

EVALUATION OF

**THE ARCHE PROJECT:
CENTRE OF
TRAUMATOLOGY
IN BUJUMBURA, BURUNDI**

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This document was published at the request of MSF-OCB under the responsibility of the Stockholm Evaluation Unit.

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NOTE

The original evaluation report was written in French, and this document is a translation of it. Efforts have been made to stay true to the French version, but some nuances can be better found in the original French version of the report.

DISCLAIMER

The views expressed in this publication do not necessarily reflect those of Médecins sans Frontières, nor those of the Stockholm Evaluation Unit.

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ACRONYMS

AVP	FRE. <i>Accidents de la Voie Publique</i> (ENG. Public road accident/traffic accident)
BO	FRE. <i>Bloc Opératoire</i> (ENG. Operating theatre)
BRC	Burundi Red Cross
CG	Consultation Group
CHUK	University Teaching Hospital of Kamenge
CMCK	Medical-Surgical Centre of Kinindo
DAC	Development Assistance Committee
DH	District Hospital
EC	Emergency Care
EQ	Evaluation Question
HC	Health Centre
HD	Health District
HPRC	FRE. <i>Hôpital Prince Régent Charles</i> (ENG. Prince Regent Charles Hospital)
ICU	Intensive Care Unit
IPD	In-Patient Department
MSF	FRE. <i>Médecins Sans Frontières</i> (ENG. Doctors Without Borders)
MSPLS	FRE. <i>Ministère de la Santé Publique et de la Lutte contre le Sida</i> (ENG. Ministry of Public Health and the Fight against AIDS)
OCB	Operational Centre Brussels
OECD	Organization for Economic Cooperation and Development
OPD	Out-Patient Department
Physio	Physiotherapy
SEU	Stockholm Evaluation Unit
SGBV	Sexual and Gender-Based Violence

EXECUTIVE SUMMARY

The Arche de Kigobe Trauma Centre project implemented between 2015 and 2021 in Burundi Médecins Sans Frontières (MSF) Operational Centre Brussels (OCB) is a project started in response to an acute violent crisis in connection with the electoral dispute in Burundi in 2015. The project aimed to reduce mortality and morbidity related to trauma in the city of Bujumbura and its surroundings. Initially an emergency project, it made an adjustment in its structure to integrate the care of victims of road accidents, victims of sexual violence, and psychological care.

The project mobilized an international expertise composed of surgeons, anaesthesiologists, nurses, etc. who collaborated with national staff in the management of cases within a private structure rented by MSF in Bujumbura, the Arche Medical Centre in Kigobe. The decentralization² and transfer of skills to other health structures began in 2019, and the Arche Centre was closed on April 30, 2021.

The project continued beyond 2015 due to various factors, including the emergence of armed groups following the 2015 crisis, the numerous sporadic incidents, the lack of visibility into the context of the 2020 elections as well as the lack of sufficient emergency response capacity. With the political climate calming before and during the 2020 elections, the project then progressed in its exit and closure phase. To assess the results of the project and its replicability in Burundi or other contexts, MSF commissioned a final external evaluation that was conducted from June to October 2021 by a team of external evaluators, after the closure of the Arche Centre. The evaluation focused on the criteria of relevance, coherence, effectiveness, efficiency, impact and sustainability; it also analysed cross-cutting themes of gender and contribution to the preservation of the environment.

The project was found relevant and kept its relevance due to the unstable political context following the various crises that the country has gone through and the weak capacity of the health system to respond to emergencies. Its coherence with the functioning of the local health system was satisfactory, with the exception of compliance with the reference-counter-reference system, the too late involvement of the Ministry of Health and the loss of income of health structures adjacent to the structures supported by the project.

The effectiveness of the project was assessed in terms of the speed of response to the crisis, the number of cases handled over the period and the project indicators. However, the measurement of effectiveness was limited by the low quality of the project's internal reporting. The medical databases and operational monitoring tools of the project were not complete and sometimes complex, making them difficult to operate and analyse, which for example did not allow to answer the questions of deaths and infections during the project period.

The efficiency of the project was also discussed in terms of financial resources, human resources, and technical means deployed. The project was efficient overall but over the period of 2017-2021 the project spent a lot of money caring for many green cases that should have constituted the small part

² The decentralization on the Arche project was defined in the sense of the integration and relocation of trauma surgery services in the targeted structures followed by the closure of these services at the Arche Centre in Kigobe.

of the activities, with a focus on serious cases requiring the technical platform of the Arche Medical Centre in Kigobe. Indeed, the project had deviated greatly from its initial objective of treating moderate and serious cases resulting from violence in the city of Bujumbura and its surroundings.

The impact of the project has been on the lives saved and disabilities averted, as well as on the economies of families who have had their resources saved, thanks to the free care offered by the Arche project.

The sustainability of the project's achievements is limited, especially at the level of the Centre, which has closed. Nevertheless, some investments such as equipment allocations to project partner health facilities and training received by national staff will continue to be used after the project.

Gender aspects were marginally included in the project with the management of sexual violence and some activities on waste management.

⇒ **Recommendation 1:**

Improve project management on programmatic aspects including needs analysis, definition of logical framework indicators, monitoring, evaluation and reporting, as well as the management of partnership relations. It would be necessary to strengthen the support of project managers by the programme referents at headquarters with follow-up of the reporting and more regular reviews of programme and project with the field teams, in order to make early adjustments during project life cycle. In general, ensure that participatory approaches are in place at all stages of the project.

As for the transition from Epool management to the regular mission, clarify the transfer criteria and mechanisms and introduce a formalized and signed transfer between EPool and regular mission (structured review or evaluation).

⇒ **Recommendation 2:**

Improve the management of project data and information by setting up simple standard tools in the form of a database allowing the exploitation of data and enabling evidence-based management. Specifically:

- Conduct clinical audits on all cases of death and investigate cases of infections associated with care at Arche from a broader perspective, not limited to clinical data, including conducting patient surveys for data triangulation;
- Harmonize the color triage system, so that the definitions are the same for inpatients and those in the emergency room;
- Implement semi-annual reports beyond individual records in similar future facilities - easy to compile or mission reports with mandatory assessment questions - number and types of infections, types of surgeries performed, treatment results, beds, non-functional equipment, summaries of death audit reports.

⇒ **Recommendation 3:**

For projects including the development of care protocols, ensure that the protocols are adaptable to the local context, particularly with regard to surgical care procedures, drugs in common use locally, wound treatment, and monitoring / evaluation of the quality of care. Organize periodic reminders for staff about hygiene, especially in wound care settings. Implement stricter hygiene controls beyond simply observing hygiene practices.

Recommendations 4 to 7 (of total 7)

⇒ **Recommendation 4:**

Improve budgetary and financial monitoring through better recording of expenses and regularly carry out an annual analysis of cost variations year by year and by cost category. Particular attention should also be paid to the efficiency of interventions, particularly in terms of the allocation of expenditure between the different budget lines and in terms of human resources.

⇒ **Recommendation 5:**

Ensure the control of the pharmacy ideally with digital tools to maintain transparency regarding the stock situation, the schedule of orders, and consumption.

⇒ **Recommendation 6:**

Extend the Arche project by at least 6 months to give it time to implement the recommendations of the collective participatory diagnosis carried out with the Prince Regent Charge Hospital in September 2021, as recommended by the evaluation team when presenting the preliminary results of the evaluation. Indeed, the effective start of the decentralization and transfer of skills to this hospital started late and some missing data / information did not allow to obtain the results in the period planned to carry out this transfer. Focus on the quality of services and the harmonization of protocols with the local context.

In general, institutionalize the transfer of skills from year 2 of the projects. In the case of the Arche, think about an integration into the E-Prep.

⇒ **Recommendation 7:**

Conduct interim evaluations for all projects with a duration of 3 years or more to take advantage of these evaluations in realigning projects to changes in context and needs. Establish rules for internal and external evaluations. Ensure that lessons learned from this and other projects such as the MSF OCB surgical project in Tabarre, Haiti, are collected and implemented.

INTRODUCTION

PROJECT CONTEXT

In 2015, Burundi sank into a socio-political crisis resulting from an electoral dispute. This crisis was followed by violence that left people dead but also injured whose humanitarian needs were considerable for care in a neutral setting. The Arche project started in the same year 2015 with the main objective of helping to reduce mortality and disability related to moderate and severe trauma in the city of Bujumbura and its surroundings.

