate increased cooperation between Mozambique and Norway in higher education and research. UniLúrio has, with financial support from the Royal Norwegian Embassy in Mozambique, commissioned OsloMet to carry out a feasibility study to assess premises and preconditions for meaningful cooperation and fruitful partnerships.

Two Portuguese-speaking researchers from OsloMet, Einar Braathen and Simon Pahle, were hired to conduct the study. Braathen is research professor at Norwegian Institute for Urban and Regional Research (NIBR, OsloMet). Pahle is associate professor in Development Studies at OsloMet. The two visited Mozambique from the 1st to the 17th of February, 2018, to collect data and speak with the rectorate and the staff of all six faculties of UniLúrio.

We want to render our gratitude to Rector, Professor Dr. Francisco Noa, Vice-rector, Professor Dr. Sónia Maciel, and all the faculty staff members of UniLúrio for their hospitality and active cooperation to make the feasibility study a pleasant experience for our researchers.

Our thanks also go to Kristin Sverdrup, director of OsloMet's Department of Research and Development, for being instrumental in bringing the cooperation and feasibility study about. Vibeke M. Viestad, senior adviser in the Department of Research and Development, played an effective administrative role in the preparations of the project.

Finally, we appreciate the active support from the Royal Norwegian Embassy, Maputo, and the personal engagement of Maren Nygård Basso and Marianne Angvik from its staff.

A draft report received very constructive comments from UniLúrio and the Embassy. However, the responsibility for the limitations and eventual errors in the report lies with the authors.

Oslo, December 2018

Geir Heierstad
Head of Research,
Norwegian Institute for Urban and Regional Research, OsloMet.

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Acronyms

Acronyms mentioned only once and explained in the document are not included here.

ADB	African Development Bank
CICA	Centre for research at the Faculty of Natural Sciences, UniLúrio
DIKU	Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (includes the institution formerly named SIU).
NIBR	Norwegian Institute for Urban and Regional Research, OsloMet
NMBU	Norwegian University of Life Sciences
NORHED	The Norwegian Programme for Capacity Development in Higher Education and Research for Development (operated by Norad)
NORPART	Norwegian Partnership Programme for Global Academic Cooperation (operated by DIKU)
OsloMet	Oslo Metropolitan University
RCN	Research Council of Norway (acronym in Norwegian: NFR)
SIU	Norwegian Center for International Cooperation in Education (from 2018 part of DIKU)
UEM	University of Eduardo Mondlane (Maputo)
UiA	University of Agder
UiB	University of Bergen
UiO	University of Oslo
UiS	University of Stavanger
UiT	University of Tromsø – The Arctic University of Norway
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UniLúrio	University of Lúrio (Universidade Lúrio)

Summary

Einar Braathen and Simon Pable

UniLúrio: Present and Future. A feasibility study of academic cooperation between Mozambique and Norway

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This feasibility study was commissioned by Universidade Lúrio (UniLúrio) with funding from the Royal Norwegian Embassy in Maputo. The mandate was to explore ‘which premises and preconditions that are present and necessary to fulfil meaningful cooperation and fruitful partnerships’ between Norway and Mozambique in higher education and academic research. The study should ‘survey the possibilities’ for such partnerships and also ‘explore the opportunities for interdisciplinary/multidisciplinary research, education and cooperation’ across the different campi of UniLúrio.

The study first features inventories of opportunity and challenges for each of the six faculties of UniLúrio – here, competence level of staff; study programs; major ongoing research; international partnerships; and key assets and opportunities are detailed. Based on the inventories and a mapping of available official financial means for collaboration – e.g., those of Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (DIKU) and the Research Council of Norway (RCN) in particular – the study goes on to envision some future possibilities, organised along three main approaches to collaboration (ad hoc/ad lib; decentred; and integral).

The study considers that there are some compelling reasons for why Norwegian academic institutions should pursue collaboration: UniLúrio is a ‘gatekeeper’ for fields of enquiry that sits at the forefront of contemporary research frontiers; collaboration holds the promise of offering genuinely novel, yet highly sought after,

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field opportunities and knowledge. Mozambique is and will remain a main partner in Norway's international development cooperation, which allows for the long-term perspective with the patience that mutually beneficial partnerships require.

For UniLúrio, collaboration would offer opportunities for lifting academic competence amongst its staff. For every faculty at UniLúrio there are, in terms of disciplinary orientation, at least two possible graduate education partners in Norway. Given UniLúrio's fields of enquiry, Norwegian counterparts are also likely to be highly competent and contribute substantially to research that may lift UniLúrio's academic status.

But challenges are also considerable. Notwithstanding some highly competent individual researchers, the current level of academic competence at UniLúrio is modest, with only one third of its staff having postgraduate degrees (master or above). Indeed, lifting the competence of middle strata academic staff should be the top priority in collaborations between UniLúrio and Norwegian academic institutions, preferably paired with collaborative field research.

The long-term route to achieve such an objective would be via the establishment of broad institutional partnerships capable of delivering joint 'sandwich master degrees'. These, however, require already existing academic and administrative competence, along with accreditation status, that UniLúrio does not possess.

Meanwhile, DIKU recently terminated full-degree-exchange stipends and now funds up to 12 months of exchange. Erasmus+ Global Mobility exchange stipends have the similar cap. In the short to medium term, Norwegian partners are likely to pursue ad hoc/ad lib partnerships for research, with associated master degree exchanges financed in part by DIKU and/or Erasmus, in part by UniLúrio itself possibly with the support of the Norwegian Embassy.

1 INTRODUCTION

The Oslo Metropolitan University (OsloMet) is a public higher education institution and a legal entity with official address in Oslo. Formerly named “Oslo and Akershus University College”, the Government of Norway made it a university from January 1, 2018. It is now the third largest university in Norway in terms of staff and students.

The Universidade Lúrio (UniLúrio) is a public higher education institution and a legal entity with official address in Nampula City, Marrere Campus. It was established by the Government of Mozambique in 2007 in order to provide higher education and research to three provinces in the Northern region of the country: Nampula, Cabo Delgado and Niassa

1.1 Background, mandate and conduct of the study

The OsloMet and UniLúrio have signed an agreement to “conduct a feasibility study that answers the questions of which premises and preconditions that are present and necessary, to fulfil meaningful cooperation and fruitful partnerships, in order to promote and facilitate increased cooperation in higher education and academic research between Norway and Mozambique”.

Furthermore, “UniLúrio would like to survey the possibilities for such partnerships between relevant Norwegian institutions and the UniLúrio. The feasibility study should look into challenges and opportunities in research and education” at each faculty and campus of UniLúrio:

- Faculty of Natural Sciences - UniLúrio Pemba (Cabo Delgado province)
- Faculty of Engineering - UniLúrio Pemba (Cabo Delgado province)
- Faculty of Agrarian Sciences - Campus of Unango (Niassa province);
- Faculty of Social Sciences and the Humanities - Campus Ilha de Moçambique (Nampula Province)
- Faculty of Health Sciences - Campus of Marrere Nampula (Nampula province).
- Faculty of Architecture and Physical Planning - Campus of Marrere Nampula (Nampula province).

Moreover, “the study should explore the opportunities for Interdisciplinary/multidisciplinary research, education and cooperation across the different campus”. The two OsloMet consultants stayed in Mozambique from the 1st to the 17th of February, 2018.

In addition to a talk with and debriefing to Rector, Professor Dr. Francisco Noa, the consultants visited all four campi and six faculties of UniLúrio. The consultants spent a major part of the visit in Cabo Delgado. The visits to the three other campi were briefer but were accompanied by Vice-rector, Professor Dr. Sónia Maciel, who added much value to the visits.¹

1.2 Opportunities for academic cooperation

There are three chief funding agencies in Norway involved in financing international education and research partnerships: *Norwegian Agency for Development Cooperation* (Norad) with its NORHED program, *Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education* (DIKU)² and the

¹ Please see Annex I: Itinerary of Field Visits and Persons Met

² DIKU (www.diku.no) was established in 2018 and integrated the Norwegian Center for International Cooperation in Education (SIU). SIU's

Research Council of Norway (RCN). In this report we have emphasized DIKU. Regarding RCN, there is a fierce competition for its funds, and a successful application must include scholars, from *both* the Norwegian, and the southern institutions, with a very strong track record (including in international publication). Thus, RCN offers opportunities primarily for already strong scholars at UniLúrio. Unless coupled with a larger institutional effort it might end up as personalist collaboration (and in extension, possible brain drain). Our study seeks to map opportunities and challenges relevant to DIKU funding — i.e., collaboration for broader institutional strengthening — in particular, lifting the academic competence of the middle strata faculty at UniLúrio.

While a key intention of the study is to solicit the interest of Norwegian institutions, it is also written for UniLúrio to provide an outsider view of institutional collaboration: what drives it, where possibilities are, and what it requires.

