

# Ex post evaluation – Yemen

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**Sector:** Primary education (CRS Code: 11220)

**Project:** Cooperative programme – Basic Education Development Project (BMZ No.: 2004 66 268\* (inv.), 2005 70 499 (complementary measure))

**Implementing agency:** Ministry of Education (MoE)

## Ex post evaluation report: 2017

All figures in millions of EUR	Project (Planned)	Project (Actual)	Measure (Planned)	Measure (Actual)
Investment costs (total)	NN	127.88	0.90	0.90
Counterpart contribution	8.00	8.33	0.00	0.00
Funding**	NN	119.55	0.90	0.90
of which budget funds (BMZ)	16.30	16.30	0.90	0.90

\*) Random sample 2017

\*\*) Total volume of the BEDP basket was USD 140 million, financed by the World Bank, Netherlands, United Kingdom and Financial Cooperation (FC)



**Summary:** The Financial Cooperation (FC) component of the FC/Technical Cooperation (TC) cooperative programme was designed as a participation in the donor community's Basic Education Development Project (BEDP) to improve primary education in Yemen. This aimed to improve access to good-quality primary education while particularly focusing on expanding girls' education. The BEDP was intended to support the Yemeni government with carrying out its National Basic Education Development Strategy in the primary education sector. The World Bank, the Netherlands and the United Kingdom also participated in the financing. The BEDP, planned as an open project, encompassed financing for (i) school infrastructure, (ii) measures to improve educational quality and (iii) measures to strengthen education administration. A complementary measure was intended to support the Ministry in implementing and coordinating the project.

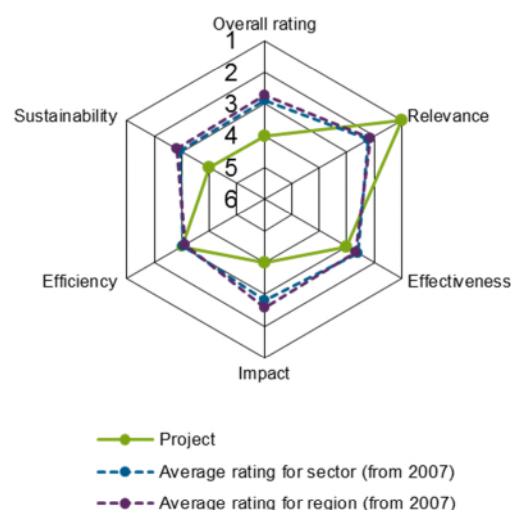
**Development objectives:** The development objective (impact) was to contribute towards better educational results by expanding access to good-quality primary education for all, with a particular focus on girls' education. The project objectives (outcome), derived from the sectoral strategy goals, were i) improving access to primary education via infrastructure expansion/rehabilitation, ii) raising the quality of instruction and iii) strengthening education administration and the sector's efficiency. Furthermore, the project contributed to improving the children's living conditions in a fragile environment by promoting education.

**Target group:** The FC component's target group was all children between the ages of 6 and 14 (nine-year primary education cycle) and older pupils repeating one of these years, while focusing in particular on girls. This comprised 6 million children in 2006.

## Overall rating: 4

**Rationale:** The armed conflicts in Yemen have resulted in infrastructure being destroyed or misused, teachers' salaries barely continuing to be paid, and teachers and pupils fleeing. School infrastructure did undergo expansion until 2012, but there remained weaknesses in the educational quality. There is no significant observable increase in learning success. The sustainability of the investments is no longer assured today.

**Highlights:** Despite challenging circumstances in a fragile context and the rapid population growth, the school enrolment rates were increased up to the start of the war in 2015 – particularly so for girls. The project failed on account of external factors, however. The secondment of an implementation consultant within the complementary measure not only managed to support the overall coordination of the financing approach, but also added bilateral experience to the programme from similar German FC projects in terms of community participation, maintenance strategies and school construction costs. Aside from UNICEF, UNHCR and Save the Children, German development cooperation is the only international actor that is still locally active today.



