

Ex post evaluation – Mauritania

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Sector: Fisheries - policy and administration (CRS code 31310)
Programme/Project: Fisheries surveillance III - BMZ-Nr: 2002 65 587*)
Implementing agency: "Garde Côtes Mauritaniene" (GCM)
 previously/ up to 2012 "Délégation à la Surveillance des Pêches et au Contrôle en Mer" (DSPCM)



Ex post evaluation report: 2016

| | | Project Phase III (Planned) | Project Phase III (Actual) |
|---------------------------|-------------|-----------------------------|----------------------------|
| Investment costs (total) | EUR million | 5.67 | 5.28 |
| Counterpart contribution | EUR million | 0.58 | 0.60 |
| Funding**) | EUR million | 5.09 | 4.68 |
| of which BMZ budget funds | EUR million | 5.09 | 4.68 |

*) project in 2016 sample; **)4.35 million from phase III plus 0.33 million residual funds from phase II; funds remaining from phase III (0.45 mn.) were carried forward to phase IV

Summary: Intervention to improve fisheries surveillance in Mauritanian waters: construction of several offices, coastal surveillance stations and 3 harbour speed boats; establishment of a vessel management system (VMS) to control all industrial fishing vessels; implementation of monitoring system for coastal fisheries and in the Banc d'Arguin' marine protected area (PNBA) by virtue of a combined radar/ Automatic Identification System (AIS) network.

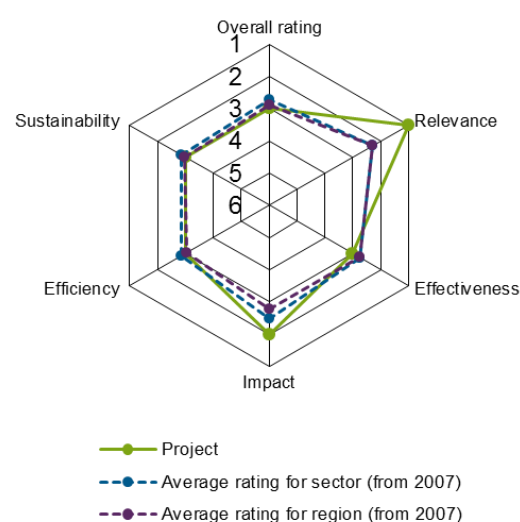
Objectives: Contribute to rational and sustainable management of fishery resources (intended impact) by virtue of an effective and efficient implementation of the pertinent regulations (intended outcome).

Target group: The entire national and foreign fleet operating in Mauritanian waters - as well as those persons whose employment is directly or indirectly linked to marine fisheries (40,000 Mauritanian nationals directly employed - and an estimated 20,000 indirectly). The industrial fleet is properly monitored and decreased significantly from 367 in 2004 to 170 in 2013. The artisanal fleet is booming, from 2,700 when the project started to more than 7,000 in 2014.

Overall rating: 3

Rationale: Positive results in terms of recovering fish stocks and employment are - to some extent - compromised by operational and budgetary constraints on GCM's side. Illegal fishing has declined drastically from over 100 detected cases per year down to approx. 10. To a significant degree, this is due to the project's support to improved monitoring of the Mauritanian waters and better efficiency of surveillance patterns. The buildings and equipment provided are in satisfactory shape and deliver good services. Shortcomings with view to an effective fisheries information system (SIAP) persist, and meagre budgetary allocations to GCM cannot - at current levels - sustain increased maintenance and running costs. Nonetheless, remarkable achievements in terms of reduced illegal fishing and recovering fish stocks justify a positive rating.

Highlights: Main demersal fish stocks are recovering significantly from over-exploitation. Public incomes from the fishery sector have considerably increased - as has the sector's role in providing employment. The management of the fast-growing artisanal sector is becoming an urgent issue. Moreover, there is a strong need for a comprehensive information system to support the new, quota-based fisheries policy.



Rating according to DAC criteria

Overall rating: 3

Relevance

The project was highly relevant at the time of appraisal: in that time, Mauritania was not able to properly monitor and control fishing activities - many of them illicit - in its waters and to satisfactorily enforce fisheries laws and regulations. Whilst Mauritania's fishery resources represent globally significant stocks, the majority of them were over-exploited at the time of appraisal. This had to be considered a serious environmental and economic loss to the country back then.

The project's intervention logic was consistent, as, for the sake of a sustainable management of fishery resources stocks. It intended to effectively and efficiently implement the regulatory framework for the fisheries sector, which, in particular, aims at the sustainable use of Mauritania's fishery resources - supported by a coherent monitoring and surveillance system.

From today's perspective the project coped with the needs of the Mauritanian Authorities and the stakeholders. Key issues and constraints had been correctly identified and prioritised at appraisal - particularly a better coordinated and concerted monitoring and surveillance system that ensures a near-continuous coverage in spatial and temporal terms. The project was suited to address the identified key issues, and innovative technological design options were chosen - notably the coupling of a Vessel Management System (VMS) with radar and an Automatic Information System (AIS).