The intervention began through existing health facilities where Médecins Sans Frontières (MSF) supported victims of violence in partnership with the Burundi Red Cross (BRC) and Caritas Burundi. These three partners worked together from April 2015 with a division of labour where the BRC took care of the collection of the wounded and their transport to the outposts where they received the first stabilization aid given by the MSF teams. Patients were then referred to partner care facilities for specialized care if needed, and Caritas Burundi paid the health care bills. Following the prolongation of the crisis over time, in June 2015, MSF then rented a private facility, which it called: the MSF Arche Trauma Centre in Kigobe (Bujumbura) providing emergency trauma surgery care and completely managed by MSF with its staff.

The initial management of the Arche project was done by the Emergency Pool (E-Pool) of MSF Operational Centre Brussels (OCB) over the period between 2015 and 2016 focusing on the urgency of the response to alleviate the suffering of victims of violence. Then, a more permanent team under the direction of MSF's regular mission in Burundi managed the project.

The Arche project was maintained after the acute crisis of 2015 as part of the preparation for a possible crisis given the persistence of some debates raising fears of new waves of violence during the elections that were scheduled for 2020.

Given the downward trend in cases of "political" violence while violence related to socio-economic conditions was on the rise, the lack of comprehensive care for other types of trauma in Bujumbura at the time (2015), to continue to play its humanitarian role, the Arche project adapted its strategy in 2016 by expanding the criteria for patient admission. The Centre was then open to victims of road accidents/road accidents (AVP), burns, and victims of domestic accidents. The project has also expanded its activities to include health promotion, psychological support and care for victims of sexual violence.

In 2018, a few NGOs that did not align themselves with the new guidelines of the Government of Burundi had their registration not renewed. Thus, Handicap International (Humanity and Inclusion), MSF's partner in physiotherapy and physical rehabilitation of patients, was forced to close its mission in Burundi.

The holding of the 2020 elections in a peaceful climate then engaged the project in an exit phase that will end with the closure of the project at the end of 2021.

CONTEXT, SCOPE, AND FRAMEWORK

CONTEXT

Seven years after the start of the Arche Trauma Centre project in Kigobe and on the eve of its closure at the end of December 2021, MSF OCB wanted to carry out a final evaluation of the project to assess its start-up, its performance with regards to the CAD criteria of the Organisation for Economic Co-operation and Development (OECD), as well as the process of transferring skills to local structures. The evaluation was made while most of the staff who worked on the project during the first phases were no longer on the project.³

It was a summative and formative end-of-project evaluation with the objective of highlighting the challenges, lessons learned from the implementation of the project, the results achieved and their sustainability. The results of the evaluation would serve to strengthen MSF's accountability, contribute to institutional learning, and inform future decisions regarding the conduct and transfer of trauma project management to local actors, in Burundi or in similar contexts.

EVALUATION SCOPE

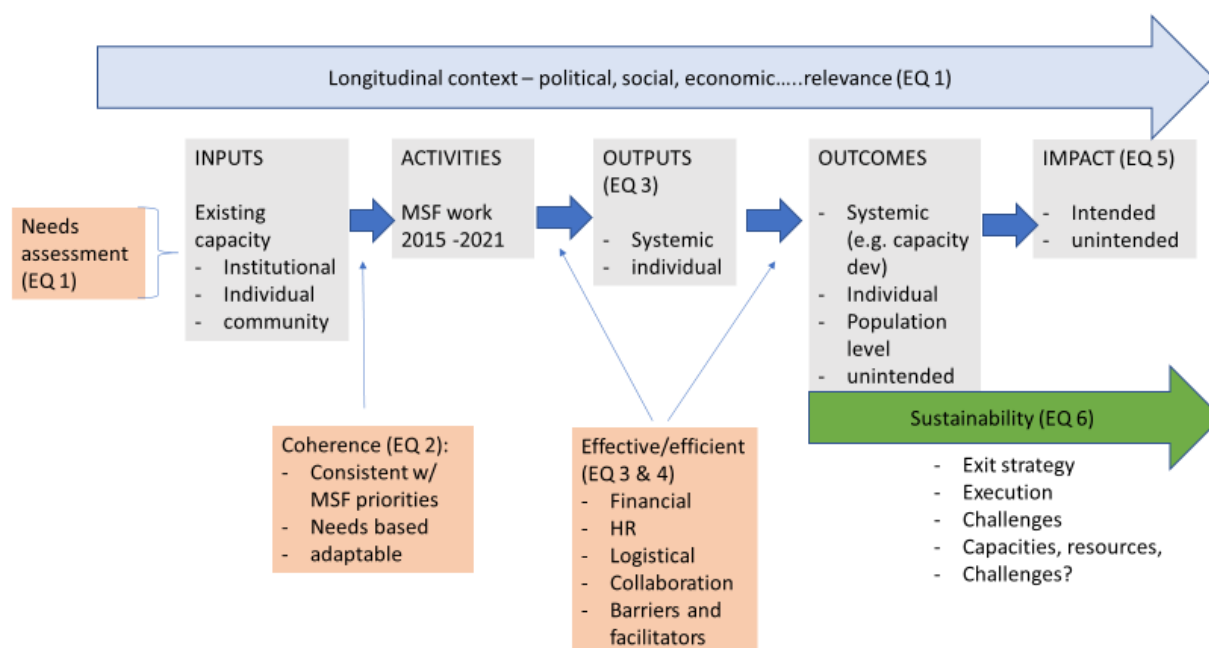
The evaluation covered the 6 classic evaluation criteria according to the OECD which are **relevance, coherence, effectiveness, efficiency, impact, and sustainability**. Timewise, the evaluation covered the period from 2015 to 2021 and in space, the evaluation covered all health structures and project partners but with variabilities in the level of access to data (refer to *the difficulties and limitations of the evaluation*).

METHODOLOGICAL FRAMEWORK

The figure below is a conceptual model of the interpretation of the evaluation questions (refer to the evaluation matrix in Appendix 1) by the evaluation team. This simplified logic model links the six evaluation questions (EQ1 – EQ6). This starts with a needs assessment (EQ1) which leads to the activities carried out by MSF (2015 – 2021) which are themselves based on the identified needs and consistent with MSF's priorities (EQ2). These activities result in outputs/outputs (EQ3), outcomes and more or less long-term impacts (EQ5) that are achieved efficiently and effectively (EGF3 and QE4). These activities would then be relevant to the Burundian context (QE1) and are/would be sustainable or sustainable in the medium and long term (QE6).

³ Development Assistance Committee, organisation for Co-operation and Development in Europe (OECD)

Figure 1. Conceptual Model of Evaluation



IMPLEMENTATION

PREPARATORY PHASE

In preparation for the evaluation, the following activities were carried out:

- Introductory and briefing meetings of the evaluation team and its presentation to the MSF advisory group for this evaluation;
- Information sessions on MSF's work and ethical guidelines;
- Review of project documents, followed by a request for missing documents, provided as they are collected from key people by the Stockholm Evaluation Unit (SEU);
- Establishment of contacts with MSF-OCB's main managers in Burundi (former and current heads of mission, project coordinator, etc.) as well as with some technical experts who have worked at Centre Arche;
- Elaboration of the schedule of field visits for data collection and have it validated by the evaluation focal point (Project Coordinator);
- Organization of weekly follow-up meetings every Thursday between the SEU and the evaluation team to update/monitor the progress of the work and make decisions on possible adjustments or respond to requests from the evaluation team;
- Writing of a start-up report specifying the methodology and timing of the evaluation.

A start-up report was developed, outlining the validated evaluation questions, a conceptual framework (Figure 1), an evaluation matrix (Appendix 1), a work plan and a maintenance guide.

DATA COLLECTION

A mixed method approach was used for the evaluation, with primary data collected qualitatively and quantitative data collected secondarily from existing documents (see Evaluation Challenges and Limitations).

