KfW Development Bank

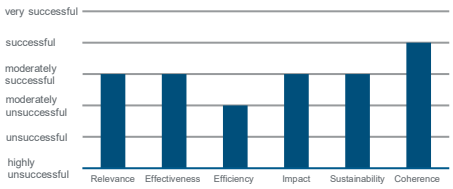
Ex post evaluation
Promotion of environmental investments, Egypt

Title	Programme to promote the Egyptian private industry & its industrial pollution control via commercial banks II		
Sector and CRS code	41020 Biosphere protection		
Project number	1998 66 690 and 1999 70 039		
Commissioned by	Federal Ministry for Economic Cooperation and Development (BMZ)		
Recipient/Project-executing	Egyptian Environmental Affairs Agency (EEAA)		
Project volume/ Financing instrument	*EUR 25.8 million (inv.) and EUR 1.4 million (complementary measure) as standard BMZ title < 2014 (ZU+DA)*		
Project duration	*1998–2022*		
Year of report	2022	**Year of random sample**	2022

Objectives and project outline

The objective at outcome level was to provide competitive loans to private industrial companies to increase investments in operational environmental protection. This was intended to improve compliance with environmental requirements and companies' working environments. At impact level, the goal was to reduce environmental pollution and reduce health risks for employees and local residents. FC funds were channelled to SMEs via the three largest private banks and investment measures with positive environmental impacts were subsidised by up to 30%. Environmental consultants supported the promoted companies.

Overall rating:
moderately successful



Key findings

The project achieved some effectiveness in reducing environmental pollution and improving the working environment in the promoted companies. Nevertheless, objectives were mainly achieved due to external factors. The project was rated as being "moderately successful" for the following reasons:

- Relevance: The project supported the national development strategy and responded to Egypt's prevailing political priorities. However, the project design underestimated the challenges in the Egyptian banking sector in the first phase and was unable to create incentive structures for banks to continue to provide loans from their own funds.
- Efficiency: At a total of 19 years, the project took a very long time to implement. Appropriate conceptual adjustments were implemented with a delay, and the political upheavals postponed the achievement of objectives. In addition, the disbursement procedure was time-consuming and costly.
- Effectiveness: The programme prompted companies to invest in technologies to reduce pollution. In particular, the high grant element made investments profitable for companies.
- Sustainability: The project supports the raising of awareness with respect to environmental issues within the Ministry of Environment. However, it did not contribute to the sustainable establishment of environmental credit lines in the banking sector and had no greater impact on transformation processes.

Conclusions

- Due to the structural characteristics of the Egyptian banking sector, banks did not need refinancing and had little interest in lending to corporate customers.
- It was not the lack of access to credit, but rather the high interest rates that prevented companies from taking out loans for environmentally friendly investments.
- The achievement of outcome targets is largely due to external factors (privatisation of industrial companies and banks, strengthening of the regulatory authority).

Ex post evaluation – rating according to OECD-DAC criteria

General conditions and classification of the project

During project appraisal in December 1998, the economic development of Egypt in the 1990s was rated significantly better than in the previous decade but was considered too low to achieve sustainable economic growth and thus a reduction in poverty and unemployment. Insufficient economic growth vis-à-vis high population growth still applies today. With annual population growth of approx. 2%, the country's population more than doubled between 1986 and 2020 to approx. 100 million,[1] while annual economic growth between 2012 and 2020 was approx. 3.8% per year and was mostly driven by large government infrastructure projects.

Over the last 20 years, the Egyptian economy has developed and diversified.2 This is not least due to the extensive privatisation of large state-owned enterprises. In 2021, private companies accounted for around 70% of GDP, and around 70% of all workers were employed in the private sector in 2021.3 The economic structure is characterised by a few large companies and a large number of small and microenterprises. Small and medium-sized enterprises (SMEs) are Egypt's main employer and dynamise employment growth, but their share of overall economic output remains small (around 25%). SMEs often face major structural internal issues (e.g. ownership) as well as external, market-related challenges. By contrast, dominating large companies (e.g. hotel chains in the tourism industry) show hardly any growth in employment and react sensitively to crises. In addition, as the direct owner of many large and profitable companies, particularly in the lucrative construction and hotel industry, the military-industrial complex is an important, influential economic player.

The following structural problems in the industrial sector were identified during the project appraisal: (i) insufficient training of workers; (ii) poor product quality; (iii) trade restrictions resulting in high transport costs; (iv) very high and varied taxes; (v) lack of legal certainty; and (vi) lack of medium- to long-term debt capital. The latter was the reason why expansion and new investments by private Egyptian industrial companies were generally financed primarily from accumulated profits from previous years (equity) rather than by borrowing. According to the companies surveyed, many of these problems persist. Only access to financing by the banking sector has improved somewhat. However, beyond subsidised loan programmes, this financing is still too expensive for many companies.

The Egyptian industry contributes significantly to a deterioration in environmental quality, especially water, soil and air quality. Metropolitan areas such as Cairo and Alexandria had particularly high levels of industrial water pollution, and industrial sector workers were exposed to unacceptable levels of gaseous and dust emissions.4

The **Environmental Law for the Reduction of Industrial Pollution**, adopted in 1994, came into force after a transitional period on 1 March 1998. The majority of all commercial and industrial companies did not meet the requirements of this law at the time, which is why there was considerable pressure on companies to take immediate measures in the last ten months of 1998. The Environmental Affairs Agency required all companies to have a Compliance Action Plan to show how the defined emission limits can be met within a maximum of two years.

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[1] World Bank (Egypt, Arab Rep., The World Bank Data, available at: https://data.worldbank.org/country/egypt-arab-rep?view=chart)

[2] The service sector (esp. transport/logistics, tourism, financial services) and the industrial, construction and mining sector (especially energy sector, petrochemicals, building materials, textiles, etc.) account for the majority of GDP in 2020. Although the agricultural sector generates only around 12% of GDP, with close to one third of employment, it is of great importance to the general population. The production structure is also reflected in a diversified goods export structure. Main exports in 2020 were oil and gas (30% of total exports), food (12%), textiles (9%) and chemical products (8%). The main export countries were the USA, UAE and Turkey as well as Saudi Arabia. However, according to the IMF, Egypt mainly exports goods with a lower degree of complexity. At 15% of GDP (2020/2021), the share of goods and service exports only accounts for a comparatively small proportion of domestic value creation. Egypt's industrial sector contributed approximately 29% to GDP in 1998, was underdeveloped and largely produced for the local market. After rising to around 40% between 2012–2014 due to declines in tourism, the contribution of the industrial sector has stabilised at around 34% in the last five years. The main comparative advantages of the industrial sector were low labour costs, flexibility of workers and low-cost energy supply. Foreign direct investment (FDI) relative to GDP was low at 2.8% between 2000 and 2021, mainly in the construction, oil and gas sectors (ibid.).

[3] The Private Sector in Postrevolution Egypt (2013) in: Malcolm Kerr Carnegie Middle East Centre (https://carnegie-mec.org/2013/06/17/private-sector-in-postrevolution-egypt-pub-52043), 2021 Yearender: More room for the private sector (Dec. 2021): in ahramonline (https://english.ahram.org.eg/NewsContent/50/1202/448835/AlAhram-Weekly/Economy/-Yearender-More-room-for-the-private-sector.aspx), Private Sector Diagnostic – EGYPT- in: EBRD (2017) in: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiFwcrEssv6AhVmgP0HHfrUD-kQFnoECAwQAQ&url=https %3A %2F %2Fwww.ebrd.com %2Fdocuments %2Fstrategy-and-policy-coordination %2Fprivate-sector-diagnostic-egypt.pdf&usg=AOvVaw1PUmjqzoxlkYNoaZwmStVC).

[4] Arab Republic of Egypt: Cost of environmental degradation. Air and Water Pollution (2019) in: Korea Green Growth Trust Fund, World Bank Group and Pollution Management and Environmental Health.

Unlike in previous years, the Egyptian government demonstrated its willingness to enforce compliance with these regulations (e.g. by means of fines and company closures, which have been enforced in individual cases since March 1998). The Environmental Affairs Agency's performance capacity and, accordingly, its enforcement was poor at the beginning, but has increased in the last twenty years. This means that (i) nationwide branches expanded from 7 to 18, (ii) checks and imposition of penalties on environmental law infringements against companies have become more regular, (iii) in some cases short-term company closures have been decided and (iv) many large Egyptian companies are now connected to an automatic emissions monitoring system. According to an interview, however, companies in the military-industrial complex are exempt from this supervision.

Regulatory incentives for environmentally friendly production processes, e.g. in the form of investment subsidies, depreciation and tax saving models, have not yet been created. The **intrinsic motivation of companies to comply with environmental requirements** is low, and general public pressure, e.g. in the form of neighbourhood lawsuits or the press, is only very selective. Only those businesses active in tourism centres, exporters and those with foreign parent companies or significant foreign investment shares are interested in environmental compliance due to foreign pressure and tough, increasing import requirements. Due to the continuously rising raw material prices in recent years, many companies are also interested in technologies with more efficient raw material and energy consumption. As a result, medium-sized to larger private companies in particular are willing to invest in environmental protection. These are often not only aimed at merely reducing pollutants, but also carry out process-oriented changes in order to prevent the generation of pollutants from the outset (what is known as pollution prevention) and to increase product quality.

The process of implementing long overdue **reforms in the financial sector** began in 1991. Interest rates have been approved, banking supervision and regulation have been adapted to international standards and internal currency convertibility has been introduced. The central bank's restrictive monetary policy in particular played a key role in macroeconomic stabilisation. The independence of the central bank is guaranteed with regard to the regulation and supervision of private banks and, with regard to state commercial banks, this was and is only the case in very limited contexts.[5] At the time of the project appraisal in 1998, the four state banks had a market share of approx. 88% of the deposit business and 77% of the lending business. A lack of dynamics in the sector was not least due to these oligopolistic structures.

The law, which enabled the **privatisation of state banks**, was passed in mid-1998. Some competition, especially in the corporate client business with private companies, was already apparent in 1998 and was slow; between 1991 and 1997, the flow of credit to the private sector rose from 23% to 51%, measured against the total volume of lending by the private industry. However, loans were mostly short-term: in 1997, 71% of the loan volume had a term of less than one year; loans with terms of more than one year were generally issued with variable interest rates. Medium maturities with fixed terms and conditions were and still are scarcely available today due to a lack of a refinancing market. The lack of medium- to long-term government securities still means that there are no benchmarks for maturities and interest rates. This hampers the development of the private bond market. The market is illiquid and, as a rule, individual issues are held until maturity. A lack of maturity-dependent interest rates also had an impact on the banks' deposit business, meaning that savings deposits always pay interest on a variable basis and thus do not give investors any incentives to invest their capital in the longer term.

Over the last 20 years, the Egyptian **banking system has undergone a certain transformation,** to which international opening and bank privatisation have contributed. There are currently 37 banks active in Egypt. The National Bank of Egypt, Banque Misr and Banque du Caire are still state-owned and their share has only decreased marginally, remaining at approximately 70% of the lending business and 66% of the deposit business. The Egyptian state banks now offer a wider range of products and are in direct competition with their private competitors in terms of price and quality.

However, interest rates are high for the structural reasons mentioned above. Banks still do not provide many long-term loans that would be economically viable for companies and would justify an investment from loan funds. Therefore, many companies still prefer to postpone their investments to finance them from equity (see annex for details).

[5] BTI 2022 Country Report – Egypt (2022) in: Bertelsmann Stiftung's Transformation Index, p. 19 (https://www.bti-project.org)

The interest rate at which banks can invest their money in the central bank at interest rates for one day (key interest rate for 1-day refinancing) is currently 12.3%. For banks, it is therefore not economically viable to issue them to their customers at a lower interest rate than this (see annex for presentation of the key interest rate trend).

Banks extend their loans with margins between 1–3% above the central bank's refinancing rate. The longer the term of the loan, the greater the interest margin. Most loans from banks are still short-term (up to one year). Medium-term loans (up to five years) are rare, whereas ten-year terms are almost the exception. Most loans are granted on a variable basis. Banks grant very few loans overall. The ratio of loans to balance sheet total is low for most Egyptian banks in an international comparison, at approx. 38% compared to the 80% that is customary internationally. In addition, the banks are very liquid. This is also reflected in the low loan-to-deposit ratio of around 48%. Banks still do not have the need to provide credit to companies, as they make ample money through short-term deposits with the central bank, which in turn lends this money to the government. The high return on equity of most institutions shows that banks are doing well with this business policy (see table). While the few companies that are creditworthy from the banks' point of view will be heavily solicited, banks remain reluctant to lend to small and medium-sized enterprises as they do not have to deal with credit risks due to their comfortable position (see annex for details).

