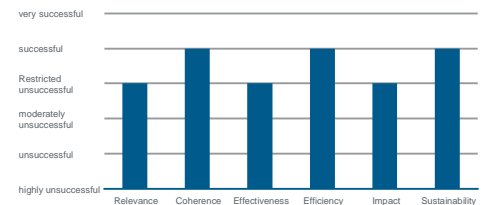


Ex-post evaluation

Extension of the University of Namibia, Ongwediva Campus, Namibia

Title	Extension of the University of Namibia, Ongwediva Campus		
Sector and CRS code	Higher education (CRS code 11420)		
Project number	2010 67 149		
Commissioned by	Federal Ministry for Economic Cooperation and Development (BMZ)		
Recipient/Project-executing agency	Republic of Namibia represented by the National Planning Commission / University of Namibia (UNAM)		
Project volume/ Financing instrument	EUR 8.0 million grant		
Project duration	October 2012– May 2021		
Reporting year	2023	Year of random sample	2023

Overall rating:
moderately successful



Objectives and project outline

The project's objective, adjusted as part of the evaluation, was to improve the need-based university education in civil engineering at the University of Namibia in Ongwediva. This was intended to increase the number of need-based qualified and employed civil engineers in the Namibian transport sector at impact level. Major activity was the expansion of UNAM's campus in Ongwediva and the building of three workshop buildings. The project was implemented in cooperation with parallel TC activities.

Key findings

The project helped to reduce the shortage of civil engineers on the Namibian labour market. Overall, the project is evaluated as moderately successful as results are positive overall, albeit below expectations.

- The initially high relevance of civil engineering education fell due to changing market conditions. The project was implemented coherently. In particular there was close integration with the activities of the German TC.
- The intended impacts at outcome level could not be achieved to a large extent. In particular the student numbers did not develop as forecast. Nevertheless, the flexible programming of the courses offered on the campus has enabled UNAM to use the building to its full capacity. Closing rates suffered due to the COVID-19 pandemic, female students performed better overall than male students.
- Positive exchange rate developments enabled a wider scope of services than planned, so that additional workshop buildings could be built and the cafeteria expanded. Due to delays, the laboratory equipment financed by TC was impaired.
- The target employment rates of UNAM graduates in the civil engineering department were not achieved at the time of the evaluation, but a positive contribution to the economic development of the region can plausibly be derived.
- With the same level of government support, the impacts must be assumed to be stable.

Conclusions

- For the effectiveness of the construction of a (high) school building, a consulting component with regard to (i) the quality and needs of teachers, (ii) modern curricula and (iii) the (financial) study conditions are essential, especially for students from low income families.
- Flexible building usage concepts can be used to respond to changing framework conditions.
- Well equipped laboratories can facilitate high quality research and teaching as well as the receipt of third party funds.
- Modern energy supply systems can be used to expand these technologies regionally.

Ex post evaluation – rating according to OECD-DAC criteria

Overview of sub-ratings

Relevance	3
Coherence	2
Effectiveness	3
Efficiency	2
Overarching developmental impact	3
Sustainability	2
Overall rating:	3

Framework conditions and classification of the project

Education has been recognised by the African Union as a key priority for development.¹ This also applies to Namibia, which gained independence from South Africa in 1990. At the same time, a functioning infrastructure, and in particular transport infrastructure, plays a major role in the country's development and regional integration. The project started at the interface between these two sectors, in which it aimed to improve university training for civil engineers for the transport sector in Namibia.

The measures were largely completed before the start of the COVID-19 pandemic. Nevertheless, the pandemic and the change in the global situation after the outbreak of war in Ukraine have a strong impact on the effectiveness of the project, which is discussed in more detail in the corresponding sections.

In 2021, after implementation, but before the evaluation of the project, UNAM was significantly restructured. The Agriculture, Engineering and Science faculties were merged into a new Faculty of Agriculture, Engineering & Sciences. The new faculty consists of four departments (called "Schools"), one of which is the School of Engineering and Built Environment. As such, this is the successor School to the former Department of Civil and Environmental Engineering. The School of Engineering and Built Environment is located on the José Eduardo dos Santos (JEDS) campus in Ongwediva and is divided into three departments: (1) Dept. of Civil and Mining Engineering, (2) Dept. of Electrical and Computer Engineering, and (3) Dept. of Mechanical and Metallurgical Engineering.² Unless otherwise stated, the evaluation shall refer to the nomenclature of the new UNAM structure.

Brief description of the project

In order to improve higher education in civil engineering at the University of Namibia (UNAM) and to increase the number of need-based qualified and employed civil engineers in the Namibian transport sector, an additional building section ("German Wing") was added to an existing teaching and research building on the Eng. José Eduardo dos Santos (JEDS) campus in Ongwediva. It was intended to house the Department of Engineering and Built Environment and, in particular, was set to be equipped with lecture halls, computer rooms and laboratories. The specifically financed activities of the project included detailed design and construction of the building as well as the corresponding consulting services. Construction began with a delay at the end of 2015. The building was scheduled to be put into operation in April 2018. Due to remaining funds, three additional workshop buildings could be built and the cafeteria expanded. This work was completed in April 2020. Parallel TC projects financed in particular the equipment of laboratories and the development of curricula in civil engineering as well as scholarships for Master's and PhD students. Financing was provided via an FC grant. The project was continued with a second phase (BMZ no. 2016 68 052). In this still ongoing phase, which is not the subject of the evaluation, accommodation for students in particular will be built on the campus.

¹ See, inter alia: "Transforming Education in Africa", African Union/UNESCO; September 2021.

² see: [Faculties - UNAM \(edu.na\)](https://www.unam.na/faculties).

The project target group was secondary school graduates, particularly in northern Namibia and from the SADC neighbouring countries, as well as teachers from the Department of Engineering and Built Environment.

Table 1: Breakdown of total costs

In EUR million	Inv. (planned)	Inv. (actual)
Investment costs (total)	15.5	16.2
Counterpart contribution	6.8	7.5
Debt financing	8.7	8.7
<i>of which BMZ budget funds (FC)</i>	<i>8.0</i>	<i>8.0</i>
<i>of which BMZ budget funds (TC)</i>	<i>0.7</i>	<i>0.7</i>

Source: KfW data, own presentation.

Figure 1: Map of the project country incl. project location



Source: Own representation, map: GADM/OpenStreetMap/Flanders Marine Institute (2023), Maritime Boundaries Geodatabase, version 12, Photo: J. Drillisch.

Evaluation according to OECD-DAC criteria

Relevance

1. Policy and priority focus

The project was fully in line with Namibia's policies and priorities at the time of design. The shortage of qualified engineers was identified in 2004 as one of the key obstacles to the development of Namibian transport infrastructure as part of the Namibian government's "Vision 2030". According to the calculations on which this was based, the number of Namibian engineers needed across all sectors was approx. 2,000.³ Insufficient university capacity and a low number of secondary school graduates who continued their education with a university degree were particularly decisive for the shortage of skilled workers. This was due to a) the lack of the necessary qualifications in natural sciences, b) the high cost of studying and c) the need to contribute to family income through employment. At the time of project planning in 2011, the third National Development Plan (NDP)⁴ was in force, which attached great importance to the development of the transport sector. The project also supports the former sectoral programme "Education and Training Sector Improvement Programme (ETSIP)" of the Ministry of Education.⁵

At the time of the 2023 evaluation, the transport sector no longer had the same high political relevance as at the time of the project appraisal. NDP 5 (2017/18 – 2021/22) had not yet been finally concluded; consultations on NDP 6 (2022/23 – 2026/27) began. Although strengthening Namibia's position as a transport and logistics hub in southern Africa is part of the fourth pillar of the Harambee Prosperity Plan II (2021-2025),⁶ the Namibian government's political focus has recently shifted to other sectors such as mining, alternative energies and green hydrogen. Education, including higher education, is given a high priority; in particular the proportion of students from rural areas and other marginalised groups is to be increased. According to USAID, the Namibian government's spending on education has been consistently above average in a regional comparison for more than 20 years, with the corresponding budget amounting to around 25% in 2022.⁷

The project met and aligns with the German development cooperation (DC) objectives in the transport and education sector,⁸ including Germany's commitment to improving the quality and importance of higher education in developing countries and emerging economies as well as ensuring fair and non-discriminatory access to universities.⁹ The project contributes to Agenda 2030, in particular to SDG 4 (Quality education) and SDG 9 (Industry, innovation and infrastructure). At the time of project appraisal, the transport sector was one of focal points of the German-Namibian development cooperation. However, during the 2019 intergovernmental negotiations, it was decided that cooperation in this sector would be phased out. A corresponding exit strategy was developed by BMZ in 2021; the BMZ country strategy is currently being updated.

In 2009, UNAM began offering its civil engineering course. The then Polytechnic of Namibia, which became the Namibian University of Science and Technology (NUST) in 2015, offered a more practice-oriented / technical higher education in engineering. Its campus is located in Windhoek. As a contribution to decentralisation and strengthening the north of Namibia, the selection of UNAM as executing agency and an expansion of university capacities in Ongwediva also appeared justified and meaningful at the time of the project appraisal, also taking into account administrative capacities. At the time, around 60% of the total Namibian population lived in the north. UNAM had and has the autonomy customary at Namibian universities and was reportable to the Ministry of Education (Ministry of Higher Education, Training and Innovation) at the time of the project appraisal.

³ According to Vision 2030 (p. 92f), the number of engineers should increase by 2% annually between 2001 and 2030.

⁴ [NDP 3 – National Planning Commission \(gov.na\)](#). The NDPs serve as multi-year implementation plans for the Vision 2030.

⁵ ETSIP was launched in 2006 in cooperation with a number of donors, including Germany, as part of Vision 2030.

⁶ The Harambee Plans are designed to implement the policy recommendations set out in the National Development Plans.

⁷ See [Namibia – Education – Country Dashboard – All \(usaid.gov\)](#). Unfortunately, no information is available on the division into primary, secondary and tertiary education, etc.

⁸ A draft version of the core thematic strategy "Sustainable economic development, training and employment" is available at the time of the evaluation. There is no separate BMZ transport/mobility sector strategy; these topics can be found in the [BMZ core topic strategy: "Responsibility for Our Planet – Climate and Energy"](#).

⁹ See [Higher Education and Science | BMZ](#).

2. Focus on needs and capacities of participants and stakeholders

The shortage of qualified civil engineers was correctly identified as the core problem in the 2011 project appraisal. However, at the time of the 2023 evaluation, the core problem formulated at the time no longer had the same relevance, as demand for civil engineers in Namibia has been declining for a few years. The reasons for this are the continuous downturn in economic growth since 2016 as well as in particular the consequences of the COVID-19 pandemic and the associated decline in construction activity (see section “Overarching development impact”). At the same time, the technical university education in civil engineering at the new NUST was reformed in 2015. This was not foreseeable at the time of the project appraisal. As a result, more civil engineers who had graduated from a university were subsequently available on the labour market (see also section “Overarching development impact”). This development has led to an oversupply of trained civil engineers on the Namibian labour market: a shortage can no longer be ascertained at the time of the evaluation. Nevertheless, it can be assumed that demand for civil engineers will increase again in the medium to long term. With a general recovery in the economy, public and private spending on transport infrastructure is expected to increase, especially as part of the Namibian government’s new focus areas of Alternative Energy and Green Hydrogen.

The design of the project took into account the needs of the target group of secondary school graduates and the teachers of the School of Engineering and Built Environment. The HIV issue was taken into account by specific measures in the design. The design of the project is to be regarded as gender-sensitive: in the design and implementation, at least gender-separated sanitary facilities were built as basic measures. The needs of people with disabilities were also taken into account (e.g., through barrier-free access and separately designated sanitary facilities). No other specific gender-related activities were planned as part of the project. It should be pointed out that Namibia has had an explicit gender policy¹⁰ since 1997; in general, Namibia scores above average in a regional comparison in terms of gender aspects.¹¹

In order to keep university education at UNAM need-based, UNAM has been updating the curricula for civil engineering since the start of the project on the basis of the specified government process.