# Rating according to DAC criteria

## Overall rating: 4

### Ratings:

Relevance	1
Effectiveness	3
Efficiency	3
Impact	4
Sustainability	4

### General conditions

During the Financial Cooperation (FC) project's term of implementation between 2008 and 2012, Yemen was already in the grip of the internal crisis which escalated into open conflict from 2011 onwards with significant effects on the measures' execution and the BEDP's outcome achievement. Travel restrictions, whose strictness varied over the implementation term, prevented direct and follow-up work outside of the Sana'a Governorate cities of Sana'a, Taiz and Aden most of the time for the personnel who were seconded. The ex post evaluation execution and results are significantly influenced by the escalation of the security situation from the Arab coalition's air strikes against Yemen from 2015 onwards and the civil war that was provoked. Firstly, the programme locations could not be visited, so the evaluation was performed as a desk analysis. Secondly, the war and the accompanying humanitarian catastrophe are having huge impacts on programme's outcome achievement, on the project's impacts and on the sustainability of the measures. Since late 2015, German development cooperation (DC) has been operating outside the realm of government, i.e. in balance with the existing structures but without political executing agencies, precluding contact with government agencies as part of the ex post evaluation. The internationally recognised government under President Hadi is based in Aden.

Within the BEDP, central donors in Yemen agreed for the first time with the World Bank, the Netherlands, DFID and German DC on a joint approach to support the primary education sector with a programme-based joint financing (PJF) package. By harmonising the donors' contributions, the BEDP offered the opportunity for the available funds to be used more efficiently and for sectoral policy development to be supported. The total volume of the BEDP Multi-Donor Trust Funds managed by the World Bank was around USD 140 million, intended to be available for improving school infrastructure and education quality as well as administration in equal measure. The BEDP was appraised by the World Bank along with the Netherlands and DFID in 2004. The FC component's programme appraisal (PA) was conducted in 2006. Since the FC contribution was directed to the joint donor basket fund, meaning that the impacts of the FC financing cannot be isolated, it is fundamentally necessary to base the evaluation on the assessment of the BEDP's joint objectives and indicators.

German Technical Cooperation (TC) assisted the Ministry of Education with developing and executing the National Basic Education Development Strategy (NBEDS) between 2003 and 2015, under which the BEDP was implemented; this was accomplished through capacity building in the education sector (administration, teaching, involvement of local communities). In its role as priority coordinator of German DC in the education sector, TC actively participated in the sectoral dialogue.

### Relevance

Yemen is one of the world's lowest-ranking countries in the education sector with its very young (49% under 15) and rapidly growing (2.8% p.a.) population. In 2006, it clearly exhibited a high rate of illiteracy among its population as a whole (51% overall, 72% for women) and low school enrolment rates. Only around 4 million of the 6 million-plus children required to attend school (6 to 14 years old) were enrolled. The education situation was marked by large differences between boys and girls (only 55% of girls re-

quired to attend school enrolled during PA), the urban and rural populations (only 30% of rural girls enrolled), and individual provinces. The chronically underfunded government education system was not capable of providing sufficient school infrastructure to support all children of compulsory school age, nor was it capable of guaranteeing sufficient quality of primary school instruction for successful learning. A sub-standard quality of education was conditioned by the lack of teachers (especially of females), inadequate training and pay, and schools being poorly equipped and oversubscribed. This was reflected in the fact that pupils performed very poorly on tests by regional standards.

The measures in the programme, which operated nationwide except for the infrastructure component initially limited to ten provinces, addressed these key problems. From today's perspective, the cause-and-effect relationships that were assumed still rest on sound logic – specifically, that improving schools' equipment, newly constructing or rehabilitating classrooms (while in particular taking the needs of girls into account), teacher training, supplying school books and strengthening the administration of education would contribute to better access and education quality, and then in turn to better educational outcomes. The positive impacts of education on children's and maternal health, for instance, are confirmed by numerous studies. The BEDP was the element regarded as key by the Yemeni government and was the largest donor-financed individual project for executing the NBEDS. It created the framework for developing the sectoral strategy with the goal of "provision of good-quality education for all by 2015". The BEDP was intended to complete the transition from bilateral projects to a PJF package. This donor coordination in the education sector was seen as a role model internationally.

