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North-South cooperation in higher education: Potentials and limitations : the case of the Eastern African-Austrian AQUAHUB programme

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North-South Cooperation in Higher Education. Potentials and Limitations

The case of the Eastern African-Austrian AQUAHUB Programme

Margarita Langthaler, Arnold Groh, Stefan Wolf, Oskar Kabbeck and Gerold Winkler

Abstract

Cooperation between institutions of higher education in North-South directions have long been a common instrument of development cooperation in the education sector. At the level of research, North-South partnerships have increasingly become a preferred strategy of financing mechanisms for research on and in countries of the global South. Transnational cooperation and partnership projects are considered to be particularly useful for capacity building at institutions in the global South. For this to materialise, however, several preconditions, such as long-term commitment, trustful relationships and accounting for power asymmetries as well as contextual factors, need to be in place, as recent research on the Eastern African-Austrian AQUAHUB programme confirms¹.

Individual scholarship and mobility programmes have for decades been the predominant instrument of international cooperation in higher education. In the development realm, this has mostly involved programmes addressed to students and staff from the global South to study at institutions in the global North. In the 1990s, resonating a general turn towards institutions in development thinking, this form of individual support began to be complemented by instruments aiming at institutional capacity building in higher education. Institutional cooperation and partnership programmes at various levels and in different forms have gained popularity ever since.

Globalisation dynamics and internationalisation policies in higher education have acted as additional drivers for international cooperation. However, globalisation and its accompanying trends of commoditisation and privatisation have also reinforced a framework of asymmetries solidifying the disadvantaged positions, inherited from colonialism, of institutions in the global South. Such asymmetries do not only refer to resources and power but are manifest also at a conceptual level in terms of marginalising epistemologies, languages, knowledge traditions, methodologies as well as understandings of scientific excellence and relevance other than those predominant in the academia of the global North. They are reflected in, and at the same time reproduced by, international rankings of universities and academic publications, access to which is strongly resource dependent and therefore often limited for institutions in the global South.

International activities in higher education of many OECD-countries often follow commercial interests (e.g. through the establishment of branch campuses in other countries), while strategies for public funding tend to be

informed by political objectives. For instance, the latest substantial increase of funding for higher education cooperation with Africa by the European Commission² corresponds to the EU's recent focus on Africa (see the EU Africa Strategy: EC 2020). Moreover, colonial legacies continue to shape North-South relations in higher education (Walker/Martinez-Vargas 2022). Yet, some European nations, e.g. Germany or the Nordic countries, claim to have a more collaborative and less profit- or influence-driven approach to higher education cooperation than those with important colonial histories (DAAD 2012).

However, a growing body of research, often informed by post- and decolonial approaches (e.g. Walker/Martinez-Vargas 2022), elaborates on how the above described global asymmetries frame and affect North-South partnerships in higher education, including those financed through aid funds and pursuing corresponding objectives. While equity in North-South research cooperation has increasingly become a precondition for public funding, at the implementation level equitable relationships appear to be rather elusive. As pointed out by Carbonnier and Kontinen (2015: 160), Northern partners, especially when unexperienced, tend to repeat traditional deficiencies such as lack of basic contextual understanding and cultural sensitivity as well as failure to explicitly address the issue of power relations. Yet, even in long-standing partnerships the above global asymmetries are reflected in "critical challenges [including] competing conceptualizations of excellence, jointly negotiated and agreed research agendas, approaching capacity building as a two-way street especially when it comes to localized knowledge, or recognizing the variety of vehicles to disseminate research outcomes toward diverse target audiences" (ibid.).

It is certainly illusory to expect individual partnership programmes to be able to completely escape these global framings. There nevertheless are lessons of experience of how such programmes can successfully contribute to institutional and individual capacity building in higher education in countries of the global South. In the following, one such experience will be discussed in more detail.

The AQUAHUB Programme

The AQUAHUB programme has been aiming to strengthen research capacities for the management of aquatic ecosystems in Eastern Africa and other parts of the global South since its inception in 1975³. The programme builds on a long-term commitment of the Austrian Development Cooperation (ADC) to support collaborations among freshwater higher education and research institutions in Austria and the global South.