An environmental and social impact analysis (ESIA) identifier was not assigned during the project appraisal. No environmental, social or climate relevance was identified in a preliminary audit, so that a deeper climate change mitigation and adaptation audit or an environmental and social review were not considered necessary. According to the audit, the effects of climate change, such as rising surface water and rising temperatures, are taken into account in the construction measures, environmentally harmless building materials are used and attention is paid to the use of renewable energies. From today’s perspective, however, the presentation of the design is not sufficient; an explicit environmental and social impact assessment would be required. A classification in category B therefore seems appropriate at present.

3. Appropriateness of design

The design was based on the core problem of the lack of adequately trained civil engineers. It aimed to increase Namibia’s civil engineering training capacity to university level by expanding a university building. On the basis of the holistic approach chosen, it was generally suitable for contributing to solving the core problem and the DC programme objective at the time. It was sufficiently precise, also because the executing agency already had previous experience from an earlier expansion of the campus building.¹² It was also technically, organisationally and financially realistic due to the integration with the parallel TC activities.

No explicit theory of change was formulated for the project as part of project planning.¹³ The selected indicators and their value allocation only proved to be appropriate in part (see also sections “Effectiveness” and “Overarching development impact”). Figure 2 shows the project’s Theory of Change (ToC) developed as part of the evaluation.

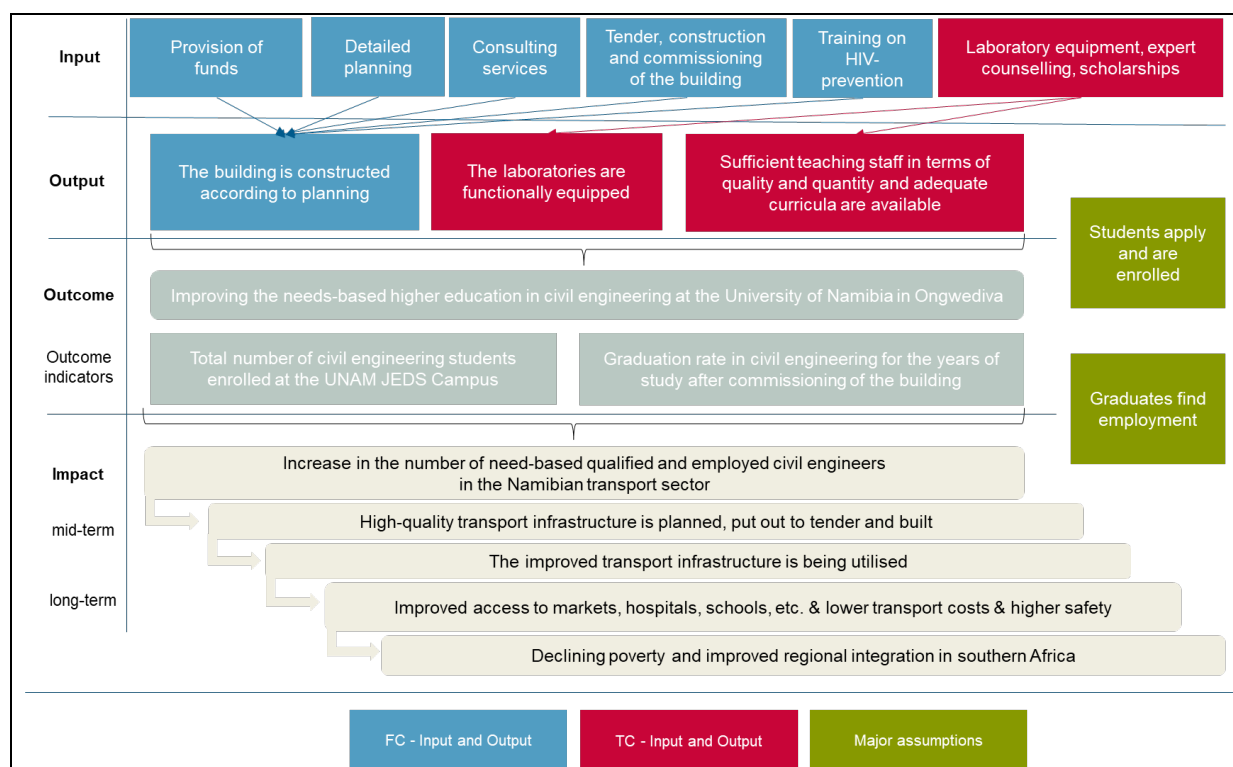
¹⁰ The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, 1997).

¹¹ See [Country Fact Sheet | UN Women Data Hub](#), among other things.

¹² The entire design of the campus was based on a master plan from 2006. In 2011, with the support of the Indian government, the so-called “Indian Wing” was established.

¹³ The results logic takes into account the target formulation updated compared to the original impact matrix (see section “Effectiveness”).

Figure 2: Theory of change for the project



Source: Own data.

The design envisaged that FC and TC provide coordinated inputs that, in their interaction, produce the impacts, as shown in figure 2 above. TC activities included the procurement and provision of laboratory equipment as well as the development of curricula and scholarships for Master's and PhD students in addition to the provision of CIM experts. This provides the executing agency with a functional building and suitable teachers (output). Assuming that students apply and are enrolled, need-based higher education in civil engineering at the University of Namibia is improved (outcome). Assuming that graduates find employment, this contributes at impact level to an increase in the number of need-based qualified and hired civil engineers in the Namibian transport sector (impact) and to the further positive medium- to long term development effects. It should be emphasised that the effects at impact level can only be achieved gradually and are very much depending on external risk factors, e.g., the further development of the Namibian economy.

4. Response to changes/adaptability

Due to the architectural integration into the master plan, which forms the basis for the design of the entire campus, there were hardly any structural possibilities for changes or adaptations in the design of the building (see also section "Efficiency"). During the implementation of the project, changes to the framework conditions occurred due to the deterioration in the construction economy in Namibia and the expansion of the range of civil engineering courses available at NUST. After completion of the measures and commissioning of the building, the outbreak of the COVID-19 pandemic had a huge impact on UNAM's direct teaching activities. UNAM tried to compensate for the absence of lectures by switching to distance learning; exercises requiring a physical presence had to be cancelled completely over a longer period of time (e.g., training in the laboratories). It is not yet possible to determine the extent to which the restrictions have affected graduation rates (see also section "Effectiveness"). UNAM responded to the effects of the general deterioration of the (global) economic situation, which resulted, among other things, in a sharp decline in demand for civil engineers in Namibia (see section "Overarching development impact") by adapting the use of the building, developing curricula, planning new courses of study (e.g., in the area of renewable energies and green hydrogen) and building any necessary additional campus buildings.

Summary of the rating

Due to the lack of trained civil engineers, the project was highly relevant at the time of design. Due to the higher number of university graduates in civil engineering and the simultaneous decrease in demand, the relevance is lower than expected at the time of the evaluation. The political priorities in Namibia have also shifted slightly – the transport sector is no longer receiving the same amount of focus as during the project appraisal. The design for solving the core problem in the appraisal was appropriate. Overall, the project can therefore be rated as moderately successful.

Relevance: 3

Coherence

5. Internal coherence

Unlike the transport sector, education was not a focal point of the German-Namibian cooperation at the time the project was designed. The project started at the interface between the two sectors, in which it aimed to improve university training for civil engineers, particularly for the transport sector in Namibia. The project's objective was suitable for contributing to the achievement of the programme objective at the time (see also section "Overarching development impact"). In 2019, the German and Namibian governments agreed to phase out the cooperation in the transport sector and to continue the ongoing projects outside the focus area. The focus in the field of education is on vocational training.¹⁴ From today's perspective, the project can be viewed as accompanying the current Africa strategy of the BMZ "Designing the future together with Africa".¹⁵

Building on the DC experience in the German-Namibian cooperation in the transport sector and the TC experience in the cooperation with the University of Namibia (UNAM), the DC involvement in the transport sector was expanded with the project evaluated here by newly committing the project at the end of 2010 and supplementing an existing TC project with a new component in coordination with the FC project. The implementation of the project corresponded to the implementation of the TC project.¹⁶

Building on the cooperation with UNAM in Ongwediva, a follow-up phase of FC involvement was agreed in 2016, in which in particular the accommodation for students was expanded on the campus.¹⁷

As set out in the "Relevance" section, the FC and TC measures are to be regarded as complementary (see also Figure 2). In principle, the cooperation between FC and TC was rated as positive in interviews, even if there were procedural coordination difficulties and time divergences in the implementation of the activities. The laboratory equipment procured by the TC had to be temporarily stored for a longer period of time, as the FC-financed building had not yet been completed.¹⁸ Nevertheless, synergy effects were exploited overall as part of the joint FC/TC commitment.

As part of the evaluation, no information about inconsistencies with international norms and standards to which German DC is committed became known.

¹⁴ At the time of the evaluations, the cooperation included the following priorities: (i) "Sustainable economic development, training and employment", (ii) "Climate and energy, just transition and (iii) Protection of our natural livelihoods.

¹⁵ See: [Shaping the future together with Africa The BMZ's Africa strategy](#)

¹⁶ "Strengthening institutional and management capacity in the road sector" or "Transport, Mobility and Logistics" (BMZ no. 2011.2095.5 and 2015.2210.1). At the time of the evaluation, UNAM is supported by GIZ as part of a TC project financed from the Studies and Experts Fund.

¹⁷ Expansion of the Faculty of Engineering at the University of Namibia (UNAM) Ongwediva Campus, Phase II (BMZ No. 2016.68.052). The ongoing FC cooperation with UNAM also includes the expansion of the faculty building for wildlife management and tourism at the Katima Mulilo campus (BMZ no. 2015.67.015).

¹⁸ This aspect is described in more detail in the "Efficiency" section and is not included in the evaluation of internal coherence; see also page 5 of the evaluation of the TC project: [Project evaluation summary report English, as of: May 2015 \(d-nb.info\)](#). The follow-up phase of this TC project "Transport, Mobility and Logistics in Namibia" (BMZ no. 2015.2210.1) was also evaluated; the corresponding report was shortly before publication at the end of 2023).

6. External coherence

The project was financed in almost equal parts by the Namibian government and German DC.¹⁹ In principle, the Namibian government supported (and continues to support) UNAM with budget funds in the performance of its educational mission. This includes not only the financing of staff costs, but also material costs. Overall, it can be stated that the principle of subsidiarity has been respected, as the project effectively supported the activities of the Namibian government.

At the time of the project appraisal, UNAM cooperated not only with German DC but also with India, which financed a part of the JEDS campus in Ongwediva. In this context, furniture was supplied from China. The activities were based on a master plan developed for the building of the JEDS campus, so that synergies could be exploited in this regard. In addition, at the time of project planning, there were no donors supporting Namibia in the transport sector in addition to the African Development Bank (ADB) and JICA.²⁰ For coordination purposes, there was a donor group that no longer existed at the time of the evaluation. The informal exchange, in particular between KfW, GIZ and ADB, worked during the preparation and implementation of projects, and continues to work.

Summary of the rating

In summary, it can be concluded that internal coherence overall can still be assessed as successful due to the close, although not completely successful, integration with TC activities and due to the external coherence regarding the significant efforts made by the Namibian government.

Coherence: 2

Effectiveness

7. Achievement of (intended) targets

The objective adjusted as part of the evaluation was: Improving the need-based higher education in civil engineering at the University of Namibia in Ongwediva. The achievement of the objective at outcome level is shown in Table 2. The number and formulation of the original indicators selected during the project appraisal were adapted as part of the evaluation and aligned with the concrete activities of the project.²¹

Table 2: Target achievement at outcome level:

Indicator	Status during PA	Target according to EPE	Actual value at final inspection	Actual value at EPE
(1) Total number of civil engineering students enrolled at the UNAM JEDS Campus	28 (2010)	EPE: 255 (3 years after commissioning, i.e., 2021)	102 (2021)	120 (2023) Indicator not achieved.
(2) Graduation rate in civil engineering for the years of study after commissioning of the building	0% (2010)	EPE: 65%	No information on percentages	Year of study 2017: - 56% (all students) - 50% (male students) - 67% (female students) Performance level not yet to be conclusively evaluated.

¹⁹ The Namibian financing share amounted to around 46% of the total costs, including the costs for the provision of the property, which was provided free of charge by the local authority of Ongwediva UNAM (see also section “Efficiency”).

²⁰ There was donor coordination in the education sector, including in the ETSIP sector project (see section “Relevance”).