Data was collected from 4 sources below:

- a) **Document review** – a document library was created on SharePoint with the help of SEU, and the various key players contacted provided more documents. These include project reports, annual reports, end-of-mission reports from various staff members, raw databases of medical activities collected on a routine basis etc. These documents were reviewed by the evaluation team, and where appropriate missing documents were shared with the SEU for follow-up to obtain them.
- b) **Key informant interviews** – A snowball approach was adopted for the interviews by adding additional stakeholders as the evaluation progressed and theoretical saturation of the information had not yet been achieved. Interviews were conducted face-to-face or separately(online) as appropriate.
- c) **Group discussions** with recipients and some key informants of project coordination.
- d) **Field visits** – With the agreement of the SEU and the Evaluation Advisory Group, a schedule of field visits was established, and a list of interviewees was finalized. An evaluator (TB) conducted field visits in August 2021, to supported structures or partners for observation and key informant interviews.

DATA ANALYSIS

Interview and FGD data were coded and analysed manually by the evaluators and themes were identified. Field observation provided limited information and data collection was more based on key informant stories as the Arche Centre had closed and collaboration with 5 of the 6 decentralization structures had ceased. Quantitative data were extracted from project documents to create a longitudinal narrative of the project by cross-referencing this data with interview data. The data were triangulated from different sources to draw firm conclusions. The evaluation team held periodic meetings where analyses and conclusions were discussed, compared, and approved.

ETHICAL CONSIDERATIONS

The evaluators committed to fully comply with MSF's ethical guidelines, including the SEU guidelines, and to inform the SEU Evaluation manager as soon as a conflict of interest or non-compliance issue would arise.

EQUITABLE REPRESENTATION AND RESPECT FOR DIGNITY AND DIVERSITY

To provide broad inclusion of various groups, the evaluators contacted different stakeholder groups. The evaluators sought to interview in a balanced way different MSF staff (e.g. profile, experience, location) and representatives (both at the operational level and at the coordination/managerial level)

of all health facilities included in the capacity transfer. A random sample of patients to be interviewed was selected by mutual agreement with the project management. Consent was obtained prior to each interview and interviewees were free to stop the interview at any time as per their convenience.

TRANSPARENCY

All of the evaluation's findings were supported by credible evidence and the evaluation team conducted a regular peer-to-peer review of its work to guard against unintentional personal bias.

CONFIDENTIALITY AND DAMAGE PREVENTION

The names of the patients interviewed are not mentioned in the evaluation documents and, as a rule, the sources of information remained anonymous. All information collected is confidential and is only used by the evaluation team to support their conclusions. In a politically and culturally sensitive context, the evaluators avoided any interview content that could encroach on the conduct of the evaluation or have an impact on MSF's image and acceptability. In terms of preventing harm to individuals, especially patients included as respondents, the evaluators avoided any question that could constitute a factor in the psychic revival of the traumatic event experienced by the person, by focusing the exchanges on the experience of the care received at the Arche Centre.

DIFFICULTIES AND LIMITATIONS

The good collaboration of stakeholders, including key informants, during the evaluation process and the presence of the lead evaluator on the ground in Burundi were major factors in facilitating the evaluation. Nevertheless, the evaluation encountered several challenges and limitations:

- **The ARCHE Trauma Centre no longer existed at the time of the evaluation because it had been closed since April 2021 (emergency rooms closed at the end of February 2021).** It had gradually reduced its activities and did not admit any new patients since March 2021, so that no visit of the activities could be carried out by the main evaluator that would make it possible to judge the adequacy of the operational conditions such as the quality of the reception, care in general, hygiene, and general management of the Arche Centre. The opinions and conclusions of the evaluators had to be formulated on the basis of the interviews and the information drawn from the literature review.
- **Decentralization activities partially completed at the time of the evaluation:** in five of the six facilities that MSF selected and with which MSF worked for decentralization and capacity transfer, cooperation had ceased at the time of the evaluation, so that only interviews could be conducted with some informants of these structures, but not the observation of the transfer process itself in real time. In addition, two district chief medical officers who collaborated in the implementation of the green case decentralization process had left their posts at the time of the evaluation. The only health facility that still had capacity transfer activities underway was Prince Regent Charles Hospital (HPRC).
- **Unavailability of some data on the life of the project, or contradiction in existing quantitative data** - Although the evaluators received many documents, the lack of some documents and the complexity of the databases of medical activities made it difficult to establish a chronology of events in some areas and to analyze the data. In other cases, the quantitative data had some contradictions, made apparent during triangulation by the evaluation team.
- **No interim evaluation during the 7 years of the project's life,** so that the evaluators could not rely on any previous analysis to track adaptations or adjustments made in relation to observations made at a key point in the project.

RESULTS

HISTORY AND EVOLUTION OF THE PROJECT CONTEXT FROM 2015 TO 2021

The Arche project started in 2015 to respond to the humanitarian need to treat the wounded during the violence following the electoral dispute. It has undergone several changes following the evolution in the context in Burundi.

The major events of the project between 2015 and 2021 are shown in the following table.

Table 1. Evolution of the Arche project between 2015 and 2021

YEAR	BACKGROUND & CONTEXT ELEMENTS
2015	<ul style="list-style-type: none"> ▪ Needs analysis as part of the health cluster, not specific to Arche ▪ Start of the project ▪ MSF/BRC & Police de la protection civile/Caritas Burundi partnership: <ul style="list-style-type: none"> ○ BRC & Police: Collection and transport of the wounded to health stations ○ MSF: Patient care in outposts ○ Caritas: Payment of health care bills ▪ CMCK partnership: rental of space for the management of sensitive cases ▪ Rental of the buildings + opening of the Kigobe Arche Trauma Centre in June 2015
2016	<ul style="list-style-type: none"> ▪ Analysis of needs in relation to the demand for care and MSF's image ▪ Corresponds to the empowerment phase ▪ Opening / expansion of admission criteria (addition of trauma by traffic accidents, sexual violence, and burns) with increased demand (cases to be treated) ▪ Increase in the capacity of the Arche Centre to meet growing demand (December 2016)
2017	<ul style="list-style-type: none"> ▪ Revision of admission criteria (exit from burns and sexual violence) ▪ Partnership with the Seruka Centre for the Management of Sexual Violence
2018	<ul style="list-style-type: none"> ▪ Drastic increase in cases managed at the Arche Centre (>1200/month) ▪ Overload for the staff of the Arche Centre with a concern about the consequences on the quality of care (eg poor compliance with hygiene practices by the staff reported in the reports of specialists on ICP) ▪ Decision to decentralize green cases in 4 health centres (Kamenge Health Centre, Buterere II Health Centre, Bwiza-Jabe Health Centre, Ngagara Health Centre) <ul style="list-style-type: none"> ▪ Decision of the National Security Council to suspend INGOs is not confirmed by the law on INGOs as drafted by the Government: consequence on the implementation schedule of the project, difficulties in terms of imports (delays following procedures), etc. ▪ MSF manages to keep its registration because of its work of patient care

	<ul style="list-style-type: none"> ▪ Some NGOs are closing, including Avocats Sans Frontières, Handicap International (partner funded by the Arche project for the rehabilitation care of patients), etc.
2019	<ul style="list-style-type: none"> ▪ Decentralization of green cases in HCs identified as partners ▪ Capacity building of health centres (provision of equipment for small-scale surgery, training of staff) ▪ Reduction of the Arche staff ▪ The Centre Arche keeps the yellow, orange, and red cases ▪ Expiry of collaboration contracts with HCs set at the end of December 2021
2020	<ul style="list-style-type: none"> ▪ Partnership with the CHUK for the management of yellow cases with end of contract expiry in February 2021 ▪ Release of yellow cases from centre Arche ▪ The Arche Centre keeps the management of orange and red cases ▪ Decrease in the number of cases treated at the Arche Centre (<1200/month) and focus on increasing quality (best care practices, particularly in terms of hygiene – sufficient time given to the patient) ▪ HR Reduction at Centre Arche ▪ Extension of collaboration contracts with partner HCs until April 2021
2021	<ul style="list-style-type: none"> ▪ Partnership with HPRC for the management of yellow, orange, and red cases (03/2021) ▪ End of the collaboration with the CHUK on the management of yellow cases (02/2021) + donation of a 3-month disengagement kit ▪ End of support to the 4 HCs, 2 of which have become DH (04/2021) + donation of a 3-month disengagement kit ▪ Closure of the Arche Centre (04/2021): <ul style="list-style-type: none"> ○ Emergency closure (02/2021) ○ Closed Hospitalization (04/2021) ○ Closure Physiotherapy (04/2021) ○ Closure of all medical activities (04/2021) ▪ Reduction of the staff of the Arche project ▪ Assignment of the remaining Arche staff to support the HPRC as part of the transfer of skills ▪ Exit phase

RELEVANCE AND ADEQUACY OF THE PROJECT WITH NEEDS AND CONTEXT

SUMMARY OF KEY FINDINGS

Pre-Intervention Needs Assessment

The needs assessment before the start of the project was not carried out in a participatory manner. It was made internally at MSF without the involvement of local actors for participatory assessment and co-construction of the strategy. The beneficiaries of the project and the Ministry of Health, key actors of the project, were not consulted in the initial phase and this had an impact on the collaboration until 2018. From that time on, relations with the Ministry of Health improved, but no joint assessment of changing needs was carried out.