In order to provide the economy with loans, the Egyptian central bank has launched several **promotional programmes** for providing loans with subsidised interest for specific sectors and company sizes since 2017. The interest rates (incl. margin) are between 5% and 8%. The Egyptian government provides the refinancing from its own funds. However, the costs of this refinancing are significantly lower for the banks than the refinancing of the banks from their own funds (e.g. savings deposits). The international donor community has created subsidised environmental credit lines with grant components in the same model (e.g. Egyptian Pollution Abatement Programme II [EPAP II] and Green Economy Financing Facility [GEFF]), which supplement the Egyptian government's credit lines both thematically and financially. For these credit lines, the creditworthiness assessment is the responsibility of the banks, which also record the credit risks. The promotional programmes run in parallel with the banks' original corporate client business, which refinances the banks from their own funds and whose interest rates exceed those of the promotional programmes by more than twice and thus still make borrowing from bank funds unprofitable for customers. According to the banks, loans from subsidised government programmes currently represent the majority of their loan portfolios. As a result, the promotional programmes do not lead to any structural transformation of the banking system, which could have led to a reduction in the high interest rate level. However, as the credit risks from the promotional programmes remain with the banks, the banks have improved their credit analysis techniques and their handling of credit risks.

Brief description of the project

The project supported the (a) "*Programme* to promote Egyptian private industry and its industrial environmental protection via commercial banks (BMZ nos. 1993 66 113 (inv.), 1993 70 354 (complementary measure)), and (b) *State Industry Environmental Facility* (BMZ nos. 1995 66 449 (inv.), 1995 70 508 (complementary measure). These programmes ran from 1994 to 2004 and from 1996 to 2012. It was intended to modernise and expand the private Egyptian industry and, in particular, to reduce industrial environmental pollution. The three largest private commercial banks participated in the programme, but experience has shown that the customer segment of these banks was limited. The follow-up project of the project under evaluation here was "*Public and private sector development and innovation", PPSI* (BMZ nos. 2000 66 225 (inv.) and 2007 70 081 (complementary measure), ran from 2007 to 2021 and continued the present project with some substantial adjustments.

The "Programme to promote the Egyptian private industry and its industrial pollution control via commercial banks" (PSI II) (BMZ no. 1998 66 690 and 1999 70 039), to be evaluated here, ran from 1998 to 2020. As in the previous project, it was handled by three private banks. Financial Cooperation (FC) funds were channelled to companies via these banks. Specifically, the banks provided medium to long-term loans for investment purposes at market conditions; this was followed by grants. Investments included individual projects for industrial wastewater treatment, air pollution control and waste disposal. At the same time, the investment measures with positive environmental impacts were subsidised by up to 30% (for SMEs) and 20% (for large companies). The financed companies were medium-sized to large Egyptian companies and multinational companies producing in Egypt. Regionally, all companies are concentrated in the Cairo and Alexandria metropolitan areas and, in some cases, on the Nile Delta, i.e. in the industrial zones of the country.

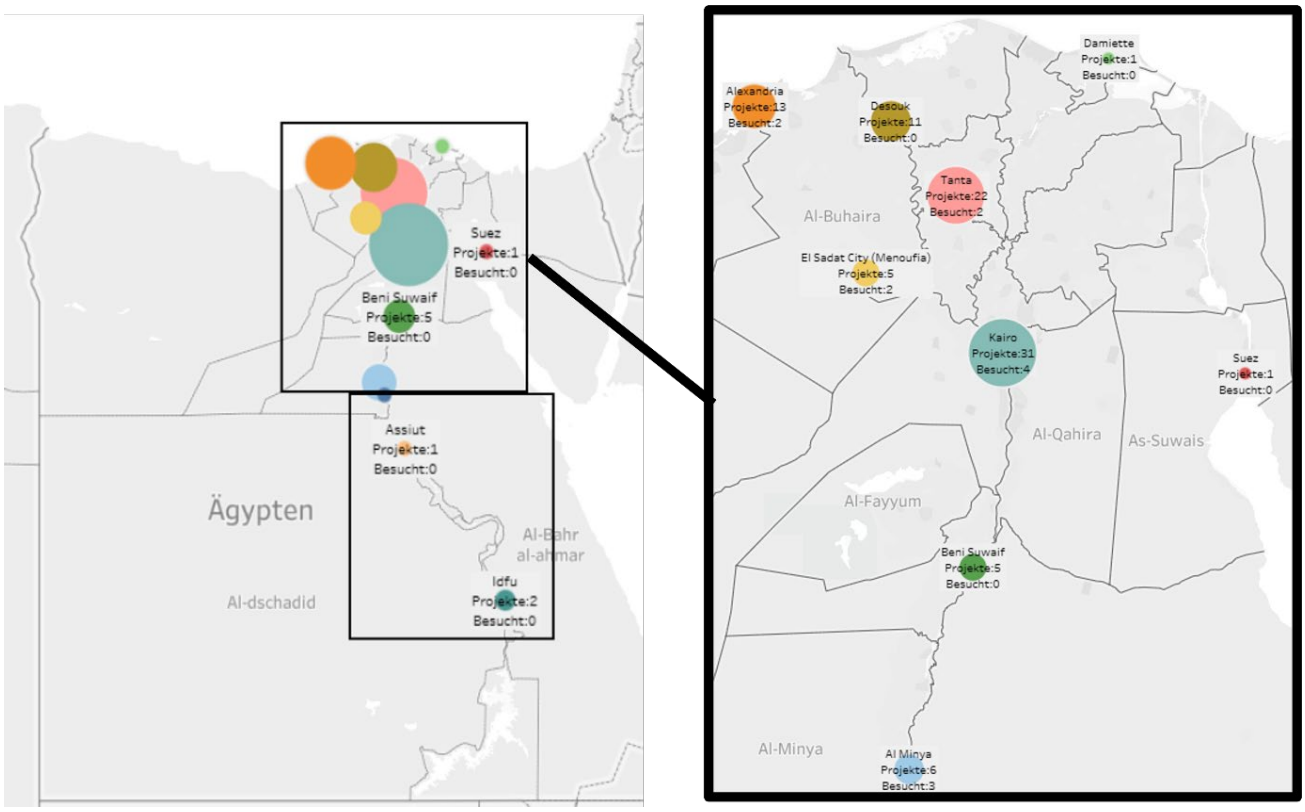
However, the disbursement of loans to end customers was very slow. Consequently, in this phase (**phase I**), it took around nine years from the first disbursement in 2002 to the last in 2011. For this reason, the project concept was redesigned between 2010–2012 **(phase II)** by adapting its content to the project "Public and private sector development and innovation" (PPSI; BMZ no. 2000 66 225). Since 2012, both projects have been implemented jointly by the Egyptian Environmental Affairs Agency (EEAA). The funds still available at this time (around EUR 9.0 million in grants for investments and EUR 0.4 million for personnel support measures) served as an ex post grant if implemented successfully by the companies or to increase the complementary measure of PPSI. Investment grants were given one year after the investment was made and pollutant measurements showed an improvement in values. This was a strong incentive for companies to make these types of investments as quickly as possible before the funds were used up. Banks also had incentives to offer these scarce funds only to their best customers. The Ministry of Environment actively marketed the product and offered it to those companies that were eligible for funding (e.g. companies with Egyptian owners). Due to the political upheavals in Egypt since 2011, the implementation of grant awards was also slow because, despite the high grant element of up to 30% of the investment costs, companies were very reluctant to make investments due to the political and economic uncertainties. The implementation of phase II took around ten years. Since the redesign, a new consultant has also supported the implementation of the second phase. He was directly commissioned because he had already successfully supervised the KfW-financed "*Public and private sector development and innovation*" project (BMZ no. 2000 66 225). The consultant was directly commissioned to assist the EEAA's Project Management Unit (PMU) in the further implementation of this project. This included management tasks of the PMU in relation to the project cycle of the individual projects, the marketing of the project to the target group and consultancy services for SMEs. Since 2012, the remaining funds, which were previously directly implemented by the banks, have been managed by the Egyptian environmental authority and paid out to the companies as a grant after the environmental investment has been successfully realised.

The project's **target group** was individual companies or groups of several industrial, commercial, and service companies in Egypt which carried out investment measures to reduce environmental pollution. The indirect target group comprised the employees of the supported companies and the local residents living near the companies whose health was affected by untreated wastewater, air pollution or improper waste disposal.

A **disposition fund** was used across both phases to disburse the investment measure, i.e. the funds are made available to the banks in advance in a special account. The executing agency may withdraw funds again only after the proper evidence of use has been submitted or must repay the previously withdrawn funds. After complete disbursement, the account is audited and certified by an auditor. This time-consuming and cost-intensive form of disbursement usually comes into effect if the executing agency is unable to make advance payments; in this project, the banks were not prepared to do so.

In addition, the **FC accompanying measure financed consulting services** to support the businesses and banks in the project by providing advice on environmental issues (environmental impact assessment and evaluation, including occupational health and safety) and in the ex post review of environmental impacts. Specifically, the consulting firm supported the companies in preparing the project applications, reviewed the completed applications before submitting them to the bank and carried out an ex post evaluation one year after the loan was taken out. The complementary measures did not serve to build up executing agency structures, but were intended to address deficits in individual functional areas that were essential for the main measure and were not sufficiently recognised by the environmental authority. Specifically, the two environmental consultants actively supported each proposed individual project in phase I and phase II by (i) verifying compliance with the eligibility criteria and Egyptian environmental legislation, (ii) preparing the individual study for the companies and (iii) monitoring the investment after completion of the measure. Following the restructuring of the project in 2012, the creation of individual studies was the sole responsibility of interested companies. If necessary, a grant was awarded for the preparation of the technical studies, which was 50% for SMEs and 20% for larger companies. Local consultants received corresponding orders from the companies, the companies received the promotion after acceptance of the studies and proof of invoice. Overall, this aspect of the consulting services was limited to 5% of the investment costs.

Map of the project country including the project locations



Source: Own representation based on project data
Note: The figure on the left shows the whole of Egypt and the geographical distribution of the individual projects financed as part of the programme; on the right, it again shows the northern project areas in a larger format (zoom). The size of the circular markers represents the number of projects. Below the number of projects, the number of sites visited as part of the evaluation is presented in writing.

Breakdown of total costs

		Inv. (planned)	Inv. (actual)	BM (planned)	BM (actual)
Investment costs (total)	**EUR million**	**138.1**	**77.8**	**1.4**	**1.4**
Counterpart contribution	EUR million	108.8	52.0	0	0
Debt financing	EUR million	29.3	25, 8	1.4	1.4
Of which BMZ funds	*EUR million*	*29.3*	*25.8*	*1.4*	*1.4*

Rating according to OECD-DAC criteria

Relevance

Policy and priority focus

The Egyptian environmental legislation to reduce industrial environmental impacts required companies to comply with certain pollutant limits within a period of three years from 1998. Building on this, the World Bank (WB) launched the Egyptian Pollution Abatement Project (EPAP) programme in the same year. KfW launched two complementary programmes at the same time: (a) *Promotion* of investments by private industry and the project "*Programme to promote the Egyptian private industry and its industrial pollution control via commercial banks*" (BMZ no. *(inv.) 1993 66 113 / (complementary measure) 1993 70 354)* and (b) *State Industry Environmental Facility* (BMZ nos. 1995 66 449 (inv.), 1995 70 508 (complementary measure)

Accordingly, the project was a response to Egypt's political priorities at the time, which were reflected in the Emissions Act of 1994, and the project was geared towards activities in the financial and environmental sectors coordinated between Egypt and other donors (WB). However, no further political strategy papers with this focus were available at the time of design, and German DC did not yet draw up any focus area papers and country strategies in which the project could be classified at that time.