Initiated in 1975 by the Austrian Academy of Sciences, the “International Post-Graduate Training Programme in Limnology (IPGL)” provided eight-months training in limnology in Austria, for scientists from less industrialised countries. Over time, the project grew, gradually shifting its focus towards capacity building processes at Eastern African institutions, which train professionals, carry out relevant research and extension activities, and contribute to evidence-based policies. This shift led to the establishment of an international network of institutional collaborations.

In 2012, the International Joint-Degree Master’s Programme in “Limnology and Wetland Management” (LWM) was established involving the Egerton University (EGU) in Kenya, the Institute for Water Education in the Netherlands and the University of Natural Resources and Life Sciences (BOKU) in Austria. One year later, the Joint Master’s Programmes in “Aquatic Ecosystems & Environmental Management” (AEEM) followed, which is organised by South-South cooperation between Ethiopia (Addis Ababa University, Bahir Dar University and the Ethiopian Institute for Agricultural Research, National Fishery & Aquatic Life Research Center) and Kenya (EGU). These efforts expanded the network of Eastern African Higher Education Science and Technology (HEST) institutions involved.

A challenging context

The context in which the AQUAHUB programme has been evolving over more than four decades is shaped by several challenges resonating global asymmetries in higher education and beyond.

In Eastern Africa, freshwater ecosystems play an indispensable role in supporting the livelihoods of local populations, particularly in rural areas. However, they are confronting an escalating array of pressures, including climate change and population growth. To address these complex challenges, there is a pressing need for scientific and technical capacities at the local level to establish context-specific policies and technical solutions for the

preservation of these sensitive ecosystems.

While the AQUAHUB partner countries in Eastern Africa, Kenya, Uganda, and Ethiopia, have articulated policies on sustainability and resource preservation (Syspons 2021), there exists a tension between these policies and the drive for accelerated industrial progress. The latter sometimes supersedes environmental considerations, leading to large infrastructure and industrial projects that may adversely affect freshwater ecosystems. Implementation gaps further hinder the effectiveness of sustainability policies.

Resource constraints are a significant contextual factor at multiple levels. Public budgets in partner countries, as well as household finances, are limited. Economic challenges, exacerbated by the COVID-19 pandemic and the conflict in Ukraine, have led to sharp price increases. This severely constrains the ability of families to support their children’s education.

While there has been a notable expansion within Eastern Africa’s HEST, tertiary education enrolment rates continue to be very low compared to global averages with 9 % versus 40 % (UNESCO 2023). The rapid pace of tertiary expansion has resulted in a fragmented institutional landscape with considerable heterogeneity in terms of instructional quality and research capabilities. Insufficient resources undermine the quality of higher education in various ways. Inadequate training, low wages, and wage suspensions often compel staff to seek additional income sources, diverting their attention from teaching and research. Limited resources curtail opportunities for fieldwork and practical learning, hindering the emergence of alternative teaching methods. Resource constraints also foster unfavourable competition and control over limited resources rather than collaboration and synergistic thinking. This can lead to further institutional fragmentation.

Security concerns, particularly in Ethiopia, have introduced additional complexities. Civil war, especially in the Amhara region, has disrupted educational continuity, causing course interruptions and administrative delays. In many instances, it has rendered fieldwork difficult or impossible.

Despite significant progress in recent decades, gender disparities persist in Eastern Africa, particularly in upper secondary and tertiary education. Social expectations often place pressure on female graduates to fulfil family obligations, potentially impeding their academic progression. Institutional support for women, such as childcare facilities or specific support measures, is often inadequate or non-existent.

AQUAHUB’s achievements and limitations

A recent impact assessment of the AQUAHUB programme covering the project duration from 1975 to 2021 (Groh et al. 2023) confirmed the key contributions of the programme at multiple levels in the three partner countries Kenya, Uganda, and Ethiopia as well as in Austria.

Key achievements include

Awareness and Regional Cooperation: From its inception in 1975, the project has played a pivotal role in raising awareness about sustainable aquatic resource management. It has fostered regional cooperation, particularly around Lake Victoria, which previously used to be limited.