A divergence of responses on the decision to remove burn cases from the admission criteria was noted during the interviews. Indeed, some interviews noted that the decision to remove the burns in **2017** was not decided by mutual agreement with the central level of the Ministry of Health, but with the health districts. This would have resulted in a feeling of non-compliance with the procedures of collaboration, the interlocutor on these decisions having to be the central level of the Ministry of Health. Other interviews nevertheless specified that this was done in a concerted manner with the Ministry of Health in **2018** and that a MoU was concluded for the continuation of the care of burn victims with a burned area < to 20% until February 2020, before they were taken over by the CHUK during decentralization. From the analysis and cross-referencing of this information, the evaluators concluded that in 2017 the decision to remove the cases of burns would have been taken without consultation with the Ministry of Health and that in 2018 following this misunderstanding, a Memorandum of Understanding (MoU) would then have been concluded to guide the approach to be adopted.

Project Design and Context-Specific

The evaluators confirm **the project's respect for humanitarian principles**. The victims of the conflict were treated in a discreet and non-discriminatory manner. The importance given to these principles was partly behind the decision to choose a private hospital at the beginning of the intervention. The project also took into account the theme of sexual and gender-based violence (SGBV), with specific protocols.

Access to the victims was made possible thanks to the partnership with the BRC. There were no security problems for humanitarian workers especially thanks to the image of the BRC partner which has a strong community base with the deployment of volunteer members of the community for the collection of the wounded. The availability of skills to manage serious cases (red and orange) at the beginning of the project was limited because of the influx of wounded and because these skills were in private or public structures, without a free system for people without the financial means needed to cover the costs of care.

International recruitments (trauma surgeons, anaesthetists, block nurses, emergency physicians, infection prevention and control specialists, etc.) were adapted to the context of traumatology and the local context of socio-political crisis where the use of foreign experts was justified beyond the search for skills, for reasons of neutrality and impartiality. The quality and possible shortcomings in the medical teams and in the care could not be verified since the evaluation took place after the closure of the ARCHE Centre and no interim evaluation was made.

Contribution of The Project to The Humanitarian Response the 2015 Crisis

With the socio-political crisis that prevailed around the 2015 elections and following the influx of wounded in the violence that followed, an urgent need for trauma surgery arose, a need to which the local health system could not respond quickly, due to the insufficient resources, capacities, political context, and poverty of the victims. The Arche project then deployed free surgical care activities for the wounded including emergency and stabilization services, surgical interventions in the operating room, post-operative physiotherapy / rehabilitation physiotherapy, and psychological support. The political nature of the crisis required a humanitarian response that MSF made available through the Arche project. The Arche project through an advanced strategy carried out in collaboration with BRC and Caritas Burundi organized the community pre-triage of cases based on the criteria of injury severity. Several tens of thousands of people were taken care of by the Arche project during the period of its implementation in Burundi.

Adaptation of The Project to The Changing Context and Needs

During the duration of the intervention, the project was modified according to the changing context and needs. The care of victims of road accidents (AVP) was included in 2016. This adaptation has become a leverage for maintaining the Arche project, which without this activity would have become unjustified or irrelevant for local partners, including the Ministry of Health.

Epool's management of the project lasted 2 years (2015-2016), before the transfer to the Regular Mission, with different operational rules. The evaluators raise the question whether an earlier transition to a regular mission would have better responded to the modified nature of the project, but the absence of the rules for moving from management by EPool to management by the regular mission did not lead to a conclusion.

After 2016, the project increased its operational expenses and cases handled, although no other emergencies occurred. The question is, how the project could have evolved after 2016. The adaptation made to the project was relevant for the project to persist in the event of a resurgence of violence over the period up to the 2020 elections. Nevertheless, even if it was relevant to remain prepared for another wave of political violence, the evaluators wonder whether green or even yellow cases could not have been treated in the existing structures as early as 2016 allowing these structures to quickly gain skills, keep their income, and increase the efficiency of the project that would have focused on moderate (orange) and serious (red) cases.

The broadening of the criteria with the inclusion of traffic accidents has increased the demand that has come from all provinces of the country. To meet this demand, the Arche Centre has increased its capacity with an increased number of beds.

With the reduction of violent trauma linked to the 2015 electoral crisis but the persistence of political debates raising fears of a new violent crisis, the project entered a phase of empowerment and stand-by and preparation for a possible influx of wounded from armed violence. This was a useful adaptation and consistent with the context, but some observations are made on the quality of this adaptation:

- **Limitations of compatibility with the functioning of the local health system (reference counter-reference)** where the majority of patients came directly to the Arche Centre without prior triage in peripheral / primary care structures, mainly in search for free care;
- Initiation of decentralization and exit with the appeasement of the political climate around the 2020 elections but **late for the green cases that could have been taken out earlier.**

Consideration of Other Actors in The Implementation of The Project

The project was implemented in collaboration with international and local actors from the start of the project. These partnerships were strategic with the central level of the Ministry of Public Health and the Fight against AIDS (MSPLS) and the Ministry of Public Security (Police in charge of civil protection) and operational (Implementation) with the operational level of the MSPLS (Health Districts), health structures, other NGOs (Handicap International, Caritas Burundi, Seruka Centre) and the BRC. This is indeed a very positive point although the direct and strong involvement of the strategic level of the Ministry of Health in the project was late (2018).

This situation had an impact on the quality of the partnership and the collaboration where before 2018 some decisions taken at project level, such as the decision to remove the burns from the admission criteria, was interrupted on the instructions of the Ministry of Health, extending the management of these cases for another year.

Gender Mainstreaming in The Project

This is a positive point of the project in the context of armed violence or political crisis followed by violence, impacting women's vulnerability. SGBV care was integrated during the project, with specific procedures, but quickly abandoned because there was a local partner with expertise in the field and experience of working with MSF – Seruka Centre.

The specific impact of the project on gender was not clear in the project reports or on the participation of women and men in decision-making.

Integration of Environmental Protection into The Project

Some actions to renovate the environment of health structures (repair of incinerators, painting of walls, renovation of buildings – laundry rooms) and activities to support waste management (e.g. construction of a waste zone) have been carried out. At the Arche Centre, no incinerator was available

and the waste was transported for destruction by a private contractor. The evaluators could not have access to information on how this provider would have treated this waste (sorting, storage, transport, and destruction of the waste).

ANALYSIS AND CONCLUSION ON THE RELEVANCE AND COHERENCE OF THE PROJECT

The project was relevant to the needs that emerged from the violent crisis linked to the 2015 elections. Indeed, the project responded to this crisis by offering free care to victims, most of whom needed urgent, free care, and in an independent centre offering trust and confidentiality for those treated. During the life cycle of the project, adaptations were made to make it more relevant to the change in context but by deviating from the purpose of the project (to treat victims of traumatic violence in Bujumbura City Hall and its surroundings).

Overall, the coherence of the project was good, and the project gained coherence by involving the Ministry of Health in the analysis of the necessary adaptations and decision-making although this could have had a greater impact earlier with a participatory needs assessment and co-definition/co-construction of the intervention strategy. Nevertheless, it should be noted that for reasons inherent to the context of the country in 2015, certain strategies such as the installation of the project in a public structure (with the inherent bureaucratic burden) were not compatible with the need for an urgent humanitarian response to the crisis (it is for this reason, for example, that MSF chose the Arche structure, private one), as well as with MSF principles.