Support for the education sector was one of the Yemeni government's development priorities, as expressed for instance in the poverty alleviation strategy. Primary education continues to be one of German DC's key cooperation sectors with Yemen. The BEDP's focus on primary education (in particular taking girls into account) had the potential by its nature to help achieve the Millennium Development Goals and Sustainable Development Goal for education. Participating in the innovative BEDP financing approach, which included the key shortages in the sector, had very high relevance due to being a high political priority and due to the great need for external funding in Yemen. The relevance of supporting the education sector is even more important from today's perspective in light of the Civil War in Yemen, because education and school attendance offer an ordered daily routine and safety to children in the fragile context marred by violence and turmoil, as well as education enabling them to improve their own living situation and free themselves from poverty. Education can therefore reduce potential for escalation and generate long-term prospects for the future.

**Relevance rating: 1**

### Effectiveness

The project objective was as follows: "the teaching and learning conditions at the schools have improved and girls in particular take advantage of the increased access to fully functioning public schools". A series of indicators was defined to measure target achievement in terms of the PJF. It is not possible to give a summary evaluation of how these changed, given the security situation, a lack of robust data, and impaired availability and reliability of information. In addition, the FC contribution cannot be separately financially classified, as the measures were jointly financed. At the time of the EPE, we could plausibly surmise that the FC disbursement made a positive contribution to target achievement.

The conflict since 2011, the somewhat calmer situation in the intervening period in 2012/2013, and the outbreak of armed conflicts since 2015 have played a crucial role in the development of the indicators. This is clear to see for component 1 (improving access): with around 4 million out of 6 million children required to attend school having been enrolled during the PA (68% net school enrolment rate), the net school enrolment rate rose to 87% in 2013, only to fall once the war broke out from 2015 onwards. Only close to 30% of the children enrolled could go to school as of 2016, as schools were either unavailable due to the Civil War that had begun (destroyed, occupied), teachers were lacking, or the children had been called up as militants and soldiers (boys), had to stay at home (girls) or had fled.

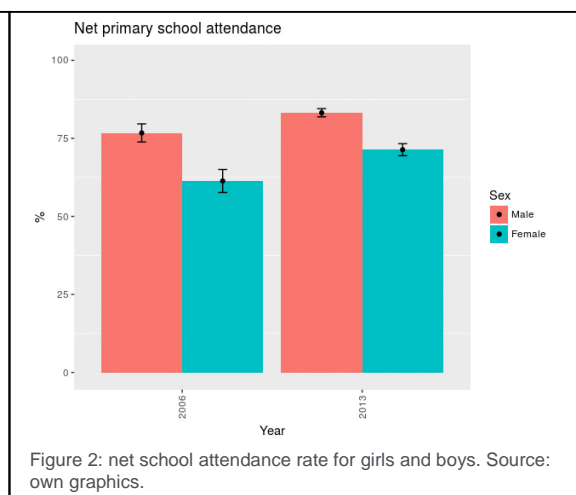
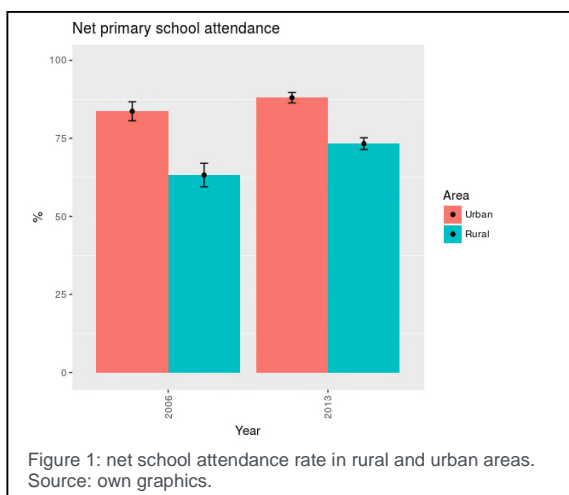
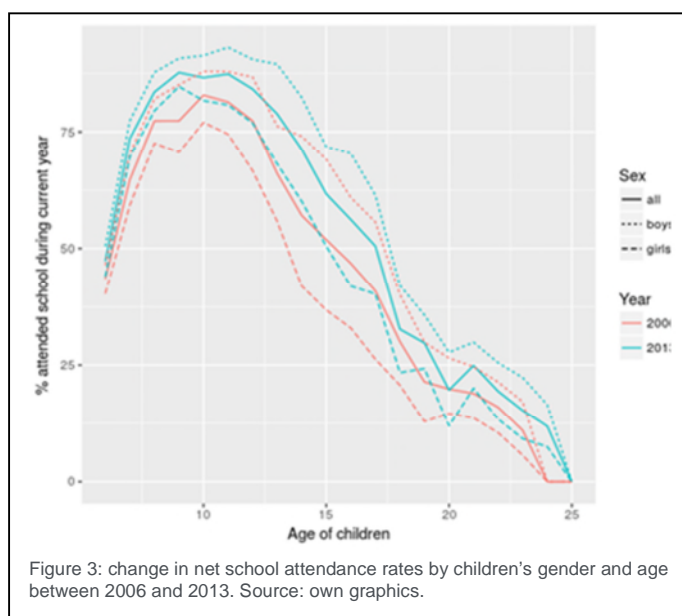


