Ex post evaluation – Tunisia

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Sector: Formal sector financial intermediaries (CRS Code 24030)
Project: Industrial Depollution Fund (FODEP) Phase III 2001 65 670* (Investment) 2008 70 055 (Accompanying measure) 1999 212 Advanced and further training measure
Programme executing agency: Agence Nationale de Protection de l'Environnement (ANPE), Banque Centrale de Tunisie (BCT)

Ex post evaluation report: 2014

		Project A (Planned)	Project A (Actual)
Investment costs (total)	EUR million	12.70	16.65
Own contribution	EUR million	4.00	6.90
Funding	EUR million	8.70	9.75
of which BMZ budget funds	EUR million	2.60	2.60

*) Random sample 2014

Description: The Industrial Depollution Fund (FODEP) was designed to help Tunisian companies gain better access to financing for environmental protection investments with the purpose of reducing their harmful pollutants and/or their use of resources. This was intended to make a contribution towards lowering environmental pollution and dangers to health caused by Tunisian industrial, service and business enterprises. Via FODEP, grants were funded (through the Tunisian environmental authority, ANPE) and loans disbursed (through selected commercial banks) for measures related to waste water treatment, conserving water, air pollution control and in-plant waste management, as well as for measures concerning waste disposal and recycling.

Objectives: Ultimate objective: Contribute towards lowering environmental pollution and dangers to health caused by Tunisian industrial, service and business enterprises. **Programme objective:** a) Lower harmful pollutants and/or use of resources by companies participating in the programme, and b) provide efficient access for the target group to financing for environmental protection investments.

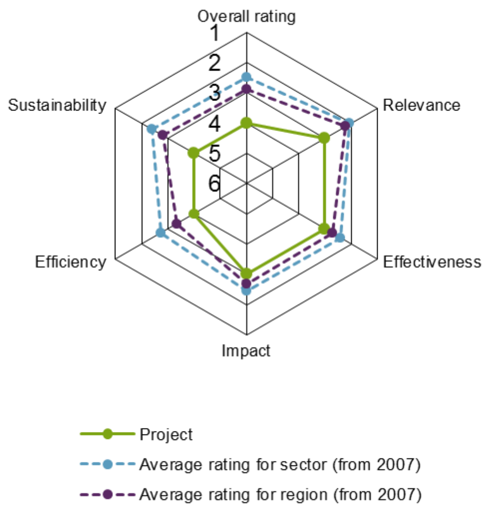
Target group: Individual businesses or combinations of private and public Tunisian industrial, service and commercial enterprises, as well as waste management companies.

Overall rating: 4

Rationale: The overall developmental effectiveness of the project is considered to be unsatisfactory. The results fall short of expectations, especially with regard to efficiency and sustainability, which is partly due to the changed political and economic conditions since the political reversal in early 2011.

Given the overall conditions (insufficient control of emissions and lack of sanctions for infringements) the impacts of the programme are isolated and limited to the supported companies.

Highlights: -



Rating according to DAC criteria

Overall rating: 4

The overall developmental effectiveness of the project is considered to be unsatisfactory. The results are lower than expected, especially with regard to efficiency and sustainability, which is also due in part to the drastically changed political conditions since the beginning of the “Arab Spring” in early 2011. No capacity-building effect can be identified in the finance sector to any significant extent.

Relevance

Tunisia’s natural resources (water, air, land) are exposed to considerable risk by current waste, waste water and waste air disposal practices, among other things. This core problem, which was identified at the project design stage, is still a priority problem in Tunisia today.

Environmental monitoring, which is rather weak overall, as well as an even weaker to non-existent sanctions practice have led in recent years to a very low implementation rate for industrial environmental protection measures.

The FODEP III programme objectives – reducing harmful emissions and/or the use of resources by businesses participating in the programme and creating efficient access for the target group to funding for environmental protection investments – remain pressing objectives for industrial environmental protection even today.

In principle, the partial results chain is plausible, i.e. “enabling small and medium-sized companies to implement environmental protection investments by means of attractive financing conditions”. However, financial incentives to implement operational environmental protection measures cannot compensate for the inadequate enforcement of statutory environmental regulations. As long as the framework conditions for investment in environmental measures remain unattractive, the finance sector, owing to a lack of demand on the part of the companies, cannot expect to see any structural effects, e.g. as a result of multiple commercial financing offers for such types of investment.

From an ex-post perspective, the core problem did not and does not lie primarily in the lack of financing offers for environmental measures, but rather in the lack of regulatory and economic incentives for implementing these measures.