EFFECTIVENESS

SUMMARY OF KEY FINDINGS

Achievement of Objectives by The Project

The achievement of three main objectives of the project was evaluated:

- **Overall/primary objective** to provide immediate care to those injured by political violence: Achieved;
- **Objective of preparing for another** emergency: Achieved at a higher cost. At the same time, the intervention has created temporary access for populations to emergency trauma services of good quality;
- **Skills transfer** objective: Marginally achieved. Late onset due to external and internal factors.

Support at The Arche Centre

Since the start of the project, 70724 cases have been taken care of at the Arche Centre in Kigobe. These cases were classified into simple cases (green sorted cases in the emergency room), moderate cases (yellow sorted cases in the emergency room), severe/severe cases (orange and red sorted cases in the emergency room), and death cases arrived in the emergency room (black or blue sorted cases in the emergency room). Table 2 shows the distribution of these cases across the different classification groups.⁴

⁴ Details color classification of cases:

Green case: mild (simple) case requiring simple care such as a small suture and a bandage;

Yellow case: cases of moderate severity such as a closed fracture not displaced that may require a cast for immobilization for example without further intervention;

Orange case: serious case requiring a specialized intervention such as a surgical intervention repairing large wounds but not requiring intensive care and not engaging or engaging little the vital prognosis of the patient.

Red case: severe case requiring medical resuscitation, hospitalization in intensive care and surgery (e.g. trauma with amputation of a limb, head trauma associated with spinal trauma).

Black/blue case : case of death, patient without sign of lives.

Note: According to the South African Triage System color-coded classification is: (1) red—vital emergency; (2) orange—very urgent; (3) yellow—urgent; or (4) green—routine.

Table 2. Cases admitted to the Emergency Department of the Arche Centre between 2015 and 2021 classified according to their severity

TYPE OF CASE	2015		2016		2017		2018		2019		2020		2021		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Green	312	37%	1866	39%	6157	39%	7907	35%	3261	15%	53	1%	0	0%	19556	28%
Yellow	269	32%	1955	40%	7348	46%	11837	53%	15625	72%	2482	52%	0	0%	39516	56%
Orange	157	18%	722	15%	1892	12%	2237	10%	2632	12%	2038	43%	186	95%	9864	14%
Red	108	13%	273	6%	449	3%	370	2%	249	1%	149	3%	5	3%	1603	2%
Black/Blue	4	0.5%	20	0.4%	39	0.25%	41	0.2%	40	0.2%	37	1%	4	2%	185	0.3%
TOTAL	850	100%	4836	100%	15885	100%	22392	100%	21807	100%	4759	100%	195	100%	70724	100%
Wives	143	17%	1191	25%	4165	26%	5852	26%	6011	28%	1189	25%	40	21%	18591	26%
Average age (years)	30	-	28	-	26	-	24	-	24	-	27	-	30	-	27	-

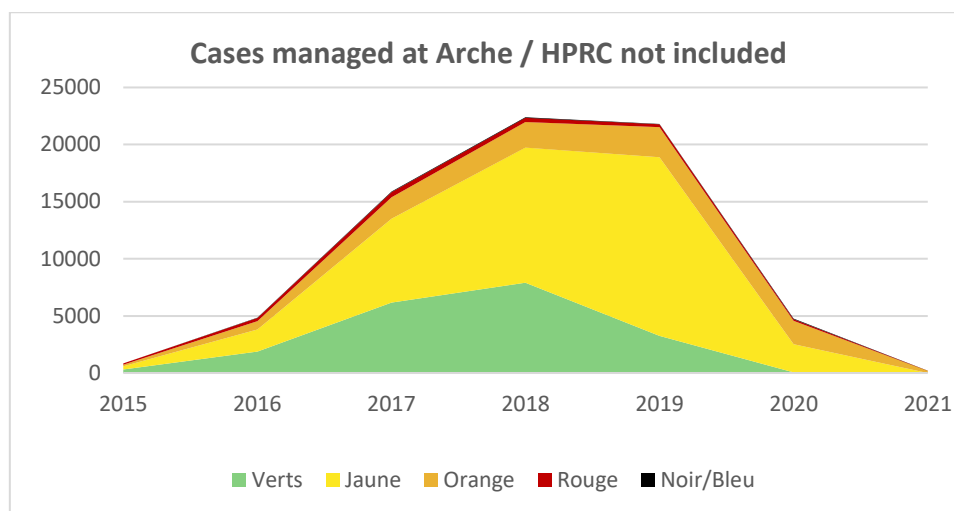


Figure 2. Graphical comparison of the frequency of the different cases supported at the Arche Centre

The average age of the patients was 27 years showing the contribution of the project to the preservation of the working population, human capital of the country. Severe cases were not numerous and with the opening of the criteria, simple and moderate cases increased further.

Most of the victims/patients were men, this may be explained by their greater participation in protest activities and their over-representation in high-risk professional activities (motorcycle taxi, bicycle taxi, construction/construction work, etc.).

Moderate cases – yellow [(39516); 56%] and severe – orange and red [(11476); (1603); 14%] by considering them as cases that if not properly taken care of can lead to death or permanent disabilities prove the contribution of the Arche project in the avoidance of deaths and disabilities. These cases accounted for 70% of all cases managed. In all, red cases accounted for 2% of all cases treated (they accounted for 13% in 2015 during the active period of the crisis and the violence that followed). However, the available data sources did not allow for a precise understanding of mortality in the different groups.

Some data call into question the quality of the reporting to assess effectiveness; for example, 0 green cases reported in 2021 and only 53 in 2020 could be explained by the fact that the available data are only for the Arche Centre and not for the decentralization Centres showing that a significant part of the project activity has not been reported/valued. Indeed, it would be an error in the reporting or recording of certain data.

The discrepancy in some data was explained by the interviewees as renouncement/refusal of care at the triage level but no traceability on these cases was found (certificate of refusal of care signed by the patient).

The compilation of cases managed by cause of trauma shows the importance of trauma by road accident (AVP). Intentional violent trauma from firearms and knives also shows the contribution of the project in terms of the number of cases handled. The quality of the management of these cases is

assessed/analysed in the protocol compliance and quality of care part of this report. Table 3 classifies the cases managed according to the cause of the trauma.

Table 3. Cases treated at the Arche Centre due to trauma⁶

CAUSE OF TRAUMA	2015		2016		2017		2018		2019		2020		2021		TOTAL / AVERAGE	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
TVA	92	11%	277	7%	806	5%	1094	5%	973	4%	203	4%	8	4%	3453	5%
TVB	348	41%	537	13%	179	3%	56	0%	19	0,1%	65	1,4%	1	0.5%	1205	2%
TVG	276	32%	158	4%	63	0,4%	50	0%	34	0%	34	0,7%	2	1%	617	1%
TVK	44	5%	116	3%	172	1%	206	2%	135	1%	61	1,3%	3	2%	737	1%
DEED	9	1%	2393	60%	9017	56%	12641	57%	11239	52%	2482	52%	123	63%	37904	54%
TVT	0	0%	67	2%	11	>0%	4	>0%	0	>0%	0	0.0%	0	0%	82	0,1%
Other	81	10%	443	11%	5763	36%	8252	37%	9418	43%	1903	40%	58	30%	25918	37%
TOTAL	850	100%	3991	100%	16011	100%	22303	100%	21818	100%	4748	100%	195	100%	69916	100%
VAT: Trauma by beating TVB: Bomb trauma TVG: Gunshot Trauma TVK: Stabbing trauma TAT: Traffic accident trauma TVT: Trauma during torture Other: Other causes (domestic accidents, unknown causes)																

⁶ The addition of the number of cases by type of trauma per year, not presented in this Table 3, highlighted some differences with the totals in Table 2, illustrating the contradictions that could be found during the analysis of quantitative data (example: 2016: total of 3991 (Table 3) vs 4836 (Table 2) and 2017: total of 16011 (Table 3) vs 15885 (Table 2).