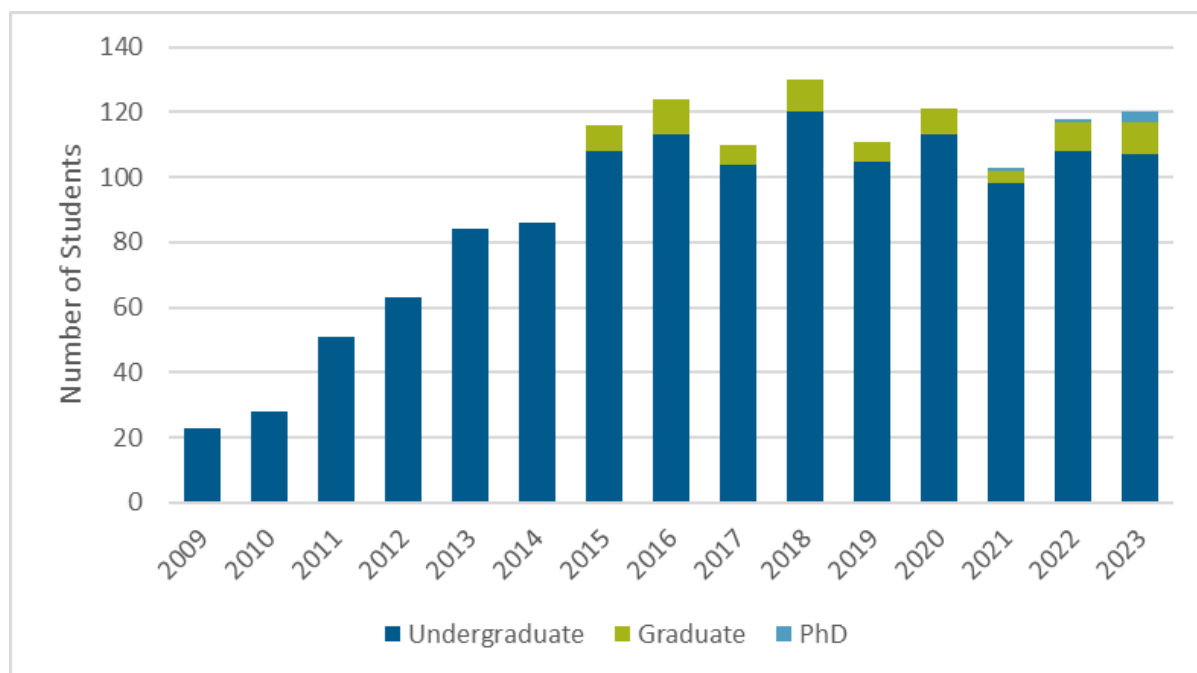
²¹ As part of the evaluation, it became clear that UNAM did not always have consistent and complete data.

8. Contribution to achieving targets

Indicator 1

The civil engineering course at the UNAM-JEDS campus was launched in 2009. The development of enrolled students is shown in Figure 3

Figure 3: Total number of civil engineering students on the UNAM-JEDS campus



Source: Data: UNAM, own presentation.

In 2023, 120 students were enrolled at the JEDS campus in the civil engineering department. In 2015, the first students began their Master's degree. In 2023, the number of students studying for a Master's amounted to ten. The number of PhD students in 2023 was three.

The target value was set at 255 students, in line with a utilisation rate of the (minimum) capacity of the building of 85%. The actual number of students on a civil engineering course does not align with the indicator value. There are many reasons for the lack of enrolment on civil engineering courses, including the fact that qualified specialists often found good recruitment and earning opportunities in the construction sector even without university degrees. In addition, the offer at NUST, Namibia's second largest university, located in Windhoek, was expanded, resulting in an oversupply of study places in some cases. Another reason for the lower-than-expected number of civil engineering students at the UNAM-JEDS campus was that only a few students are enrolled on the master's courses: this is essentially due to the fact that many students with a bachelor's degree prefer to complete a master's degree abroad to diversify their study experience (inter alia at universities in South Africa). Probably against the backdrop of the COVID-19 pandemic and the worsening job prospects, the number of students on master's courses has been increasing again since 2022.

Indicator 2

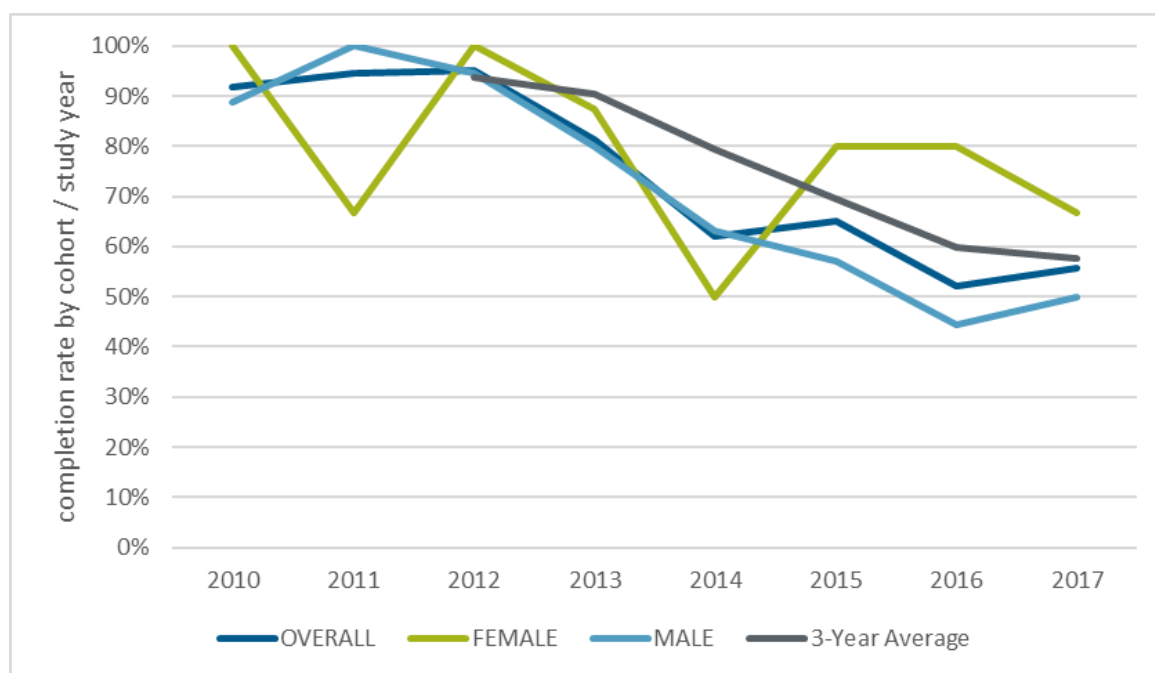
The initial value of the graduation rate is 0%, as the first year of study began in 2009 and therefore no graduation rate was yet available at the time of the appraisal. Figure 4 shows the evolution of graduation rates (annual values and three-year average) from civil engineering courses at the UNAM-JEDS campus.²² The target value for this indicator is based on regional benchmarks and the average graduation rate targeted by the Namibian

²² This data refers exclusively to the graduation rates on the bachelor's programmes.

government in NDP5. This was set at 65% during the evaluation.²³ Students on the bachelor’s programmes have a maximum of six years to complete their studies, meaning that the graduation rate for 2018 students, who were able to use the new building for the entire duration of their studies, will not be available until the end of 2023.

It is evident that graduation rates decrease on average over time. While the student year 2015 still posts a graduation rate of 65% and therefore reaches the target value, the graduation rate from the year 2017 drops to 56%. However, there is a clear difference between male students (50%) and female students (67%).

Figure 4: Completion rates (three-year average) from civil engineering courses at UNAM-JEDS campus



Source: Data: UNAM, own presentation.

According to UNAM, possible reasons for the decreasing graduation rates are that the level of knowledge of first year’s students has deteriorated compared to previous years. This is supposed to be due to the lower level of education in secondary schools. In addition, funding (see below) is granted for the bachelor’s programmes up to a maximum of the minimum study duration of four years (for the master’s programmes for a maximum of two years). As a result, repeated years must be financed from own funds and students may have to drop out of their studies for financial reasons. In order to counter the low level of knowledge at entry level, UNAM has introduced a kind of “pre-semester” from 2023 onwards in order to provide students with the necessary basics.

Due to the COVID-19 pandemic, it can be assumed that the graduation rates from the years 2018 onwards will initially not improve compared to the year 2017 and that the target indicator will probably not be met in the short term. It seems plausible that the graduation rate will increase again in the medium term, as it can be assumed that the introduction of the preparatory year will improve training.

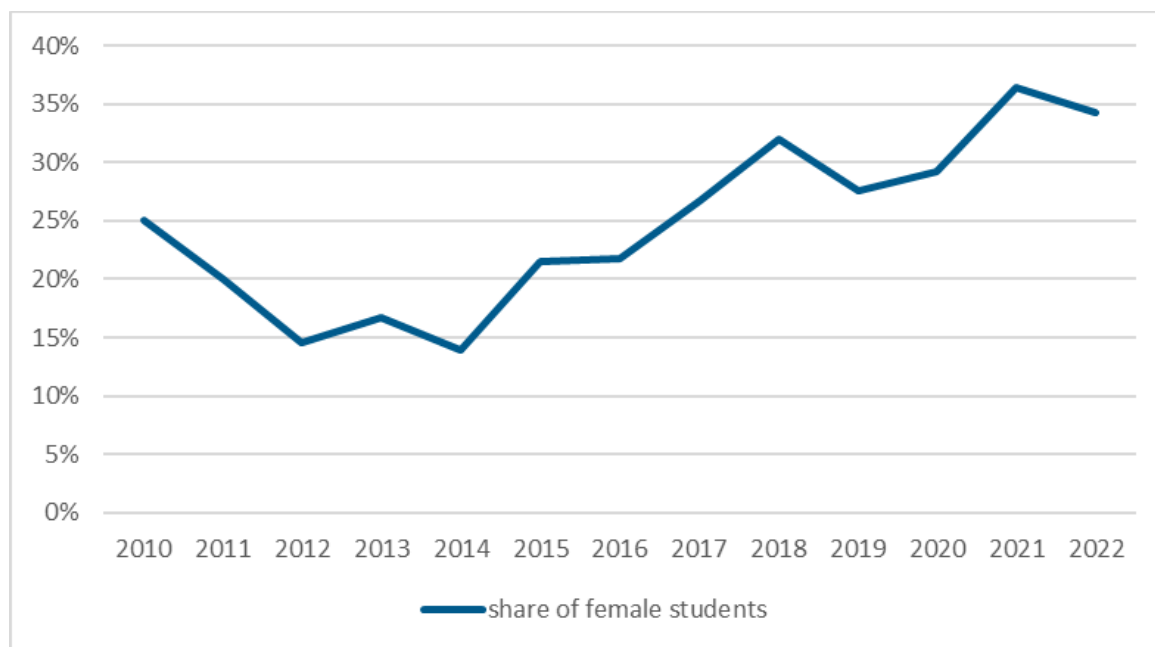
Further aspects

No gender-related activities beyond the structural measures planned in the design phase were financed as part of the project (see section “Relevance”). In cooperation with the TC, UNAM has carried out selected activities to attract female students to the traditionally male-dominated field of civil engineering. Figure 5 shows the

²³ Graduation rates from civil engineering courses in South Africa range from 54% to 73%, and the Namibian government wanted to achieve an average graduation rate across all degree programmes of 70% by 2021/2022.

development of the proportion of female students among the total number of civil engineering students on the UNAM-JEDS campus.²⁴

Figure 5: Share of female students among the total number of civil engineering students on the UNAM-JEDS campus



Source: Data: UNAM, own presentation.

From 2014, the proportion of female students in civil engineering increased significantly and stood at around 33% in 2022. This is higher than the average across the entire JEDS campus (around 27%) and roughly equals the average of all UNAM students. The proportion exceeds the international average for civil engineering degrees, which is around 30%.²⁵ UNAM's efforts are therefore to be evaluated as successful. In addition, it should be noted that both the position of faculty manager and the position of vice faculty manager, who also holds the position of campus manager, are occupied by women. Access is provided for people with physical disabilities on the JEDS campus.