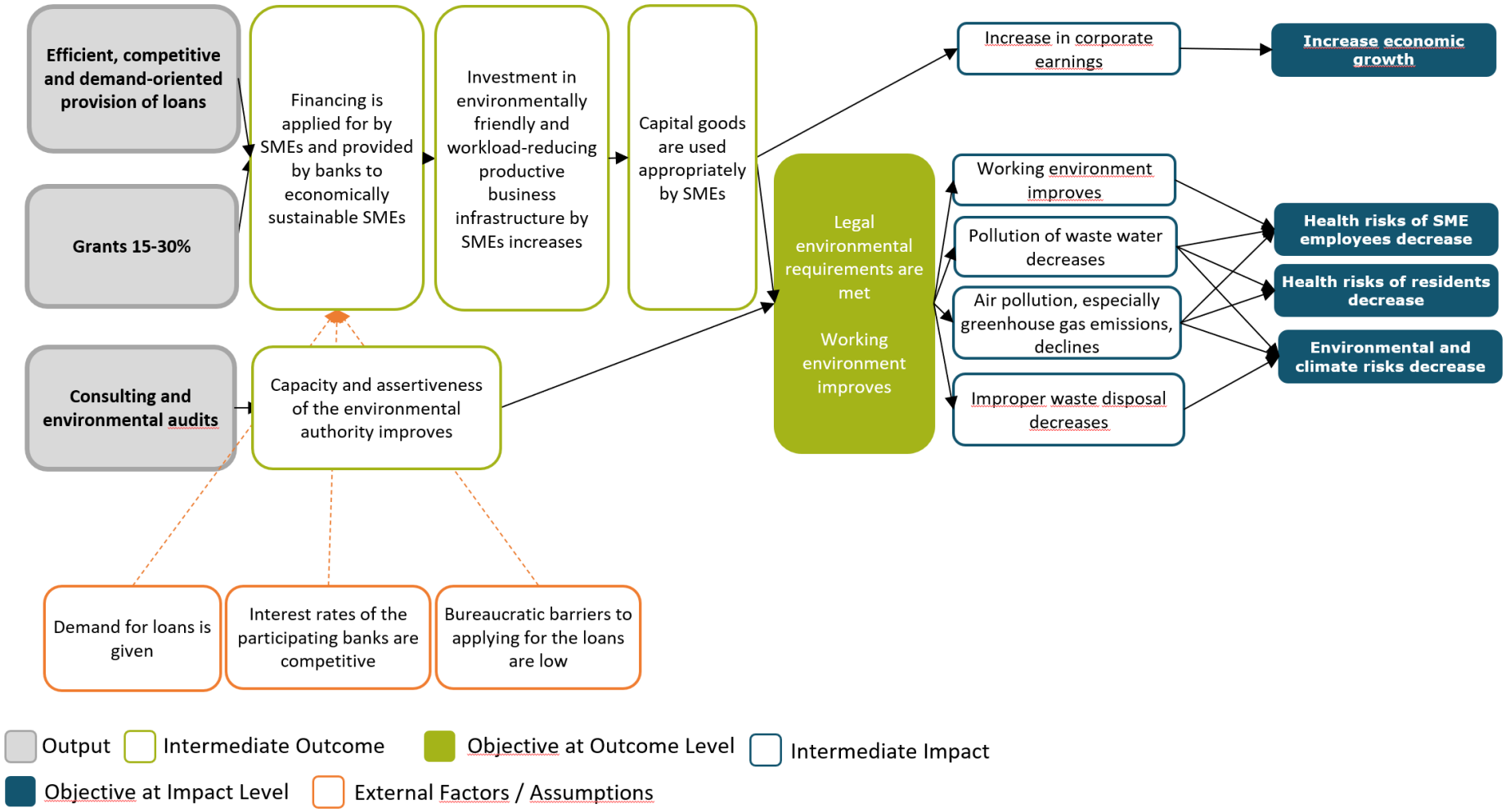
Focus on needs and capacities of participants and stakeholders

The project was intended to support the Egyptian government in tackling the massive environmental pollution caused by public and private companies.[6]

The project was based on the needs and capacities of the Egyptian Environmental Affairs Agency, private and state banks, and private and public companies at the start of the project. In detail (i) the Environmental Affairs Agency had insufficient capacity to carry out environmental audits and ex post impact measurements, to support businesses and ultimately to penalise infringements of the law; (ii) Egyptian banks only offered their customers a small product portfolio, competition was weak and the provision of medium- to long-term debt capital at attractive conditions was insufficient overall and (iii) companies did not invest in production goods and infrastructure from an environmental and often also economic perspective due to the lack of access to investment loans and lack of external incentives as well as weak regulation and enforcement. As a result, the aim of the project was also to meet the protection needs of employees and local residents in and around the polluting companies.

[6] In 2011, these were defined as those companies whose average turnover in the last three years exceeded EGP 50 million. At the time, this corresponded to approx. EUR 6.41 million. (rate EUR 1 = approx. EGP 7.8 as at January 2011).

Figure 1: Project's Theory of Change (stylised)



Appropriateness of design

Figure 1 visually shows the project's Theory of Change (ToC) reconstructed as part of the evaluation. The original objective of the project was to comply with industrial environmental requirements and the resulting reduction in health risks for employees and local residents as well as water, environmental and climate risks. In addition, there were increases in corporate income from investments, as these – in addition to state regulation and the threat of punishment – were both important incentives for environmentally friendly investments from the perspective of companies and were the declared objective of the project. The design of the measure is logical and precise, and the lines and assumptions of impact are plausible.

The design was generally suitable for solving the predominant core problems and was based on a holistic approach to sustainable development (see ToC) but had some substantial design weaknesses. Firstly, the main polluters at the start of the project were large state-owned enterprises, which at the time accounted for the majority of industrial production in the country; however, these were only taken into account in this project after their privatisation (2004–2010). Remaining state-owned enterprises were only taken into account in the follow-up project in 2007. In summary, **this project worked without influencing the main polluters at the beginning** but involved many of them after their privatisation.[7] Appropriate conceptual adjustments were implemented with a delay.

Secondly, massive investments in machinery and infrastructure were necessary to enable Egyptian companies to comply with environmental standards. These investments should be made through the banking sector. However, **the Egyptian banking sector was not prepared to finance these types of investments** (for reasons, see General conditions section and classification of the project). The project design overestimated the ability to persuade banks to take corporate risks and did not provide banks with sufficient technical support to establish *know-how* in the banks over the long term to enable them to do so; it is doubtful whether this kind of technical support would have been accepted by the banks.

Thirdly, the lack of access to credit did not discourage companies from making environmental investments, but rather the high interest rates on loans. Due to the high loan interest rates, the investment in the machines did not pay off. Many of the companies therefore preferred to pay for the **investments from their own funds and without borrowing;** the majority of the companies financed by the project were large companies or subsidiaries of international corporations for which financing was possible from their own funds. In addition, what is known as a "buffer fund" was introduced to reduce the banks' exchange rate risk on long-term and fixed-income loans in EGP. This construct consists of funds fed from the interest differential funds of this project. The intent was to use these to absorb depreciation of the EGP of up to 8%. However, a depreciation of around 8% p.a. must be borne by the ultimate borrowers. This **buffer fund only absorbed short-term exchange rate fluctuations; risks for companies remained above the 8% mark** and thus reduced their incentives to take out loans. Effectively, the project therefore did not alleviate the most important barrier to investment from the perspective of companies.

Response to changes/adaptability

For the reasons stated above, the project design was adjusted in August 2010, i.e. nine years after the start of the project. This adjustment was necessary, appropriate, and responded meaningfully to the design weaknesses and the changed external factors during the implementation phase.

The EEAA, as the executing agency responsible for marketing the project to the target group, aimed to redesign the project. Lengthy negotiations between the EEAA and KfW on contract restructuring led to the project coming to a standstill between 2010 and 2012. Under the new strategy, since 2012, interested companies have had the opportunity to receive a subsidy for their own investments in environmental and occupational health and safety measures, regardless of whether they finance these investments from their own funds or loans. The grant was 20% for large industrial enterprises and 30% for SMEs, and was only paid after one year of successful implementation. The grant element created necessary investment incentives for companies. It can be assumed that the companies would have made these investments even without the grant component – albeit at a later date. On the one hand, this is due to the fact that the new technology can save companies considerable production costs and, on the other hand, that they were ultimately forced by law to comply with the standards. The problem of the lack of incentives for banks was also remedied in phase II, as they were only responsible for grant management.

[7] The companies were considered in the project "State Industry Environmental Facility" (BMZ nos. 1995 66 449 (inv.) and 1995 70 508 (complementary measure)).

There was an incentive for the banks to do this, as they were able to use this as a mechanism to achieve customer loyalty.

Summary of the rating:

The project responded to a relevant problem and the political priorities in Egypt at that time. Although the project design was plausible in the first phase, it disregarded relevant incentive structures of local companies and challenges in the Egyptian banking sector. In the second phase, these weaknesses were eliminated and, accordingly, more meaningful incentives were created for companies to make timely investments in environmentally friendly production means.

Relevance: 3

Coherence

Other development cooperation institutions in Germany were and are barely active in the Egyptian financial sector, which is why there was no synergy potential for complementary or collaborative cooperation or conceptual interaction between several projects.

A large number of multi- and bilateral donors were involved in Egypt over the course of the project. In addition to German development cooperation, the main actors included the European Union (EU), the WB, the United States Agency for International Development, the United Nations Industrial Development Organization, and the International Labour Organization.

The Sustainable Development Strategy: Among other things, Egypt Vision 2030 (2016) identifies health and environmental aspects as strategic pillars of national development up to 2030 (e.g., indicators for the reduction of particulate matter or for the illegal discharge of industrial wastewater into the Nile). From today's perspective, the project therefore supported relevant national strategies and thus the partner's own efforts (subsidiarity principle), particularly in the areas of water consumption and reducing air pollution.

Both KfW programmes for financing environmental protection via commercial banks were launched at the same time. Both were complementary to each other and to the World Bank's EPAP programme. While the World Bank's programme included companies in Cairo and Alexandria, the FC programmes covered the greater Cairo and Alexandria areas and occasionally covered the Nile Delta, i.e. the country's industrial zones. Other donors were not active in this area at the start of the project, which is why donor harmonisation is considered appropriate.

This harmonisation has been further strengthened in the current project phases and new donors have been involved. The subsequent EPAP II and III programmes led by the World Bank and the projects of other donors such as the European Investment Bank, Japanese cooperation, the EU and French cooperation have also been harmonised with KfW's activities. Local banks such as Qatar National Bank, Commercial International Bank and Banque du Caire are all under the syndicate leadership of the National Bank of Egypt. This project's follow-up projects are also an integral part of the EU Neighbourhood Investment Facility project with a total volume of approx. EUR 184 million. In addition, the EBRD (European Bank for Reconstruction and Development) is implementing a project to promote energy efficiency for industry (Green Economy Financing Facility/GEFF) with QNB, but this did not result in any synergies, as the target group orientation at the EBRD was different.

Summary of the rating:

The programme complemented the efforts of the partner country, German DC, and the international donor community very well.

Coherence: 2

Effectiveness

The objective at outcome level adjusted as part of the EPE was "The provision of competitive loans for profitable private industrial enterprises leads to an increase in investments in environmental protection, as well as an

improvement in the working environment and increased compliance with legal environmental protection requirements in the promoted enterprises".

Achievement of the project objective at outcome level is summarised in the table below:

Indicator	Status PA (1998)	Target value PA/EPE (1998)	Actual value at final inspection (2020) (optional)	Actual value at EPE (2022)
(1) The proportion of financed enterprises that fully comply with Egyptian environmental legislation one year after the financed facilities were put into operation, measured against the reduced environmental impacts that prove compliance with the standard. (Indicator adjusted as part of the EPE)	0%	> 90%	96%	100% (partly verified by data, plausible to some extent – see body text)
(2) The proportion of financed operations that fully meet Egyptian requirements for the working environment one year after the financed facilities were commissioned, measured by the absence of sanctions by the relevant institutions. (Indicator newly included as part of the EPE)	0%	> 90%	--	100% (according to interview with Environmental Affairs Agency)
(3) All financed companies were operational during the project's term. (Indicator newly included as part of the EPE)	100%	100%	100%	100% (according to interview with Environmental Affairs Agency and banks)

Contribution to objective achievement

The intent was to achieve the objectives set out above through several outputs, in particular by lending from banks to companies and, in turn, their use of credit for environmentally friendly investments. Overall, however, the banks showed a weak to moderate interest in implementing the project. Even at the beginning of the project, only three out of eight banks expressed interest in borrowing funds and implementing them as environmental credit lines. Ultimately, only two banks used the credit lines, but did not withdraw the committed funds in full. The third bank exited after two smaller financing packages. Banks no longer had sufficient funds after exiting and did not establish products for environmental credit lines. The accompanying measure in the first phase consisted of consulting services in the form of feasibility studies, which examined the economic viability of the investments planned by the companies. On the one hand, this relieved the banks of the burden of performing these types of analyses themselves and, on the other hand, the banks did not have any incentive to embed this *know-how* at the time.

As part of the design, there was no planning of the amount of environmental pollution to be saved, nor of the number of individual projects to be financed. Accordingly, no target/actual comparison of outputs can be made as part of the evaluation. The unused loan funds were converted into grants, so all funds were spent. Using these funds, at output level the project financed investments, 20 feasibility studies and five monitoring setups as part of 70 individual projects in a total of 64 companies, 45% of which were in the delta region and Upper Egypt and 55% in the area around Cairo and Alexandria. A total of 67, i.e. 2/3 of the individual projects, were financed in phase II of the project. Almost all financing went to privatised large companies: out of a total grant volume of EUR 12.7 million, only 8.6% (EUR 1.1 million) went to 16 SMEs and, of a total lending volume of of EUR 15.8 million, only 1.1% (a loan of EUR 0.17 million) went to an SME. Over the two phases, 35% of companies were in the food processing industry, 18% in the chemical industry and 29% of companies produce building materials. Within the scope of the financed investments, investments were made over the two phases in industrial wastewater treatment (42%, e.g. sewage treatment plants), air pollution control (45%, e.g. natural gas power plants) and waste disposal (5%, e.g. technical studies). Only 16% of all grants and 12% of the financed projects were used to improve the workplace situation (see annex for details).