Relevance rating: 3

Effectiveness

The following two programme objectives were defined during the programme design:

1. Reduction of harmful emissions and/or the use of resources by companies taking part in the programme
2. Creating efficient access for the target group to financing for environmental protection investments

In order to achieve these programme objectives, the following indicators were specified:

Programme objective 1

- Indicator 1a: proper operation and maintenance of environmental facilities in at least 80% of the supported businesses after three years of operation
- Indicator 1b: maintaining the (relevant) Tunisian environmental standards at the annual average of at least 80% of the supported businesses after three years of operation

Programme objective 2

- Indicator 2: aggregate repayment rate - defined as the ratio between the total actual repayments and the total payments due - of at least 90%.

The achievement of programme objective 1 based on indicators 1a and 1b is monitored on the basis of rather superficial monitoring practices (irregular on-site visits) by the project-executing agency ANPE. In recent years, these monitoring practices have produced the following percentages for the simultaneous achievement of objectives with regard to indicator 1a (proper operation and maintenance) and indicator 1b (maintaining Tunisian environmental standards):

2003 (for project FODEP I):	69 % of 114 inspected businesses
2005 (for projects FODEP I & II):	76 % of 37 inspected businesses
2008 (for projects FODEP I & II):	79 % of 29 inspected businesses
2013 (for project FODEP III):	inspection of 32 businesses planned, but not yet carried out.

The delay to the inspection of 32 FODEP III-financed companies, which was planned for May 2013, is attributable to the current restructuring of the department responsible for this matter at the project-executing agency ANPE: Département Contrôle et Suivi.

Of the eight businesses visited in the course of the ex-post evaluation, all intended investments were fully implemented in four of these (out of a total of 41). The implementation rates in the remaining four businesses ranged between 60 % and 90 %. The incomplete realisation of the planned single-business investments to date is due in part to in-house project modifications, and in part to the direct impact of the political reversal in early 2011.

With regard to the achievement of programme objective 1, the businesses visited are a mixed bag, but suggest an overall success rate in a similar ballpark to that of the previous phases FODEP I and II, with a proportion of around 70 % to 80 % of supported businesses. This means that the requirements of both indicators 1a and 1b have been met simultaneously. It is assumed here that the measures not yet concluded at the time of the evaluation can be effectively put into operation. As this concerns half of the investments examined, only limited conclusions can be drawn in relation to operation and maintenance.

The accompanying measure - implemented in the period 2011 to 2013 - compiled a multitude of recommendations for the improvement of ANPE internal processes as well as for the subsequent review of FODEP-supported projects. The accompanying measure's implementation in the organisational structures of ANPE is still pending however, and it has thus been unable to have any impact from an institutional viewpoint.

The following were identified as significant obstacles to the full achievement of the programme objectives:

- The motivation of the companies taking part, which is often linked to individual owners or employees, and puts the retention of target levels for following years (sustainability) at risk in particular;
- The competence of company representatives, which can result in doubts arising from time to time with regard to the sustainable operation of the facilities;
- The suitability of the engineering office taking part, which has at times negatively affected the design and dimensions of the facilities.

The achievement of objectives with regard to indicator 2 mentioned above (aggregate repayment rate of the loans) is not systematically checked. An individual request within the framework of the evaluation of one of the participating commercial banks confirms a redemption rate of almost 100% for a total of 9 promoted FODEP projects in Phases I and II (Phase III loans have only been available within the last few years and include a grace period of 3 years). As a result of the strict credit assessments of companies carried out by the lending commercial banks visited on-site, it can be expected that the redemption rates in the other participating commercial banks will be in a similar ballpark and that both the aggregate redemption rate of at least 90% set as indicator 2 and the target figure of 95% - which is standard for similar projects - will be achieved.

Efficient access to financing for environmental measures cannot, however, be derived from the aggregate redemption rate of the loans - or at least not exclusively. Rather, this documents the creditworthiness and payment discipline of the supported companies. The efficiency of access should also reflect the attractiveness of the financial product, which can be measured on the basis of demand within a specified period for example. This level of demand at participating commercial banks is also not recorded systematically, however. Although FODEP funds have more favourable terms in comparison to standard loans on the market (see section on Efficiency below), the programme funds were only made use of in a very slow and hesitant manner. It seems questionable whether the project has actually resulted in more efficient access to financing for environmental measures which is set to continue independent of FC funding and additional grants.

In Phase III of the industrial environmental fund - in contrast to the two precursor phases - intensified production-integrated measures were to be promoted which involve reducing environmental pollution instead of eliminating environmental pollution caused by downstream activities. This further development of instruments has only taken place to a very small extent (only 2 of 41 funded sub-projects).

Effectiveness rating: 3

Efficiency

The investment costs of the FODEP III programme - including the contributions from the Tunisian businesses - amount to around EUR 14 million.

For the majority of the industrial businesses visited it can be stated that the investments were made at relevant current market costs and the production efficiency can be assessed as appropriate in this respect. This, however, is subject to the condition that the design and dimensions of the facilities were appropriate in each case. This is not a given in all cases. It is, however, not possible to quantify these misallocations.