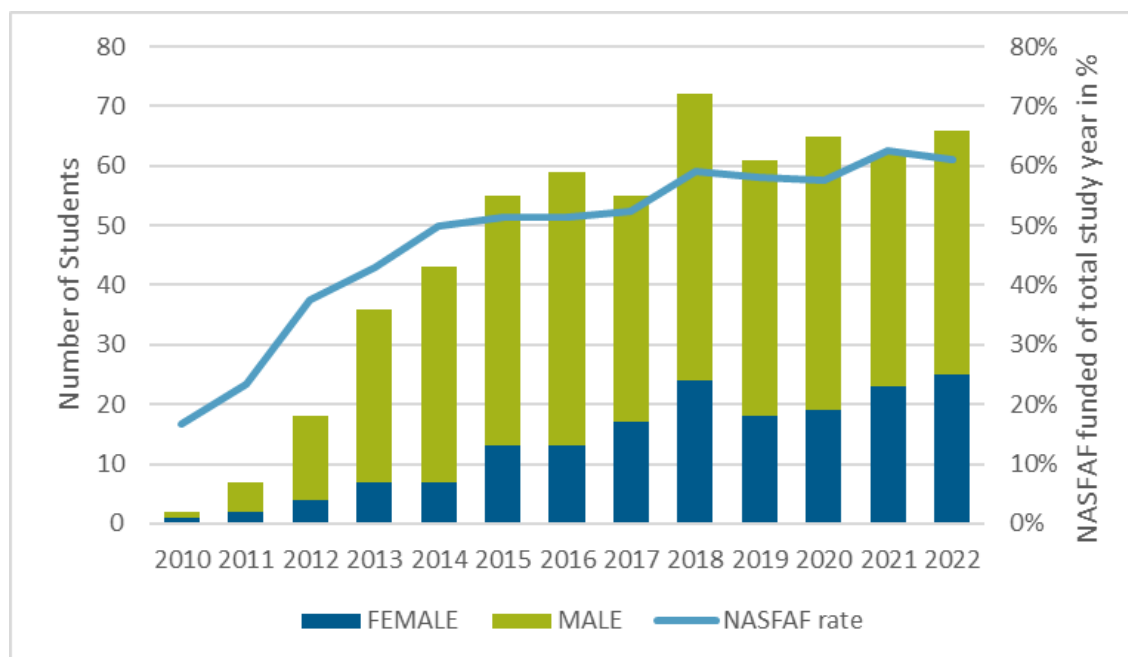
Specific measures for the benefit of students from low income families were not financed under the project. According to UNAM, UNAM supports students in seeking support for tuition financing. Students in Namibia can receive funding from various sources, in particular from the Namibia State Student Financial Assistance Fund (NSFAF), as well as from UNAM and industry scholarships. The NSFAF funding is granted for a maximum of four years for bachelor's programmes and for a maximum of two years for master's programmes and is based on the income ratios of the students and their families. For civil engineering students at the UNAM-JEDS campus, the proportion of NSFAF-funded students increased from around 17 % in 2010 to around 61 % in 2022 (Figure 6).²⁶

²⁴ The data refers to female students on the bachelor's programmes; disaggregated data by gender for the master's and PhD programmes was not available.

²⁵ According to the German Federal Chamber of Engineers, the proportion in Germany in 2023 is around 30% ([Female civil engineers: facts and figures – Federal Chamber of Engineers \(bingk.de\)](#)); the figures are similar for the USA.

²⁶ This data refers exclusively to the graduation rates on the bachelor's programmes.

Figure 6: Number and proportion of civil engineering students from low income families (measured by receiving NSFAP funding)



Source: Data: UNAM, own presentation.

Overall, it can be stated that without the building financed by the project and the laboratories set up with the building, the training of students in civil engineering could not have taken place to the same extent (see also Theory of Change, Figure 2). The interviews conducted as part of the evaluation confirmed these assessments. In addition, the photovoltaic system installed as part of the project enabled part of the campus' electricity supply to come from a renewable source.²⁷

9. Quality of implementation

As the developer of the campus extension, UNAM, specifically the "Estate Services" department, was primarily responsible for the implementation of the construction activities. UNAM was supported by an international and also national consultants. The cooperation between UNAM and the consultants was described as very good by the parties involved. Despite significant delays (see section "Efficiency"), UNAM is certified for proper project guidance. According to the final inspection, the pure construction of the new building could be completed in the originally scheduled time.

As part of the evaluation, a visual inspection of the building and the workshops was carried out, whereby no serious defects were found.²⁸ Exceptions to this are in some cases non-functional laboratory equipment that was procured as part of the TC commitment (see also section "Efficiency"). The use of funds audit as part of the final control did not reveal any anomalies or indications of misuse of funds. During the evaluation, the mission was not aware of any indications of possible misuse of funds.

10. Unintended consequences (positive or negative)

Due to the lower-than-expected number of civil engineering students, the average occupancy of the building of students on civil engineering courses has stood at only around 46% since 2018. As a consequence, UNAM has adapted the usage concept of the building financed as part of the project. The premises, such as lecture halls, computer rooms and, in some cases, laboratories, are now also used by students of other engineering courses

²⁷ A more precise calculation could not be carried out as part of the evaluation due to the plant's operating data not being submitted.

²⁸ The structural risks identified during the appraisal due to the nature of the subsoil and the sometimes severe flooding during the wet season did not occur until the time of the appraisal.

offered by UNAM on the JEDS campus.²⁹ Since the building was commissioned in 2018, the number of students on the JEDS campus has almost doubled by 2023, with 675 students registered by the time of the evaluation. According to UNAM, the utilisation rate of the building is high at the time of the evaluation. Using the building also for students on other courses suggests that it is also helping to expand and improve the quality of these courses of study. The interviews conducted as part of the evaluation confirmed this assessment.

Neither positive nor negative unintended effects were identified during the evaluation. This aligns with the results of the evaluation of the TC project carried out in 2021. As part of the project evaluation, it came to light that after the project completion there had been a case of sexual harassment against a person on the way from the campus to its home outside the campus. This was supposed to be favoured by a lack of street lighting. According to UNAM, the lighting situation around the campus has been improved in cooperation with the local authority of Ongwediva. UNAM has a coded policy to combat sexual harassment.

Summary of the rating

The indicators revised as part of the evaluation for achieving the (newly formulated) objective at outcome level are only partially met. In particular, the number of civil engineering students on the UNAM-JEDS campus is far below expectations. This is partly due to external effects. The UNAM degree programme for civil engineering is characterised by a high proportion of female students even without concrete gender-related activities being carried out in addition to structural measures as part of the FC project. The graduation rate of female students has been significantly higher than that of male students since 2015. The quality of the implementation of the project is rated as good. It is worth highlighting that UNAM uses free building capacities for other engineering degree programmes, making the positive, unintended effect of the project the opportunity to improve quantity and quality in these courses. No further positive or negative unintended effects could be identified during the evaluation. Therefore, the effectiveness of the project is rated as moderately successful overall.

Effectiveness: 3

Efficiency

11. Production efficiency

The total costs of the project amounted to around EUR 16.2 million and were approximately 4.5% above the planned amount of EUR 15.5 million. It must be taken into account that the scope of the project was expanded due to residual funds and that not only the main building section “German Wing” was built, but also three additional workshop buildings and parts of the cafeteria. The rental agreements for the workshop halls in Ongwediva, which were previously being rented, were terminated with the additional building of the three workshops. This resulted in noticeable operating cost savings and significantly improved conditions for all students.

The positive exchange rate development between the euro and the Namibian dollar was key to making the expansion possible. The Namibian dollar depreciated against the euro during the project implementation phase, so that less finance in euro was required for the originally planned construction measures and a suitable amount of residual funds remained in euro. In return, UNAM was not able to benefit from exchange rate changes in the financing of local consulting and other local costs. Since it was agreed that all construction costs would be financed in equal parts by project funds on the one hand and UNAM's own funds on the other, and it was decided that the residual funds in euros should be used for the building of the further outputs, UNAM had to increase its own funds accordingly in order to also ensure equal financing for the additional measures. Overall, UNAM's own contributions and total costs therefore increased by approximately EUR 0.7 million compared to the initial planning. As a result, UNAM's share of the total costs increased from 44% to 47% and the DC's share ultimately amounted to 53%. A total of 49% (EUR 8 million) of this amount was attributable to FC funds and 4% (EUR 0.7 million) to TC funds. Since the completion of the project, UNAM has adequately financed the running costs of the building from its own funds.

Overall, the share of costs for investment measures (building and equipment) increased by 6% to a total of 83% of the total budget, while the share of costs for (national and international) consulting services amounted to 17%

²⁹ Further courses of study include mining engineering, electrical engineering, mechanical engineering and metallurgy technology as well as electronics and computer technology.

as planned. The specific costs of the main building (including furnishings and technical equipment) amounted to around EUR 1,420/m². As the construction was carried out on the basis of the master plan, the star-shaped building could not be constructed completely in accordance with efficiency considerations according to an expert statement (e.g. the spacious ceiling height had to be maintained). Nevertheless, the final inspection concludes that the specific costs are to be assessed as appropriate taking into account the modern standard and the local context. The specific costs for the construction of the workshop buildings have been calculated at EUR 690/m² and appear reasonable.

After the appraisal of the project in 2011 and the signing of the financing contract, there were considerable delays to the award of contract and the start of the construction measures, mainly due to (i) the long period until signing the on-lending agreement, (ii) late provision of Namibian financial contributions³⁰ and (iii) a long phase of approval and signing of the consulting contract. The implementation of the construction measures went largely according to plan. The building was handed over in April 2018 and the further construction measures financed by the residual funds were finalised in April 2020.

It is critical to note that the delay in the construction of the building meant that the laboratory equipment financed by the TC had to be temporarily stored. This resulted in some damage to the equipment. Warranty periods also expired in some cases without a corresponding claim being made. Parts of the unusable laboratory equipment are still in the laboratories at the time of the evaluation. However, this only results in slight restrictions in the training of students.

12. Allocation efficiency

The shortage of qualified civil engineers was the core problem that the project was intended to address. Therefore, the approach of expanding university capacity was appropriate (see also section “Relevance”). At the time of the appraisal, it also seemed appropriate to expand UNAM's capacities on the JEDS campus, as the former polytechnic (and today's NUST) offered a more technically oriented degree at university level. The lower use of the building by civil engineering students at the time of the evaluation is compensated for by the use of students on other engineering courses.

At the time of the evaluation, there are no specific studies or analyses that allow for an overall economic evaluation of civil engineering university education in Namibia and its alternatives.³¹ There is also a lack of concrete data on whether a cooperation with an alternative project-executing agency such as NUST would have led to a more cost-effective achievement of the effects. As part of the evaluation, it was not possible to quantify whether the offer of study places for construction engineering in Namibia by UNAM and NUST is or will be too large. However, the lower utilisation figures make this estimate seem plausible in the medium term at least. The selection of the location appears justified (see also section “Overarching development impact”).

Summary of the rating

The delay until the start of construction measures and the resulting deficiencies in the usability of the laboratory equipment financed under the TC project limit the otherwise high production efficiency. The scope of services was significantly increased due to the available residual funds and the provision of additional own funds. This compensates for the rather limited successful allocation efficiency, so that the overall efficiency of the project is still rated as successful.

Efficiency: 2

³⁰ As part of the project appraisal, the risk that the funds for the building and equipment cannot be provided in the full amount was formulated.

³¹ A comprehensive cost-benefit analysis was not carried out as part of the “rapid appraisal approach” of the ex post evaluation. According to the World Bank, people with a tertiary education are able to earn the highest income ([Tertiary Education Overview – worldbank.org](https://www.worldbank.org)). For information on how higher education helps achieve the SDGs, see, among other things: Chankseliani, M, McCowan, T Higher education and the Sustainable Development Goals. High Educ 81, 1–8 (2021) <https://doi.org/10.1007/s10734-020-00652-w>, or also: [Tertiary education is essential for opportunity, competitiveness, and growth \(worldbank.org\)](https://www.worldbank.org).

Overall development impact

13. Overarching developmental changes (intended)

At the time of the project appraisal, a subordinate programme objective was formulated for the project. The impact-level objective adjusted as part of the evaluation was: “Increase in the number of need-based qualified and employed civil engineers in the Namibian transport sector.” Target achievement at the impact level can be summarised as follows.