The indicators show that the objectives have been achieved. However, a strong caveat should be noted here: **target achievement is mainly due to external factors**, all of which played a much stronger role in the target achievement (both at output and outcome level) than the project itself. These external factors included in particular:

- **Strengthening of the regulatory authority:** Over the last ten years, global political discourse on pollution has reached Egyptian policy makers and, in some cases, the population. This, in turn, increased political will for greater environmental protection despite the unchanged protectionist economic policy. Environmental violations have been more severely punished, and businesses have been urged to comply with their environmental requirements. To this end, the Ministry of Environment's powers have been extended to enforce sanctions against environmental infringements.
- **Privatisation of industrial enterprises**: The privatisation of many state-owned enterprises to international investors and the pressure that these investors were exposed to from their countries of origin (key word: green label) increased the willingness of Egyptian companies to align their operations in a more environmentally friendly manner.
- **Privatisation of banks:** The privatisation and subsequent sale and resale of banks to international banking groups, which also experienced significant prioritisation of environmental issues in their countries of origin, increased the interest of Egyptian banks in financing in general and for environmental issues, in particular. Prior to the final privatisation of the banks, the project itself had only limited influence on the banks' limited capacity and willingness to finance private companies. By supporting the banks in carrying out the feasibility studies, the project partially reduced the appraisal of credit risks; however, credit risk analytic capabilities were not anchored in the banks as part of the project. Only in the last ten years of the project, after the second wave of restructuring of banks and the privatisation of many state-owned enterprises, were banks willing to carry out credit risk analyses in their institutions and acquire corporate customers – albeit to a small extent – as a customer segment.

In addition to the above-mentioned external, positive influencing factors, **the political upheaval** had a negative impact on target achievement at outcome and impact level. The period after the fall of the Mubarak regime in 2011 was characterised by a brief revival of the political scene. Since the victory of the Muslim Brotherhood and its spokesperson Mohamed Morsi, as well as its fall when they were overthrown by the armed forces on 3 July 2013 and the subsequent presidency of General Abdel Fattah al-Sisi, both Egyptian policy and the economy are controlled by authoritarian leadership. The fragile Egyptian economy experienced a severe crisis in 2013–2014 and inflation rose to around 30% in 2016–2017. In 2020, the **COVID-19 pandemic** was added, which further weakened the economy – and thus the investment climate of banks and companies.

Quality of implementation

The project was managed over a period of 19 years. It was only after nine years, in August 2010, when it was clear that participating banks did not wish to grant loans via the banking sector, that a conceptual adjustment was made. In particular, from then on, the companies were provided with grants from the FC funds for investments made and feasibility studies via the banks, thus creating reasonable incentives, which were still only used to a limited extent due to the political and economic uncertainties at the time of the upheavals in 2011 (see above). Although this adjustment made sense, it came late.

The accompanying measure in phase II co-financed a consulting company together with other donors, which provided advisory support to the Project Management Unit (PMU) anchored in the Ministry of Environment. The PMU is an externally financed unit within the ministry; its employees are sent there and their salaries are higher than those of the ministry. Therefore, the performance incentive of these employees is higher than that of those in the ministry. As this unit is funded on a long-term basis by the National Bank of Egypt, the unit's medium-term continuity should be ensured. If this remains the case, a higher quality of implementation can still be ensured. This redesign measure is also assessed as reasonable.

The quality of project implementation and design is also strongly influenced by the selected form of disbursement. The disposition fund selected for the disbursements was time-consuming and costly (see above), but there was no alternative in phase I of the project. However, following the design change in August 2010, a disposition fund procedure was hardly justified, as the funds were disbursed one year after the investment was made; a reimbursement procedure would have been more appropriate here.

Unintended consequences (positive or negative)

No unintended impacts of the project were identified during the evaluation.

Summary of the rating:

The quality of project implementation was high after the project was redesigned, in particular thanks to the grant element; however, the redesign did not start until nine years later and was therefore relatively late. However, the project objective was largely achieved thanks to external factors and not thanks to the project itself. There were no unintended effects.

Effectiveness: 3

Efficiency

Production efficiency

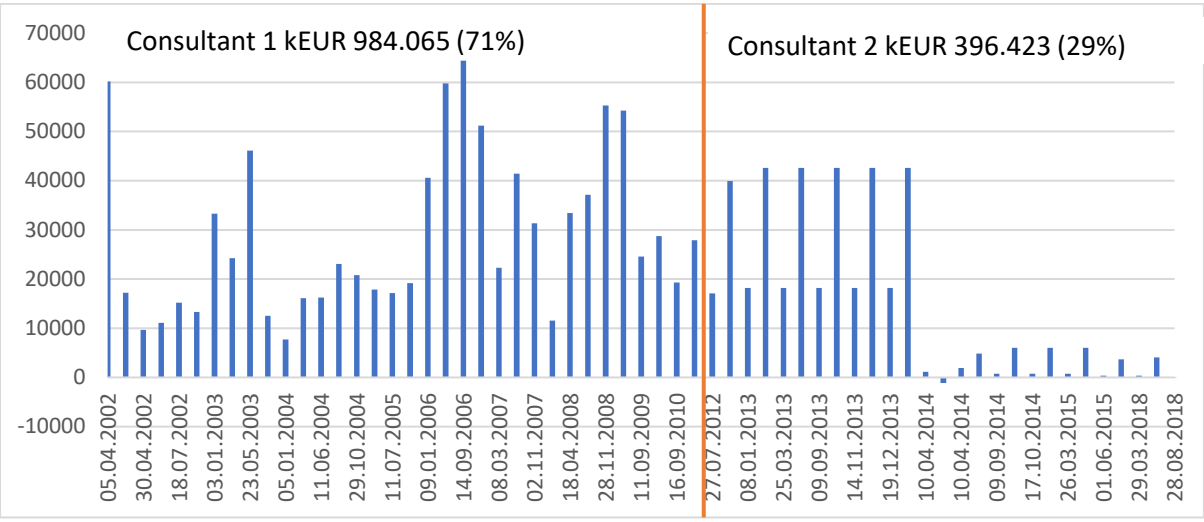
At 19 years, the implementation of the project took a very long time overall, also measured by the number of loans granted and the plausible resulting environmental impacts. Phase I lasted approximately nine years from the first disbursement in 2002 to the last disbursement in 2011, while phase II lasted approximately 11 years from 2011 to 2022. The project was originally set up for a total of four years, so it suffered a massive delay.

A disposition fund was used to disburse the investment funds to banks, which is generally time-consuming and cost-intensive to manage. In the first phase, there was no alternative to this due to a lack of interest from banks, but in the second phase, for cost reasons, the project should have been adjusted and a reimbursement procedure used to improve the production efficiency of the project.

The funds were disbursed to the companies in the period between 2002 and 2018 (see annex for details). The Ministry of Environment had committed the remaining funds of approx. EUR 303 thousand to a large company; however, due to COVID-19, the procurement of the machinery was delayed. As the Ministry of Environment was not prepared to reallocate the funds, the final disbursement was delayed until the beginning of 2022.

Figure 2 shows the distribution of consulting costs and thus the costs for the environmentally friendly individual projects over the course of the project. EUR 1.38 million was spent on consulting support for 75 individual projects (without feasibility studies), resulting in an average of 18,400 per project. In the second phase, this ratio improved significantly compared to the first phase from an average of EUR 30,750 (32 individual projects at approx. EUR 984 thousand) to EUR 9,209 (43 projects at approx. EUR 396 thousand) per project or reduced to approx. 30%. This was the case because the grants in phase II made it possible to reach more companies and implement more projects than the loans in phase I. Since the expected environmental impacts of the individual projects do not differ significantly between phase I and phase II, the cost efficiency of the individual projects in phase I is rated as very low, and phase II is rated as significantly improved.

Figure 2: Accompanying measure disbursements



Allocation efficiency

More efficient implementation of the project as a credit line via the Egyptian banking sector would hardly have been possible under the framework conditions existing at the beginning of the project, as the banks were not interested in implementing them. A direct submission of the grants to the companies – as was the case after the design change – would have probably been the more efficient variant. In addition, the participating banks could have been directly supported with advisory services in modernising their lending processes instead of facilitating lending decisions in the form of ready-made feasibility studies. However, it is highly questionable here whether the banks would have accepted such advisory services.

For those companies that benefited from the grant, this also had a positive impact on their profitability, as they were able to make investments that they would have had to make anyway at up to 30% lower costs. So these are pure windfall profits. In summary, the grant component of the project was attractive for companies, but the loan itself was not.

Summary of the rating:

The implementation period of the project was long, and the disbursement procedure was time-consuming and costly. The costs of the advisory measure were high in relation to the number of individual projects at the beginning, but gradually improved thereafter. We, therefore, rate the efficiency as moderately unsuccessful.

Efficiency: 4

Overarching Developmental Impact

Overarching developmental changes (intended)

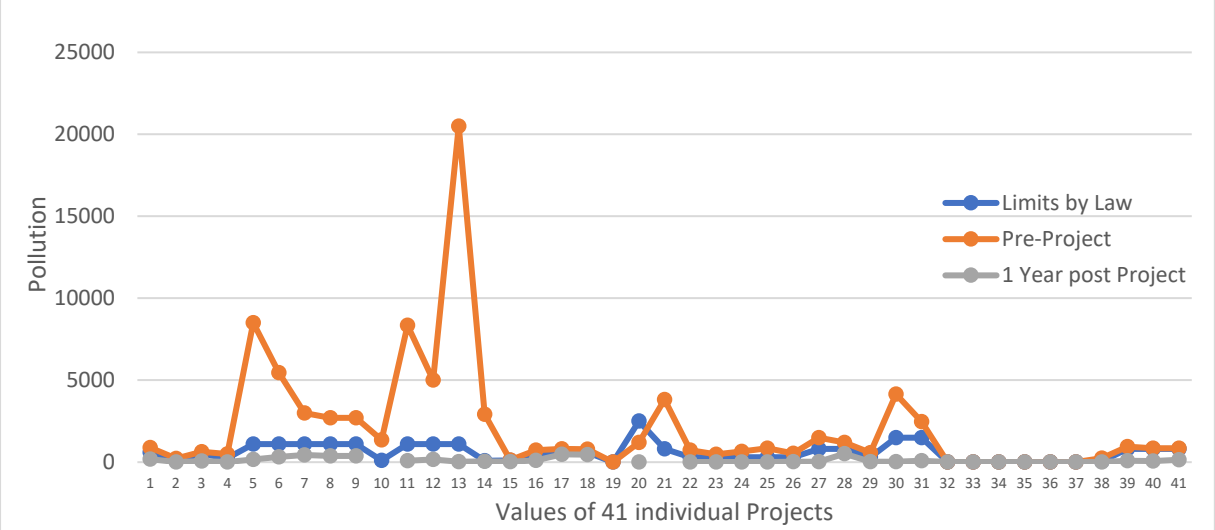
The overarching development objective adjusted as part of the EPE was as follows: The promoted industrial companies are improving the working environment and putting less strain on the environment (in particular through lower wastewater volumes, air pollution and greenhouse gas emissions as well as proper waste disposal).

Achievement of the overarching development objective can be summarised as follows:

Indicator	Status PA (1998)	Target value at PA (1998)	(Optional) actual value at final in-spection (2020)	Actual value at EPE (2022)
(1) Measured values for water and air pollution measurement as well as waste disposal have improved. (Indicator newly included as part of the EPE)	See Figure 3	See Figure 3	See Figure 3	Value achieved Only verifiable with sufficient data for 39 out of 70 individual investment projects
(2) Certain indicators for improving the working environment have improved (e.g., reduction of noise pollution, better ventilation, better equipment for employees) (Indicator newly included as part of the EPE)	--	--	--	Confirmed with random checks as part of the evaluation.

Figure 3 shows the values of 41 individual projects before and one year after the implementation of the individual projects, as well as the legal threshold. The values refer to different indicators/units (e.g. carbon monoxide, chemical oxygen, nitrogen oxides, sulphur oxides, total suspended matter, total airborne particles), depending on the sector, environmental hazard and investment measure. The data are incomplete: (i) missing individual values for two of the graphically displayed projects, (ii) there are no data for phase I, as the files had already been destroyed at the time of the evaluation and (iii) there are also no data available for 26 projects from phase II, in two cases because no legal thresholds were defined for the pollution type (solid waste) and in the other 25 cases where monitoring equipment or studies were financed. The figure shows that in all 39 cases, one year after project implementation, the pollution values were below the legal thresholds; in some cases, the reductions are significant. It can be assumed that the indicators were also achieved in companies for which no data are available, as an ex post appraisal was carried out by the consultant for each of the financed projects.

Figure 3: Pollution levels: legal threshold, before project and one year after project



Note: The values of the 41 individual projects relate to different indicators/units (e.g. carbon monoxide, chemical oxygen, nitrogen oxides, sulphur oxides, total suspended matter, total airborne particles); the absolute values are therefore not comparable.

Concerning indicator 2, no data was available, and a systematic measurement of the desired work environment improvements was not possible. However, the random checks as part of the evaluation confirmed that the financed individual measures contributed to improving working conditions. For example, it was observed that workers were no longer exposed to toxic fumes from manual spraying due to a switch to automatic spraying technology or were no longer in contact with harmful acids or toxic pesticides due to the automated opening of batteries using gripper arms in the production line.