A feasibility study, such as the present, will not itself bring about partnership; it can be instrumental only to the extent that other vectors play its part. Our experience is that institutional collaboration and partnership can emerge only where there is both *a very strong personal interest* from at least a couple of individual academics, and sufficient *institutional embeddedness* (i.e., leaders willing to allow these individuals set aside time, ensuring that administrative support is offered, etc.). The funding modalities of DIKU amplify the importance of the latter: It offers no remuneration for working time spent by faculty staff on collaboration. In other words: collaboration relies on in-kind contribution from the partner university (which detracts from teaching/supervision responsibilities at home). Alternatively, the interested individual must forego parts of his/her allotted research time.

website kept being the official site for international cooperation in education into 2019: <https://www.siu.no/eng>

2 THE BASES OF FEASIBILITY

2.1 Inventories of opportunities and challenges

UniLúrio must internalize the fact that the pursuit of partnerships through DIKU is very unlike embassy funding. In DIKU-funded institutional collaboration, the Norwegian partner is responsible for application, accountability, reporting — this requires considerable efforts. Thus, the Norwegian partner’s question will invariably be: “what and how much is it in this for us”?

This turns the logic of pursuing funds on its head: it is not the needs and shortfalls at the developing country institution that are likely to attract funds, but its strengths and opportunities.

While still committed to the promotion of development in higher education and research, the overall quest in Norwegian aid-for-higher-education policy nowadays is to ensure opportunities for Norwegian scholars and students — this is a departure from yesteryear’s collaboration schemes that were much more aid-oriented (with a strong focus on the needs of the developing country partner).

Crudely stated: institutional collaboration of the DIKU kind requires a *win-win* and *quid-pro-quo* way of thinking, and a ‘transactionist’ perspective: Very simplified we might say that UniLúrio may get degrees and research competence in exchange for facilitating field access/data collection opportunities for the Norwegian partner’s students and staff.

2.2 The means/modalities of collaboration

The financial means/modalities available through DIKU include funding towards:

- joint events
- individual mobility stipends, both for master students and faculty
- PhD fellowship stipends
- joint course development and teaching
- joint master degrees, with double accreditation

Such items are wrapped and combined within either *small projects* (1-2 year pilot/exploratory projects, typically in the range of US\$50,000 to 100,000); or *big projects* (5 years, typically in the range of US\$400,000 to 700,000).

Importantly, DIKU does not fund remuneration for working time spent by Norwegian faculty staff on collaboration. Meanwhile, it is liberal in funding of stipend, cost of joint activities (including travels/diems), and local administrative and research assistance. The latter implies ample funds for remuneration of the work spent by UniLúrio staff in institutional collaboration. DIKU funds material/infrastructure only if intrinsically linked to the collaborative project and only of limited extent.

To date, two big projects involving Norwegian and Mozambican partners (Eduardo Mondlane University) have won grants from the DIKU NORPART program. Both are in the field of health informatics:

- ‘Extending Health Information Capacity’ (University of Oslo)
- ‘MAP – Mozambique/Norway Accessibility Partnership’ (OsloMet).³

³ Please see projects here: <https://espresso.siu.no/projects/?1>

2.3 Approaches to collaboration

When we, in the last part of the study, imagine the sort of approaches one could follow in building partnership, we distinguish between three main approaches:

(1) *Ad hoc/ad lib ('individual-to-individual')*: The least ambitious approach and natural point of departure. Typically, this would *not* require any deep institutional embeddedness – a mere standard cooperation agreement on university level would suffice – and would be of a scope that does *not* require DIKU application and funding (it could, however, be paired with some minor event funding from DIKU). The most likely means would be individual exchanges/stipends toward full master degrees funded through a bundling of part-degree stipends from *Erasmus+Global* mobility, UniLúrio, African Development Bank, or even the Norwegian Embassy.

(2) *Decentered ('faculty-to-faculty')*: This would have to be based on faculty-to-faculty agreements, and institutional embeddedness with administrative support, etc. It would involve different activities – events, student exchanges, collaborative research and staff mobility – wrapped within a larger ‘package’ designated in terms of prioritized fields of enquiry. It could very well lead to a joint degree with double accreditation. Big project funding from DIKU would eventually be necessary.

(3) *Integral (inter-disciplinary; inter-faculty; trilateral)*: The integral approach would involve a partnership that engages multiple faculties and possibly more than one Norwegian university partner. It would require deep institutional embeddedness and commitment, with extensive administrative support. Activities would include joint events, student exchanges, collaborative research and staff mobility and development of a joint degree – all wrapped within a larger ‘package’ designated in terms of prioritized fields of enquiry that may cross-cut individual faculties and disciplines. Even if the funding was to be readily available, the complexity of integral arrangements can only be managed if building on previous collaboration of the ad hoc/ad lib kind and faculty-to-faculty collaboration. In order to succeed, partners would need at least two successive big project grants from DIKU (extending across 10 years).

3 UNILÚRIO: OPPORTUNITIES AND CHALLENGES

3.1 General

UniLúrio was established in 2007 to provide higher education and undertake research in Northern regions (those north of Lurio river, which are also the least developed regions of Mozambique). At present its academic scope is limited.⁴

UniLúrio's *mission* is to 'educate and raise a new generation of competent professionals committed to development, science and the well-being of local communities', and its *vision* is to 'deliver higher education of excellence, quality, competitiveness and international recognition'.

UniLúrio comprises 4 campi, each with separate faculties:

- (i) Nampula - Faculty of Health Sciences, and Faculty of Architecture and Physical Planning; UniLúrio Business School (outside of main campus)
- (ii) Pemba (Cabo Delgado Province) - Faculty of Natural Sciences, and Faculty of Engineering
- (iii) Unango (Niassa Province) - Faculty of Agrarian Sciences
- (iv) Ilha de Moçambique (Nampula Province) - Faculty of Social Sciences and Humanities

⁴ Notably, UniLúrio offers few studies in social sciences and humanities; it does not offer vocational training for some major professions, such as teaching, which is left to specialised colleges.

As will become apparent later, academic designations are aligned with the opportunities and development challenges of the sub-region in which the respective campi are located.

The downsides of being an infant university are many. It may also have some advantages: UniLúrio is built-to-fit with the Bologna standards; and as a not-yet institutionally consolidated university, it may be more amenable and inclined to adjust to and engage with international initiatives. Meanwhile, its actual carrying capacity will be limited.

Overall opportunities

Ilha de Moçambique: The single biggest asset of UniLúrio remains quite underexploited - namely, the Ilha de Mozambique with *Fort São Sebastião* – a spectacular UNESCO world heritage site which, amongst many other treasures, includes the *Chapel of Nossa Senhora de Baluarte* (1522), the oldest European building in the southern hemisphere. From 2014 on, the Fort is under the stewardship of UniLúrio. One interviewee described it as ‘bigger than Mozambique itself’ (in terms of its world historic and cultural significance) – Ilha and the fort is surely one of the world’s most important edifices and heritages of colonialism and the slave trade.

The challenges and opportunities associated with it is of a magnitude far beyond the scope of even the most ambitious DIKU financed collaboration program. The current strategy of the UniLúrio rectorate is to collaborate with its partners in Portugal to apply to EU for the extensive funds required for conservation/rehabilitation, and begin the realization of its potential as both an academic, cultural and tourism powerhouse. Given the finances required and the complex bureaucratic and political sensitivity involved, proper rehabilitation and realization will probably require financing and cooperation on state-to-state scale alongside involvement of multilateral institution.

Still, potential Norwegian partners may want to consider how a partnership may be part of/contribute towards the development of Ilha and the Fortress. Particularly relevant fields include architecture, heritage conservation and culture, tourism, and urban/regional geography, and development studies.

Access to fields of enquiry: UniLúrio is a ‘gatekeeper’ for fields of enquiry that sits at the forefront of contemporary research

frontiers – particularly in the fields of environment, resource extraction and sustainable livelihoods. Yet, these themes have been subject to remarkably little study in UniLúrio’s surroundings. Therefore, collaboration holds the promise of offering genuinely novel, yet highly sought after, field opportunities and knowledge production.⁵

Given UniLúrio’s surroundings and context – being in the poorest region of Mozambique, yet endowed with abundant natural resource and great cultural and historical heritage – collaboration in education and research are likely to be rewarded with tangible positive effects.

In 2017, Norway and Mozambique celebrated 40 years of partnership for development. For both strategic and traditional humanitarian reasons, Mozambique remains a ‘partner country’ in Norway’s international development cooperation, and it is likely to retain this position for many years to come (even if it is undetermined what the category ‘partner country’ will entail in terms of aid volumes). At any rate, chances are slim that collaboration with UniLúrio, once established, will fall victim to the vagaries and trend shifts in the development industry anytime soon. This allows for the long-term perspective, the patience and security that proper and mutually beneficial partnerships in education and research require.

Overall Challenges

Competence level of academic staff. As we detail below, a large majority of UniLúrio faculty members have no more than a *licenciatura* (bachelor) degree. The ambition of the rectorate is to lift the share of faculty with at least master and doctorate degrees to respectively 80per cent and 20per cent by the year 2025.