Establishment of Limnology: The project has significantly contributed to establishing limnology as a recognised scientific field in the partner countries, evidenced by the creation of specialised units and departments at universities and the enhancement of research institutions.

Institutional Capacity-Building: The project has been instrumental in establishing higher education and research institutions through the provision of qualified graduates and the facilitation of long-standing institutional cooperation. This collaboration has resulted in various dialogical and learning processes and has built a high level of trust among involved institutions. AQUAHUB has supported structural, methodical, and didactical changes in higher education. These include curricular modularisation, integration of theoretical and practice-oriented teaching, and fieldwork.

Quality Improvement in Education: The project has contributed to quality enhancement in higher education through high-quality curricula, capacity advancement at different levels, and the provision of infrastructure and equipment, particularly for practice-oriented education.

Research Cooperation: The project has fostered research activities and cooperation in both North-South and South-South directions. Notable is the transition of IPGL to a comprehensive North-South joint international MSc programme, and the establishment of the AEEM MSc programme as a model of South-South cooperation.

Gender Equality: The project has made significant contributions to gender equality in higher education and research through quota regulations in admissions and the provision of positive role models.

Contributions to Policies and Strategies: In all three partner countries, but most significantly in Uganda, the project has contributed to the elaboration of policies and strategies relevant to sustainable aquatic resource management.

Advancement of Austrian North-South Cooperation: The project has contributed to the orientation of Austria's education sector strategy towards institutional cooperation and the establishment of programmes in Southern partner countries. BOKU has become a driver in Austrian academic North-South cooperation projects and a frontrunner in the Austrian academic community cooperating with the global South.

Key limitations include

The assessment has also identified limitations, many of which reflect the impact of constraining contextual factors

and global asymmetries. Notably, limitations emerge at the policy and community level, dimensions where project impact is particularly expected by the donor.

At the *policy level*, AQUAHUB's influence varies across the three countries, with a remarkable presence of alumni in governmental and parastatal institutions in Uganda. However, policy implementation remains a challenge across all countries, indicating a gap between policy and executional levels which resonates with the above-mentioned tensions in government priority-setting between economic and sustainability goals.

Community-level impacts are visible through ongoing projects involving national research institutes and extension agencies. Despite widespread awareness of the importance of community cooperation, there is room for improvement in integrating community knowledge into research processes. Here, the pressures exerted by the asymmetric global HEST landscape become visible. Scientific excellence as defined by globalised standards often supersedes locally determined research agendas that could bear increased relevance for communities.

In terms of *institutional capacity-building*, notable progress is seen within national research institutes and partner universities. However, the spillover effects to local programmes in aquatic sciences are less pronounced than expected, largely due to resource constraints in HEST, which often lead to irregular wages for lecturers and insufficient facilities for practice-oriented teaching.

A key challenge is *academic publishing*, where alumni face pressure to publish in high-ranking journals amid structural barriers and personal, especially financial, constraints. This tension underscores the need for more accessible avenues for publishing, especially for African institutions.

In terms of *gender equality*, notable progress has been made, particularly in Kenya and Uganda in terms of female participation, despite the difficult context described above. Challenges remain in Ethiopia due to historical and societal factors. Efforts are underway to address these challenges, including affirmative gender policies and support for female students within the programme. Nonetheless in all three countries, the representation of women in higher academic and professional ranks remains an area for improvement.

Factors facilitating success

The analysis of the AQUAHUB project reveals several pivotal insights that might be useful for the more general discussion of potentials and limitations of North-South cooperation in higher education and research.

■ Role of longevity in programme success

The extended timeframe of the AQUAHUB project has been instrumental for its success, particularly with respect to individual and institutional capacity-building. This longevity

allowed for the gradual growth of trust, a cornerstone of effective cooperation, fostering mutual learning and programme advancement. This observation underscores the necessity of sustained financial commitment for enduring institutional capacity-building. Time, as a critical factor, facilitates the deepening of partnerships and the consolidation of initiatives, which is essential for impactful outcomes in North-South cooperation.