Figure 1<sup>1</sup> clearly demonstrates that net school attendance rates increased during the project term in urban and in particular in rural areas. This was accomplished despite the logistical challenges in the often remote areas (routes to school shortened by the new construction, availability of teachers expanded through further education, lesson materials procured).



During the project's term and before the war broke out, the proportion of girls going to school not only increased (around 60% of girls of compulsory school age attended school in 2006 (net school attendance rate), then over 70% by 2013; see Figure 2), but the girls of primary school age also go to school for longer (see Figure 3), increasing the probability that they will go on to complete their schooling. The conditional cash transfer component financed via the BEDP and awareness measures had an effect on this. However, the lack of female teachers, especially in rural areas (where only 9% of teachers are women), continued to act as a barrier for many girls to attend school.

We can deduce from interviews, press releases and the World Bank's Final

Report in 2013 that by the end of the project's term but before the war ignited, the number of pupils per room was significantly above normal levels in the sector (40-45 pupils), with up to 120 pupils attending

<sup>1</sup> Sources for all graphics: MICS 2006 and DHS 2013

one class. Lessons were taught in shifts. In many cases, chairs, tables and learning aids were lacking. None of the planned school libraries were found in 2013, suggesting that the spaces were instead being used as classrooms. As many schools could no longer be used with the outbreak of war (see above), we can reasonably assume that this indicator has worsened further – if indeed lessons are held at all.

The World Bank rated training measures for teachers and head teachers as a success in 2013. However, teacher salaries have only been paid irregularly since the outbreak of conflict, have not been paid at all to over 70% of the country's teachers since 2016, and many teachers no longer go to the schools on account of the security situation or have fled – resulting in school hours having to be cut or cancelled outright. It cannot be quantitatively proven, but we can plausibly surmise that the indicator to measure the pupil-to-teacher ratio has worsened since 2015. The Girls' Education Sector within the Ministry of Education, established by the TC in 2005 in the course of achieving project objective 3 (strengthening administration of education), eliminated the very low school fees and set up a Centre of Measurement and Evaluation. There is no information available about how the Centre and this newly created sub-departmental office are operating. However, as the onset of the war in 2015 led to the government being deposed, Ministry staff fleeing and no official contacts being maintained with the Ministry of Education, we cannot assess whether the office still exists and to what extent staff with advanced training continue to work at the MoE. According to TC information, the Centre is out of operation due to having no staff. On the other hand, the Girls' Education Sector is functioning and measures are being implemented here with skilled and qualified staff in cooperation with TC, UNICEF and GPE.

Under difficult conditions and a constantly deteriorating security situation, and in spite of weak management and implementation capacities on the part of the Yemeni government, access to primary education was improved in the project regions, while reservations about educating girls were allayed and incentives provided to send girls to school. On the other hand, we have lost out on the intended improvement in learning conditions and, in turn, the quality of education. Nonetheless, we would still note that in spite of the serious challenges, a large percentage of pupils (especially girls) and teachers benefited from the measures, meaning that we can rate the project's effectiveness as satisfactory in light of the fragile context.