Attracting and retaining competent scholars: Across all campi, a serious problem is low remuneration for faculty. Generally, a teacher with a bachelor degree earns some \$350/month; with a master’s degree \$500/month; with a PhD at least \$750/month. Salary levels are regulated by law. Thus, even if lavish external funding were available, this would not solve the problem. The few

⁵ Details on the specific fields of enquiry are given in our summaries of each faculty in the next sections of this chapter.

talents that nevertheless emerge and boost competence by prestigious master degrees or PhDs (typically from abroad) are often lured to bigger universities in the region or to the private sector. UniLúrio's number of foreign lecturers fell from 86 in 2016 to 26 in 2017 (primarily because of disadvantageous currency exchange rates that served to diminish salaries further). Together with generally low middle strata competence, UniLúrio's status remains low, in turn failing to attract good students. Altogether, this is a very real threat to viability: If UniLúrio continues to fail in attracting talented students and staff, while not lifting its *middle strata* competence, it may get stuck in a self-perpetuating dynamic as a resource poor university with a low academic standing.

Access to relevant research frontiers: The main bottleneck here is language. The present reliance on Portugal (and to some extent Brazil) involves a very real risk of locking in UniLúrio within the confines of Lusophone academia.

Limited inter-faculty/inter-disciplinary collaboration: The model whereby each campus has its own faculty/ies might foster specialization by way of spatial concentration of 'disciplinarians'. However, it is not conducive to inter-disciplinary education and research. This problem is amplified by the considerable distances and cost of travel between the different campi.

The only easily manageable distance between campi is the two-hour drive between Nampula and Ilha de Moçambique. Pemba to Nampula and Ilha is also manageable by road but takes four to six hours. Pemba to Unango — the two campi between which inter-disciplinary collaboration is easiest to envision — requires either prohibitively expensive flights (via Nampula) or a two days drive. In the rainy season it is hardly possible to travel between the two by road at all.

It is no surprise then that there is little if any collaboration between campi — despite many possibilities identified by faculty members themselves. This squanders synergy opportunities; and might produce knowledge with highly consequential 'blind spots' (i.e., applied sciences with limited or no actual applicability).

Improving collaboration across campi and disciplines is becoming a top priority for UniLúrio. A first major move towards university-wide collaboration is the flagship program *One Student, One Family*

that crosscuts all faculties. This is a mandatory, one-semester course that all students, from all disciplines, must complete before earning a degree. Its emphasis is on integrating community awareness and community work in study programs. While activities are somewhat variable with discipline, all must do some form of fieldwork with communities, doing interviews, collecting data and/or material, etc. The envisioned outcome is increasing contact between students, teachers and the local community, thus increasing students' sensitive towards traditional knowledge, experiences and needs.

General financing: It goes without saying that a university in the poorest region of one of the world's poorest countries faces financial constraints. In addition, UniLúrio is, for the last few years, plagued by dramatic currency exchange rate fluctuations. However, a recent and sizeable grant from the African Development Bank (ADB) is likely to ease the most acute financial problems.

Infrastructure challenges. Since such challenges fall outside the scope of DIKU funding we will not detail and discuss these at any length here. However, we do mention some critical challenges under each campus below. Again, we presume that the ADB grant may help overcome many of the most acute infrastructural problems and may cover equipment to laboratories, libraries and classrooms.

3.2 UniLúrio Pemba

Location and Surroundings

The campus is located in Pemba, the capital of Cabo Delgado which is the province furthest Northeast in Mozambique. It borders with Tanzania. In the Northern part of Cabo Delgado, in the Palma area, there has since 2013 been a fast development of the petroleum industry based on the natural gas reserves offshore. Pemba is the only well-equipped port in the province, and is connected with the even more modern port Nacalá by a national road; therefore Pemba is also the base center for the petroleum activities. There have also been other pressures on the natural resources and local communities in the recent years – Chinese

entrepreneurs connected with building projects and (often illegal, but tolerated) logging, as well as foreign investors in the hotel and tourism industry.

Just north of Pemba begins the *Quirimbas National Park* – including the Quirimbas archipelago – within which much UniLúrio research is conducted. The park is of crucial national importance in terms of conserving marine and terrestrial resources and wildlife. The traditional livelihoods of people living within the park boundaries, as well as emerging corporate activities (the oil/gas extraction, in particular), are not easy to reconcile with the imperative of conservation and sustainable utilization.

The Faculty of Natural Sciences was established in 2008/9; the Faculty of Engineering in 2012/13.

Table 3.1: *Overview of UniLúrio Pemba*

Faculties	Departments	Teachers w/ postgrad. degrees / Total staff	Taught degrees (students/year)
Natural Sciences	Adm.staff:15. Departments: 1)Maritime ecology, 2)Terrestrial ecology, 3)Botanics	14/37= 38 per cent	270 students: Bachelor: 220 (55/yr) Master :50
Engineering	Adm./technical staff:17 Departments: 1) Civil engineering, 2) Mechanical engineering, 3)Geological engineering, 4) Informatics	7/47= 21 per cent	440 students, divided on four bachelor degrees (110/yr)

Common for the two faculties - staff and student programs: English classes are offered to the students during two of the eight semesters of the Bachelor. The students must write a utility-oriented bachelor thesis based on fieldwork during the last semester(s). The university teachers receive a two week intensive training from the University

of Pedagogics department in Cabo Delgado – this course is mandatory for all teachers.

3.2.1 Faculty of Natural Sciences

The staff. In the staff, 14 of 37 teachers (38per cent) have a master. Only one (a Portuguese citizen) has a PhD. No teachers are currently in a PhD program. None of the teachers with a bachelor are currently in a master's program, but many teachers with a master's degree are motivated to embark on a PhD program abroad. The faculty has a unit for 'laboratory services'.

Study programs. The departments are jointly responsible for the joint four-year bachelor degree. The faculty directors are responsible for the master's programmes.

Research activities.

At this faculty there is an impressive range and scale of research activities. The depth of resources available and institutional commitment towards these are uncertain and variable, however. Some research projects remain at the stage of intention/planning rather than execution. Master (and sometimes bachelor) students integrate field- and thesis work.

Examples of research & development under implementation:

- The AMA/OIKOS project. Community-based monitoring of fishery as well as sea farming around the corals. With communities in Vamizi and Palma, in partnership with a NGO based in the province, AMA (The Association for the Environment) and the Italian NGO, OIKOS. Involves all departments and produced 7-8 master's theses. It also involved an informatics engineering student who developed an app for the communities to identify fish species and stocks.
- FINPRINT. A remote underwater video program, to monitor reproduction of various species of fish
- Shark research-project. Attach a GPS to sharks to monitor their movements. Funded by Raw Food Foundation (USA)

- SEACAPS. Promotes resilient storm-water and sanitation infrastructure in Pemba. USAID-funded, to be connected with a planned but yet unfunded “Green neighbourhood”-project of the municipality.

Examples of planned research & development activities:

- Bee-keeping project. Six villages and 70 families are involved.
- Green schools (*Escola mais verde*) (USAID funded). Gardening activities at local schools.
- Green Lúrio. It develops a botanical garden and green spaces at the campus in Pemba.
- Wild dog-project. It works to avoid attacks from hyenas etc on herds of goats etc.

Opportunities, assets. The Faculty of Natural Sciences manages, in spite of low salaries compared to the high local costs of living, to retain some highly competent scholars with the help of its institutional innovation: CICA. This is a semi-independent research center that takes consultancy assignments, lavishly remunerated, thus adding substantial income to involved researchers, the Faculty and the University. The money received by the clients and partners vary a lot. 15-20 per cent is paid in overhead shared between the faculty and the departments. 80-85 per cent is paid out to the involved researchers and students to cover travel, food and accommodation expenses as well as salaries.

Pemba is at a great advantage in that its education and research relates most directly to the field of cross-disciplinary development studies. This is advantageous for two reasons: Development studies institutes have a keen interest in Pemba’s fields of enquiry – and may therefore attract both researchers and students for fieldwork. Secondly, the master programs of Norwegian development studies are all taught in English. Furthermore, contrary to its institutional set-up/denomination, Pemba is also the one campus where there are ongoing projects with strong inter-disciplinary characteristics – again an advantage vis-à-vis development studies. Major relevant fields of enquiry at Pemba illustrating such matches include:

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- Conflicts between *coastal livelihoods* and stressed marine ecology/resources; ways toward reconciling the two
 - Community-based management of marine resources; including the use of universal design ICT available to local fishing communities, for the monitoring of fish stocks
 - Resource conflicts and ecological stress related to oil/gas extraction
 - Opportunities for and challenges of eco-tourism

Opportunities extend beyond development studies. Discounting general social sciences, there are at least six master's degree programs taught at Norwegian universities in English⁶ of direct relevance to the nature-society relationships that the Faculty of Natural Sciences faculty engages with. Most of these are interdisciplinary degrees inclined towards the social sciences; in the long run, the Faculty of Natural Sciences may want to find a way around the constraints of its own designation and disciplinary commitments (i.e., 'natural sciences'). A designation such as 'environmental sciences' would probably ease constraints, and prove more inviting to international collaboration.