Table 2: Target achievement at impact level:

Indicator	Status PA	Target value at EPE	Actual value at EPE
Proportion of UNAM civil engineering graduates who find employment as civil engineers, work independently as such or find a comparable position.	0% (2010)	Six months after completion of the first complete study year at the end of 2023: 75%	43% (2020) A complete evaluation of the achievement of the indicator is not possible at the time of the evaluation, as insufficient data is available.

At the time of the 2011 project appraisal, there were no students who would have been able to conclude a course of study due to the minimum study duration of four years. Therefore, the base value is given as 0%. In August 2021 GIZ conducted a retention study (retention or tracer study). According to this study, only around 43% of those graduated from civil engineering courses at UNAM found employment as a civil engineer or in a comparable position in 2020. If just this one-year period had been taken into account, the indicator would not have been achieved. However, it should be noted that the first students to use the new building in 2018 were not able to complete their studies until the end of 2021 at the earliest, so they are not yet included in the study. Therefore, it is not yet possible to calculate an indicator value; corresponding data is not available. In order to compensate for the lack of data availability, estimate data is used as part of the evaluation. It can be assumed that the indicator value will not increase significantly.

Significant reasons for this assumption include:

- a) The high level of competition and price pressure in the Namibian construction and construction consulting industry, which, according to expert assessments, has led and still leads to limited integration of less experienced graduates into companies.
- b) The economic downturn of the Namibian economy: as Figure 7 shows, Namibia’s economic growth has fallen sharply since 2016 and in particular in 2019 and 2020; only relatively moderate growth rates are expected in the medium term. The construction sector’s share of Namibia’s GDP fell rapidly, particularly in 2016 (Figure8), particularly due to the reduction in public orders. The unemployment rate has remained at a high level of around 20% in recent years.
- c) The development of the global economic situation with the rise in global and Namibian inflation rates, also taking into account the conflicts in Ukraine and the Middle East.
- d) The Namibian government’s continued efforts to reduce the national state quota, which reduces job creation and recruitment in the public sector. Experts interviewed reported on vacancies in the public sector that would not be filled.

Figure 7: GDP development in Namibia 2010-2022

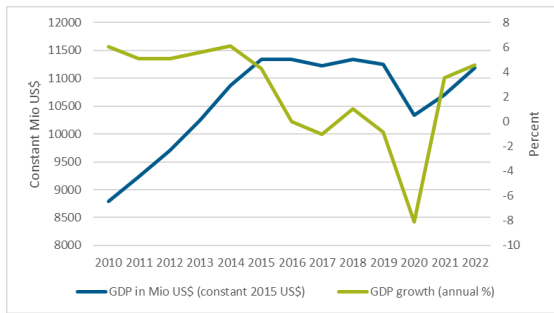
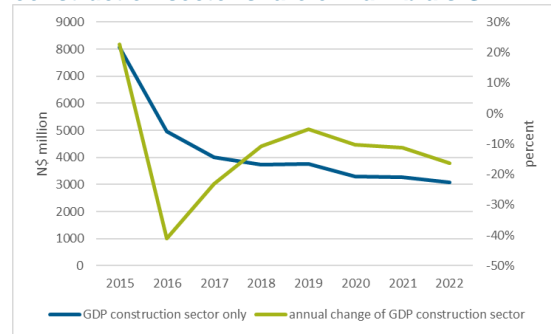


Figure 8: Namibian construction sector and construction sector share of Namibia's GDP



GIZ's retention study also examined the professional development of NUST civil engineering students. It becomes clear that an even lower proportion of NUST civil engineering graduates have found a suitable job as a civil engineer, which speaks for the quality of the training at UNAM. Those who found employment would have found it predominantly in the private sector or with parastatal companies.³² In order to be able to fully measure the results of the project at impact level, anchored and more extensive retention studies would be necessary from the outset.

UNAM has state-of-the-art facilities and recognised curricula, which have been regularly adapted following consultations, in particular with the construction industry, and approved by the National Council for Higher Education (NCHE). Nevertheless, interviews revealed that UNAM training should be expanded especially in the area of software used in industry, which would in turn be associated with high licensing costs for UNAM. The university could also become even more active in gathering practical experience through a stronger support in arranging students' internships in the industry, in order to further increase students' employability.

The target group of the project was secondary school graduates, particularly in northern Namibia and from the SADC neighbouring countries, as well as indirectly the teachers of the School for Engineering and Built Environment. The project had not explicitly defined vulnerable groups as part of the target group (see section "Effectiveness"). People with disabilities belong to the group of beneficiaries of the project. Students can benefit from state study funding through NSFAP. During the design of the building, sanitary facilities were set up separately for men and women, in addition to disabled sanitary facilities, and access options were created (e.g. accessibility through ramps and lifts). Systematically disaggregated information on vulnerable parts of the target group is not available.

14. Contribution to overarching developmental changes (intended)

Without the project, UNAM would not have been able to expand to the same extent and accordingly enlarge the number of courses offered on the campus. Although the current employment figures of graduates in the field of civil engineering did not meet expectations, UNAM is also using the financed building for the training of students in other courses of study. This helps to improve their opportunities to find employment and therefore earn an income.

A broader impact can be achieved through the involvement of UNAM's central department for building management (Estate Services). The department's employees have gained valuable learning experiences from the design and implementation of the project and can incorporate these into other construction designs. The construction of the photovoltaic system as part of the project is to be evaluated as positive. The use of solar energy on the campus means that greenhouse gases are not produced.³³

³² For further details, see also page 46f of the evaluation report of the GIZ project "Transport, Mobility and Logistics, Namibia" (BMZ no. 2015-2210-1).

³³ See also footnote 27.

15. Contribution to (unintended) overarching developmental changes

From the perspective of the evaluation, the reasons for the (current) non-achievement of the results at impact level arise in particular from external factors (see above). In the overall assessment of the impact, the following additional aspects (not to be quantified as part of the evaluation approach) must be taken into account:

- a) Temporary jobs were created during the construction phase.
- b) UNAM students and teachers generate income for local communities around Ongwediva through their demand for housing, health care and entertainment.
- c) The project contributed (albeit only to a small extent) to UNAM being the largest employer in the northern region of Namibia. According to information from interviewed experts, this was a key reason for setting up a private hospital in the region, which expanded the range of health care services.³⁴
- d) The presence of an internationally recognised university strengthens the region's attractiveness for industry, trade and commerce.
- e) Secondary school graduates in the region who would not be able to choose another place of study despite state promotion are not forced to leave the region to study civil engineering.
- f) UNAM has offered free computer training courses to employees of the municipality of Ongwediva in the building financed by the project.
- g) In future, UNAM could act as a promoter for the installation of photovoltaic systems if the operating results of the systems financed under the project are available. Based on the expected positive results, UNAM could broaden experience in the region and therefore help to remove the investment barrier for photovoltaic.

The project's contribution to the medium-term and long-term effects (see also Theory of Change in the Relevance section) cannot be quantified, but still appears plausible.

No negative unintended development policy changes were identified at impact level during the evaluation. Neither were any negative, unintended environmental impacts of the financed building known.

Summary of the rating

The target employment rates of UNAM graduates on civil engineering courses had not yet been achieved at the time of the evaluation. Conservative estimates suggest that this will not be the case in the short term. In the medium term, it can be assumed that the desired employment rates will be achieved. The currently unsatisfactory results in civil engineering are partially compensated for by the positive unintended effects for students on other engineering courses. The project also had some positive effects for the region in northern Namibia that could not be quantified as part of the evaluation. Against this background, we continue to rate the impact as moderately successful.

Impact: 3

Sustainability

16. Capacities of participants and stakeholders

Both the UNAM management in Windhoek and those responsible on the JEDS campus display a very high level of commitment and ownership. Institutionally, UNAM is very well positioned, and it can be assumed that UNAM can continue to implement necessary adjustments in the use of the building (e.g. by using the lecture halls, computer rooms and also selected laboratories) in order to value the created capacities so that positive changes will continue to arise for the target group.

The building and the workshop buildings are in a very tidy condition according to the evaluation of the premises visited. Until now, UNAM has been able to maintain the buildings even after the project has been completed on

³⁴ The reason for this is that public employees are entitled to support for medical costs and can therefore potentially finance higher costs for private health care.

the basis of budget allocations from the public budget. A risk formulated in this regard as part of the project appraisal did not occur until the time of the evaluation.

The teachers interviewed during the evaluation demonstrated a high level of intrinsic motivation and were in general satisfied with the laboratory equipment and teaching conditions. One challenge remains the location factors in the vicinity of Ongwediva, which appear less attractive to the capital Windhoek, for example. The very good laboratory equipment was rated positively, even in a supra-regional comparison. As part of TC activities, some study and training costs were financed by selected teachers over several years. In return, they undertake to remain as teachers in Ongwediva for an equivalent period after completing their PhD programme.

Thanks to the flexible design and utilisation of the financed building by students of all courses offered on the campus, UNAM demonstrates a high level of resilience to the controllable risks that can jeopardise the impact of the project. It must be noted that the functionality of the campus is exposed to the risk of IT system failure. UNAM must therefore ensure that appropriate staff and organisational mitigation measures are in place.

17. Contribution to supporting sustainable capacities

As part of the project, a photovoltaic system was financed and installed to provide the campus with electricity supply. This is a significant contribution by the project to strengthening the ecological and economic sustainability of the campus building, especially against the backdrop of rising energy prices.

The building and furnishing of the laboratories as part of the project provided teachers with a modern working environment, which increased the attractiveness of the campus. UNAM was given the opportunity to market the corresponding laboratory services. To this end, UNAM successfully completed a process to conclude laboratory certification in 2023. No quantitative information can be provided at the time of the evaluation on the amount of future revenue that can be generated by the sale of laboratory services. The challenges in the economy will also have an impact here.³⁵ In order to ensure UNAM's competitiveness with other laboratories, it must be ensured that the laboratory management financed by the current TC commitment also has the corresponding capacities after the end of the promotion. UNAM raises further third party funds via the rental of premises of the building financed as part of the project (e.g. auditorium and computer rooms).

18. Durability of impacts over time

The sustainability of the effects over time depends in particular on the availability of sufficient funds for financing running costs, in particular staff costs, as well as for necessary replacement investments. Due to the high importance of education in the context of Namibian policy, it can be assumed that sufficient funds will be made available for the education sector in general and for the higher education sector in particular, i.e., also for UNAM, even with smaller national budgets. According to information received from the Ministry of Higher Education, Training and Innovation (MHETI) in the course of the evaluation, sufficient funds should continue to be provided for running costs, maintenance and any necessary reinvestments despite tight budgets. The financing of the salaries of UNAM employees is of central importance. In order to maintain sufficient competitiveness for highly qualified teaching staff, remuneration appropriate to the location is of great importance. In order to maintain the quality of training in the laboratories and also the range of services offered, it is essential to be able to ensure that the laboratory equipment remains at an internationally recognised standard. The extent to which UNAM can generate its own funds or raise third party funds cannot be conclusively evaluated. It is undeniable, however, that public funds will remain necessary in addition to tuition fees.

The sustainability of the project also depends on the development of the number of UNAM civil engineering students. This is influenced by the preferences of school leavers. The interviews conducted during the evaluation revealed that some undergraduate students prefer to complete a master's programme at another university in order to broaden their experience horizons. In order to be able to reacquire these students as teachers for UNAM, it seems constructive to maintain contact, e.g. within the framework of alumni associations. In addition, the financial possibilities of potential students influence the capacity utilisation of UNAM. This is strongly influenced by the further development of state study funding via NSFAP and the availability of other scholarships.

³⁵ At the time of the evaluation, all third party funds received are entered in the general UNAM budget without the JEDS campus directly participating in the revenue.

Summary of the rating

The buildings financed as part of the project are in good condition. UNAM is capable of performing proper maintenance and servicing. It can be assumed that sufficient funds will continue to be made available from the state budget in the future to cover the running costs as well as the costs of necessary reinvestments. The acquisition of third party funds can improve the financial situation and therefore financial sustainability, albeit only slightly. Sustainability risks continue to exist in individually perceived site disadvantages for potential teachers and in a sufficient number of successful students' applications. The installation of a photovoltaic system as part of the project contributed to environmental and economic sustainability. Overall, sustainability is still rated as successful.