Contribution to overarching developmental changes (intended)

The project contributed to the timely achievement of the impact objectives in the financed operations. As companies have been increasingly forced by the legislator to comply with their environmental requirements, it can be assumed that they would have had to make these investments anyway, albeit at a later date. It must also be noted to a limited extent that the project's low contribution to the outcome objectives also implies that the impact objectives were significantly driven forward by external factors.

Although the environmental impact of these operations has been reduced and the working environment has improved, the project has not achieved a broad impact, as these improvements were limited to only the financed operations.

Contribution to impact (unintended)

No contribution discernible.

Summary of the rating:

The project contributed to the achievement of development policy objectives in the financed operations, but only by means of non-quantifiable early target achievement, and it was substantially supported by positive external developments. The project did not have a greater impact on any transformation processes.

Impact: 3

Sustainability

Capacities of participants and stakeholders

In recent years, the Ministry of Environment has raised companies' awareness of environmental problems. The FC-financed accompanying measure supported the PMU with advisory services within the framework of the Ministry of Environment and sustainably strengthened its long-term capacities. However, external pressure also leads to this focus and capacity building within the PMU.

The programme prompted companies to invest in technologies to reduce pollution. These technologies proved to be profitable for companies, especially due to the high grant element. However, it is doubtful whether companies would have done so immediately without receiving the grant from international donors. The pressure of the legal commitment would have forced them to make such investments, but at a later date.

There are currently three types of credit lines for companies in Egypt. Firstly, almost all banks in Egypt now have credit lines to finance companies. However, these credit lines (i) are available on the market at high (not subsidised) market conditions, (ii) are not specifically aimed at financing environmental projects; and (iii) occurred in a delayed manner and independently of the FC project. Secondly, the Egyptian government grants subsidised loans to specific sectors, but these lines are not specifically intended for environmental projects either, although they can be used to finance them. Here, too, it is not clear how long the government can and wants to maintain these subsidised loans. Thirdly, both the Ministry of Environment and the banks are willing to provide financing for environmental measures and thus enable positive environmental impacts to be multiplied over time. The large amounts of money from various donors are a strong incentive for this, in particular the EPAP (World Bank and others) and GEFF (the EBRD). These price-subsidised loans are in demand from companies, as these interest rates are almost twice as favourable. So far, however, the banks or the Ministry of Environment have not established these types of credit lines. As soon as the donor-financed loans have been disbursed in full, there may not be any other credit lines to cover this demand on the market. From a purely institutional, human-resource and financial standpoint, the ministry and the banks would be able to continue the measures independently, but it is

questionable whether the willingness to do so will continue after the subsidised credit funds from the Egyptian government and donor funds have expired.

Contribution to supporting sustainable capacities

The project made a certain contribution to strengthening capacity within the Ministry of Environment and supported an ongoing trend towards greater environmental awareness in companies. The PMU continues to exist within the Ministry of Environment. It is funded by the National Bank of Egypt, which is the lead bank for various international donors. As PMU employees receive higher salaries, their motivation to work is high (a secondment to the PMU is seen as a privilege), and the PMU staff is stable. Since the financing of the PMU is only secured for a few years, it remains questionable whether it can be maintained in the very long term. The processes financed by the accompanying measure will continue to be used at the time of the evaluation; this is still ensured as an internationally financed consultant works at the PMU.

Durability of impacts over time

It is plausible that, in the future, the environmental investments and their effects in the financed companies (see Efficiency and Impact) will continue to exist over time, as the legal regulations continue to commit to this, and regular checks are carried out by the now strengthened environmental authority. The incentives and capacities for the regular use and maintenance of environmentally friendly capital goods also frequently exist due to additional benefits for the companies, in particular through cost reductions. This is confirmed by the fact that the financed equipment – based on random checks as part of the evaluation mission – appears to be in good condition, used and maintained. Equipment that has exceeded its lifespan has been written off. Since the equipment was used by private companies in their day-to-day business and these companies financed them themselves, this type of finding is to be anticipated.

Summary of the rating:

The programme has not contributed to the sustainable establishment of environmental credit lines in the banking sector. The only contribution that can be indirectly attributed to the programme through the accompanying measure was the raising of the Ministry of Environment's awareness by the PMU.

Sustainability: 3

Overall rating: 3

The project was implemented in close consultation with other donors and the Egyptian partner. Although the project responded reasonably to an Egyptian change in the law and gaps in the financial market, it made only a very small contribution to achieving its objectives based on its long implementation time. This is also due in particular to the fact that the design did not sufficiently recognise that banks would have little interest in implementing the programme. It was only thanks to a new concept nine years after the start of the project that the project could be completed and its low level of efficiency could be increased. The project made a contribution to reducing environmental pollution in the financed companies; however, this was also largely due to external factors occurring in parallel. Although the companies benefited greatly from the 20% grant element, the question arises as to whether they would not have implemented these investments without the project and, as a result, the project simply advanced the investment timeline accordingly. Overall, the project can therefore be rated as moderately successful.

Contributions to the 2030 Agenda

Since the project was designed before Agenda 2030, it was unable to contribute to this.

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

The project had the following strengths and weaknesses in particular:

- The project was one of the first to finance environmental technologies in Egypt. In the financed companies, it made a noticeable contribution to reducing environmental pollution – supported by external factors occurring in parallel. It created strong material incentives for companies to invest in environmental technology. The project was therefore able to prompt some flagship projects. Large companies have mainly benefited from the project; this makes sense as they were among the larger polluters.

- The implementation of the project took a very long time, but this was also due to the political upheaval.

- The project had no structural impact on the banking sector. Banks were not induced to continue to grant loans for environmental protection. Despite many incentive structures (buffer fund, disposition fund procedure), banks were only moderately interested in the project.

- The ex post disbursement of the grants after the appraisal ensured the companies' compliance.

Conclusions and lessons learned:

- Banks did not need refinancing at this time and were not interested in lending to corporate customers. Due to the structural characteristics of the banking sector, financing outside the banking sector – as happened after 2012 – would have been the better solution right from the start.

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, studies, websites and statistics of the Central Bank and the World Bank, country and sector analyses, partner government strategy papers, media reports, other evaluations

Data sources and analysis tools:
Evaluations from KfW systems, overview data of projects provided by the executing agency

Interview partners:
Project-executing agencies, banks, industrial companies, residents, consultant

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.

The following aspects limit the evaluation:
The evaluation was carried out ex post and verifies the project's contribution to target achievement, but cannot completely close the allocation gap. In particular, the contribution to the project objectives at impact level (including health impacts) cannot be assessed or quantified with certainty due to a lack of data and a lack of a counterfactual.

In addition, the evaluation exclusively visited a sample of the companies and banks financed. Despite a deliberate, complex selection of visited project locations and interview partners, it cannot be definitively ruled out that this selection had an impact on the results of the evaluation.

Methods used to evaluate project success

To evaluate the project according to OECD-DAC criteria, a six-step scale is used for all criteria except for the sustainability criterion. 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).

Publication details

Responsible:
FC E
Evaluation Department of KfW Development Bank
FZ-Evaluierung@kfw.de

KfW Group
Palmengartenstraße 5-9
60325 Frankfurt am Main, Germany

List of annexes:

Target system and indicators annex

Risk analysis annex

Project measures and results annex

Recommendations for operation annex

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

Target system and indicators annex

Project objective at outcome level	Rating of appropriateness (former and current view)
During project appraisal: Promotion of profitable private industrial enterprises to achieve a justifiable workload and environmental impact in the supported enterprises. The aim is to contribute to increasing economic growth, protecting the environment and occupational health and safety	The project outcome objective includes objectives at both output and short and medium-term impact level: - "Promotion" = output - "Reasonable workload and environmental impact" = short-term impacts - "Increase in economic growth", "Protection of the environment and occupational health and safety" = long-term impacts Accordingly, the project objective does not include an objective at the appropriate outcome level (in particular "Increase in environmentally friendly investments" and "Compliance with legal environmental requirements"). Furthermore, "reasonable" environmental pollution is non-specific and therefore not measurable. Due to the strong focus of the project indicators on the output level (provision of efficient, competitive and demand-oriented loans), this output level is also to be raised in the outcome objective modified for the EPE. The capacity increase of the environmental authority and the authorities responsible for occupational health and safety envisaged by the project is not covered by the target system and indicators. As part of the EPE, these measures are discussed qualitatively and on the basis of discussions with project participants, i.e. without using quantitative indicators.

During EPE (if target modified): The provision of competitive loans for economically sustainable private industrial companies leads to an increase in investments in environmental protection and an improved working environment and to increased compliance with legal environmental requirements – and to an improvement in the working environment in the promoted companies.					
Indicator	**Rating of appropriateness** (for example, regarding impact level, accuracy of fit, target level, smart criteria)	**PA target level** **Optional: EPE target level**	**PA status (1998)**	**Status at final inspection (2020)**	**Optional: Status at EPE (2022)**
Indicator (PA) 1: 90% of the financed companies comply with Egyptian environmental laws one year after commissioning. NEW: Indicator 1 The proportion of financed enterprises that fully comply with Egyptian environmental legislation one year after the financed facilities were put into operation, measured against the reduced environmental impacts that prove compliance with the standard.	Only SMARTer indicator to a limited extent: - Cannot be measured, as compliance with the laws is so difficult to measure/check. - The indicator also implies that 90% of all companies comply with ALL laws; accordingly, the indicator measures increasing, but not complete, compliance with the laws: The newly formulated and quantified indicator requires a high quality of environmental standards. This must be checked during the evaluation.	>90%	--	96% Until 2012, each proposed project was reviewed by a United Engineers (UNE) environmental consultant for compliance with the promotional criteria and Egyptian environmental legislation. Since 2012, companies have no longer been able to rely on local consultants commissioned by PSI II to prepare the individual studies; instead, they have been responsible for this themselves. Local consultants received corresponding orders from the companies, the companies received the promotion after acceptance of the	

				studies and proof of invoice.	
NEW: Indicator 2 The proportion of financed operations that fully meet Egyptian requirements for the working environment one year after the financed facilities were commissioned, measured by the absence of sanctions by the relevant institutions.	Previously, the target system lacked measurement of the working environment: The newly formulated indicator presupposes the existence of laws and regulations on the working environment as well as strict sanctions in the event of non-compliance. This needs to be reviewed during the evaluation	>90%	--		
NEW: Indicator 3 All financed companies were operational during the project's term	The indicator (highly approximate) checks the economic sustainability of companies. An extensive industry analysis and a systematic comparison with the peer group would be necessary to check the actual profitability, but this goes beyond the scope of the EPE	100%	100%	100%	100%

Project objective at impact level	Rating of appropriateness (former and current view)
At project appraisal: efficient and demand-oriented provision of medium to long-term investment loans and grants by the banking sector for private Egyptian industrial enterprises of any kind to finance investments that induce a reduction in environmental pollution Project objective (from 07/2010): is the proper use of the financed in-house, operational environmental investments by the industrial and commercial companies participating in the project.	The original objective was inappropriate and was modified during the course of the 07/2010 project. However, the modified objective is still not an impact objective, but an outcome objective. According to the results logic, the impact objective should be to "increase economic growth, protect the environment and improve the working environment". Contributing to economic growth appeared in the project objective at outcome level and was lacking at impact level. This objective is overambitious because the number of financed SMEs is too small to make a visible contribution to domestic economic growth. Instead, an increase in the company's earnings is to be added to the formulation of objectives. Systematic measurement of the company's earnings is

	not possible as part of the EPE, but this is requested in summary form. A distinction will be made between sectors and the size of the company.
During EPE (if target modified): The supported industrial companies and commercial enterprises have an improved working environment and have less impact on the environment (especially due to less pollution of waste water, air, reduced air pollution, in particular greenhouse gas emissions and improper waste disposal). In addition, companies' investments increase their corporate earnings.	