Relations with other campuses/faculties of UniLúrio. Both faculties in Pemba think they have more to offer the other campuses and faculties, especially Nampula and Unango, than vice versa. The courses on the Ilha campus (Local development and International Relations, and Tourism) are considered relevant particularly for the natural science fields of enquiry.

Foreign relations. There are some ongoing collaborations – largely individualistic and/or unsuccessful – with Portuguese universities, such as Aveiro University. Much more significant are the many and lucrative consultancies for companies in the oil/gas complex. As of 2018, a partnership of UniLúrio, UniZambeze (public university for the central regions), the Higher Polytechnic Institute of Manica, the University of Lisboa and the Gorongosa National Park, offers a MSc degree program in Conservation Biology. The program includes 12 fellowships to Mozambicans, is taught within the park boundaries providing on-site unique opportunities for

⁶ See Annex III

students to get acquainted with the various ecological systems in the park. Students are taught by highly qualified scientists from Poland, UK, Swaziland, South Africa and USA.

Challenges, needs. The problem of poor salaries (and the related problem of attracting and retaining top scholars) is reinforced by the very high cost of living in this region. The use of CICA works as a stop-gap measure but is fraught with difficulties of its own: Researchers spend substantial amounts of time on collecting data and doing analysis that is embargoed – i.e., may *not* be disclosed and used in independent or degree-related research, feature in publications, etc. Moreover, it may create problems of integrity: Some of Pemba’s senior researchers are deeply involved in consultancy research and advisory roles on the controversial Palma oil/gas complex. These contracts may create ties and loyalties to prevent critical and independent research on the very same complex. Thus, in the CICA model, UniLúrio may face an unfortunate trade-off between retaining competent staff (by providing additional remuneration) on the one hand, and academic integrity on the other.

3.2.2 Faculty of Engineering

The Staff. In the staff, only seven of 47 teachers have a master or more. Two of the teachers are on a combined Master and PhD programme, five more are in other master’s programmes abroad. The plan is that by 2022 all teachers shall hold a master’s degree, by 2025 some of them a PhD degree. From 2018 and onwards, one or two teachers in each department shall go abroad every year to different universities to take a master’s degree.

Study programs. Each of the four departments offer their own bachelor’s degree. There is a big demand for the engineering bachelor’s courses – thus the high number of students (440). The facilities offer high standards, and the laboratories are well equipped with computers etc. There is a cooperation with private sector companies to provide internships for students. Since the graduates get good jobs with a bachelor’s degree, there is no push to set up a master’s program.

Research activities. With insufficient conditions to start up a master’s program, there are no genuine research activities taking place at

this faculty. However, there is much outreach/development work done by teachers and students, the latter in connection with the work for the bachelor's thesis, in collaboration with communities and local governments.

Opportunities and assets. The main opportunities for this faculty lie in the fast economic development connected with the petroleum and other extractive industries. However, there are also important lines of research connected with these economic opportunities.

Relations with other campuses/faculties of UniLúrio. There is surprisingly little cooperation between the two faculties situated in Pemba (a noteworthy exception is the app developed by an informatics student for a community fishery management project). There is no report of collaboration with the Faculty of Architecture and Physical Planning in Nampula.

Foreign relations. The teachers' master degrees have so far been offered in collaboration with the University of Coimbra, from where teachers come down to Pemba for intensive lecturing. At present, two lecturers are finishing their Master and PhD programs at Ehime University, Japan.

Needs and challenges. The faculty has an extremely low percentage of formally qualified staff – only 21 per cent possess a master's degree. At the same time their teaching duties are immense with close to 500 students attending their bachelor courses; thus the faculty can afford very few of its teachers to go abroad for two years to take a master's.

3.3 UniLúrio Nampula

Location and Surrounds. Nampula is the capital of the Nampula province and the third biggest city of Mozambique (some 5 million inhabitants). It is an important hub for business in and transport throughout Northern Mozambique. The province has a rich cultural and religious make-up and heritage, while also boasting numerous investments in infrastructures and mining sector, providing challenges to the management of the province and Nampula city.

Table 3.2: *Overview of UniLúrio Nampula*

Faculties	Departments	Teachers w/ postgrad. degrees / Total staff	Taught degrees (students/year)
Architecture and Physical Planning	1)Architecture 2)Physical Planning	5/31= 16 per cent	Bachelor's: Architecture and physical planning (from2010). 224 students. Bachelor's: Urbanism and soil management. (From 2017). 71 students. Master's: Territorial development and urban management (from 2017). 44 students. Master's: Planning and management of informal settlements. 27 students.
Health Sciences	1) General medicine 2) Education in Health Sciences 3) Dental medicine 4) Pharmacology 5) Nutrition 6) Optometry 7) Nursing 8) Health management	65/163 = 40per cent	Bachelor's for each of the departments Master in Nutritional Security Master in Education in Health Sciences Master in Tropical Medicine and International Health

Alongside the two faculties, Nampula campus is home to the Rectorate and central administration, as well as to a new Business School (not considered in this study).

The campus faces many of the same challenges witnessed at other campi: While within the city perimeters, it is set in a somewhat remote and rural location and access roads are of very poor quality. At the time of our visit, parts of the campus were in a temporary lack of piped water. Yet, it is our impression that this is, by far, the strongest campus of UniLúrio: It has a number of good scholars; facilities and administration seems well developed, and there is some experience with meaningful international collaboration.

3.3.1 Faculty of Architecture and Physical planning

The faculty was established in 2009/2010.

Staff. In the staff, only five of 31 teachers (16 per cent) have a master's degree. There is none with a PhD, but one person is in a PhD programme in Brazil. 26 of the teachers have a bachelor's degree in architecture. There are two historians (one from Brazil) and two geographers (one from Japan). 25 are male. At the time being, two staff members are taking a master's degree in Portugal; one is in a PhD program in Brazil, and three or four are ready to be included in a PhD program in Portugal.

Study programs. The faculty graduated its first 9 bachelor candidates in 2015. From the academic year 2018 every intake for each of the two bachelor's programs are 30. Since 2016, the faculty has initiated master's programs in close collaboration with the University of Coimbra, which deploys teachers who come to Nampula for 14 days and provide intensive courses. A third master's degree in 'Heritage and development' is to start up in 2018.

Research activities. Every department or teaching course has defined its own 'line of research'. Moreover, there are two research centres with a dedicated researcher/coordinator:

- First, Centre for Studies and Services in Architecture and Physical Planning, CESAP (Centro de Estudos e Serviços de Arquitetura e Planeamento Físico).
- Second, Centre for the Studies and Documentation of Ilha de Moçambique, CEDIM (Centro de Estudos e Documentação da Ilha de Moçambique). It is led by a young Mozambican historian and employs also a public relations officer. In addition to building a historical archive, CEDIM is very much involved in the new master program in 'Heritage and Development' and with the challenges connected to the current upgrading and development of the Ilha.

Opportunities, assets.

- The faculty has a very young and dynamic staff. In spite of a predominantly bachelor's degree level among its teachers, the faculty manages to graduate architects and physical and urban planners by an increasing number every year.
- The faculty has been able to design and start up three master's programs.
- Most importantly: The faculty takes an active responsibility for the conservation/rehabilitation and management of the world heritage of Ilha de Moçambique.

In sum, the Faculty of Architecture and Physical Planning should be an attractive partner for academic institutions in Norway/Europe.

Relations with other campuses/faculties. The Faculty has to adjust its bachelor's and master's programs in architecture and planning to those already long established at the University of Eduardo Mondlane in Maputo. Faculty of Architecture and Physical Planning in Nampula cooperates with the Faculty of Social Sciences and Humanities at Ilha de Moçambique to carry out the new Master's course program, "Heritage and Development". CEDIM cooperates with a similar centre, CECROI, at the Faculty of Social Sciences and Humanities in its research and documentation work, as well as in the efforts to implement the conservation of the fortress at Ilha de Moçambique in order to make it a future university campus.

Foreign relations. The faculty has, since it was established in 2009/2010, collaborated closely with University of Coimbra, Portugal, who deploys teachers to Nampula for short and intensive teaching in key subjects. UniLúrio pays much of the expenses. There have also been some research workshops organized with Coimbra – the most recent one discussed low cost strategies for the upgrading and conservation of Ilha de Moçambique. In the past there was a strong partnership with Sapienza University in Italy. Finally, an "Erasmus+" partnership with Belgium is underway.

Needs and challenges

First of all, with only 16 per cent of the teachers holding a master's degree, staff development is the main priority. Although Portuguese universities do provide useful partnerships in capacity building, there is a big need to diversify the upgrading of the staff regarding disciplines (e.g. towards social sciences, humanities as well as engineering), foreign language skills (e.g. English) and countries with whom to collaborate. Several Norwegian universities may offer relevant partnerships with the Faculty of Architecture and Physical Planning.

Second, not only the PhDs but also the master degrees acquired by the staff in the coming years need to build their capacity particularly in applied research and make them relevant for the development tasks in the regions and cities of Mozambique. This is necessary in order to provide high quality supervision to their students when they do *estagios* (internships) and thesis writing.