In summary, it can be concluded that, at the time of appraisal, the set of interventions - including those which ultimately did not materialise, like a patrol vessel for the Banc d'Arguin National Park (PNBA) and the database for a fisheries information system ("système d'information et analyse des pêches"/ SIAP) - complied with both the BMZ's strategy and Mauritania's needs and priorities. Recent governmental documents ("National strategy for sustainable development of fisheries and maritime economy 2015-2019"; "Responsible fisheries transparency initiative") have added weight to the approach pursued by the project.

Relevance rating: 1

Effectiveness

In terms of outcome, the project aimed to implement effectively and efficiently the fisheries regulations. The project's objectives - as defined at appraisal and reviewed - were to be measured by the following (adjusted) indicators (previous indicators were partially adequate only, and not monitored under the project) to measure achievements at the outcome level:

| Indicator | Status PA* | Ex post evaluation |
|--|------------|--|
| Modified - Offenses of illegal fishing in closed or restricted fishing areas. | 2004: 12 | 2010 : 103 / 2015 : 6 The detection of fishing vessels in closed / forbidden areas was hardly effective in 2004. This was remedied by VMS for the industrial fleet and Radar/AIS covering the entire coastline). At project completion (2010), the number of offenses was high and has sharply decreased since. It demonstrates the effectiveness and the adequacy of the technologies applied. |
| - Detection ratio (# of inspections conducted for 1 offense) | 13/1 ratio | 3.4/1 ratio (counting off- and on-shore patrol activities - i.e. inspections at sea and in ports - catches, fishing gear etc.) GCM has substantially improved its detection ratio due to the combined VMS and radar/AIS |

*) 2004, the first full year of project implementation, was taken as baseline.

Concerning off-shore patrols, the respective boats usually leave port upon having been alerted on the basis of evidence that is obtained through GCM's VMS or radar/ AIS detection gear.

The legal framework established in 2000 is complete and supports the surveillance pattern. This framework was reviewed in 2015, according to the new fisheries policy. No serious regulatory gaps can be noticed. VMS and radar/AIS detection are part of the regulation system. Penalty levels seem adequate to be deterrent. The settlement/ arbitration committee is said to process cases quickly. Accordingly, no cases were referred to the judiciary but rather settled off court. Mauritania has adopted a national plan of action against illegal and unregulated fishing. The licensing procedure still remains complex and would need more transparency.

The high standards of equipment delivered are, in principle, suited to the envisaged tasks as well as to GCM's operational capacity and are still the most accurate for the surveillance of Mauritania's waters: at the time of project completion, VMS and radar/AIS technologies were mastered by GCM. The Coastal surveillance stations' energy issue was partly solved by solar panels. Coastal surveillance stations' quality of construction is not as good as expected and design (e.g. room sizes, space allocation) might have been improved for the benefit of better functionality. The VMS is fully operational for the industrial fleet, with the surveillance network covering the entire coastline; nevertheless, some coastal surveillance stations are operationally hampered due to low and/ or delayed maintenance budgets, which reduces the availability esp. of patrol boats (not part of this project phase) to around 25 %.

Fisheries management plans are still not implemented, apart from the case of octopus fishing. This remains a weakness of the Mauritanian fisheries policy. Implementation of, at least, the artisanal fisheries management plan and the small pelagic management plan should become a priority. An effective SIAP database would help the authorities in monitoring implementation and impact of those management plans.

Equipment delivered under the project is still operational and in continuous use. However, some elements are at increased risk due to lack of maintenance (notably harbour speed boats). Apart from the SIAP not yet established, the project's main shortfall is the continuing lack of a specialised patrol vessel capable of controlling the shallow waters around PNBA: due to constraints on the manufacturers' side, that vessel was not yet delivered. It is expected to be commissioned in the course of the new phase V.

Effectiveness rating: 3

Efficiency

Whilst project costs - according to the findings during final inspection - were largely in line with original estimates, project implementation took 7 years, as opposed to the 5 years foreseen originally. This increased implementation costs and delayed benefits to the target group. The share of consulting costs increased from 15 % (PA estimate) to an actual 40 %. This was largely caused by the necessity to extend the implementation period, as - after the 2008 military coup - FC funding for new projects had been temporarily suspended. In summary, production efficiency is to be rated as "satisfactory".