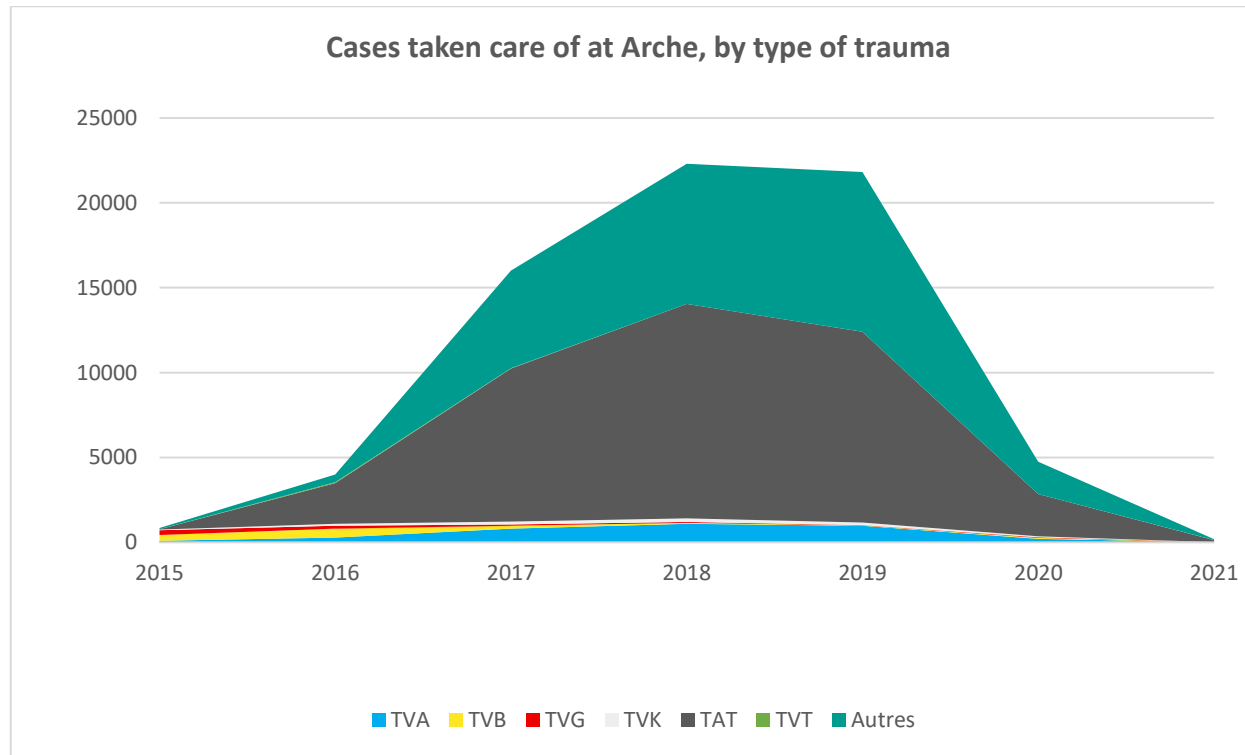


Figure 3. Schematic comparison of cases managed at the Arche Centre by cause of trauma

After the emergency phase, most of the cases were not related to trauma related to the 2015 socio-political crisis around the elections. Between 2016 and 2020, most cases were those related to traffic accidents.

A breakdown of the activities of each department of the Arche Centre was also made.

Table 4. Cases supported in the various care departments of the Centre Arche

DPT.	2015		2016		2017		2018		2019		2020		2021		TOTAL / AVERAGE	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
EC	850	25%	4836	22%	15885	24%	22392	36%	3261	5%	4759	14%	195	4%	52178	20%
WILL	873	25%	3200	15%	4100	6%	4158	7%	4081	6%	2978	9%	310	6%	19700	8%
IPD	326	10%	1795	8%	2296	4%	2031	3%	2050	3%	1455	4%	1600	31%	11553	4%
OPD	1229	36%	0	0%	30378	47%	29371	47%	36893	55%	13071	39%	1626	32%	112568	44%
Physio	146	4%	11238	52%	11957	18%	3935	6%	20677	31%	11288	33%	1397	27%	60638	23%
ICU	0	0%	495	2%	430	1%	398	1%	384	1%	304	1%	27	1%	2038	1%
TOTAL	3424	100%	21564	100%	65046	100%	62285	100%	67346	100%	33855	100%	5155	100%	258675	100%

By reading the figures, in particular by comparing the emergency department and the operating room, depending on the patient's circuit, we would have more patients in the operating room than in the emergency room in 2015, 2019 and 2021. The explanation found is readmission to the operating room for some patients for a second scheduled intervention and the patient is not registered twice in the emergency room but twice in the operating room. Cases of readmission to the operating room **would** also, and mostly, be hospitalized cases either in intensive care or in hospitalization which, during the medical rounds, were identified and returned to the operating room without passing by the emergency room.

The following graph allows a better visualization and comparison of the activities of the different departments over the years.

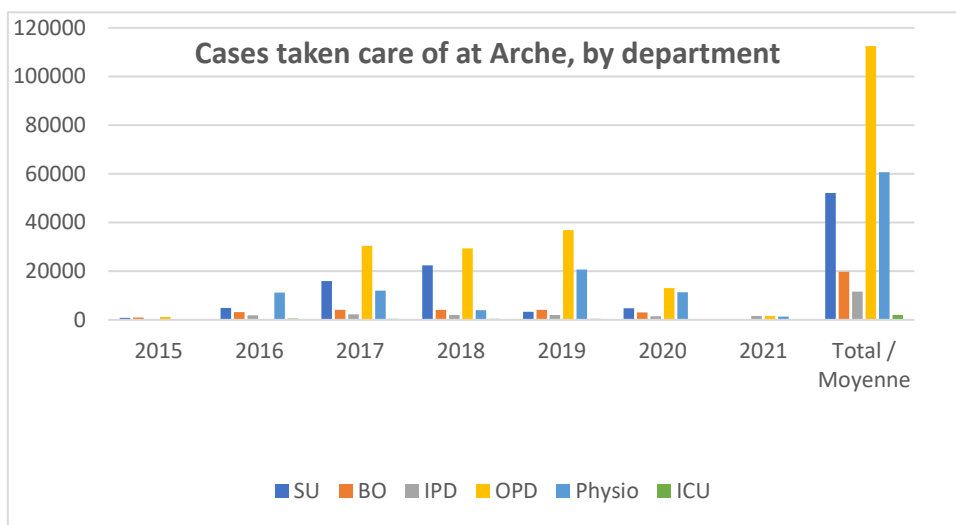


Figure 4. Graphical comparison of cases managed in the care departments of the Arche Centre

Most of the patients were ambulant (out- patients, 44%) and were green and yellow cases and it should be noted a significant number of patients who used the physiotherapy service (23%). The triangulation of the information made it possible to understand that some patients using the physiotherapy / physiotherapy service had been received / counted several times (at each consultation).

HPRC support

From 1 March 2021, while the Arche Centre was in the process of closing, the transfer of competences on the management of yellow, orange and red cases to the HPRC by the Arche project began. This transfer of competence was achieved through an agreement in the form of a memorandum of understanding between MSF and the HPRC after an assessment of needs and human resources to accompany the process.

The evaluation found that data exist to assess the number of cases treated at this hospital with the support of the Arche project but without color-coded classification of cases. The operating room has seen its 3 rooms rehabilitated by the Arche project and the sterilization circuit was improved. The

emergency department was supported with training, equipment (monitoring, anaesthesia machine, radiology machine, etc.), and formative supervision. Indeed, MSF teams were deployed on site to accompany the process but at times MSF specialists were missing and a general practitioner trained by MSF was recruited as a national surgeon to ensure the transfer of competence on a more permanent basis.

The lack of staff was a challenge to the success of the Arche project at the HPRC. Indeed, there were 6 general practitioners assigned to the surgical department but working on a schedule not compatible with the demand for care to which the service was subject. The absence of surgeons under permanent contract at the HPRC, due to the status of management autonomy and lack of resources, forcing it to resort to individual contractors, had an impact on the quality of the implementation of the project at the HPRC level. The MSF staff deployed at this hospital then found themselves in a situation of substitution of the HPRC staff instead of focusing on support in the acquisition of skills. This could also be explained by the fact of deploying MSF staff with NGO salaries in a structure with comparatively low salaries, which can create frustration and a renunciation of participation in the project activities.

The following table presents the achievements of the project at the HPRC in terms of the number of cases treated since the start of activities in this hospital.