Third, much of the future of the Faculty is connected with the fate of Ilha de Moçambique. It is urgent to intervene in order to stop further degradation of the world heritage and contribute to the good management of the island and its urban spaces. A critical issue is to establish good working relationships between the Faculty of Architecture and Physical Planning in Nampula and the Faculty of Social Sciences and Humanities in Ilha de Moçambique, as well as with the Faculty of Engineering in Pemba.

3.3.2 Faculty of Health Sciences

Departments and staff. The faculty is comprised of the following departments

- General Medicine
- Education in Health Science
- Dental Medicine
- Pharmacology
- Nutrition
- Optometry

- Nursing
- Health Management and Administration

Study programs. Generally speaking, the student population at this faculty is many times higher than at the others. Each department offers its own *licenciatura* (in keeping with the above listed disciplines). In addition, there is a nascent *licenciatura* in Clinical Psychology. Presently, there are three master programs: *Nutritional Security; Tropical Medicine and International Health;* and *Education in Health Sciences.*

There are a handful of quite new and well-equipped laboratories (medicine/pharmacology; chemical/nutrition; anatomy; nurses training, etc.

Research activity. The faculty conducts research across all fields; during our visit, laboratory studies of foodstuff properties/food safety (owned by CIEL, an associated research center) as well as properties/safety of pharmaceuticals were highlighted.

Opportunities, assets. Given the current strong emphasis on health in international aid, the faculty might attract Norwegian researcher interest, and perhaps postgraduate fieldworkers. However, the scope is constrained by the nature of professional studies, language barriers (see below). Clinical psychology is an entirely new field in this part of Mozambique; as the populace of the Northern regions were often brutally victimized during the civil war, PTSD and other mental disorders are prevalent and goes largely untreated (other than through prescription of drugs or traditional medicine). The opening of this research frontier might attract scholars in research psychology from Norway.

Needs and challenges: Unfortunately, the nature of education and research in professional studies, in both countries, limits collaboration opportunities. Medicine, dentistry, and pharmacology are unlikely fields of collaborative research for various reasons: there are no significant education/research environments in tropical medicine in Norway and professional training in these fields does not involve student apprenticeship abroad. In nursing, where apprenticeships abroad may occur, the language barriers are unsurmountable. There are no master's

degrees taught in English in Norway, in any of the above mentioned fields, and thus no opportunity for student mobility to Norway. The Cognitive Neuroscience track at UiO's master program in Research Psychology is taught in English but admission might be granted to extraordinarily talented students only. Nevertheless, there are ample opportunities for exchange in Health Administration and Management/International Health with six relevant master's programs in Norway taught in English, across four universities.⁷

3.4 UniLúrio Ilha de Moçambique

3.4.1 Faculty of Social Sciences and Humanities

Location and Surroundings. The campus is set in the middle of the World Heritage town of Ilha de Moçambique and just a few hundred meters from the entrance to the *Fort São Sebastião*. The faculty was established as recently as in 2017, and it now has 19 teachers and some 220 students.

Table 3.3: *Overview of UniLúrio Ilha de Moçambique*

Faculty	Departments (academic staff)	Teachers w/ postgrad. degrees / Total staff	Taught degrees (students/year)
Social Sciences and Humanities	1) International Relations and Local Development 2) Tourism and hotel management	7/19 (29 per cent)	Bachelor degrees: 1) Local development and international relations 2) Tourism and hotel management

Staff. In the staff, 7 of 19 teachers (37per cent) have competence at the level of a master's degree or higher. Three hold a PhD degree. The dean has the ambition of ensuring, within the next few years, that all teachers have at least a master's degree.

⁷ See Annex III.

Study programs. The two bachelor programs offer six courses per semester, 12 courses per year of which some are common to both programs. Programs commenced in February 2017, with 120 students. In 2018 there are 224 students, and the student population will increase to 360 within the next two years; this seems somewhat ambitious given the campus facilities and the number and competence level of staff. Programs are equally ambitious in the terms of the academic scope of taught *disciplinas* (subjects/modules) including: Anthropology; sociology; history; globalization; geopolitics; social development; public policy and economy; geography; communication and media; hotel and tourism management; cultural heritage; numerous auxiliary subjects (statistics, informatics, basic micro-economy); and languages (basic English, French, Mandarin Chinese).

The program *International Relations and Local Development* focuses on how transnational actors, relations and processes (particularly in the field of economics) affect development opportunities.

In the *Tourism* program, internship is compulsory and students are responsible for finding their own placements; but they may draw on international network of internship vacancies, including in several countries in Europe. In the wake of the recent grant from the African Development Bank, the rectorate and the faculty contemplate opening a gastronomy, culture and hospitality training inside the Fortress, along with a gastronomy facility in the poorer parts (Macuti) of the island.

Research activities. Notably, there is an ongoing two-year collaboration project with Zurich University, with one professor from each side and 12 local students as auxiliary fieldworkers, focusing on mineral resource extraction and effects on local communities and households. Cases involved include graphite extraction in Cabo Delgado; and heavy sands in Largo/Moma. The ambition is to establish a baseline for a dashboard/database against which future effects of mineral extraction can be gauged. (Zurich is also conducting a twin study in Burkina Faso).

Opportunities and assets. The overall approach of the *International Relations and Local Development* program is akin to the ‘scaling-up’ approaches increasingly taken in several development studies programs in Norway, therefore suggesting research/fieldwork opportunities for Norwegians, relevant exchange opportunities for

Mozambican students and, potentially, a shared thematic designation for more comprehensive collaboration in the future. Much the same goes for the ongoing research on development effects of extractive industries.

Relations with other faculties of UniLúrio. Staff readily see possibilities for collaboration with Faculty of Natural Sciences – on both Tourism (both Pemba and Ibo island are subject to increasing tourism, not unlike Ilha) and on international relations affecting development (cf. major oil and gas extraction offshore in Cabo Delgado). Collaboration with Architecture in Nampula is inevitable given the shared stewardship of the fortress at Ilha but no proper collaboration is developed yet.

Foreign relations. The collaboration with ETH Zürich in Switzerland on the research on extractive industries (above) is the most significant. Escola Superior de Turismo e Hotelaria do Estoril (ESTHE, Higher School of Tourism and Hospitality of Estoril) at the Universidade Nova de Lisboa played key roles in developing the curricula at the faculty; some staff have their master's/diploma degree in tourism from this school.. Moreover, ESTHE has agreed to teach one advanced course – in preparation for master degrees – in hospitality, funded by the Calouste Gulbenkian Foundation. This consists of 13 training modules, offered across same number of consecutive weeks (one visiting lecturer for each module/week), and will be taught in the evening. This allows staff that is busy with their own teaching during the day, to eventually complete a master's degree.

Needs and challenges. Being in its very inception the faculty has yet to properly determine shortfalls and needs. But staff indicate that, in a future partnership, they would want a master level course in international relations and local development, as well as a course and research on coastal/island development, integrating tourism.

3.5 UniLúrio Unango/Lichinga

3.5.1 Faculty of Agrarian Sciences

The faculty was established in 2009, and the campus was built by Chinese entrepreneurs.

Location and Surroundings. The faculty lies in Niassa, the province furthest to the northwest of the country. Niassa is the poorest province, with the lowest rates of literacy and education, in Mozambique. The campus is located between the province capital Lichinga and Lake Niassa (in the English-speaking world called Lake Malawi), about one hour drive away from both. It is situated in a fertile but thinly populated rural area that was used as a dumping ground of ‘anti-social elements’ particularly from Maputo during the ‘Operation Production’ of the Frelimo government in 1982. While the area is characterized by some of Mozambique’s most fertile lands, and great natural riches, it does not offer the most thriving and productive environment, and there are few linkages with local communities e.g. in terms of food supply to the students canteen.

25 staff houses are built on the campus, but since electricity is yet to be installed, no teaching staff (with families) live on the campus. They all live in Lichinga (some 65 km away) and are bussed back and forth every work day. The faculty operates a ‘satellite’ in Lichinga town, where the master courses are taught.

Table 3.4: *Overview of UniLúrio Unango/Lichinga*

Faculties	Departments (academic staff)	Teachers w/ postgrad. degrees / Total staff	Taught degrees (students/year)
Agrarian Sciences	1)Basic courses (Maths, English etc); 2) Agriculture; 3)Forestry, 4) Husbandry; 5)Vegetal production and protection; 6)Conservation of natural resources; 7)Community extension	30/36= 83 per cent (35/51= 69 per cent)	350 students in total. 1)Bachelor Rural Development Engineering (2009). 150 students, 30/yr 2) Bachelor Forestry Engineering (2009). 150 students, 30/yr 3)Bachelor, Husbandry Technics (Zootécnica) (2016). 20 students 4)Master, Rural Development (2017). 30 students

Staff. Of those teaching at the moment, 30 of 36 (83 per cent) have a master's degree. In addition, ten teachers with a bachelor's are on study leave abroad to take a master's, and five with a master's are presently abroad to obtain a PhD (one in Japan, four in Portugal). A teacher from Portugal with a PhD has left the faculty. This means that 35 of 51 in the whole staff have a master's or higher degree. However, none of them live on (or nearby) the campus.