**Effectiveness rating: 3**

### Efficiency

The FC component was appraised in July 2006 and started to be effective in July 2008. These delays are explained by the design being reworked and under-capacity at the Ministry. At the end of the planned term, the persistently volatile security situation resulted in the project not being able to wind up until December 2012 (individual measures as late as 2013), rather than late 2009. However, the delays did not lead to interruptions in support or significant cost increases. Implementing the complementary measure, which was exclusively financed from FC funds, was one tool for increasing efficiency. During its course, a consultant concentrated on the process of the PJF, on refining the financing approach towards a sector wide approach, and on the supply of bilateral FC experience (community involvement, maintenance plan, school construction costs).

The production efficiency was only satisfactory. The project had to be implemented under deteriorating security circumstances and high transaction costs. Affected by costly coordination, introducing the PJF initially entails a large allocation of time and financial resources, which should have paid off through the planned durability of the approach to safeguard primary education. This amortisation is not on the horizon as of 2017. Nevertheless, it was possible to pool funds and coordinate their expenditure in this way. The cooperation between the donors and their different guidelines made it possible, for instance, for the World Bank to keep being able to send local personnel into conflict regions even though it was no longer making payments, while FC could still finance these measures even though it had already withdrawn its personnel. By these means, it was possible to guarantee project continuation and eventual conclusion when all funds were spent.

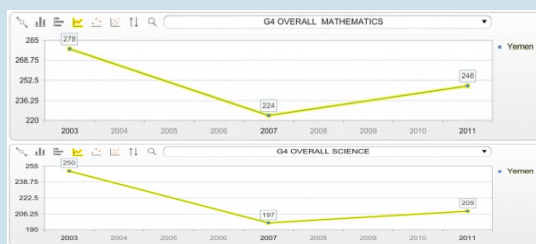
We rate the allocation efficiency as only just satisfactory. The average investment costs, which is assessed differently by all the donors in Yemen<sup>2</sup>, is rated as acceptable considering the high level of support required for the large number of classrooms constructed (some in very remote regions) and the difficulties owing to the fragile situation in the country. However, these costs still run up against poor educational outcomes. Many children were enrolled in school and took advantage of the resources (up to the point of overcrowding). But only a few pupils passed their primary education due to the extremely high rates of pupils needing to repeat the year or failing. Implementing administrative reform in the Ministry of Education would be the decisive factor for increasing effectiveness and efficiency in the sector. To date, such reform has not materialised.

Although the joint financing approach is an efficient instrument, there is the impression that the efficiency level was compromised due to institutional deficiencies, administrative limitations and the persistent fragile security situation, which prevented the high transaction costs from being amortised through the durability of the approach. A positive point to note is that the project's implementation moved ahead despite the volatile and tense security situation in the country. The social gains from investments in education, measured by the contribution towards increasing the population's income, are generally higher than those from investments in other sectors, especially in countries with a low rate of coverage like Yemen. In summary, we therefore rate the efficiency as satisfactory.

### Efficiency rating: 3

### Impact

The BEDP's development goal (impact) was to contribute to quantitatively and qualitatively improving primary education and stabilising the situation in Yemen (dual aim added during the course of the evaluation). The indicators to measure the impact achievement are only comparable to a limited degree due to differing sources.

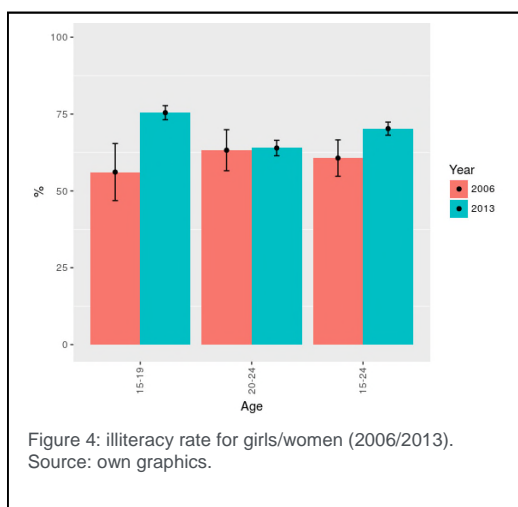
Indicator	Status PA	Ex post evaluation
(1) Reduction in the gender difference in public schools (Gender Parity Index, GPI)	0.78	0.83 (2012).
(2) Increase in the average pass rate for Years 1-6	0.69 (male)/0.59 (female)	Not achieved. 0.61 (male)/0.51 (female)
(3) Improvements in learning performance levels (TIMSS) <sup>3</sup> in mathematics and science.  The average is 500. There are also the following classifications: advanced international (625), high international (550), intermediate international (475), and low international (400).		