Indicator	Rating of appropriateness (for example, regarding impact level, accuracy of fit, target level, smart criteria)	Target level PA / EPE (new)	PA status (1998)	Status at final inspection (2020)	Status at EPE (2022)
Indicator 1 (PA) Interest rates are competitive and reflect credit risk.	This indicator is not appropriate in terms of content, as it is too general and not objectively measurable. It is also at output level. Indicator is not used.	Achieved	Not achieved	Achieved	
Indicator 2 (PA) The arrears rate of participating banks is less than 12% (central bank guidelines)	Indicator inappropriate as it is used to select the partner (due diligence indicator), but does not represent an outcome. Indicator is not used.	<12%	10.2%	<12% (exact value per bank missing)	
Indicator 3 (PA) Provisions for problematic loans meet the requirements of the central bank.	Indicator is a prerequisite for the bank's operation and is therefore always met. Indicator also inappropriate, as it is used to select the partner (due diligence indicator), but does not represent an outcome. Indicator is not used.	Achieved	Achieved	Achieved	
Indicator 4 (PA) Portfolio of loans with a term of more than one year increases by 5% p.a.	Indicator does not measure the effect of the credit line received. Instead, one should ask about the behaviour of the ratio of loans granted over a year to the total loan portfolio after receipt of the KfW line. How would the bank's growth have developed without taking into account the credit line? Indicator is not used.	>5%	>18% (exact value per bank missing)	Value is missing	

NEW: Indicator 1 Measured values for water and air pollution measurement as well as waste disposal have improved	Indicator and value assignment must be specified based on audits. It must be checked whether these are replacement or new investments. In the case of the latter, it is possible to check whether it is state-of-the-art, which, by its nature, causes fewer emissions and contamination.				
NEW: Indicator 2 Certain indicators for improving the working environment have improved (e.g. reduction of noise pollution, better ventilation, better equipment for employees, etc.)	Indicator and value assignment must be specified based on discussion with PM/Audit.	Improvement of the values			

Risk analysis annex

All risks should be included in the following table as described above:

Risk	Relevant OECD-DAC criterion
Insufficient capacity of the environmental agency	Effectiveness
Downturn in demand for fixed-interest loans	Efficiency, relevance, sustainability
Political upheavals	Efficiency

Project measures and their results annex

Annex a: Individual measures financed: a) sector affiliation of enterprises and b) investment focus, in %

Annex a shows the sector affiliation of the companies financed by the credit line and the focus of the environmentally friendly investment measures they implemented, as well as the distributions thereof in Phase 1 and Phase 2 of the project. Over the two phases, 35% of companies were in the food processing industry, 18% in the chemical industry and 29% of companies produce building materials; an additional 18% belong to sectors/products broken down in Annex a. Within the scope of the financed investments, investments were made over the two phases in industrial waste water treatment (42%, e.g. sewage treatment plants), air pollution control (45%, e.g. natural gas power plants) and waste disposal (5%, e.g. technical studies). Only 16% of all grants and 12% of the financed projects were used to improve the workplace situation. This includes all projects that were used to automate production steps in the companies and thus reduce the hazards for employees resulting from manual production steps (e.g. switching from manual spraying processes to automated collection of car batteries using a crane, etc.).

	Phase		
a) Sector	**1**	**2**	**Σ**
Food	53.1	26.9	35.4
Chemical industry	18.8	17.9	18.2
Textile	3.1	0.0	1.0
Construction (e.g. cement, glass, wood)	18.8	34.3	29.3
Oil and gas	0.0	3.0	2.0
Plastic	0.0	3.0	2.0
Printing	0.0	3.0	2.0
Automotive	0.0	4.5	3.0
Paper	0.0	3.0	2.0
Fertilisers	0.0	3.0	2.0
Logistics	0.0	1.5	1.0
Other	6.3	0.0	2.0
Σ	32	67	99

	Phase		
b) Investment category	**1**	**2**	**Σ**
Water	50.0	22.4	31.6
Air	15.6	41.8	33.7
Working conditions	18.8	10.4	13.3
Water, air	3.1	11.9	9.2
Water, working conditions	3.1	0.0	1.0
Air, working conditions	6.3	0.0	2.0
Waste	0.0	7.5	5.1
Other	3.1	6.0	4.1
Σ	32	67	99

Annex b: Overview of individual investments financed under the project

Company	Sector	Law limits	Pollution indicator (unit)	Before project	1 year after project	Project name	Project category
Phase 1							
Company 1	Food	N/A	N/A	N/A	N/A	New Malt Production Plant w/dust collection system and IWWTP	Water
Company 2	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant (Upgrade)	Water
Company 2	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant (Upgrade)	Water
Company 3	Chemicals	N/A	N/A	N/A	N/A	- Formaldehyde plant - Catalytic gas oxidizer - Bag filter	Air
Company 2	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant	Water
Company 4	Textile	N/A	N/A	N/A	N/A	Plant expansion	Work environment

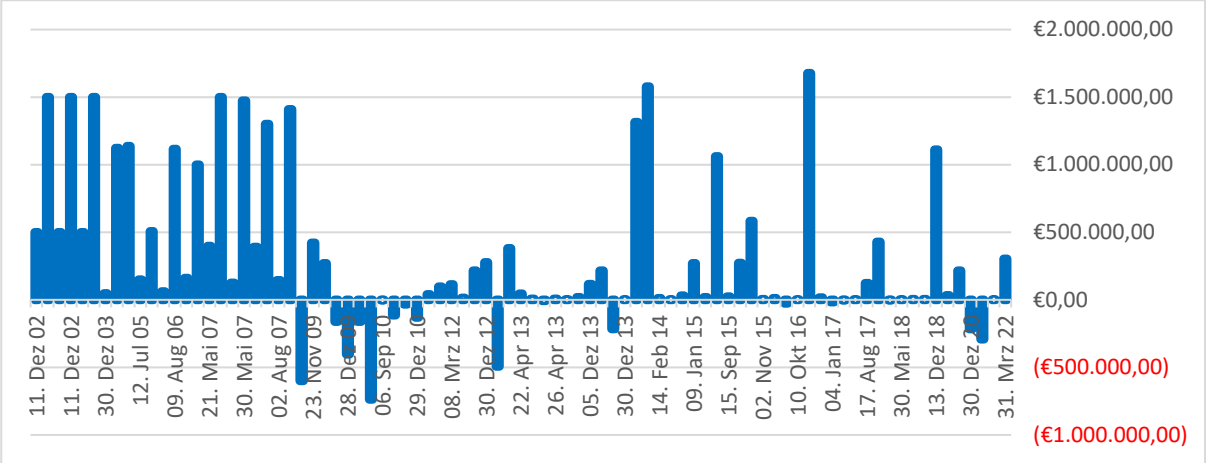
Company 5	Chemicals	N/A	N/A	N/A	N/A	Plant expansion	Work environment
Company 6	Chemicals	N/A	N/A	N/A	N/A	- Gas washing units for acrylonite storage tank and polymerization reactor - Monomer recovery unit - Polymer washing unit - Gel filtration system - Wastewater treatment plant - Air conditioning	Water/air
Company 6	Chemicals	N/A	N/A	N/A	N/A	- Concrete tanks for wastewater treatment plant - Fire fighting facilities	Water/work environment
Company 7	Glass	N/A	N/A	N/A	N/A	Furnace rebuild and batch plant modernisation	Work environment
Company 8	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant	Water
Company 9	Wood	N/A	N/A	N/A	N/A	Finishing line	Work environment
Company 10	Wood	N/A	N/A	N/A	N/A	Exhaust air system	Air
Company 11	Other	N/A	N/A	N/A	N/A	Plant Expansion (installing two full-featured computerised ink control systems instead of the current manual dosing system)	Water
Company 12	Food	N/A	N/A	N/A	N/A	Rendering, wastewater treatment plant, fire network	Water
Company 13	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant (ventilation system)	Water
Company 14	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant (ventilation system)	Water
Company 15	Food	N/A	N/A	N/A	N/A	- Starch decanter - Upgrade fire fighting system	
Company 16	Food	N/A	N/A	N/A	N/A	Rendering, wastewater treatment plant	Water
Company 17	Engineering	N/A	N/A	N/A	N/A	Dust collection system	Air
Company 18	Food	N/A	N/A	N/A	N/A	Plant rehabilitation	Air / work environment
Company 19	Food	N/A	N/A	N/A	N/A	- Starch separator - Gas burner	Air / work environment
Company 20	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant	Water
Company 20	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant - civil works (complementary to Res. II-92)	Water
Company 21	Other	N/A	N/A	N/A	N/A	Wastewater Treatment Plant	Water
Company 22	Food	N/A	N/A	N/A	N/A	- Wastewater Treatment Plant - Plant ventilation	Water
Company 1	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant	Water
Company 23	Wood	N/A	N/A	N/A	N/A	- Furniture finishing line - Dust collection unit	Air
Company 20	Food	N/A	N/A	N/A	N/A	Wastewater Treatment Plant	Water
Company 3	Chemicals	N/A	N/A	N/A	N/A	- Catalytic gas oxidizer	Air
Company 24	Chemicals	N/A	N/A	N/A	N/A	- Organo-lignite production line - Bag filling machine - Air cleaning system - Fabrication & installation of equipment - Filter bags	Work environment

Company 25	Wood					- Paint spraying line	Work environment
Phase II:							
Company 14	Food	10	TSP	17.1	0.55	Technical studies	Air/water
Company 14	Food	1100	COD	8500	160	19 new packing machines, waste water treatment plant (starch recovery)	Air/water
Company 26	Chemicals	N/A	N/A	N/A	N/A	Technical studies	Work environment
Company 26	Chemicals	434	Ethyl Bz	741	100	Replacement of two old plastic injections, extrusion machines and one printing machine and one crusher	Work environment
Company 27	Construction	800	TSS	940	90	Waste water treatment plant	Water
Company 28	Construction	800	TSS	844	70.8	Waste water treatment plant	Water
Company 29	Construction	800	TSS	844	143.4	Waste water treatment plant	Water
Company 30	Construction	500	CO	640	62	Supply &installation of natural gas burners	Air
Company 31	Food	600	BOD	893	187.8	Rehabilitation of waste water treatment plant	Water
Company 31	Food	1100	COD	5455	317.4	Rehabilitation of waste water treatment plant	Water
Company 32	Food	1100	COD	3000	435.8	Waste water treatment plant	Water
Company 32	Food	N/A*	N/A	N/A	Nile	Solid waste	Solid waste
Company 33	Oil and gas	N/A	N/A	N/A	N/A	Technical studies	Air
Company 33	Oil and gas	800	SOx	3812	N/A	Industrial development to reduce air pollutants	Air
Company 34	Construction	N/A	N/A	N/A	N/A	Technical studies	Air
Company 34	Construction	300	SOx	723	10	Installation of natural gas burners	Air
Company 35	Construction	N/A	N/A	N/A	N/A	Technical studies	Air
Company 35	Construction	300	SOx	485	11	Installation of natural gas burners	Air
Company 36	Construction	N/A	N/A	N/A	N/A	Technical studies	Air
Company 36	Construction	300	SOx	649	18	Installation of natural gas burners	Air
Company 37	Construction	N/A	N/A	N/A	N/A	Technical studies	Air
Company 37	Construction	300	SOx	854	18	Installation of natural gas burners	Air
Company 38	Construction	N/A	N/A	N/A	N/A	Technical studies	Air
Company 38	Construction	300	SOx	538	29	Installation of natural gas burners	Air
Company 39	Plastic	N/A	N/A	N/A	N/A	Technical studies	Solid waste
Company 39	Plastic	N/A	N/A	N/A	N/A	Technical studies	Solid waste
Company 40	Printing	N/A	N/A	N/A	N/A	Technical studies	Work environment
Company 40	Printing	152	Butyl alcohol	225.8	5.2	Work environment, improvement projects	Work environment
Company 41	Car industry	N/A	N/A	N/A	N/A	Technical studies	Water
Company 41	Car industry	1100	COD	2700	378.1	waste water treatment plant (IETOS)	Water
Company 41	Car industry	1100	COD	2700	378.1	- Technical studies - waste water treatment plant (IETOS) - Painting line (Gauangzou Kinte Ltd.)	Water
Company 42	Food	N/A	N/A	N/A	N/A	Technical studies	Water/air
Company 42	Food	10	TSP	11.4	0.76	Dryer & dough mixer (fen)	Water/air