The student programs. 350 students (half/half girls and boys). Due to the low education level in Niassa, almost all students come from other provinces, such as Zambezia or Maputo. The majority of students live on the campus (a few live in the neighborhood villages), but with limited involvement in agricultural and other practical work. The bachelor's are four-years programs. The students learn English the first year. The last semester of the fourth year they are on internships to write their thesis, most of them dispatched to a branch of the Mozambican Institute of Agricultural Research (IAAM). Many of them focus on socio-economic problems in rural development, e.g. the local distribution of the tax collected from mineral and other natural resource investors. According to national law, 20 per cent of the tax collected is to be distributed to the local community. However, this is not well spelt out by the law, and there are many conflicts surrounding the appropriation of this tax locally.

The master's program in Rural Development started up in 2017 and is mainly recruiting officials with a bachelor's degree who work in the public (provincial) administration in Lichinga (a *mestrado profissionalizante*). All the teachers are flown in from outside, mainly Nampula (UniLúrio) or Maputo (UEM and other higher education institutions), and the course takes place in Lichinga town. The first year is course-based - it is more oriented to social sciences than the bachelor program. The second year will be centered on the thesis – often connected to the use of national surveys/statistics.

Research activities. Overall, the impression is that the faculty members are occupied with teaching with little time for research. Numerous exciting research opportunities and ideas were mentioned but there are few research projects in actual implementation. The faculty has plans to establish a research

center at the Niassa Lake, pending on a 1 mn USD grant from the outside world.

Opportunities and assets. Amongst faculties of UniLúrio, this is one of the best situated in terms of staff number and formal academic qualifications. Moreover, it has a very new and well-equipped campus, with 25 staff houses with gardens. The students live in a very 'quiet' rural environment with few facilities outside the campus competing for their attention. There are great opportunities for research (fishery, litoral ecology, etc), regional collaboration (Malawi, Tanzania) and scope for important contributions to local socio-economic development both in the surrounds of the campus itself and in the lake region, as well as with the Niassa National Reserve.

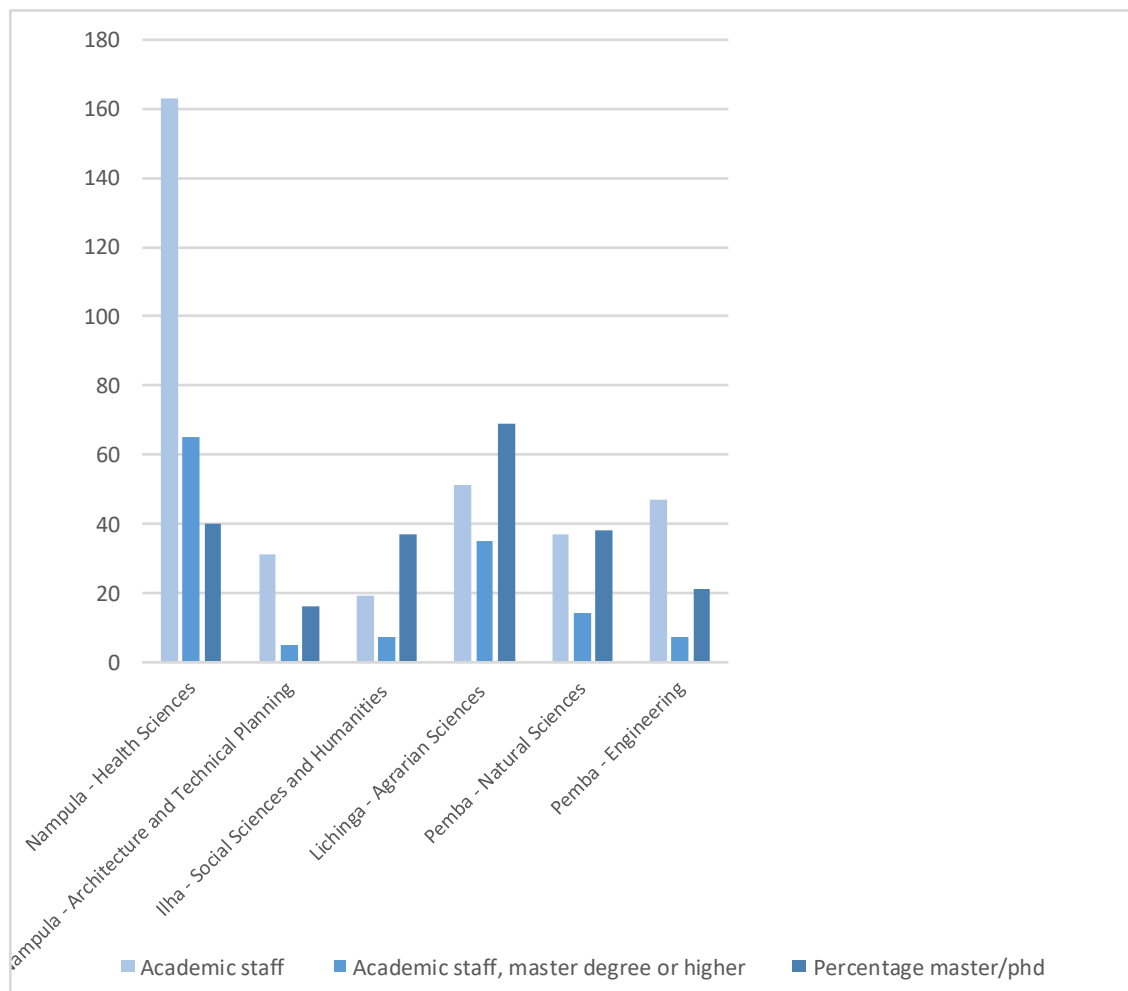
Relations with other campuses/faculties of UniLúrio. There is some ad hoc collaboration with the natural sciences in Pemba, public health (nutrition issues) at health sciences in Nampula, and physical planning in Nampula.

Foreign relations. The faculty of agrarian sciences have some minor collaboration with universities in Portugal and Japan for staff development – but it seems that these have been largely self-interested partners. Numerous Japanese students have come to do fieldwork in Lichinga, especially in the field of rural household food security and nutrition, but theses or results otherwise were never shared with UniLúrio.

Needs and challenges. A striking characteristic is the relatively lifeless campus and surrounds, despite the overall quality of facilities and lands, and the nominally high academic competence at the faculty. Adjacent farmlands are left partly fallow; reportedly, animals occasionally escape or are stolen from the stables. All 25 staff houses remain uninhabited due to lacking connection to the electricity grid. There is a day-to-day relationship with surrounding communities through the program One Student One Family, and the surrounding community uses the faculty tractor for preparing the land. However, we were not shown examples of this during the visit, and we found no farm shop at campus despite great need and potential. This, in turn, leaves the campus a less attractive place to live and work in. In order for the faculty to function socially, economically and academically, a significant number of staff and their families should live at or close by the campus, with

mutually beneficiary and developmental relations with the surrounding communities, and with extensive and diversified agricultural production centered on the campus.

Table 3.5: *Summary of academic resources, by faculties*



4 IMAGINING FEASIBLE COLLABORATIONS

4.1 Key considerations

4.1.1 Filling acute competence gaps at UniLúrio.

From a total of approx. 350 faculty members, only one-third holds a master degrees or higher. UniLúrio itself stresses that lifting academic competence is a *sine qua non* for international collaboration. The rectorate is increasingly dissatisfied with accreditation from other Mozambican universities and is very keen on developing and increasing partnerships that may offer staff MSc and PhD training degrees taught in English. Thus, English-language master degrees at Norwegian universities are very attractive option for UniLúrio.

As can be seen from the Annex III, there is a wide range of master degrees taught in English at Norwegian universities of relevance to staff at UniLúrio's different faculties.

The easiest way toward accommodating UniLúrio's strategy would be to offer select staff a two-year full degree exchanges to the Norwegian partner university; over time, this might help build critical mass of academic competence at UniLúrio. However, with DIKU's recent change in funding modalities, this is unfortunately not feasible: Current DIKU stipends merely cover one or two semesters of exchange.

The reasoning behind DIKU's new policy has some merit. Sending staff or students abroad to take full degrees is an unsure route to lifting competence at their home universities: It might spur brain

drain (as the degree holder obtains qualification for Northern labour markets), and the training itself will hardly involve the university at home – and therefore not help institutional development. Essentially, the DIKU policy instead invites the development of joint degrees with dual accreditation – i.e., partner universities collaborate on developing a curriculum; give collaborative courses; and offer two-way supervision toward fieldwork and dissertation.

But this leaves partners in something of a *catch twenty-two*: Low academic carrying capacity at UniLúrio may effectively block setting up a full joint degree collaboration funded by DIKU. Yet, DIKU funding does not help build the carrying capacity required to make such joint degrees possible. Joint courses, while a stimulus toward collaboration, are far from sufficient, nor are staff mobility of ‘high-end’ scholars: What UniLúrio needs is to lift middle strata of faculty to at least the level of a master degree.