In evaluating achievement of the impact objective, the positive change in the sectoral indicators from the BEDP up to the outbreak of the civil conflict in 2011 must be distinguished from the decrease in the indicators in the context of a disintegrating state from 2015 onwards and persisting until the present. On the whole, the indicators were in a low or even declining state at impact level, which is derived primarily from

<sup>2</sup> Investment costs per classroom: UNICEF – USD 5,000; JBIC – USD 26,000; World Bank – USD 16,000; MoE – around USD 15,000; Social Fund for Development – around USD 11,000; CRES I and II (BMZ No. 1997 652 31, 2000 653 83) – EUR 8,700 (Abyan), EUR 10,000 (Ibb).

<sup>3</sup> The Trends in International Mathematics and Science Study (TIMSS) is conducted every four years and compares the performance levels of pupils in mathematics and science internationally.





the measures to increase the quality of education. The Gender Parity Index (GPI) did improve slightly at the start of the project measures (2006-2008), but was on a stagnant trend in more recent years (2008-2012) and most likely dropped once the military conflict was underway. The literacy rate among girls (15-19 years old) rose until 2013 during the project term and is also attributable to the impacts of the project, which contributed here by assisting most children repeating their year as a part of the target group (may also be older than 14).

The targeted raising of awareness and mobilisation of the population, schools being located nearby and, for instance, separate toilets and the availability of a sufficient number of skilled or qualified female teachers were crucial factors influencing the fact that more girls

attend school for longer. The latter of these still proves to be difficult today due to the living conditions, especially in rural areas.

The measures' impacts on learning success can only be defined over a longer period. As of the EPE, we can only refer to the results on the overall sectoral level up to 2011, as data is not currently being collected by the same method. Even so, we can reasonably suppose that the outbreak of conflict not only brought on a worsening data situation, but crucially also worsening general conditions for learning success. Yemen came in last place out of 36 countries in TIMSS 2007. Ninety-four percent of pupils did not even reach the threshold for "weak performance" for the mathematics subject area, with 92% falling into the poorest results category for science. In TIMSS 2011, despite improvements, Yemen came in last place again, this time out of 52 countries' learning success at Year Four level. The nation also scores last in terms of Year Six pupils' performance, which proved to be better. The underachievement can primarily be attributed to many pupils being incapable of reading the test questions quickly enough, if at all. In Year Two, 42% of children could not read a single word correctly, nor could 27% in Year Three ("Early Grade Reading Assessment" USAID 2012). Consequently, the quality of schooling, measured by increased learning success and improved performance on international school tests, was not improved.

It is education, and especially girls' basic education, which can help in this context to overcome the rapid population growth, along with the associated pressure on resources, social infrastructure and services. Studies show the correlation between girls' and women's education levels and their respective number of children. A woman without any school qualifications in Yemen has an average of 5.8 children; a woman who went to primary school 4.7. Due to the high number of early marriages and traditional duty to have a child after one year of marriage, reproduction begins at a very early age. School attendance not only increases girls' understanding (provided that modern curricula are taught) – they also marry later. Additionally, World Bank studies demonstrate a statistically significant positive relationship between school attendance and girls' well-being, via improvement in the prospects for their living conditions. Support for education, the stability of the daily school routine, and the cognitive abilities imparted to the pupils contribute towards reducing the potential for conflict and towards social cohesion, in light of Yemen's rampant poverty and its fragile situation (including before the war broke out, with the independence movements in the South and North, tribal conflicts and increased activities of Al-Qaeda). It therefore appears plausible to assume that the FC project has contributed – albeit to a limited extent – to the stabilisation of the country's situation, though not to the prevention of the armed conflict. However, despite the fragile context and contribution to stabilisation, we rate the overarching impacts as unsatisfactory, because substantial improvements in learning success have not become apparent in recent years and, in view of the security situation, we cannot assume that this trend will come to be reversed.