From the perspective of the national economy, the environmental impact incurs costs of around EUR 14 million for the 41 participating businesses. Without detailed case-by-case data, it is to be assumed from the information available on air and water pollutants generated on a sector-specific basis, the observed scale of the businesses visited, and the process technology used in the individual facilities inspected, that pollutant loads were considerably reduced and that substantial quantities of waste were recycled back into the material cycle.

An estimated analogy calculation on communal waste water treatment would enable a reduction in pollutants from a population equivalent of around 80,000 to 100,000 (5,000 to 6,000 kgBSB5/d or 10,000 to 12,000 kgCSB/d) in the case of a total investment of around EUR 14 million. These pollutant reduction rates will also be achieved - and probably even exceeded - by the waste water projects funded by FODEP III (even if these make up less than 40 % of the 41 FODEP III funded projects). Against this backdrop, the aforementioned costs appear appropriate for the roughly estimated impacts in the area of industrial environmental protection.

Negative impacts on efficiency result from deadweight effects, which relate in the current context to investments funded using FODEP III funds, but would have been implemented either way. This above all concerns waste management companies which were able to finance operation-critical equipment using FODEP funds. This is in contrast to the measures funded in other companies which have implemented downstream investments in environmental measures (e.g. waste water purification) as a general rule. Against this backdrop, it is worth noting that more than half of the promoted companies (24 of 41) were in the waste management sector.

In order to avoid these kind of deadweight effects, a viability criterion was introduced in the course of the programme (2004) which states that funded investments should be amortised after 3 years at the earliest. As the further training of FODEP employees required to implement this criterion was not carried out until between 2011 and 2013, an improvement could no longer be achieved by this means.

Against this backdrop, allocation efficiency is considered to be just satisfactory.

The companies and banks visited (the Tunisian central bank BCT and one of the commercial banks) consistently confirmed that the framework conditions for the financing of environmental investments by means of the FODEP III programme (non-repayable financial contributions of up to 20 % of the investment sum, loans with a nominal interest rate of 5-6 % p.a. and a grace period of 3 years) are to be considered attractive in comparison to other financial products on the market (interest rates of around 8 % p.a. without a grace period).

The overall duration of project execution - which is still not yet fully concluded - is extremely long. The start of Phase III was already delayed by three years (Jan 2006 instead of Jan 2003) because the funds for precursor programmes FODEP I and FODEP II were drained at a considerably slower pace than was hoped. Over the next 8 years, only around EUR 1 million (40 %) of the funds from the grant components (EUR 2.6 million) could be disbursed to the promoted companies. This is attributable, amongst other things, to organisational and administrative factors. The originally planned implementation period of 3 years has thus proven to be unrealistic.

Taking into consideration the production efficiency, allocation efficiency and very slow implementation of measures, the efficiency of the project is no longer considered to be satisfactory.

Efficiency rating: 4

Impact

The overall objective of the FODEP III programme formulated at the programme design stage is still an urgent matter and FODEP III made a de facto contribution to the achievement of this overall objective. Due to very fragmentary data, it is not possible to quantify this contribution.

The project is not expected to have any appreciable signal effect on the industrial sector. The communication of successfully implemented measures in the FODEP III programme may in fact contribute to the ongoing raising of awareness in the industrial sector in Tunisia. It is not expected, however, that this - without significant financial incentives such as the awarding of a grant - will lead to an increased willingness to invest in environmentally-relevant measures. More consistent implementation of the statutory provisions and appropriate pressure on businesses would be necessary in this regard. Without this tightening - which is not expected - the impact of the project remains limited to the directly promoted businesses.

The FODEP III programme makes the following contributions towards the development of the partner country with regard to the establishment of development policy objectives:

- Environmental protection: This is the overall stated objective of the programme. The FODEP III programme makes some contribution to environmental protection (although this is moderate in terms of quantity due to the limited programme volume).
- Social justice: The FODEP III programme makes a secondary contribution, e.g. through improved production conditions which impact health protection for employed persons, or through the reduction of pollution for the affected population in the immediate vicinity of the businesses.
- Economic performance: Individual industrial businesses - particularly those that are export-oriented - can increase their economic performance through improved market opportunities as a result of better ecological production conditions. However, as a result of the low export ratio of the businesses, this aspect remains largely theoretical in nature. No concrete evidence of corresponding effects was identified.

Despite its comparatively low programme volume, since its introduction in the MENA region 15 years ago the FODEP programme as a whole (Phases I to III) has - outside of Tunisia at least - developed a model character which has since inspired imitations, particularly in Egypt and Morocco. In Morocco, two closed environmental funds, FODEP I and II, were supported with FC funds of around EUR 18 million, and a third line of funding, FODEP III, which is still ongoing, was provided with funds of EUR 5 million. A fourth line of funding is currently being prepared. In Egypt to date, four lines of financing for state and private industrial businesses have been implemented with a total volume of almost EUR 94 million for investments and almost EUR 6 million for personnel support measures.