We believe such a challenge may be overcome by finding other ‘bridging finances’ with which to bring UniLúrio academic competence above a critical threshold, thus preparing the UniLúrio for more comprehensive collaboration projects. One likely alternative here is to apply for finance from funders that may pay supplemental stipends. EU’s *Erasmus+Global* Mobility program is a likely option. A feasible alternative is to combine one-year stipends from DIKU with one-year stipends from UniLúrio, or from the African Development Bank (perhaps even with the Norwegian embassy as co-financier) thus allowing the student to take a full degree at the Norwegian partner university. Other combinations that may jointly cover full degree exchanges – say Erasmus+ stipend wrapped with a UniLúrio stipend – should be considered.

Staff with BSc degrees from Mozambican universities may not always qualify for Norwegian MSc/MA programs. Programs operate with different criteria In technical subject areas (e.g., engineering, architecture), requirements may be quite specific and strict while a more flexible approach applies across social sciences (e.g. assessing the relevance of the BSc relative to the MSc in question, as well as the academic results of the individual applicant).

4.1.2 Overcoming language barrier.

Norwegian academics proficient in Portuguese are very few (in all of academia there are probably not more than a dozen or so individuals). However, given UniLúrio's own ambition of significantly improving the English proficiency of staff (and students) – in fact, by systematically expecting English-language degrees, and exposing staff and students to foreigners, this language barrier could be overcome. Therefore, the language barrier challenge may not be as strenuous for the Norwegian partner as one might at first suspect. In social science fieldwork one would certainly need translators, but in research collaboration, teaching and partnership management it is safe to assume that English will be the main working language. UniLúrio is increasing the number of English lecturers providing compulsory English language courses to its staff, in collaboration with the USA Embassy.

4.1.3 Improving remuneration for Mozambican scholars and data access.

Irrespective of faculty involved, all projects should remunerate researchers through the CICA model developed at Pemba. Lifting remuneration might help retain scholars at UniLúrio. However, unlike in current CICA consultancies (undertaken primarily for transnational companies), data collected would be the ownership of the researchers/university partners. It would also help safeguard UniLúrio's academic integrity.

4.2 4.2.Possible variants of partnership

We here try to imagine what partnership designs might look like, taking the above into consideration. Please note that these are indeed *imaginations* – there are no pretensions, on our part, to present any exhaustive list of alternatives. Amongst the three general approaches, the latter two would have to be preceded by exploratory/pilot projects.

4.2.1 Ad hoc/ad lib ('individual-to-individual')

This is the least ambitious approach and natural point of departure. Typically, this would *not* require any deep institutional embeddedness – a mere standard cooperation agreement on university level would suffice – and would be of scope that does *not* require DIKU application and funding (it could, however, be paired with some minor event funding from DIKU).

The most likely means would be individual exchanges/stipends toward full master degrees funded by UniLúrio and/or African Development Bank, with supplementary *Erasmus+ Global Mobility* stipends. We see numerous alternatives for pairing educational needs at UniLúrio with competence at Norwegian institutions. One can easily imagine that a student from Pemba with a strong interest in marine ecology and coastal livelihoods could take a master degree at Noragric/NMBU; that a student from Nampula interested in the social geography development of urban spaces and social geography at Ilha would do his/her degree at OsloMet. Here, the interest of a couple of individuals would be decisive.

Ad hoc/ad lib approaches might also include research and field activities with funds via the Norwegian partner – i.e., toward research collaboration between professors (with grants from NFR, perhaps toward a Mozambique case study wrapped into a multi-country project); it could also involve fieldwork of Norwegian students.

4.2.2 Decentered ('faculty-to-faculty')

This is a partnership in broader sense than just between a couple of individuals. It would be based on faculty-to-faculty agreements, and institutional embeddedness with administrative support, etc. It would involve different activities – events, student exchanges, collaborative research and staff mobility – wrapped within a larger 'package' designated in terms of prioritized fields of enquiry. It could very well lead to a joint degree with double accreditation. Big project funding from DIKU would eventually be necessary. We see numerous opportunities for faculty-to-faculty collaboration on research and education – to mention but a few:

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- *Natural Sciences/Pemba*: Development Studies/Environmental Studies at NMBU, UiA or OsloMet
 - *Architecture/Nampula*: Urban Studies at OsloMet, or The Oslo School of Architecture;
 - *Social Sciences and the Humanities/Ilha de Mozambique*: International Relations and Development Studies at NMBU; Tourism at UiT or UiS
 - *Agrarian Sciences/Unango*: Animal Breeding/Ecology/Environmental Studies at NMBU.⁸

4.2.3 Integral (interdisciplinary, inter-faculty, inter-institutional)

As noted previously, there is a marked lack of interdisciplinary training and research across UniLúrio – even where the need for such is pronounced, and academic staff fully recognizes this shortfall. Increasing the collaboration between UniLúrio campi would certainly bring about synergy effects. However, this is unlikely to happen all by itself – every campus faces severe resource constraints. Moreover, no faculty at UniLúrio has the required social science competence to productively exploit the research opportunities they do have in relevant fields of social enquiry. An ambitious international collaboration program could make a big difference.

The integral approach would involve a partnership that engages multiple faculties and possibly more than one Norwegian university partner. It would require deep institutional embeddedness and commitment of extensive administrative support, etc. Activities would include joint events, student exchanges, collaborative research and staff mobility and development of a joint degree – all wrapped within a larger ‘package’ designated in terms of prioritized fields of enquiry. An integral approach is not something to opt for from the outset. Even if funding were available, complex arrangements are only likely to work if building on previous collaboration of the ad

⁸ All relevant master degrees taught in English at Norwegian universities are listed in Annex III.

hoc/ad lib kind and faculty-to-faculty collaboration. Furthermore, in order for it to succeed in strengthening UniLúrio institutionally, partners would need at least two successive big project grants from DIKU (extending across 10 years).

Many possible configurations might be imagined. In keeping with the MoU we pay particular attention to opportunities and challenges at the Pemba campus; the following is an imagination of integral partnership with Pemba as the hub in the wheel. Below are some outlines of an integral program that would stand a good chance of getting substantial DIKU funding:

(NB – partners proposed below have *not* been contacted by us – nor does it fall within the scope of this study that we do so; thus, nothing is known or can be presumed about the desire or capacity of these institutions as regards collaboration)

- An ideal main partner would be Noragric at NMBU; it has extensive social science and natural science capacity and interdisciplinary experience related to most of the development fields in which UniLúrio (Pemba and Unango) engages itself – ecology, climate change, sustainable livelihoods, community-based resource management, natural resource conflicts, etc.
- Secondary partners could be International Studies and or (future) Urban Studies at OsloMet, or Centre for Development and the Environment at UiO, or Global Development at UiB (all of these are almost entirely social sciences based)
- Activities would certainly include joint research and events, and ample opportunities for student fieldwork
- Sizeable parts of joint degree would likely base itself on the curriculum of one the existing master degrees at Norwegian partner universities; this core would be bundled with some new collaborative modules and activities. Typically, Mozambican students would do first and second semester in Norway (along with Norwegian peers); part of the third semester would be devoted to a joint course at UniLúrio Pemba or Unango, succeeded by fieldwork and

thesis writing in the third and fourth semesters. Thesis work would be supervised from both ends.

- One could reap inter-faculty synergies and bolster multidisciplinary competence from involving, for instance, campus Ilha on studies of the development implications of the emerging tourist industry (in Cabo Delgado), and Unango on agricultural livelihoods.

Table 4.1: *Matrix of opportunities, possible activities and components*

Faculties	I..Ad hoc/ad lib	II.. Decentered	III.Integral
Natural Sciences	a) OsloMet: students field visit, Development Studies b) Researcher X: PhD in Norway c) Norwegian participation in Biodiversity conference in Pemba, October 2018	A pre-study of “Biodiversity, livelihoods and extractivism (oil & gas)” in Palma, Cabo Delgado	A: Course and research in “community-based participatory development” A1: rural development (added course) B: Eco-tourism B1: Ilha de Ibo
Engineering	N/A	N/A	A2: Green urban development
Health Sciences	N/A	N/A	A3: Public health; ...nursing
Architecture and Physical Planning	OsloMet (NIBR) participation in conferences, guest lectures and student seminars at Ilha de Moçambique.	Feasibility Study of UniLúrio/conservation project at Ilha de Moc.	A2: Green urban development
Social sciences and the humanities			A1: rural development A2: green urban development B: course in ‘eco-tourism’ B2: Ilha de Moçambique
Agrarian Sciences	Norwegian participant in Biodiversity conference meets staff	Feasibility Study: Unwrapping the obstacles to functioning faculty? What should be done?	A1 rural development

Regarding funding opportunities, we should add the following to Table 6:

First, Norway's embassy in Mozambique (I. and II.) may offer possible seed funds for Norwegian/European collaboration, and targeted measures (see annex). This could involve trilateral collaboration between Norway, EU/Portugal (e.g. University of Coimbra) and Mozambique(II. and III:)

Second, only one of the several programs of Norwegian Centre for International Cooperation in Education (DIKU) is targeting the Least Developed Countries. That is NORPART, Norwegian Partnership Program for Global Academic Cooperation. NORPART supports academic partnerships and student mobility with an emphasis on Master level between higher education institutions in Norway and selected developing countries.⁹

Third, Research Council of Norway has a globally oriented research program called NORGLOBAL.¹⁰ NORGLOBAL-2 will stimulate innovative high quality and relevant research in support of global efforts towards the UN's Sustainable Development Goals (SDGs). The aim is to develop research-based knowledge of high quality on poverty reduction and sustainable development. In 2018, nearly 100 million NOK was to be allocated to.