Sustainability: 2

Overall rating: 3

As part of the project, UNAM was supported in establishing civil engineering study opportunities. Specifically, the UNAM JEDS campus in Ongwediva has been expanded with a new building. In addition, three workshop buildings could be built, and the cafeteria expanded. The project at the interface between the transport and education sectors addressed a relevant topic at the time of the project appraisal, but it somewhat lost in significance at the time of the evaluation. The coherence of the project is characterised by close integration with parallel TC activities. The Namibian government's and UNAMs' own efforts are noteworthy. At outcome level, not all success indicators were met, in particular the number of civil engineering students on the UNAM-JEDS campus was below expectations. Due to positive exchange rate developments, among other things, the project is characterised by high efficiency, even though delays in the project's start-up phase made interim storage of laboratory equipment procured as part of the parallel TC project necessary. This also led to efficiency losses in the TC project. The target employment rates of UNAM graduates on civil engineering courses had not yet been achieved at the time of the evaluation. Nevertheless, the project was able to have some positive effects for the region in northern Namibia that could not be quantified as part of the evaluation. This was a sustainable project, based on the justified assumption that the Namibian government continues to provide sufficient funds for maintenance and necessary reinvestments. The installation of a photovoltaic system as part of the project should be highlighted as a positive aspect. Overall, the project helped to reduce the shortage of civil engineers on the Namibian labour market. The project is rated as moderately successful overall as the results are on the whole positive, albeit below expectations.

Contributions to the 2030 Agenda

The implementation of the project is integrated into various transformation areas of Agenda 2030, in particular on the topic of high quality education (SDG 4, specifically sub-goals 4.3 Access to university education, among other things; 4.4 Qualifications for employment, decent work; 4.5 Eliminating disparities in education; 4.a Building and expanding educational institutions). The indirect impact on transport infrastructure contributes to SDG 9 "Industry, innovation and infrastructure" (in particular sub-goals 9.1 and 9.a Building a high quality, reliable, sustainable and resilient infrastructure/in developing countries). In the short term, the strengthening of the local economic cycle in the vicinity of the UNAM campus in Ongwediva and the long-term poverty-reducing effects will contribute to SDG 1 "No Poverty" (see also Figure 2).

The parallel design and implementation of the FC and TC components in the programme approach and their implementation in cooperation with the Namibian partners takes into account a shared liability. The project took into account the interplay of economic, ecological and social development. The training of qualified civil engineers contributes to a modern transport infrastructure, which in turn contributes to increasing welfare in Namibia in the long term. The ecological component was taken into account in particular through the construction of a photovoltaic system on the campus building. The creation of training opportunities contributes to the social aspect of sustainable development.

The project is to be considered gender sensitive. In addition, an inclusive approach and the "leave-no-one-behind" principle were taken into account by taking the needs of people with disabilities into account when constructing the building.

Project-specific strengths and weaknesses as well as cross-project conclusions and lessons learned

The project had the following strengths and weaknesses, in particular:

- a) The Namibian government and the project partner UNAM are characterised by high ownership. This is particularly evident in the provision of substantial, higher-than-planned own resources, in the high technical competence of UNAM staff at various levels and in dynamic, solution-oriented and forward-looking campus management.
- b) A very high degree of complementarity between FC and TC activities was planned. The division of labour resulted in high synergies. A significant weakness in this regard was the delays in the initial phase of the FC project. As a result, the laboratory equipment procured as part of the TC project had to be temporarily stored and was not installed in the designated laboratory rooms until later on. In some cases, this resulted in equipment not being usable. Nevertheless, the laboratory equipment is rated as very good and enables UNAM to acquire third party funds via services for industry in the future.
- c) The project is located in Ongwediva in northern Namibia and has therefore contributed to strengthening the region's economy. Funds flow into the local economic through the teachers and students. Students from the region have the opportunity to study locally.
- d) The main weaknesses of the project are the currently low enrolment figures for civil engineering courses and the low degree completion and employment rates of students. Demand planning has proven to be too optimistic, which is partly due to external factors such as the COVID-19 pandemic and their influence on economic development in the construction sector.
- e) The construction of a photovoltaic system has made a major contribution to the sustainability of the campus. According to UNAM, other UNAM buildings are to be equipped with solar electricity supply based on these experiences.

Key conclusions and lessons learned include:

- a) For the effectiveness of the construction of an education/higher education building, it is essential to ensure that adequate equipment and staff are provided in addition to the building itself via accompanying TC or FC-financed complementary measures or consulting activities. This includes in particular: (i) the creation and maintenance of working conditions and remuneration systems for teachers appropriate to the location, (ii) modern curricula tailored to the needs of research and industry and (iii) a sufficient number of willing and capable students. In order to enable students, particularly from low income families, to study, public study funding is usually necessary.
- b) Well-equipped laboratories are used to improve teaching and also enable the university to generate third party funds by selling laboratory services.
- c) A flexible usage concept for a teaching building can be used to react to changing framework conditions.
- d) Considering modern energy supply technologies in the design of the project can prevent significant consequential costs and environmental damage during operation. Appropriate technologies can contribute to the regional broadening of technologies as demonstration projects.
- e) Operational risks, in particular against the background of the high IT dependency in the university sector, should be discussed with the executing agency and corresponding mitigation measures agreed.

Evaluation approach and methods

Methodology of the ex post evaluation

The ex post evaluation follows the methodology of a rapid appraisal, which is a data-supported qualitative contribution analysis and constitutes an expert judgement. This approach ascribes impacts to the project through plausibility considerations which are based on a careful analysis of documents, data, facts and impressions. This also includes – when possible – the use of digital data sources and the use of modern technologies (e.g. satellite data, online surveys, geocoding). The reasons for any contradicting information are investigated and attempts are made to clarify such issues and base the evaluation on statements that can be confirmed by several sources of information wherever possible (triangulation).

Documents:

Internal project documents (MP, reporting, final inspection, etc.), secondary specialist literature, strategy papers, context, country and sector analyses, impact evaluations (FC and TC), comparable evaluations.

Data sources and analysis tools:

World Bank and other databases, data collection on site, monitoring data of the partner, interviews (see below)

Interview partners:

Representatives of the project-executing agency, the target group, other donors, the Ministry (MHETI), municipalities and associations as well as various consultants.

The analysis of impacts is based on assumed causal relationships, documented in the results matrix developed during the project appraisal and, if necessary, updated during the ex post evaluation. The evaluation report sets out arguments as to why the influencing factors in question were identified for the experienced effects and why the project under investigation was likely to make the contribution that it did (contribution analysis). The context of the development measure and its influence on results is taken into account. The conclusions are reported in relation to the availability and quality of the data. An evaluation concept is the frame of reference for the evaluation.

On average, the methods offer a balanced cost-benefit ratio for project evaluations that maintains a balance between the knowledge gained and the evaluation costs and allows an assessment of the effectiveness of FC projects across all project evaluations. The individual ex post evaluation therefore does not meet the requirements of a scientific assessment in line with a clear causal analysis.

There were no aspects that limited the evaluation.

Methods used to evaluate project success

A six-point scale is used to evaluate the project according to OECD DAC criteria. The scale is as follows:

- Level 1** very successful: result that clearly exceeds expectations
- Level 2** successful: fully in line with expectations and without any significant shortcomings
- Level 3** moderately successful: project falls short of expectations but the positive results dominate
- Level 4** moderately unsuccessful: significantly below expectations, with negative results dominating despite discernible positive results
- Level 5** unsuccessful: despite some positive partial results, the negative results clearly dominate
- Level 6** highly unsuccessful: the project has no impact or the situation has actually deteriorated

The overall rating on the six-point scale is compiled from a weighting of all six individual criteria as appropriate to the project in question. Rating levels 1-3 of the overall rating denote a “successful” project while rating levels 4-6 denote an “unsuccessful” project. It should be noted that a project can generally be considered developmentally “successful” only if the achievement of the project objective (“effectiveness”), the impact on the overall objective (“impact”) and the sustainability are rated at least “moderately successful” (level 3).

List of abbreviations:

PCR	Project completion report
GDP	Gross domestic product
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (Federal Ministry for Economic Cooperation and Development)
DAC	Development Assistance Committee
DC	Development Cooperation
EUR	Euro
FC	Financial cooperation
FC E	FC Evaluation
HDI	Human Development Index
MP	Module proposal
PA	Project appraisal
TC	Technical cooperation
USD	US Dollar

Publication details

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List of annexes:

Target system and indicators annex

Risk analysis annex

Project measures and results annex

Recommendations for operation annex

Target system and indicators annex

Project objective at outcome level		Rating of appropriateness (former and current view)				
During project appraisal: Appropriate use of the extension of the Faculty of Engineering and Information Technology of the University of Namibia in Ongwediwa		The formulation is suitable on the outcome level and contains the target region/ destination. The positively achieved state can be formulated more precisely. This also includes the addition of "need-based higher education". In the new target formulation, the target group is reduced at impact level due to the length and redundancy of the target formulation and summarised in "civil engineering".				
During EPE (if target modified): Improving the need-based higher education in civil engineering at the University of Namibia in Ongwediwa						
Indicator	Rating of appropriateness (appropriate; partially appropriate; not appropriate)	Rationale of appropriateness (for example, regarding impact level, accuracy of fit, target level, smart criteria)	Target level	PA status	Status at final inspection (year)	Optional: EPE status (year)
The indicators were partially reformulated as part of the reporting (see reporting dated 18 September 2019)						
Indicator 1 (PA): Number of students completing studies in the area of transport and logistics in the Faculty of Civil Engineering	Partially appropriate	Reformulation (see below) due to the new nomenclature following the reorganisation of UNAM. The determination of a target value per academic year does not seem realistic, as the number of students on master's degree programmes is sometimes smaller than on the bachelor's degree programmes.	PA: 40 (short-term) or 60 (long-term) students per academic year	29 students per year of study	31 (2018)	See indicator new 1

Indicator The indicators were partially reformulated as part of the reporting (see reporting dated 18 September 2019)	Rating of appropriateness (appropriate; partially appropriate; not appropriate)	Rationale of appropriateness (for example, regarding impact level, accuracy of fit, target level, smart criteria)	Target level	PA status	Status at final inspection (year)	Optional: EPE status (year)
Indicator 2 (PA): Civil engineering completion rate within five years of project completion	Partially appropriate	The indicator was adjusted as part of reporting. The period of five years does not include the maximum study duration (in the bachelor's programmes) Absolute figures are mentioned in the reporting; a rate in % is relevant.	N/A	No students	17 (2018) 24 (2019)	See indicator new 2
Indicator 3 (PA): Average proportion of faculty students from low-income families at the faculty is over 60%	Not appropriate	The project has no activities for promotion	> 60%	58%	> 60%	N/A
NEW (1): Total number of civil engineering students enrolled at the UNAM JEDS Campus	–	–	EPE: 255 (three years after commissioning of the building, i.e. 2021)	EPE: (2010): 28	102 (2021)	120 (2023)
NEW (2): Graduation rate in civil engineering for the years of study after commissioning of the building	–	–	EPE: 65%	0%	N/A to %	Year of study 2017: 56% (all students); 50% (male students); 67% female students Performance level not yet to be conclusively evaluated.

Project objective at impact level

During project appraisal: Improving access to educational institutions as well as creating income and employment for graduates (and therefore indirectly strengthening regional integration in southern Africa).

During EPE (if target modified): "Increase in the number of need-based qualified and employed civil engineers in the Namibian transport sector."

Indicator	Evaluation of appropriateness (appropriate; partially appropriate; not appropriate)	Rationale of appropriateness (for example, regarding impact level, accuracy of fit, target level, smart criteria)	Target level PA / EPE (new)	PA status	Status at final inspection	EPE status
Indicator 1 (PA): Number of students on the University of Namibia campus in Ongwediva	Not appropriate	The indicator is more likely to be at outcome level, as the number measures the use of the output.	PA: (according to reporting dated 18 September 2019) 1,000 students, including 250 civil engineers	N/A	N/A	See indicator New (1)
NEW (1): Proportion of UNAM civil engineering graduates who find employment as civil engineers, work independently as such or find a comparable position.	–	–	EPE: 75%	0%	N/A	43% (2020) A complete evaluation to achieve the indicator is not possible at the time of the evaluation, as there is insufficient data to date.