The least cost analysis conducted in the project's feasibility phase is deemed appropriate. VMS and radar demonstrated their ability to cover - at reasonable costs - most of the targets: industrial and artisanal fleets, the entire EEZ, fishing areas as delineated by regulations. The weighted average cover rates for VMS and Radar, as stated in the study, have been achieved. Coupling AIS with radar even increases this rate. The network implemented is at least in line with expectations regarding costs/results relations

The project intended to implement a more efficient monitoring of Mauritania's Extended Economic Zone/ EEZ - through VMS (under deployment in the most advanced fisheries at the time of project implementation) and an effective coastal surveillance network equipped with radar (and later, coupling radar and AIS). The monitoring cost of the EEZ, the protection of environmentally sensitive areas today require less days at sea/hours of air surveillance than previously. Overall fisheries surveillance costs have been reduced. At the same time, the regulation is implemented more strictly. The project demonstrates that the two technologies applied jointly (VMS; Radar/AIS) can significantly reduce the cost of surveillance without negatively impacting on effectiveness (cf. improved detection ratio under "Effectiveness"). The project's failure in tackling the SIAP database still withholds GCM the opportunity to work under an annual surveillance plan and with detailed risk analysis. A global fisheries information system database would strengthen the surveillance scheme's efficiency and would also help GCM to build a stronger case with regard to

the budgetary constraints it continues to face. In any case, significant macro-economic effects (see below under "Impact") allow for a satisfactory rating in terms of the project's allocation efficiency.

Efficiency rating: 3

Impact

The project's intended impact was to support the rational and sustainable management of fishery resources. The recovery of fish stocks has been positively impacted by the project. The socio-economic indicators show that the project also had a positive impact on the industry. In addition, the national budget also benefited from the project, with the sector having increased its contribution.

| Indicator | Ex post evaluation |
|---|--|
| (1) Decrease of the octopus stock over-exploitation rate by 2012*, (35 % in 2006), and stable shrimp catches (6,300 tons average 2004-2006) | Sharp decrease to 17 % in 2013. Demersal fish stocks show a relative improvement from 2006. Shrimp catches have dropped significantly since the European fleet's withdrawal. 2013 shrimps' total catches amounted to 490 tons (against more than 6 000 tons in 2004), and the stock is considered to be under-exploited. |
| (2) 28 800 jobs (average 2005 - 2007) in fisheries and processing industry will be maintained | 40,000 people (2014) are directly employed in the fisheries sector, against 28,000 in 2002. An increase in the number of pirogues may explain this phenomenon in part. The processing sector is growing (46 factories in 2012), with a boom in the fishmeal sector (1 factory in 2006; 23 in 2013) |
| (3) stable public incomes from fisheries sector (average 2005 - 2007 : 124 million EUR equivalent) | The fishing sector increased its contribution to the national budget. Since 2005-2007, this contribution has nominally increased to a EUR equivalent of approx. 165 mn. in 2013, which - in real terms - still constitutes a slight increase. |

* No octopus stock assessment was conducted in 2012. Instead, 2013 figures were used.

Industrial foreign fleets are satisfactorily monitored. The number of industrial vessels operating in Mauritania has more than halved in the last ten years. Fisheries agreements have been renegotiated since 2003. Major challenges in the sector are the lack of management of the booming artisanal sector, the pressure on the southern border resulting mainly from Senegalese pirogues and the regulation of the fishmeal sector, which is absorbing an increasing part of small pelagic catches. Authorities have produced an impressive sectorial policy 2015-2019, which will require a lot of effort and political strength to be implemented. GCM will play a key role for this policy to succeed.

Impact rating: 2

Sustainability

In terms of equipment, the high standards allow for long life cycles, in principle. Nonetheless, the low availability rate of the patrol vessels reduces GCM's overall effectiveness (see above, section "effectiveness" and underneath). Maintenance has been a key issue for a while, but has not been tackled properly. Whilst staff in charge is competent enough, budgetary and procedural constraints negatively impact on the availability rate. Spares are not available on the local market and maintenance is reactive, only. Allocations for repairs and maintenance have to be claimed on a case-by-case basis, which - due to cumbersome approval procedures - can lead to delays. Therefore, some equipment and materials are not made available for months. Periodic, scheduled software maintenance has to be implemented according to manufacturers' recommendations to properly monitor the use of crucial equipment, to plan the maintenance works, to manage a stock of spares, to prepare and submit an annual budget etc.

Although not funded from the project's phase to be evaluated here, the low availability of patrol vessels is a concern. Those vessels require high operating skills (conduct of the vessel; inspection teams) and

budget (maintenance; operation costs). Difficulties in addressing esp. the latter issue have considerably reduced the fleet's availability rate. Although the coastal waters and EEZ are properly monitored (radar/AIS and VMS implemented by the project), the protection of the fisheries resources still requires an effective patrol fleet.

Before GCM operated in its present institutional set-up (i.e. as DSPCM - up to 2012), it could - in terms of professional staffing - rely on secondments from the Navy. With the Navy ending the secondment of personnel, GCM has to recruit massively. This newly recruited personnel has to be properly trained and has to gain experience to be fully operational. Human resources management is expected to remain a major challenge for some time to come.

In summary, budgetary issues have to be regarded as the greatest sustainability and operational risk. GCM is building up its stock of equipment (with support from German Financial Cooperation, the EU et al.). However, GCM will find it increasingly difficult to properly staff, use and maintain this equipment if budgetary allocations remain at present levels. The fines collected accrue to the national treasury and amount to approx. 3.6 mn. EUR/year. This is almost equivalent to GCM's annual budget, which further justifies significant budgetary efforts.

Sustainability rating: 3

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 |

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

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

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

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

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

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

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