- Significance of “anchor individuals” and enabling environments

The project’s success is heavily attributed to the dedication of “anchor individuals” – those key figures driving change within their respective institutions. However, the impact of these individuals is significantly enhanced within enabling institutional environments. The transformation of AQUAHUB from a scholarship-based initiative to a robust institutional cooperation model illustrates this dynamic. This change process, requiring extensive negotiation and collective effort, highlights the interdependence of individual initiative and institutional adaptation. It points to the necessity of integrating both individual and institutional components in HEST cooperation programmes.

- Collective negotiation as a mechanism for change

The project’s trajectory demonstrates that lasting institutional change at all involved partner institutions, including in Austria, stems from prolonged collective negotiation processes. Inevitably, the context in which these collective negotiation processes took place reflects above-described asymmetries of power. However, these have been mitigated by a high level of mutual trust and a sense of cooperation at equal footing. This emphasizes the importance of non-linear, context-sensitive approaches to change, being aware of the asymmetries of power and resources among involved parties. North-South cooperation interventions should, therefore, provide enabling factors to counterbalance inhibiting conditions, focusing on building trust and facilitating dialogue on equal footing.

- Mediating role of contextual factors

The impact of the AQUAHUB project, particularly at the levels of policymaking and community engagement, is mediated by various contextual factors. These include resource constraints, institutional competition, labour market conditions, and government policy priorities. Individual commitment, while impactful, may not suffice to trigger systemic change in unfavourable contexts. This suggests the importance of aligning expectations with contextual realities.

Conclusion and prospects

Without doubt, AQUAHUB is an example for a successful North-South, and more recently also South-South, cooperation programme in higher education that has made a significant impact at the level of capacity development in all involved partner countries. On the other hand, it also illustrates how strongly the wider social and political context, including the global asymmetric landscape, frames and ultimately constrains its societal impact beyond the immediately involved institutions. Indeed, expectations, as often advanced by donor agencies, of North-South cooperation programmes triggering wider change processes in society beyond the involved institutions are mostly doomed to fail given that the constraining power of contextual factors is commonly not accounted for in a sufficient way.

Against this background, several conclusions can be drawn.

- **Education and research are not a panacea for structural problems.** It is therefore advisable not to overload North-South and South-South cooperation programmes in higher education and research with expectations of wider societal impact. Moreover, it is vital to acknowledge the constraining power of contextual factors in designing theories of change (ToCs) of such programmes. Linear ToCs in the form of input-output-outcome-impact designs appear to be overly simplistic.
- **Acknowledging power asymmetries is key.** This does not imply that equitable North-South cooperation is completely impossible. It rather indicates that given the inevitability of these asymmetries, trustful relationships between the involved partners have to be built to constructively deal with the given context.
- As the AQUAHUB example suggests, **prolonged processes of collectively negotiating change in each partner institution** are preferred opportunities for such building of trust. Contrary to the observable volatility of many aid programmes, the AQUAHUB experience also emphasises that **sustained commitment over a long period of time** is indispensable and should not be sacrificed to short-term efficiency constraints.
- Finally, the strong impact of context, and in particular asymmetric global power relations, suggest that change should be sought not only through interventions at the programme level, but also in terms of **advocacy for more inclusive regulations of the global HEST landscape**, e.g. through open access to scientific findings and academic publications, more public funding and stronger regulations of commercial providers.

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1 This Policy Note draws on the recent impact assessment of the AQUAHUB programme and its predecessors (Groh et al. 2023) that has been financed by the Austrian Development Cooperation (OEZA) since 1975.

2 Under the current cycle of the Erasmus+ programme (2021–2027), about 23 % of international funds are dedicated to Sub-Saharan Africa. This is a massive increase from about 7 % of the budget under the previous programme cycle (2021–2020). See: <https://erasmusplus.at/en/news/article/2021/09/subsahara-wird-neue-schwerpunkt-region-im-hochschulbereich-von-erasmus> (13/3/2024).

3 Project funded by Austrian Development Cooperation, numbers IPGL 612-00/1975 to 612-00/2009; CAPAQUA (Development of Educational and Research CAPacity in Eastern Africa for the Sustainable Management of AQUAtic Ecosystems), numbers 612-00/2009 to 612-00/2018; AQUAHUB 612-00/2018.

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