Table 5. Cases supported at the HPRC by department

DEPARTMENT	APRIL/21		MAY/21		JUNE/21		JULY/21		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Emergency room	720	42%	797	33%	745	32%	770	33%	3032	35%
Bloc Op.	79	5%	96	4%	75	3%	91	4%	341	4%
Hospitalization	22	1%	40	2%	26	1%	36	2%	124	1%
ICU	18	1%	18	1%	14	1%	18	1%	68	1%
OPD (pansements + physio)	151	9%	574	24%	633	27%	654	28%	2012	23%
Radiology	708	42%	884	37%	839	36%	780	33%	3211	37%
TOTAL	1698	100%	2409	100%	2332	100%	2349	100%	8788	100%

Achievement of Project Indicators (Logical Framework Indicators)

The project's indicators were assessed based on operational monitoring tools called monitoring sheets, which monitor the achievement of the indicators annually. This information was cross-referenced with that of the project's sitreps/quarterly reports. The sitreps made it possible to complete the analysis over the period from 2015 to 2017 where there were no monitoring sheets available.

Compared to the indicators, there is a great variability in their achievement over the years. It should be noted that the analysis of monitoring sheets covers the period from 2018 to the second quarter of 2021. In 2018, none of the indicators for the specific objectives of the project were met. Nevertheless, the evaluators believe that the definition of these indicators may lead to an erroneous conclusion on the performance of the project because some are not dependent on the management of the project

and therefore with little possibility of controlling them (eg indicator of keeping admissions between 1000 and 1200 / month cannot be controlled because patients come voluntarily to seek care, unless the Arche Centre decides not to admit patients who meet the criteria, just to stay within the indicator), while other targets have been exceeded. There should be an "overachieved target" conclusion option that is not synonymous with not having achieved the goal of patient care, although the quality of care is not emphasized (the quantitative objective can be interpreted differently). For example, the indicator bed occupancy rate of 76%, interpreted as a non-achievement of the indicator of being between 80 and 95%, should be qualified (we will not admit patients without indication of hospitalization and not achieving this indicator is not a failure of the project to achieve its objectives).

There is also a contradiction between the indicator of having a bed occupancy rate between 80 and 95% and the indicator of staying within 10 days of bed rest. Indeed, having a reduced bed occupancy rate with the shortening of the duration of hospitalization and admissions in hospitalization in general does not mean a lack of performance of the Arche project / Centre.

At the level of the various indicators, the same observations were made on the definition and interpretation of the indicators.

The evaluators also believe that the project has defined many indicators and that it is probably necessary to target the most relevant ones (49 indicators to be filled in with the non-centralized databases, this raises the question of the quality of the data / information). Of the 49 indicators, 15 indicators were not achieved in 2018, 4 indicators not achieved in 2019, 1 indicator not met and 1 partially achieved in 2020, 12 indicators achieved and 18 indicators partially achieved until June for the year 2021. It should be noted that no comment accompanies the results obtained in the monitoring sheets to explain the level of achievement of the various indicators. Global/cumulative indicators over the entire duration of the project were not calculated.

Compliance with Quality Standards and Expected Results

The evaluators noted the availability of care protocols. On the other hand, at the time of the field visits, the Arche Centre was already closed, and it was therefore not possible to assess the compliance of surgical techniques and peri- and post-operative care with standard MSF protocols.

The observation was made at the level of the HPRC where the protocols were clearly defined but the limit of the observation of their application on patients (in real time or the exploitation of patients' personal records) requires upstream preparation (preparation of the files to be examined, consent of patients, request for authorization to the Medical Ethics Committee of Burundi, etc.). The same obstacle could therefore have manifested itself also at the Arche if this preparation was not made. The assessment of the application of the protocols was therefore based solely on the reports of the various MSF experts/ specialists who worked on the project.

The very good quality of the emergency department at Arche is to be highlighted (quality of the care relationship and speed of care) compared to other hospitals, mentioned in several interviews with stakeholders, including patients.

On the other hand, the overall quality of care was volatile with increasing demand, but the available data did not allow for a quantitative assessment of death rates and infection rates. From the interviews, rates of up to more than 50% of deaths in burned children were mentioned, even in the event of non-serious burns. Some interviews have made it possible to hypothesize these rates of death and infection in hospitalization; these include the delay or insufficiency of local wound care, the refusal of some providers to isolate patients with infected wounds (see IPC expert mission reports), the treatment of burn wounds without dressings questioning the adaptation of MSF protocols to the local context (patients' personal hygiene, if not optimal, should perhaps impose measures to cover wounds?)

It was difficult to assess the variation in the rates of infections and deaths before and after the project intervention (indicators of death in the intensive care unit but no overall indicator on deaths or infections). Indeed, the databases on the medical activities of the Arche project are complex, difficult to exploit, and do not contain all the information allowing this analysis. The existence of death audits or infection investigation committee was noted, although some interviews reported that death audits were conducted but did not provide clinical audit reports. According to interviews with patients, the quality of post-operative care was not always assured (changes of dressings and sheets late or after questioning the caregiver).

The death file only covers the period from 2018 to 2019 and presents 11 cases of death, which is in contradiction with the data of the interviews sometimes relating high rates of deaths, especially among the burned.

The admission criteria were for a period sometimes unsuitable or exclusive (eg admission of a less serious head trauma because associated with a minimal injury to another part of the body and non-admission of a serious head trauma). Some yellow cases would have continued to be taken care of while officially these cases had been released since 2020 to the CHUK questioning compliance with internal decisions and protocols.

The evaluators did not find enough information to assess the effectiveness of the handover between the E-Pool and the Regular Mission. An interim evaluation made at the time of the shift from the management by MSF's emergency pool to the regular mission could have brought a cross-examination of the different actors and impacted the realignment of the project over this period which coincided with the opening / expansion of the criteria for patient admission. The decision to extend the project beyond 2018 and which decision criteria were applied could not be assessed due to the lack of detailed documentation on this process.

ANALYSIS AND CONCLUSION ON EFFECTIVENESS

The effectiveness of the project was difficult to assess objectively due to the low quality of monitoring and reporting on project indicators and databases of medical activities. **Key indicators of mortality and infection rates have not been clearly defined or informed**, yet indicators of the quality of care. Some of the documentation provided (e.g. death audit documents and report on hygiene practices in care/infections) did not allow the evaluators to draw factual conclusions as they were provided after

the first analyses of the data and their content was limited (lack of conclusion on the results of these analyses, including the low rate of compliance with handwashing practices by staff at certain points in the project).

EFFICIENCY

At this level, it was a question of assessing whether resources had been used/allocated optimally.

SUMMARY OF KEY FINDINGS

Efficiency in Relation to Financial Resources

The total amount allocated to the intervention was significant, i.e. 22.5 MEUR for the period from 2015 to 2020 without the amounts for the year 2021 and the overhead/operating costs of the headquarters in Belgium. The analysis of the various expenses showed an amount of 6.4 MEUR as payroll, or 1/4 of the total budget of the project. The purchase of the vaccines costs the project 432 KEUR but no details were provided on the exact types of vaccines purchased and the reasons for the zero amount for the year 2016 and the lack of budget for the year 2021. The rental costs of the Arche buildings (505 KUSD = 428 KEUR for 2015 -2020, no data for 2021) were not included in the list of other project expenses and without analytical data on the cost of a typical building, it was impossible for the evaluators to conclude on the efficiency of the rental in relation to the construction or rental of another building that would be in a neighbourhood of average standing (if the location of the Centre in Kigobé was not also dictated by the fact that the district had not experienced violence and had remained relatively calm during the crisis). The urgency of responding to the 2015 crisis justifies renting during the emergency period from 2015 to 2016 and MSF could have made an analysis of the cost of renting versus construction and deepened the reflection to justify the other reasons for this choice, for the capitalization of the experience and lessons learned from the implementation of the Arche project in Burundi.

It was efficient and strategic to grant funding to Handicap International with a lump sum of 300,000 euros per year as part of the partnership on the rehabilitation component. Indeed, given the number of patients in need of rehabilitation over the period of collaboration with Handicap International, this synergy with this amount seems efficient although it was not possible to have the details of the number of patients treated at Handicap International and what this service would have cost.