**Impact rating: 4**

## Sustainability

Since the air strikes were launched by Saudi Arabia in 2015, tens of thousands of people in Yemen have lost their lives, millions have fled, a state infrastructure no longer exists, and the health system has largely collapsed. Education has been “on the verge of collapse” since November 2015, according to the UN. In July 2015, 70% of the 5,148 schools had been closed before the end of the school year on account of the security situation, which affected 1.8 million children’s schooling. By 2017, 2,407 schools could no longer be used for lessons (10% destroyed, 56% damaged, 7% occupied by internally displaced persons, and 27% by IDPs and/or armed groups). Some 2.1 million children could no longer go to school (30% of children required to attend), including over 500,000 IDPs. This number had risen to 4.5 million children for the 2017 school year (over 70% of children required to attend), including those who in any case had left school. There is no information available about the distribution between primary and secondary education. In communities with committed parents’ associations, ongoing attempts are being made to at least facilitate school attendance on an hourly basis. Access to education is crucial for the children, is an avenue away from the warfare, and will have lifelong effects. However, an improved system of primary education has not been sustainably secured for future generations of pupils.

Even if the schools have not been externally damaged, they are often in bleak condition, lacking the basic minimum of equipment such as chalk and books. The absence of a budget for maintenance and repairs, intended to be transferred to the districts by the government, no longer plays an important role under the circumstances at hand. The National Maintenance Policy to prevent degradation of the school buildings, developed by the ongoing FC measures, is also of little importance due to persistent combat and its destructive effects. The infrastructure’s existence cannot be sustainably guaranteed and the contribution to improving the teaching and learning conditions can no longer be assessed in light of the situation changing due to the war.

The strengthened capacities in the Ministry of Education (MoE) and the expanded inter-ministerial cooperation – which still had positive effects for the FC measures implemented afterwards and enabled the MoE to independently take control of the donor cooperation and management – have lost some of their claim to sustainability as a result of the government being overthrown. At work level, there are still personnel available; at decision-making level, so on the level of the sector dialogue that was held, the contacts are no longer available. These contacts need to be re-established (as is often the case after elections). The Local Education Group (LEG) has been active again since 2013/14 and representatives of the Sana’a MoE took part in meetings, as did representatives of the legitimate Aden MoE for the first time in April 2017. Though the MoE has set out an emergency plan for the education sector, geared to maintaining the functioning of the education system and adjusting to the crisis, the funds are not sufficient to cover the costs for the current school year, despite new commitments. The international donor community has made substantial commitments to Yemen for reconstruction assistance. The financial support for the education sector is considerably lower than before, with the donor community considering this to be less of a priority during the crisis, as opposed to emergency relief and food aid under the threat of massive famine in the country.

The infrastructure and equipment financed could not be inspected in person within the scope of the evaluation, though it is highly likely to have been destroyed or misused in large part. We can therefore assume from today’s perspective that the development effectiveness of the FC-financed measures via the BEDP will not improve in the future, but instead will worsen further due to the ongoing clashes. DC’s focus is still on the school level and on assisting the decentralised education structures, such as with rehabilitation of schools, supporting the programme for female teachers and community involvement. The current goal is, wherever possible, to keep schools running to offer children today prospects for the future.

### Sustainability rating: 4



### Notes on the methods used to evaluate project success (project rating)

Projects (and programmes) are evaluated on a six-point scale, the criteria being **relevance, effectiveness, efficiency** and **overarching developmental impact**. The ratings are also used to arrive at a **final assessment** of a project's overall developmental efficacy. The scale is as follows:

<b>Level 1</b>	Very good result that clearly exceeds expectations
<b>Level 2</b>	Good result, fully in line with expectations and without any significant shortcomings
<b>Level 3</b>	Satisfactory result – project falls short of expectations but the positive results dominate
<b>Level 4</b>	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
<b>Level 5</b>	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
<b>Level 6</b>	The project has no impact or the situation has actually deteriorated

Rating levels 1-3 denote a positive assessment or successful project while rating levels 4-6 denote a negative assessment.

### Sustainability is evaluated according to the following four-point scale:

Sustainability level 1 (very good sustainability): The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability): The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected).

Sustainability level 3 (satisfactory sustainability): The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability): The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and is very unlikely to improve. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The **overall rating** on the six-point scale is compiled from a weighting of all five 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 ("overarching developmental impact") and the sustainability are rated at least "satisfactory" (level 3).