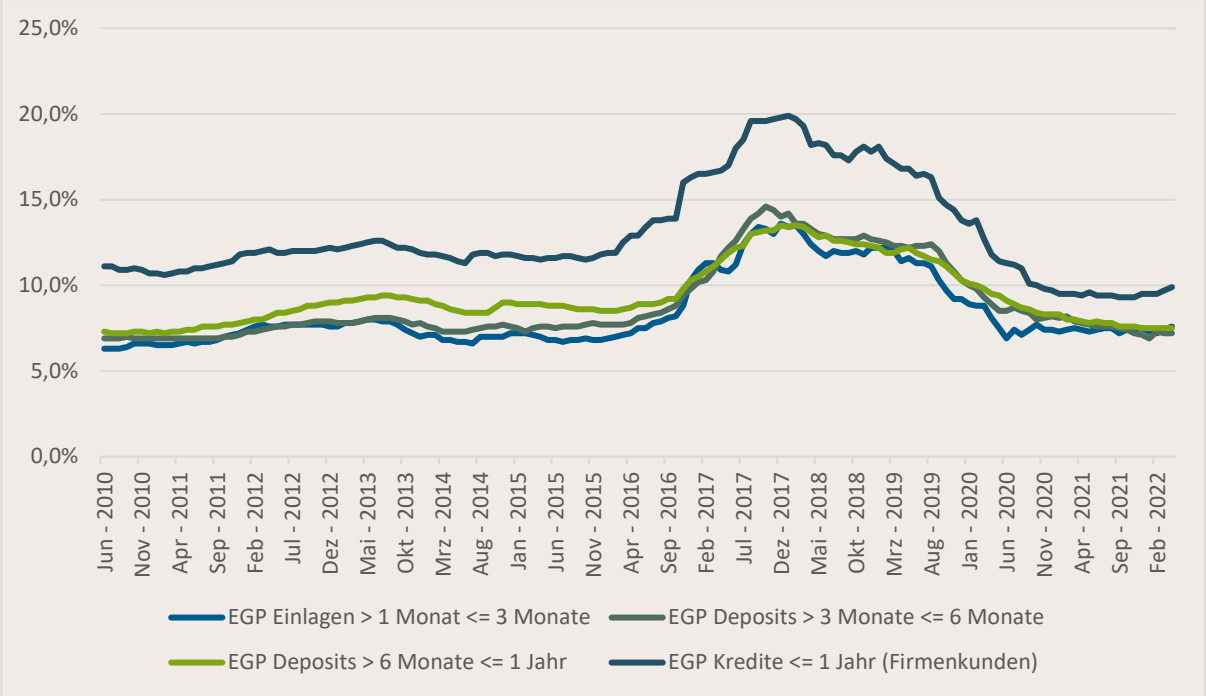
Company 42	Food	10	TSP	15.2	5.4	Distribution system (Symtech UK)	Water/air
Company 42	Food	10	TSP	14.8	1.85	Extruder (Clextral)	Water/air
Company 42	Food	10	TSP	18.6/21.4/19.6	0.75/0.95/0.45	3 packing machines (Simionato)	Water/air
Company 42	Food	100	COD	1350	N/A	waste water treatment plant (fryer, heat & control)	Water/air
Company 43	Paper	1500	SOx (stack 1)	4140	20	Fuel switching	Air
Company 43	Paper	1500	SOx (stack 2)	2471	95	Fuel switching	Air
Company 44	Food	2500	SO2	1198	0	Fuel switching with NG piping and burners	Air
Company 44	Food	250	CO	506	4	Fuel switching with NG piping and burners	Air
Company 45	Food	3	TSP	6.3	0.229	Dedusting system for the raw material section, new production line	Work environment
Company 46	Chemicals	100	cyclohexanone	128.5	26	Replacement of the semi-automatic bottling in agricultural liquid pesticide by one automatic line that has the same capacity	Work environment
Company 47	Chemicals	Solid waste recycled 50000/tonne*				Vacuum salt production factory	Solid waste
Company 47	Chemicals	Liquid reuse 450,000 m3/year*				Treatment unit for pharmaceutical-grade salt production	Solid waste
Company 48	Chemicals	N/A	N/A	N/A	N/A	Technical studies	Water
Company 48	Chemicals	1100	COD	8348	88	Waste water treatment plant	Water
Company 49	Chemicals	N/A	N/A	N/A	N/A	Technical studies	Water
Company 49	Chemicals	1100	COD	5010	171	Waste water treatment plant	Water
Company 50	Fertiliser	800	SOx	1500	30	Fuel switching	Air
Company 50	Fertiliser	800	SOx	1200	516	Replacement of catalyst (vanadium) & TowerGuard filters	Air
Company 51	Cement	N/A	N/A	N/A	N/A	Online monitoring equipment	Air
Company 51	Cement	600	NOx	803	480	SNCR	Air
Company 52	Cement	N/A	N/A	N/A	N/A	Online monitoring equipment	Air
Company 52	Cement	600	NOx	786	450	SNCR	Air
Company 53	Cement	N/A	N/A	N/A	N/A	Online monitoring equipment	Air
Company 53	Cement	50	TSP	250	15	Filter replacement	Air
Company 54	Cement	N/A	N/A	N/A	N/A	Online monitoring equipment	Air
Company 55	Cement	N/A	N/A	N/A	N/A	Online monitoring equipment	Air
Company 56	Chemicals	0.05	Pb	0.1/1.2	N/A	Recycled hazardous waste lead-acid batteries	Work environment
Company 57	Food	1100	COD	20500	24.2	Waste water treatment plant	Water
Company 58	Bricks	300	SOx	575	30	Fuel switching with NG	Air
Company 59	Food	N/A	N/A	N/A	N/A	Technical studies	N/A
Company 60	Logistics	N/A	N/A	N/A	N/A	Technical studies	N/A
Company 61	Chemicals	N/A	N/A	N/A	N/A	Technical studies	N/A
Company 62	Chemicals	N/A	N/A	N/A	N/A	Technical studies	N/A
Company 63	Food	80	COD	2912	52	Vinasse spray dryer	Water

This annex served as a source for Annex a (see above)

Annex c: Disbursements/repayments of the investment measure

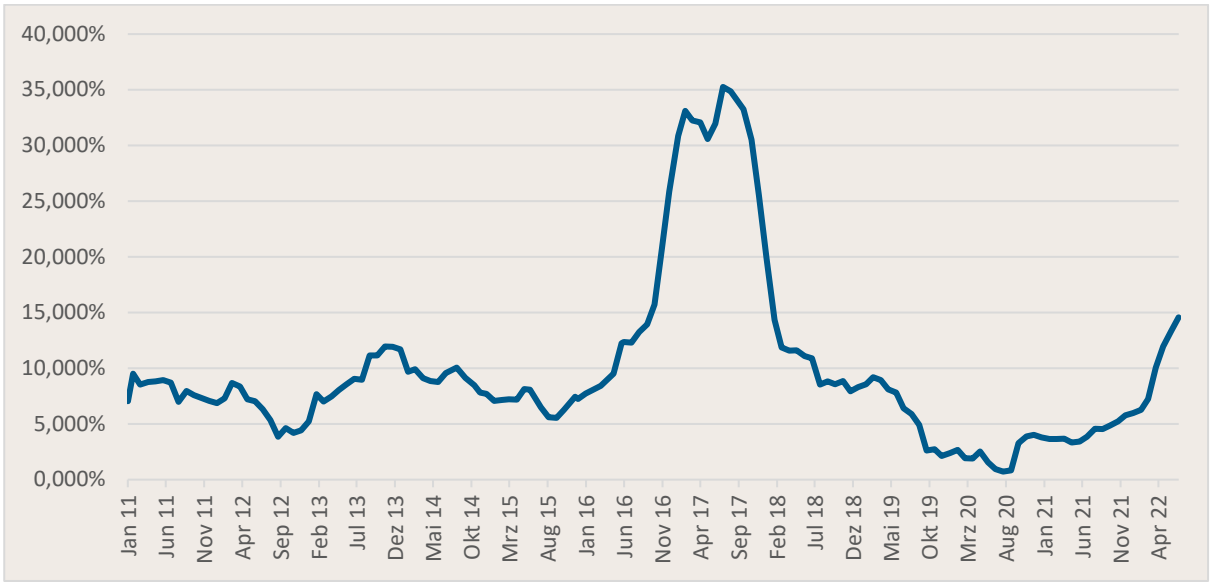


Annex d: Average deposit and loan interest in EGP, period 06/2010 – 02/2022



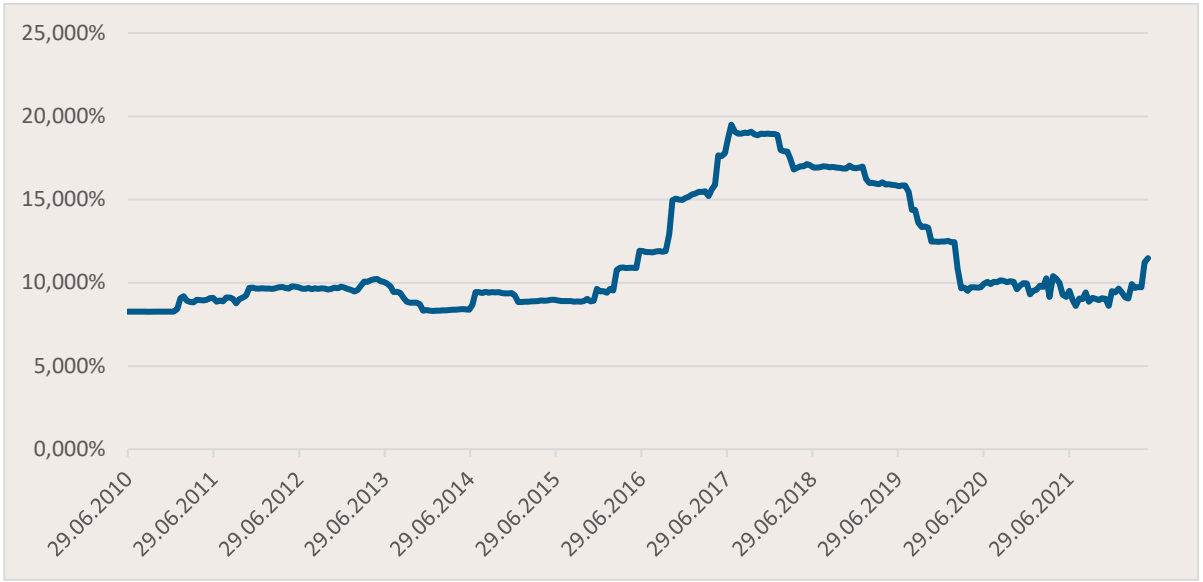
Source: Egyptian Central Bank (2022). https://www.cbe.org.eg/en/EconomicResearch/Statistics/Pages/Inflation.aspx
Note: as the chart shows, interest rates for loans in local currency of less than one year was at around 10% in recent years. From 2016–2018, there were remarkable upward swings due to high inflation (lower chart).

Annex e: Inflation rate (core CPI) 2011–2022



Source: Egyptian Central Bank Core CPI (2022): https://www.cbe.org.eg/en/EconomicResearch/Statistics/Pages/Inflation.aspx

Annex f: Inflation rate (core CPI) 2011–2022



Source: Egyptian Central Bank Refinancing Rates (2022): https://www.cbe.org.eg/en/EconomicResearch/Statistics/Pages/Inflation.aspx

Annex g: Key figures of Egyptian banks as at 31 December 2021 (unless otherwise stated). Figures in millions of euros.

Name	Ownership structure	Assets	Loans	Loans/assets	Market share of loans	Deposits	Loans/deposits	Market share of deposits	Equity	Equity ratio	Profit before tax	Return on equity
National Bank of Egypt [a]	State-owned	131,175.80	51,987.15	40%	42%	105,093.65	49%	40%	6,451.65	5%	1,888.80	29%
Banque Misr [a]	State-owned	72,914.85	28,495.15	39%	23%	56,017.50	51%	22%	4,831.85	7%	1,246.05	26%
Commercial International Bank (Egypt)	Private	24,911.80	7,278.75	29%	6%	20,362.10	36%	8%	3,442.40	14%	941.65	27%
Qatar National Bank Alahli	Private	17,978.40	8,641.45	48%	7%	14,774.60	58%	6%	2,318.75	13%	556.75	24%
Banque du Caire (Banque Misr subsidiary)	State-owned	12,767.65	4,933.85	39%	4%	9,913.90	50%	4%	970.70	8%	290.25	30%
Arab African International Bank [b]	Partially state-owned	11,202.60	3,254.95	29%	3%	7,676.75	42%	3%	1,598.00	14%	119.35	7%
Arab International Bank [b]	Partially state-owned	7,486.70	1,743.30	23%	1%	6,141.55	28%	2%	819.80	11%	67.55	8%
Faisal Islamic Bank of Egypt	Private	6,549.10	596.65	9%	0%	5,478.00	11%	2%	852.15	13%	217.40	26%
HSBC Bank Egypt [b]	Private	5,824.70	1,815.75	31%	1%	4,511.00	40%	2%	749.90	13%	255.30	34%
Bank of Alexandria	Private	5,744.50	2,570.65	45%	2%	4,786.00	54%	2%	686.10	12%	199.40	29%
Emirates National Bank of Dubai	Private	4,129.80	1,943.70	47%	2%	3,378.90	58%	1%	402.50	10%	47.95	12%
National Bank of Kuwait – Egypt	Private	3,874.70	2,036.25	53%	2%	3,101.15	66%	1%	514.90	13%	109.85	21%
Al Baraka Bank of Egypt [b]	Private	3,776.65	1,051.60	28%	1%	3,323.55	32%	1%	251.40	7%	100.35	40%
Abu Dhabi Islamic Bank – Egypt [b]	Private	3,694.25	2,007.10	54%	2%	3,133.65	64%	1%	277.40	8%	87.60	32%
Egyptian Gulf Bank [b]	Private	3,601.35	1,133.85	31%	1%	3,013.50	38%	1%	273.10	8%	51.50	19%
Crédit Agricole Egypt	Private	3,022.30	1,457.40	48%	1%	2,410.50	60%	1%	433.05	14%	111.65	26%
Suez Canal Bank	Partially state-owned	2,871.55	1,153.20	40%	1%	2,529.35	46%	1%	220.00	8%	52.50	24%
Export Development Bank of Egypt [c]	Private	2,861.85	1,564.90	55%	1%	2,197.35	71%	1%	302.60	11%	75.50	25%
Blom Bank – Egypt [b]	Private	2,198.70	648.90	30%	1%	1,847.00	35%	1%	249.85	11%	53.50	21%
Totals		326,587.25	124,314.55	38%	100%	259,690.00	48%	100%	25,646.10			

Source: Central Bank of Egypt, banks' websites (compiled by Economist Intelligence); footnotes: (a) as at the end of June 2021; (b) as at the end of 2020; (c) as at the end of June 2020.

Recommendations for operation annex

Not applicable as not an infrastructure project.