Risk analysis annex

Risk	Relevant OECD-DAC criterion
Structural risks due to the subsurface and the sometimes severe flooding during the wet season: These risks did not occur until the time of the evaluation.	Effectiveness, sustainability
Shortage of qualified teachers at UNAM: reduced by continued TC measures.	Effectiveness, sustainability
Insufficient student numbers for civil engineering study programmes: addressed by UNAM information campaigns.	Effectiveness, efficiency, impact, sustainability
Insufficient provision of funds for building and equipment of the faculty by the partner: funds were provided with initial delays, but then in excess of the originally agreed amount.	Effectiveness, efficiency
Insufficient budget to cover running costs (including maintenance and reinvestments for the financed building, staff and IT): the provision mainly depends on budget funds from the Namibian government; so far there is sufficient budget.	Effectiveness, impact, sustainability
Low demand for trained graduates: demand is largely determined by the development of the overall economic situation in Namibia.	Impact

Project measures and their results annex

The project measures and their results are adequately presented in the main part.

Recommendations for operation annex

No recommendations for operation were made in the final inspection report.

Evaluation questions in line with OECD-DAC criteria/ex post evaluation matrix annex

Relevance

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / 0 / +)	Rationale for weighting
Evaluation dimension 1: Policy and priority focus			3	0	–
1.1 Are the objectives of the programme aligned with the (global, regional and country-specific) policies and priorities, in particular those of the (development policy) partners involved and affected and the BMZ?	<p>Is the project aligned with the needs and current policies/strategies in the Namibian (higher education) education sector and in the transport sector?</p> <p>Is the project aligned with the BMZ strategy for training and employment or transport/mobility?</p> <p>Is the project aligned with the needs and objectives of the UNAM (project-executing agency) and is it in line with the UNAM strategy for the current period and the coming years?</p>	<p>BMZ core topic strategy proposal: Sustainable economic development, training and employment</p> <p>Higher education and science BMZ Education BMZ</p> <p>UNAM Master Plan 2006</p>			
1.2 Do the objectives of the programme take into account the relevant political and institutional framework conditions (e.g. legislation, administrative capacity, actual power structures (including those related to ethnicity, gender, etc.))?	<p>Does the design of the project take into account the needs of disadvantaged groups and women?</p> <p>Does UNAM have sufficient administrative capacity (in Windhoek and on campus)?</p> <p>What role did the polytechnic, later NUST, play in the design?</p> <p>Does the project actively contribute to reducing inequalities?</p>	<p>Project design at appraisal</p> <p>Information from discussions with portfolio managers and consultants involved in the appraisal</p> <p>Final inspection report</p>			

<p>Evaluation dimension 2: Focus on needs and capacities of participants and stakeholders</p>			3	0	–
<p>2.1 Are the programme objectives focused on the developmental needs and capacities of the target group? Was the core problem identified correctly?</p>	<p>Was the shortage of civil engineers actually large and is the shortage still present?</p> <p>How was the need for labour in the construction/transportation sector identified?</p> <p>Is the project designed to increase the supply of well-qualified civil engineering graduates?</p> <p>Are the employment and income opportunities of civil engineering students increasing?</p>	<p>Module proposal Vision 2030 Tracer studies Reporting GIZ evaluation</p>			
<p>2.2 Were the needs and capacities of particularly disadvantaged or vulnerable parts of the target group taken into account (possible differentiation according to age, income, gender, ethnicity, etc.)? How was the target group selected?</p>	<p>No specification required</p>	<p>Module proposal Reporting UNAM statistics If applicable: other secondary sources</p>			
<p>2.3 Would the programme (from an ex post perspective) have had other significant gender impact potentials if the concept had been designed differently? (FC-E specific question)</p>	<p>What measures were specifically planned for women?</p> <p>What is the differentiation from the parallel TC activities? Does UNAM perform specific gender activities?</p>	<p>Module proposal Reporting GIZ documents UNAM surveys and reports</p>			
<p>Evaluation dimension 3: Appropriateness of design</p>			3	0	–
<p>3.1 Was the design of the programme appropriate and realistic (technically, organisationally and financially) and in principle suitable for contributing to solving the core problem?</p>	<p>Was the shortage of civil engineers actually large and is the shortage still present?</p>	<p>Module proposal Vision 2030 Tracer studies Reporting GIZ evaluation</p>			

	<p>How was the need for labour in the construction/transportation sector identified?</p> <p>Is the project designed to increase the supply of well-qualified civil engineering graduates?</p> <p>Are the employment and income opportunities of civil engineering students increasing?</p>	
3.2 Is the programme design sufficiently precise and plausible (transparency and verifiability of the target system and the underlying impact assumptions)?	Were the impact hypotheses underlying the project plausible? How big is the allocation gap?	Module proposal
3.3 Were the selected indicators and their value allocation appropriate in their entirety (select one of the following to answer: indicators and values were appropriate / partially appropriate / not appropriate)? The rationale is differentiated according to indicators in Appendix 1. (FC-E specific question)	No specification required. Indicators were partially appropriate.	Module proposal
3.4 Please describe the theory of change, incl. complementary measures, if necessary in the form of a graphical representation. Is this plausible? As well as specifying the original and, if necessary, adjusted target system, taking into account the impact levels (outcome and impact). The (adjusted) target system can also be displayed graphically. (FC-E specific question)	<p>Input: Funds, construction planning, consulting services, tender and handover of the building (FC) plus TC services</p> <p>Output: building</p> <p>Outcome: Improvement of higher education in civil engineering at UNAM</p> <p>Impact: Better income opportunities and labour requirements are met</p> <p>How did FC and TC measures fit together?</p>	<p>Module proposal</p> <p>Reporting</p> <p>GIZ evaluation</p> <p>Comparable projects</p>
3.5 To what extent is the design of the programme based on a holistic approach to sustainable development (interplay of the social, environmental and economic dimensions of sustainability)?	Was it possible to build the PV system?	<p>Reporting</p> <p>On-site interviews</p> <p>Campus tour</p>

<p>3.6 For projects within the scope of DC programmes: is the programme, based on its design, suitable for achieving the objectives of the DC programme? To what extent is the impact level of the FC module meaningfully linked to the DC programme (e.g. outcome impact or output outcome)? (FC-E specific question)</p>	<p>A separate target formulation at impact level was found for the module (and the expansion of the TC project).</p> <p>Does the project fit in?</p>	<p>DC programme objective Reporting</p>			
<p>Evaluation dimension 4: Response to changes/adaptability</p>			<p>2</p>	<p>o</p>	<p>–</p>
<p>4.1 Has the programme been adapted in the course of its implementation due to changed framework conditions (risks and potential)?</p>	<p>The construction cover and building layout are defined in the master plan. Are there any other conceptual adjustments?</p> <p>What impact did the COVID-19 pandemic have?</p> <p>What effects did the deteriorating Namibian economy have?</p> <p>Has the equipment been adapted?</p>	<p>Consultant's final report Final inspection Secondary sources Reporting Interviews with project stakeholders</p>			

Coherence

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / o / +)	Rationale for weighting
<p>Evaluation dimension 5: Internal coherence (division of tasks and synergies within German development cooperation):</p>			<p>2</p>	<p>o</p>	<p>–</p>
<p>5.1 To what extent is the programme designed in a complementary and collaborative manner within German DC (e.g. integration into DC programme, country/sector strategy)?</p>	<p>How was the division of work between TC and FC planned?</p> <p>What was the programme approach?</p>	<p>Reporting Module proposal Interviews BMZ</p>			

	Were and are there country and sector strategies (education and transport)?				
5.2 Do the instruments of German DC dovetail in a conceptually meaningful way, and are synergies put to use?	How was the equipment selected for the laboratories? Were there joint procurements? How are the delays to be evaluated and what influence did they have?	Reporting Module proposal Interviews			
5.3 Is the programme consistent with international norms and standards to which German development cooperation is committed (e.g. human rights, Paris Climate Agreement, etc.)?	To what extent were the ESIA and human rights standards relevant at the time of the audit taken into account?	Reporting Module proposal Interviews			
Evaluation dimension 6: External coherence (complementarity and coordination with actors external to German DC)			2	0	–
6.1 To what extent does the programme complement and support the partner's own efforts (subsidiarity principle)?	What own efforts have the Namibian Government and UNAM made?	Interviews Module proposal Other secondary sources			
6.2 Is the design of the programme and its implementation coordinated with the activities of other donors?	Which donors are active in the higher education and transport sectors? Was and is there donor coordination, if necessary with which ministries? Are any measures complementary?	Module proposal Interviews with other donors and ministries/UNAM			
6.3 Was the programme designed to use the existing systems and structures (of partners/other donors/international organisations) for the implementation of	Were any other donors involved with UNAM and were they used?	Interviews with other donors and UNAM			

its activities and to what extent are these used?		
6.4 Are common systems (of partners/other donors/international organisations) used for follow-up/evaluation, learning and accountability?	Are there donors that collect monitoring data (e.g. UNESCO)?	Interviews with donors and, if necessary, NCHE

Effectiveness

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / 0 / +)	Rationale for weighting
Evaluation dimension 7: Achievement of (intended) targets			3	0	–
7.1 Were the (if necessary, adjusted) objectives of the programme (incl. capacity development measures) achieved? Table of indicators: Comparison of actual/target	No specification necessary?	Final inspection report Reporting Interviews UNAM statistics			
Evaluation dimension 8: Contribution to achieving targets:			3	0	–
8.1 To what extent were the outputs of the programme delivered as planned (or adapted to new developments)? <i>(Learning/help question)</i>	Which of the planned outputs are available? Were there any additional outputs? Were the outputs delivered as part of the TC project? Does the PV system work?	Final inspection report Reporting Interviews UNAM statistics Site visits			
8.2 Are the outputs provided and the capacities created used?	What is the utilisation of the building? Is there gender-differentiated data?	Final inspection report Reporting Interviews			

	<p>Which study programmes use the building?</p> <p>What is the condition of the laboratories and how are they used? What is the status of the certification for use in processing industrial orders?</p>	<p>UNAM statistics (see also target/actual comparison of indicators)</p> <p>Site visits</p>
<p>8.3 To what extent is equal access to the outputs provided and the capacities created guaranteed (e.g. non-discriminatory, physically accessible, financially affordable, qualitatively, socially and culturally acceptable)?</p>	<p>Was the building built to be accessible?</p> <p>Are there separate sanitary facilities for both genders? Are there separate sanitary facilities for people with physical disabilities?</p> <p>For affordability, see Indicators.</p>	<p>Final inspection report</p> <p>Reporting</p> <p>Interviews</p> <p>UNAM statistics (see also target/actual comparison of indicators)</p> <p>Site visits</p>
<p>8.4 To what extent did the programme contribute to achieving the objectives?</p>	<p>Would the impacts have been achieved without the building?</p>	<p>Final inspection report</p> <p>Reporting</p> <p>Interviews</p> <p>UNAM statistics (see also target/actual comparison of indicators)</p> <p>Site visits</p>
<p>8.5 To what extent did the programme contribute to achieving the objectives at the level of the intended beneficiaries?</p>	<p>Discussion as part of the evaluation of the indicators (see above)</p>	<p>See above</p>
<p>8.6 Did the programme contribute to the achievement of objectives at the level of the particularly disadvantaged or vulnerable groups involved and affected (potential differentiation according to age, income, gender, ethnicity, etc.)?</p>	<p>Discussion as part of the evaluation of the indicators (grant award, see above)</p>	<p>See above</p>
<p>8.7 Were there measures that specifically addressed gender impact potential (e.g. through the involvement of women in project committees, water committees, use of social workers for women, etc.)? (FC-E specific question)</p>	<p>Which gender-relevant measures were financed through the project?</p> <p>Which gender-relevant measures were implemented as part of the TC project</p>	<p>Final inspection report</p> <p>Reporting</p> <p>Interviews</p> <p>UNAM statistics</p>