In the 2018 announcement, projects from all thematic areas of the program were called for, particularly inviting strong proposals in the areas of: Global Education; Humanitarian Efforts, Conflict, Security and Fragility; and Business Development and Job Creation

NORGLOBAL can in addition fund two to four -4 networks within thematic and/or geographic areas of relevance to the program. Each network can be supported with an annual budget of up to NOK 2 million for a period of 3-4 years.

⁹ See upcoming [Calls for applications](https://www.siu.no/eng/Programme-information/Cooperation-outside-the-EU/norpart) and the Q & A: <https://www.siu.no/eng/Programme-information/Cooperation-outside-the-EU/norpart>

¹⁰ https://www.forskningsradet.no/prognett-norglobal/Home_page/1224698160055

5 CONCLUSIONS

Why should, UniLúrio and Norwegian universities, seek collaboration with each other?

We have detailed the many reasons but also limitations and challenges that ought to be taken into consideration in the pursuit of partnership.

For *Norwegian universities*, chief motivations for partnership would include:

- UniLúrio is a ‘gatekeeper’ for fields of enquiry that sits at the forefront of contemporary research frontiers – particularly in the fields of environment, resource extraction and sustainable livelihoods. Yet, these themes have been subject to remarkably little study in UniLúrio’s surrounds. Therefore, collaboration holds the promise of offering genuinely novel, yet highly sought after, field opportunities and knowledge.
- Given UniLúrio’s surrounds and context (the poorest regions of Mozambique, yet endowed with abundant natural resource and great cultural and historical heritage) collaboration in education and research are likely to be rewarded with tangible positive effects.
- For both strategic and traditional humanitarian reasons, Mozambique is a main partner in Norway’s international development cooperation, and it is likely to remain so for many years to come. Chances are slim that collaboration with UniLúrio, once established, will fall victim to the vagaries and trend shifts in the development industry anytime soon. This allows for the long-term perspective, the patience and security that proper and mutually beneficial partnerships in education and research require.

For UniLúrio, chief motivations for partnerships would include:

- The main need at UniLúrio is no doubt opportunities through which academic competence amongst its staff may be raised (at least to the level of a master's degree). There is a wide range of master's degree programs taught in English at Norwegian universities. In fact, for every faculty at UniLúrio there are, in terms of disciplinary orientation, at least two possible education partners in Norway.
- Due to the relevance of UniLúrio's fields of enquiry, UniLúrio may attract counterparts that will be highly competent and could add substantially to both education and research. The Norwegian partner could contribute even to international publication and some uplifting of UniLúrio's academic status.

Key considerations and challenges when pursuing collaboration

- In terms of 'full-degree-producing' partnerships, there are much fewer real 'suitors' for UniLúrio than the lengthy list of English-language master's programs (cfr. Annex III) seems to suggest. Limitations of DIKU funding modalities means that collaboration only will produce full degree training (as opposed to mere student mobility/exchange for one or two semester) if there is *supplemental finance* (from the partners themselves or other funders), or training is part of a more comprehensive collaboration in the form of a *joint degree*. But supplemental funding and/or joint degree projects requires a lot from the Norwegian counterpart. Hence, 'full-degree-producing' partnerships will only emerge where the Norwegian counterpart has a very strong interest in the fields of enquiry for which UniLúrio is the 'gatekeeper'. In the context of DIKU funding this applies as much to students' fieldwork as to research.
- Faced with the complexity of the above, it might be tempting to opt for the easier yet highly attractive form of collaboration, in which a Norwegian researcher involves UniLúrio's 'top-end' scholars in projects limited to research. On its own, this does not help lift the competence of middle strata staff. 'Top-end' collaboration should at least involve a couple of full degree master stipends (students contributing through the fieldwork).

In light of the above we believe that collaboration and expectations should be built gradually, and with considerable patience.

Annex I.

Itinerary of field visits and persons met

2018:

- February 1: Arrival in Pemba (flight from Oslo via Johannesburg)
- *February 2-6: Pemba.* Visit to Faculty of Natural Sciences: meetings with the director, Mr. Marcelino Inácio Caravela; research director Dr. Isabel Marques da Silva; and staff. Visit to Faculty of Engineering: meetings with deputy directors and heads of departments.
- February 6: Pemba. Interview with Mr. Fadil, member of the executive council of Pemba Municipality and teacher at the Faculty of Engineering.
- *February 7-9: Ibo island.* Meeting with staff of OIKOS, Italian NGO operating some of its Ibo projects in partnership with the Faculty of Natural Sciences.
 - *February 9 – 10: Nampula.* Meeting and supper with the Deputy Vice-Chancellor for Academic Area, Prof. Dr. Sonia Maciel
 - *February 10-12: Ilha de Moçambique.* Visit to Faculty of Social Sciences and Humanities: meetings with the director, Prof. Dr. João Salavessa, and staff.
 - *February 13-14: Lichinga/ Unango.* Visit to Faculty of Agrarian Sciences, Unango: meetings with the director, Mrs. Maura de Oliveira, and staff.

- February 14: Lichinga. Meeting with the director of department for research and technology, the province administration of Niassa.
- *February 15: Nampula.* Visit to Faculty of Health Sciences: meetings with the director, Dr. Celso Belo, and staff. Visit to Faculty of Architecture and Physical Planning: meetings with the director, Mr. Isequiel José Alcolete, and staff.
- February 15: Debriefing with the Vice-Chancellor (Rector), Prof. Dr. Francisco Noa.
- February 16: Plane to Pemba
- February 17: Departure from Pemba, return to Oslo.

Annex II.

Major relevant institutions in Norway, by acronyms

AHO - The Oslo School of Architecture and Design
www.aho.no/en/

OsloMet – Oslo Metropolitan University
<https://www.hioa.no/eng/>

NMBU - Norwegian University of Life Sciences
<https://www.nmbu.no/en/>

NTNU - Norwegian University of Science and Technology
<https://www.ntnu.edu/>

UiA - University of Agder
<https://www.uia.no/en>

UiB - University of Bergen
www.uib.no/en/

UiO - University of Oslo
www.uio.no/english/

UiS - University of Stavanger
www.uis.no/?lang=en_GB

UiT - University of Tromsø
<https://en.uit.no/startside>

Annex III.

Relevant Master's programmes (English) in Norway, by subject

Social Sciences, Humanities (select)

- English (UiB; also UiA¹¹)
- Human Geography (UiO)
- Economics (UiO)
- Philosophy (UiO; also UiB)
- Modern International and Transnational History (UiO)
- Religion, Philosophy and Society (UiA)

Development Studies, International Relations

- Development, Environment and Cultural Change (UiO)
- Development Geography (UiB)
- Development Studies (NMBU)
- Global Development – Theory and Practice (UiB)
- Global Development and Planning, *online programme/course sessions* (UiA)
- Globalisation and Sustainable Development (NTNU)

-
- International Education and Development (OsloMet)
 - International Relations (NMBU)
 - Migration and Intercultural Relations (UiS; multi-country)
 - Peace and Conflict Studies (UiO)
 - Theory and Practice of Human Rights (UiO)

Environment, Life Sciences (select)

- Agroecology (NMBU)
- Animal Breeding and Genetics (NMBU)
- Aquatic Food Production (NMBU)
- Coastal Ecology (UiA)
- Energy, Environment and Society (UiS)
- International Environmental Studies (NMBU)
- Natural Resource Management (NTNU)
- Ocean Resources (NTNU)
- Plant Sciences (NMBU)

Architecture, Urban Planning

- Architecture (AHO)
- City and Regional Planning (UiS)
- Sustainable Architecture (NTNU)
- Urban Ecological Planning (NTNU)
- Urban Studies (OsloMet, NIBR – forthcoming)

¹¹ Acronyms – please see explanation in Annex II.

Engineering, Informatics (select)

- Civil and Constructional Engineering (UiA)
- Communication Technology (NTNU)
- Computational Sciences (UiO)
- Environmental Engineering (UiS)
- Informatics: Design, Use, Interaction (UiO)
- Industrial Design Engineering (NTNU)
- Material Science and Engineering (NTNU)
- Petroleum Engineering (NTNU; UiS)
- Petroleum Geosciences Engineering (UiS)
- Structural Engineering and Building Technology (OsloMet)
- Universal Design of ICT (OsloMet)

Health Sciences

- Cognitive Neuroscience (UiO)
- Global Health (UiB)
- Global Health (NTNU)
- Health Economics, Policy and Management (UiO)
- International Community Health (UiO)
- International Social Welfare and Health Policy (OsloMet)

Tourism

- International Hospitality Management (UiS)
- Tourism Studies (UiT)