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 (- / o / +)	Reason for weighting
Evaluation dimension: Policy and priority focus			2	o	
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?	Where are there contradictions? Is Egypt's strategy donor-driven? Intrinsic interest of the country?	Egypt Vision 2030 National Sustainable Development Strategy			
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.))?	De facto interest and implementation with regard to environmental issues and working environment on the part of the government. Hidden agendas?				
Evaluation dimension: Focus on needs and capacities of participants and stakeholders			4	o	
Are the programme objectives focused on the developmental needs and capacities of the target group? Was the core problem identified correctly?	How were the banks selected? How did the banks select the companies? Do banks and businesses de facto need and are they interested in the loans available? Do they have a vested interest in implementing environmental protection measures and improving the working environment?				

	Why have the participating banks barely extended their own loan funds to the target group beyond the FC loan funds? Why were the residual loan funds returned? What incentive structures did the banks have to grant the customers the grant?				
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?	How did the banks select the companies? Why to SMEs? Why not a line to large companies right away, as they can achieve more environmental protection measures? Who are the biggest polluters? SMEs or large enterprises?				
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)					
Evaluation dimension: Appropriateness of design			4	o	
Was the design of the programme appropriate and realistic (technically, organisationally and financially) and in principle suitable for contributing to solving the core problem?	Why SMEs and not large companies? Was there a feasibility study? What were the results? Is it generally sensible to link loans to investments in environmental protection in similar contexts (as opposed to separate implementation of environmental and financial projects)? Does achieving the environmental objectives justify the additional effort of this linking?				

Is the programme design sufficiently precise and plausible (transparency and verifiability of the target system and the underlying impact assumptions)?		
Please describe the results chain, 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)	Description under use / compared to a reconstructed, graphic ToC.	
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)?		
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)	Why was there no DC programme?	

Evaluation dimension: Response to changes/adaptability			3	o	
Has the programme been adapted in the course of its implementation due to changed framework conditions (risks and potential)?	Which changes to framework conditions and measures occurred? Why wasn't more money collected for TA? Why did you not convert the subsidy into TA (was it possible to use RePro with the old BMZ number)?				

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 / +)	Reason for weighting
Evaluation dimension: Internal coherence (division of tasks and synergies within German development cooperation):			2	--	Not applicable, as no comparable German DC projects
To what extent is the programme designed in a complementary and collaborative manner within the German development cooperation (e.g. integration into DC programme, country/sector strategy)?	Which TC and FC projects were there in the sector during the same period?	Not applicable, as no comparable projects			
Do the instruments of the German development cooperation dovetail in a conceptually meaningful way, and are synergies put to use?	What theoretical potential for dovetailing existed? What involvement of other GIZ or other KfW projects was there de facto? Were synergy potentials used?	see above			
Is the programme consistent with international norms and standards to which the	Have ILO standards and environmental criteria been pursued according to international standards?	see above			

German development cooperation is committed (e.g. human rights, Paris Climate Agreement, etc.)?					
Evaluation dimension: External coherence (complementarity and coordination with actors external to German DC):			2	o	
To what extent does the programme complement and support the partner's own efforts (subsidiarity principle)?	Which environmental credit lines are financed in Egypt? Who are the main donors? Are such lines available through self-funding? What strategies were there in Egypt to reduce environmental pollution from industrial companies during the course of the project (e.g. strengthening the environmental authority, creating incentive systems for companies)?				
Is the design of the programme and its implementation coordinated with the activities of other donors?	Which donors were involved with which measures (credit lines and environmental protection measures of industries)? In consultation with the EBRD? In consultation with the EU?				
Was the programme designed to use the existing systems and structures (of partners/other donors/international organisations) for the implementation of its activities and to what extent are these used?	How was the PMU used?				
Are common systems (of partners/other donors/international					

organisations) used for monitoring/evaluation, learning and accountability?		

Effectiveness

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / o / +)	Reason for weighting
Evaluation dimension: Achievement of (intended) targets			2	o	
Were the (if necessary, adjusted) objectives of the programme (incl. capacity development measures) achieved? Table of indicators: Comparison of actual/target	Completion of indicators as shown above.				
Evaluation dimension: Contribution to achieving objectives:			4	o	
To what extent were the outputs of the programme delivered as planned (or adapted to new developments)? *(Learning/help question)*	Were the adjustments adequate and meaningful?				
Are the outputs provided and the capacities created used?	How many systems are still in operation?				
To what extent is equal access to the outputs provided and the capacities created guaranteed (e.g.	omitted	Projects do not pursue this claim.			

non-discriminatory, physically accessible, financially affordable, qualitatively, socially and culturally acceptable)?		
To what extent did the programme contribute to achieving the objectives?	How have corporate environmental values and work environment indicators changed?	Data/interviews on site
To what extent did the programme contribute to achieving the objectives at the level of the intended beneficiaries?	Can changes (see above) be plausibly attributed to the project? Employees of the supported enterprises and the population living in the vicinity of the enterprises may be directly affected: To what extent were the measures for environmental protection and/or to improve the working environment noticeable for employees and local residents?	Data/interviews on site
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.)?	omitted	The measures do not pursue this objective.
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)	omitted	The measures do not pursue this objective.

Which project-internal factors (technical, organisational or financial) were decisive for the achievement or non-achievement of the intended objectives of the programme? *(Learning/help question)*					
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)? *(Learning/help question)*	How much impact did the political upheavals have on the project in 2011?				
Evaluation dimension: Quality of implementation			4	o	
How is the quality of the management and implementation of the programme (e.g. project-executing agency, consultant, taking into account ethnicity and gender in decision-making committees) evaluated with regard to the achievement of objectives?	Why were they no longer able to use the consultant? How was the quality of the local consultants checked? Conflict of interest between local consultant and company as client?				
How is the quality of the management, implementation and participation in the programme by the partners/sponsors evaluated?	How was management carried out by the environmental authority and previous executing agency?				
Were gender results and relevant risks in/through the project (gender-based violence, e.g. in the context of infrastructure or empowerment	omitted	The measures do not pursue this objective.			

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)					
Evaluation dimension: Unintended consequences (positive or negative)			2	--	Omitted
Can unintended positive/negative direct impacts (social, economic, ecological and, where applicable, those affecting vulnerable groups) be seen (or are they foreseeable)?		omitted			
What potential/risks arise from the positive/negative unintended effects and how should they be evaluated?		omitted			
How did the programme respond to the potential/risks of the positive/negative unintended effects?		omitted			

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 / +)	Reason for weighting
Evaluation dimension: Production efficiency			4	o	
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)		
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.	How was the buffer fund calculated? Why the shorter terms? What did CB do with the money during the other period? Was there misuse of funds after 2013? What was the issue with the cheque payments? How exactly did the disbursement processes take place? How additional were the financings?	
If necessary, 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.)?	Why were these grants not used for something else? Why return the funds? e.g. for further training of bank employees in environmental protection and working environment issues in order to make it possible to expand the loan portfolio in this area.	
Were the outputs produced on time and within the planned period?	What could have been done better from the banks' perspective? Why were the conditions no longer attractive? Why was the consultant no longer available? Why did it all take so long? What does the long duration mean for the efficiency of the project?	

Were the coordination and management costs reasonable (e.g. implementation consultant's cost component)? (FC-E-specific question)	Are the consulting costs reasonable in comparison?				
Evaluation dimension: Allocation efficiency			3	o	
In what other ways and at what costs could the effects achieved (outcome/impact) have been attained? *(Learning/help question)*	The signalling effect of the measures with regard to environmental protection and improvement of the working environment is important here. Were these effects best achieved through the implicit signalling effect resulting from the specialised loan offer or would explicit awareness-raising activities have had a higher effect?				
To what extent could the effects achieved have been attained in a more cost-effective manner, compared with an alternatively designed programme?		Data/interviews on site, comparison with other banks' projects, other phases			
If necessary, as a complementary perspective: To what extent could the positive effects have been increased with the resources available, compared to an alternatively designed programme?		Data/interviews on site, comparison with other banks' projects, other phases			

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 / +)	Reason for weighting
Evaluation dimension: Overarching developmental changes (intended)			2	o	
Is it possible to identify overarching developmental changes to which the programme should contribute? (Or if foreseeable, please be as specific as possible in terms of time).	What has the measure contributed to environmental protection or improved working conditions? Were there any national objectives in the area of environmental protection and improving working conditions to which a contribution could have been made?				
Is it possible to identify overarching developmental changes (social, economic, environmental and their interactions) at the level of the intended beneficiaries? (Or if foreseeable, please be as specific as possible in terms of time).	Possible No, use interviews to check whether the project has a broad impact (environmental authority, employees in companies and/or local residents).				
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 should contribute (Or, if foreseeable, please be as specific as possible in terms of time).	omitted	The project did not pursue this objective.			
Evaluation dimension: Contribution to overarching developmental changes (intended)			4	0	

To what extent did the programme actually contribute to the identified or foreseeable overarching developmental changes (also taking into account the political stability) to which the programme should contribute?	If the environmental protection and improvement of working conditions in and around the supported companies improved, to what extent is this due to the project, to what extent is this due to other developments?	
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 also at impact level? (E.g. drinking water supply/health effects).		Appraisal using indicators
Did the programme contribute to achieving its (possibly adjusted) developmental objectives at the level of the intended beneficiaries?	How did the companies benefit from this? How did companies' employees (see Improvement of the working environment) and local residents (see Lower environmental impact in the immediate environment) noticeably benefit from this?	
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?	omitted	Not the objective of the project
Which project-internal factors (technical, organisational or financial)		Interviews

were decisive for the achievement or non-achievement of the intended developmental objectives of the programme? *(Learning/help question)*		
Which external factors were decisive for the achievement or non-achievement of the intended developmental objectives of the programme? *(Learning/help question)*	What is the availability of foreign currency for MSMEs? Political events since 2011 Changing the executing agency	
Does the project have a broad-based impact? - 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)	Possible No, use interviews to check whether the project has a broad impact (environmental authority and local residents). Are banks continuing to hold similar loans? Do companies continue to implement environmental protection measures and improve the working environment? Can it be assumed that the project had a signalling effect with regard to a higher level of awareness in the area of environmental protection and improvement of the working environment? Has the loan portfolio been expanded compared to the overall portfolio? Is an expansion of the loan portfolio in this area discernible at other banks? Are there other promotional programmes?	
How would the development have gone without the programme? (Learning and help question)		

Evaluation dimension: Contribution to (unintended) overarching developmental changes			2	--	omitted
To what extent can unintended overarching developmental changes (also taking into account political stability) be identified (or, if foreseeable, please be as specific as possible in terms of time)?	What specific unintended effects did the project have (on participating banks, companies, employees and/or local residents)?	omitted			
Did the programme noticeably or foreseeably contribute to unintended (positive and/or negative) overarching developmental impacts?		omitted			
Did the programme noticeably (or foreseeably) 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. no strengthening of inequality (gender/ethnicity))?		omitted			

Sustainability

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / o / +)	Reason for weighting
Evaluation dimension: Capacities of participants and stakeholders			3	o	
Are the target group, executing agencies and partners institutionally, personally and financially able and willing (ownership) to maintain the positive effects of the programme over time (after the end of the promotion)?	Were banks continuing to grant environmental credit lines? (Number of environmental credit lines and/or comparable products offered by participating banks after the end of the project) Have sustainable structures been created, e.g. introduction of an additional segment in the area of loans? Which programmes still exist? How is it ensured that the know-how of the employees is available? Does the bank operate profitably and is it able to continue offering loans? Are the modernisation measures sustainable? Is the EEAA Project Management Unit (PMU) still in place? What exactly did it do? Who finances this? What are the salary structures compared to the rest? Is the EEAA now working better? (Laboratory capacities)				
To what extent do the target group, executing agencies and partners demonstrate resilience to future					

risks that could jeopardise the impact of the programme?					
Evaluation dimension: Contribution to supporting sustainable capacities:			3	o	
Did the programme contribute to the target group, executing agencies and partners being institutionally, personally and financially able and willing (ownership) to maintain the positive effects of the programme over time and, where necessary, to curb negative effects?	What environmental credit lines are there now? Is the environmental authority implementing this? Which monitoring mechanisms have improved? What has changed in terms of improving the working environment and environmental protection within companies?				
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?	omitted	Strengthening resilience was not the aim of the project			
Did the programme contribute to strengthening the resilience of particularly disadvantaged groups to risks that could jeopardise the effects of the programme?	omitted	Strengthening resilience was not the aim of the project			
Evaluation dimension: Durability of impacts over time			3	0	
How stable is the context of the programme (e.g. social justice, economic performance, political		Reports on the structure and development of the banking system. Policy analysis.			

stability, environmental balance)? (*Learning/help question*)		
To what extent is the durability of the positive effects of the programme influenced by the context? *(Learning/help question)*	How effective is the environmental authority? How does the context described above (pol. system and economic development) affect the sustainability of the project's impacts?	
To what extent are the positive and, where applicable, the negative effects of the programme likely to be long-lasting?		Interviews with companies