	<p>and which were implemented independently by UNAM?</p> <p>Which women have which role in the management function of the faculty or campus in Ongwediva?</p>			
8.8 Which project-internal factors (technical, organisational or financial) were decisive for the achievement or non-achievement of the intended objectives of the programme? (<i>Learning/help question</i>)	<p>How did coordination between TC and FC measures take place?</p> <p>Was there an alternative to interim storage of the laboratory equipment?</p>	Final inspection report Reporting Interviews		
8.9 Which external factors were decisive for the achievement or non-achievement of the intended objectives of the programme (also taking into account the risks anticipated beforehand)? (<i>Learning/help question</i>)	<p>What was the impact of the COVID-19 pandemic?</p> <p>How did the supply and demand for civil engineering graduates (UNAM and NUST) develop? What influence did global and national economic developments have?</p> <p>Have all partner services been provided?</p>	Final inspection report Reporting Interviews Secondary literature		
Evaluation dimension 9: Quality of implementation			2	0
9.1 How is the quality of the management and implementation of the programme to be evaluated with regard to the achievement of objectives?	Why were no student numbers reported during the implementation?	Interviews		
9.2 How is the quality of the management, implementation and participation in the programme by the partners/sponsors evaluated?	<p>How is the "Estate Services" department responsible for the tender to be assessed?</p> <p>How satisfactory were the consulting services?</p>	Final inspection report Reporting Interviews		

<p>9.3 Were gender results and relevant risks in/through the project (gender-based violence, e.g. in the context of infrastructure or empowerment projects) regularly monitored or otherwise taken into account during implementation? Have corresponding measures (e.g. as part of a CM) been implemented in a timely manner? (FC-E specific question)</p>	<p>Were there any relevant incidents during the implementation of the project or even after completion of the project? If so, what was the response?</p>	<p>Reporting Final inspection report Reporting Interviews</p>			
<p>Evaluation dimension 10: Unintended consequences (positive or negative)</p>	<p>Note: if there are no unintended effects: → No weighting → No evaluation</p>		<p>3</p>	<p>0</p>	<p>–</p>
<p>10.1 Can unintended positive/negative direct impacts (social, economic, ecological and, where applicable, those affecting vulnerable groups) be seen (or are they foreseeable)?</p>	<p>Does the project have an impact on other study programmes? What effects did the building of the PV system have?</p>	<p>Consultant's final report Final inspection report Reporting TC evaluation Interviews Site visits</p>			
<p>10.2 What potential/risks arise from the positive/negative unintended effects and how should they be evaluated?</p>	<p>No further specification of the question required.</p>	<p>Module proposal Final inspection report Interviews</p>			
<p>10.3 How did the programme respond to the potential/risks of the positive/negative unintended effects?</p>	<p>No specification required, depending on answer to previous question.</p>	<p>See above</p>			

Efficiency

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / o / +)	Rationale for weighting
Evaluation dimension 11: Production efficiency			2	o	–
11.1 How are the inputs (financial and material resources) of the programme distributed (e.g. by instruments, sectors, sub-measures, also taking into account the cost contributions of the partners/executing agency/other participants and affected parties, etc.)? (Learning and help question)	Consideration of the contributions of the Namibian government/UNAM and TC also in the measures financed via the residual funds. Was the laboratory equipment adequate?	Final inspection report Interviews			
11.2 To what extent were the inputs of the programme used sparingly in relation to the outputs produced (products, capital goods and services; if possible in a comparison with data from other evaluations of a region, sector, etc.)? For example, comparison of specific costs.	Is there comparative data from other projects?	Final inspection report Interviews Expert opinions			
11.3 If applicable, as a complementary perspective: To what extent could the outputs of the programme have been increased by an alternative use of inputs (if possible in a comparison with data from other evaluations of a region, sector, etc.)?	No specification required	Final inspection report Interviews Expert opinions			
11.4 Were the outputs produced on time and within the planned period?	What explains the delayed start? Were there any delays in the construction phase?	Reporting Final inspection report Interviews			

11.5 Were the coordination and management costs reasonable (e.g. implementation consultant's cost component)? (FC-E specific question)	No specification required	Final inspection report Interviews Expert opinions			
Evaluation dimension 12: Allocation efficiency			2	0	-
12.1 In what other ways and at what costs could the effects achieved (outcome/impact) have been attained? (<i>Learning/help question</i>)	Would a cooperation with Polytechnic/NUST have been possible? Could this have had the same effects? Are there alternatives to higher education in Namibia?	Module proposal Final inspection report Interviews Secondary literature			
12.2 To what extent could the effects achieved have been attained in a more cost-effective manner, compared with an alternatively designed programme?	No specification necessary.	Module proposal Final inspection report Interviews			
12.3 If applicable, as a complementary perspective: To what extent could the positive effects have been increased with the resources available, compared to an alternatively designed programme?	No specification necessary.	Module proposal Final inspection report Interviews			
Note: If the internal identifier PSP (Private Sector Participation; see Inpro under 1.11) was issued for the project or there is generally cooperation with private actors (commercial banks, companies, professional NGOs) in the implementation of FC (private sector as an instrument), the following evaluation question must be taken into account:					
12.4 In what respect was the use of public funds financially complementary?	Not relevant				

Impact

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / o / +)	Rationale for weighting
Evaluation dimension 13: Overarching developmental changes (intended)			3	o	-
13.1 Is it possible to identify overarching developmental changes to which the programme should contribute? (Or if changes are foreseeable for the future, please be as specific as possible in terms of time.)	How did the GDP growth rate in Namibia and the Ongwediva region develop? Is sufficient data available to determine the employment of the graduates, if necessary gender-differentiated?	Final inspection report National and international statistics Retention (tracer) studies GIZ evaluation reports Interviews			
13.2 Is it possible to identify overarching developmental changes (social, economic, environmental and their interactions) at the level of the intended beneficiaries? (Or if changes are foreseeable for the future, please be as specific as possible in terms of time)	How has the income situation of the graduates been? What are the reasons for any developments? What skills do the graduates have? Is there anything that (potential) employers believe is missing?	Final inspection report National and international statistics Retention (tracer) studies GIZ evaluation reports Interviews			
13.3 To what extent can overarching developmental changes be identified at the level of particularly disadvantaged or vulnerable parts of the target group to which the programme was set to contribute? (Or, if these are foreseeable for the future, please be as specific as possible in terms of time)	Are there any differentiated statistics?	Final inspection report National and international statistics Retention (tracer) studies GIZ evaluation reports Interviews			
Evaluation dimension 14: Contribution to overarching developmental changes (intended)					
14.1 To what extent did the programme actually contribute to the identified or foreseeable overarching developmental changes (also taking into account	See above question "Are any overarching development policy changes identifiable to which the programme should contribute?"	See above			

political stability) to which the programme was set to contribute?		
14.2 To what extent did the programme achieve its intended (possibly adjusted) developmental objectives? In other words, are the project impacts sufficiently tangible not only at outcome level, but at impact level? (e.g. drinking water supply/health effects)	See explanations on target achievement above.	See above
14.3 Did the programme contribute to achieving its (possibly adjusted) developmental objectives at the level of the intended beneficiaries?	See explanations on target achievement above.	See above
14.4 Has the programme contributed to overarching developmental changes or changes in life situations at the level of particularly disadvantaged or vulnerable parts of the target group (potential differentiation according to age, income, gender, ethnicity, etc.) to which the programme was intended to contribute?	See explanations on target achievement above.	See above
14.5 Which project-internal factors (technical, organisational or financial) were decisive for the achievement or non-achievement of the intended developmental objectives of the programme? (<i>Learning/help question</i>)	No specification necessary.	Final inspection report National and international statistics Retention (tracer) studies GIZ evaluation reports Interviews
14.6 Which external factors were decisive for the achievement or non-achievement of the intended developmental objectives of the programme? (<i>Learning/help question</i>)	Which courses of study are in demand? What is the influence of general economic development?	Final inspection report National and international statistics Retention (tracer) studies GIZ evaluation reports Interviews
14.7 Does the project have a broad-based impact?	What experience could the department responsible for building the extension (UNAM-Estate Services) have gained?	Final inspection report Interviews

<ul style="list-style-type: none"> - To what extent has the programme led to structural or institutional changes (e.g. in organisations, systems and regulations)? (Structure formation) - Was the programme exemplary and/or broadly effective and is it reproducible? (Model character) 	<p>Have experiences been leveraged for other projects?</p>				
<p>14.8 How would the development have gone without the programme (developmental additionality)?</p>	<p>An answer to the question at impact level does not appear to be possible without in-depth studies as part of the evaluation.</p>	<p>–</p>			
<p>Evaluation dimension 15: Contribution to (unintended) overarching developmental changes</p>	<p>Note: if there are no unintended effects: → No weighting → No evaluation</p>		<p>3</p>	<p>0</p>	<p>–</p>
<p>15.1 To what extent can unintended overarching developmental changes (also taking into account political stability) be identified (or, if changes are foreseeable for the future, please be as specific as possible in terms of time)?</p>	<p>What role does UNAM play as an economic factor for the region in northern Namibia?</p> <p>What influence does the PV system have on the region (pilot character)?</p> <p>Does UNAM also use the building for non-university purposes (e.g. for the benefit of the surrounding communities)?</p>	<p>Final inspection report National and international statistics GIZ evaluation reports Interviews</p>			
<p>15.2 Did the programme noticeably contribute to unintended (positive and/or negative) overarching developmental impact, or are such impacts foreseeable for the future?</p>	<p>No specification necessary in connection with the previous question.</p>	<p>Final inspection report National and international statistics GIZ evaluation reports Interviews</p>			
<p>15.3 Did the programme noticeably contribute to unintended (positive or negative) overarching developmental changes at the level of particularly disadvantaged or vulnerable groups (within or outside the target group; do no harm, e.g. not exacerbating equalities (gender/ethnicity)), or are such changes foreseeable for the future?</p>	<p>No specification necessary.</p>	<p>Final inspection report Consulting reports National and international statistics GIZ evaluation reports Interviews</p>			

Sustainability

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / 0 / +)	Rationale for weighting
Evaluation dimension 16: Capacities of participants and stakeholders			2	0	–
16.1 Are the target group, executing agencies and partners able and willing on an institutional, personnel and financial level (ownership) to ensure that the positive effects of the programme continue over time (after the end of the promotion)?	<p>What own measures has UNAM taken since the building was commissioned? What is the state of the infrastructure (buildings, workshops, cafeteria)?</p> <p>Are government budget allocations sufficient to finance maintenance and any reinvestments?</p> <p>Are there any changes with regard to the award of grants (affordability of studies)?</p> <p>What motivates the teachers and campus management, also taking into account the site conditions?</p>	<p>Final inspection report</p> <p>Interviews</p> <p>Site visits</p>			
16.2 To what extent do the target group, executing agencies and partners demonstrate resilience to future risks that could jeopardise the impact of the programme?	<p>How does campus management deal with changes in student numbers?</p> <p>What are the risks to effectiveness from the perspective of different stakeholders?</p>	<p>Final inspection report</p> <p>Interviews</p> <p>Site visits</p>			

Evaluation dimension 17: Contribution to supporting sustainable capacities:			3		–
17.1 Did the programme contribute to the target group, executing agencies and partners being able and willing on an institutional, personnel and financial level (ownership) to ensure that the positive effects of the programme continue over time and, where necessary, to curb negative effects?	Are there opportunities to use the laboratory equipment for the acquisition of third-party funds (e.g. conducting tests for industry)? If so, how and to what extent? What other measures are being carried out by the TC?	Final inspection report GIZ evaluation reports Interviews			
17.2 Did the programme contribute to strengthening the resilience of the target group, executing agencies and partners to risks that could jeopardise the effects of the programme?	No specification necessary.	Final inspection report GIZ evaluation reports Interviews			
17.3 Did the programme contribute to strengthening the resilience of particularly disadvantaged groups to risks that could jeopardise the effects of the programme?	No specification necessary.	Final inspection report GIZ evaluation reports Interviews			
Evaluation dimension 18: Durability of impacts over time			2	0	–
18.1 How stable is the context of the programme (e.g. social justice, economic performance, political stability, environmental balance)? (<i>Learning/help question</i>)	Do curricula include aspects related to climate change (mitigation and adaptation)?	Final inspection report GIZ evaluation reports Interviews			
18.2 To what extent is the durability of the positive effects of the programme influenced by the context? (<i>Learning/help question</i>)	No specification required.	Final inspection report GIZ evaluation reports Interviews			
18.3 To what extent are the positive and, where applicable, the negative	No specification required.	Final inspection report GIZ evaluation reports Interviews			

effects of the programme likely to be long lasting?		
18.4 To what extent can the gender results of the programme be considered permanent (ownership, capacities, etc.)? (FC-E specific question)	No specification required.	Final inspection report GIZ evaluation reports Interviews