Impact rating: 3

Sustainability

The sustainability of the FODEP III programme should be considered both at the level of the individual companies and investments, and at the level of FODEP investments and their contribution to the development of the finance sector.

With few exceptions, we can assume the long-term viability of the promoted businesses. Of all the companies funded to date by the FODEP environmental fund, more than 90 % are still in existence today. The repayment rates of almost 100 % achieved in Phases I and II were also achieved in Phase III, which - as noted above - is also an expression of the strict credit assessments and the high requirements set on collateral by the lending commercial banks and which are often criticised by companies.

In relation to the sustainability of funded investments, the positive impact can only be ensured in the long term if participating businesses ensure at all times the resources necessary for the proper operation and maintenance of the facilities financed by FODEP III.

In the majority of the businesses visited as part of the evaluation, operation and maintenance are satisfactory, whereby it is only possible to make a well-founded statement in the case of half of the businesses due to the fact that the funded facilities have not yet been put into operation in the other cases. It can be assumed in general that most businesses with the support of ANPE and, if applicable, further suitable partner institutions will be able to ensure the proper operation of the facilities - and thus the positive effects of the programme - in the long-term. It is questionable, however, particularly for ANPE, to what extent their performance capabilities are sufficient for this type of support. Other partner institutions include the Tunisian waste water authority, the international centre of excellence for environmental technologies and the Tunisian waste management authority. The accompanying measure, implemented between 2011 and 2013, significantly strengthened the expertise of FODEP engineers for the technical consulting of FODEP-promoted companies.

Against this backdrop, the accompanying measure has also been able to achieve a positive impact on the sustainability of individual FODEP projects by improving the advisory skills of FODEP engineers. The measures were sufficient; they would, however, have been able to achieve an even greater impact had they been implemented earlier.

That said, experience (including that of the programmes FODEP I and II) shows that the opportunities for and willingness to maintain the positive impact of the individual projects - and thus also the impact of the FODEP III programme as a whole - are very personal. Confident, motivated and dedicated decision-makers among the industrial businesses also wish to maintain the positive effects of the project in the future. Others are unlikely to advocate the medium and long-term preservation of the positive project effects to the same extent. This makes it clear that the sustainability of this type of investment can only be secured by an immediate economic interest (or regulatory constraint) from the company’s point of view, and not by the personal motivation of an individual.

According to statements from the promoted industrial businesses as well as the Tunisian central bank (BCT) and a participating commercial bank, the sustainability of the financing instrument - in the sense of the acceptance of further phases of the industrial environmental fund - depends greatly on future financing conditions. It is not expected that the financing of environmental institutions (such as by means of the FOCRED credit line, for example) will continue without additional external financial incentives (grants).

From the point of view of companies, investments in industrial environmental protection are less attractive for two main reasons. On the one hand, taxes on the emission of pollutants are relatively low, meaning that the economic benefit of investments for pollutant reduction is limited. On the other hand, although there are statutory requirements on in-house environmental protection, these provisions are poorly enforced on the part of the relevant supervisory bodies so regulatory pressure on companies is low. The attractiveness of the investments may have been significantly improved by FODEP’s favourable financing conditions, but the effect remains inevitably selective and limited to the promoted companies. Outside of FODEP funding, investments in industrial environmental protection remain unattractive, limiting demand for the relevant financing opportunities. On this basis, no structural changes have occurred or are expected in the finance sector.

It is clear that regulatory approaches for the implementation of environmental measures through the creation of financial incentives would add value, but lack of the proper enforcement of statutory provisions cannot be compensated for by favourable financing opportunities.

Even the current political situation - which is still somewhat unstable - has a negative effect on the sustainability of the financing instrument, as the financial risks from investments in companies are greater in this context. Companies are thus suitably cautious when it comes to tying up financial resources for investment in industrial environmental protection (or its proper operation and maintenance). Against this backdrop, the desired structural effects are not to be expected on either a real economic level or in the finance sector.

Following discussions with ANPE representatives, the motivation and willingness to sustainably ensure the success of the FODEP III programme is clearly recognisable. It only appears questionable whether the resources available (personnel, equipment, logistics) are sufficient in this regard. In particular the highly inadequate environmental monitoring currently in place urgently requires marked expansion. No improvement to the framework conditions for investments in industrial environmental measures can be foreseen at present.

Sustainability rating: 4

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

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

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

Ratings level 1-3 denote a positive assessment or successful project while ratings level 4-6 denote a negative assessment.

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

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

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

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

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

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