Due to the lack of certain skills at the level of the Project/Arche Centre, referrals of patients for outpatient expert consultations (neurosurgeons) or for the realization of examinations such as the CT Scan in Bujumbura (especially at the Kira Hospital) cost 876KEUR and the evaluators wonder if this amount could not have helped in the acquisition of the skills sought at Arche (recruitment of these skills, acquisition of a scanner device). Significant sums were spent from 2018 to 2020 to keep the project and respond to a possible resurgence of a violent crisis during the 2020 elections (unstable socio-political context for several years as mentioned above in this report) and response to the need for trauma surgery care whose significant demand has been stimulated by the supply of care made

available by MSF. It should be noted, however, that the initial purpose of the project was to treat victims of violence and that the project had diverted from that objective in order to adapt its strategy to changing needs. This would therefore merit a more detailed analysis of the cost of adapting a project to changing needs and context. *Perhaps the project could have limited its expenses (more than 12 MEUR from 2018-2020 vs 4.9 MEUR for the period of active crisis 2015-2016).*

Some inconsistencies have also been noted at the level of expenditure and this concerns certain headings such as the purchase of medicines where the cost of medicines is zero for the year 2016. With the expansion of the admission criteria in 2016, it is logical that the consumption of medicines should increase and that the stocks of 2015 purchased to treat victims of violence could not cover the whole of 2016 (zero purchases of medicines in 2016 suggests a possible error in the allocation of expenses or an error in charging to the budget lines to be checked at MSF level). Indeed, an internal mission document from 2016 notes weaknesses in pharmacy management.

Efficiency in Relation to Human Resources

The Arche Centre was sufficiently staffed with national and expatriate staff to meet its operating needs. Experts (surgeons – orthopaedics, anaesthetists, infection prevention and control specialists, emergency physicians, etc.) were deployed despite a high turnover observed. It was also noted an absence of certain specialties at times but the rotation was considered by some members of the project team as a strong point to allow the acquisition of a diversity of techniques in the people trained.

The decentralization process was initiated after a phase of analysis of the needs and situation of the decentralization structures. However, this analysis did not make it possible to identify the risks related to the human resources situation of these structures that would contribute to the project. Thus, for example, at the HPRC, surgeons presented as staff during the development of the collaboration protocol between this hospital and MSF were in reality all individual contractors and there was no guarantee of maintaining or retaining them over time within the hospital. They would also have little interest in participating in the capacity-building activities of the Arche project and these human resources aspect had not been mentioned during the negotiation of the partnership. To support the decentralization structures, a lump sum envelope had been given to these structures to compensate for the loss of income caused by the free care of patients treated as part of the Arche project but also to stimulate the motivation of staff whose workload had increased following the growing number of patients to be cared for. At the HPRC, the staff of the services supported by the project mentioned a major change in the work system, in particular the change in the pace of rotation from 3 shifts to 2 shifts between the teams (increase in working hours). This staff would not have been consulted before the implementation of the project (partnership negotiation with the hospital management without feedback to the care providers) in particular on the question of the incentives that the hospital was going to give from the MSF envelope, as well as on the possible change of working hours). Support in terms of incentives would be a practice officially prohibited in health facilities but which continued to be effective.

The evaluators then proposed the realization of a collective participatory diagnosis with the HPRC (decentralization structure still operational at the time of the evaluation) to analyse the different

challenges and problems and propose consensual solution approaches in the form of a roadmap for the remaining period before the closure of the project. This diagnosis was carried out and integrated into the management of the project for the period from October to December 2021.

ANALYSIS AND CONCLUSION ON EFFICIENCY

The financial cost of the project over the period 2015 seems justified by the nature of the crisis and the urgency to act. Nevertheless, the maintenance of the project on stand-by **could have been done with the early exit of non-serious cases to local structures**, especially since they were not sensitive cases resulting from the political crisis but rather victims of traffic accidents for the most part (the project could then have kept the serious cases amongst them). This could have greatly reduced the activity at the Arche Centre and made it possible to achieve savings while remaining consistent with the objectives and the initial scope of the project (victims of violence in Bujumbura and its surroundings during the 2015 crisis). With the cases handled after 2015 consisting mainly of road accident injuries, the evaluators wonder whether the use of certain local experts would not have contributed to reducing HR costs over the years 2017-2021 and rapidly strengthening local capacities.

The collaboration with the other partners at the beginning of the project increased efficiency, in particular by allowing a synergy of action.

IMPACT

SUMMARY OF KEY FINDINGS

Achievement of General and Specific Project Objectives

The project has had the expected impact, saving lives and avoiding years of disability in a violent political crisis and beyond with the extension of admission criteria to victims of road accidents and victims of sexual violence. The project was quickly established by the Emergency Unit (EPool) and began its work in the month after the beginning of the crisis.

Effects of The Project Perceived by Beneficiaries and Other Actors

The project resulted in a reduction in deaths, disability risks and severity of disability as there were no other viable options for receiving care in a politically tense context with limited surgical capacity and given the financial means needed to pay for surgical care, beyond the victims' capacities. The project would have allowed several families not to sell their farmland or other property to pay health care bills, which helped not to destabilize family economies and push them into extreme poverty in a chronic way. Nevertheless, it remains difficult to objectively assess the economic value of this impact on households beyond qualitative information from interviews with patients, their families, and representatives of the administration.

During the brief period of decentralization, the project shared medical knowledge with teams from sex health structures with an impact on the quality of care, especially in relation to professional care practices. The contribution to filling the gap in terms of competence was one of the main contributions

of the Arche project through the deployment of surgical experts and support teams (anaesthesiologists, nurses, etc.).

Unintended Consequences of The Project

Beyond the expected effects of the project, unexpected effects were also noted such as:

- Influx of patients to structures supported by Arche in search of free care during the period of collaboration and **decrease in attendance elsewhere with impact on the revenues and operation of these structures;**
- Difficulties in returning to direct payment of care by patients in decentralization structures after the end of the collaboration. Some patients continued to flock to the HPRC even if they were not in the admission criteria, because in the structures of decentralization of green cases the care had again become paying.

ANALYSIS AND CONCLUSION ON IMPACT

The supply of care made available and accessible by the Arche project has had a demand-stimulating effect. Several thousands of people have been able to seek treatment without having to bear the burden and consequences of direct payment for care and have had their lives saved or permanent disabilities/disabilities avoided. Nevertheless, the free nature of care without accompanying follow-up measures for the future management of similar cases has **disrupted the local system** which cannot meet this request created.

SUSTAINABILITY / DURABILITY

DECENTRALIZATION

The consequence of the opening or broadening of the admission criteria was the acceptance of MSF as a key partner to meet a need for traumatology not sufficiently covered, but also the increase in the demand for care and the number of cases to be managed at the Arche Centre **which exceeded its capacity** and led the project to start a process of decentralization and transfer of capacity to other structures.

Decentralization was rather defined as an integration of Arche's services and activities within the partner structures (transfer of cases followed by the release of cases to the Arche Centre) with a gradual reduction in the volume of activities and staff at the Arche Centre, gradual transfer of skills and responsibility and then closure of the project scheduled for the end of December 2021.

The decentralization process was accompanied by a transfer of skills to decentralization structures (staff training, equipment/materials, renovation of buildings, etc.). Nevertheless, in terms of strengthening the technical and organizational skills of staff through training, the evaluators found that the time allocated to the process of skills transfer was limited for the acquisition of these skills. Indeed, to acquire the skills, the teams of the Arche Centre were accompanied over a long period. Thus, even with the limitation of the package of skills to be transferred, the acquisition of surgical skills by a

general practitioner requires more time than that devoted to this activity at the level of the decentralization structures on the Arche project.

EXIT STRATEGY

With the positive evolution of the political situation from 2017-2018, the project began the reflections on the exit strategy by maintaining a certain volume of activities that would keep the project operational and responsive in the event of a new violent crisis. This strategy was based on the decentralization/integration of services and the transfer of competences to local public health structures.

DURABILITY

Initially, the intervention pursued the objective of an immediate response to a need emerging from an acute crisis. In this perspective, it is positive that MSF managers have put a decentralization / transfer of certain skills as an exit strategy for the project.

The sustainability of the intervention at the Arche Centre, which no longer exists, is zero. The equipment used at the Arche Centre was taken over by MSF during the decentralization to the HPRC and all the staff had left for other structures. The buildings built at Arche to increase its capacity were made of non-durable materials and appeared to be in disrepair at the time of the assessment field visit. The lack of exchange on the possible reuse of these buildings by the owner, for other care services, limits the possibility of concluding on the sustainability of this increased capacity. There is also no certainty whether these buildings will not be demolished in the future.

Collaboration with the CHUK has ceased very early and negotiations for continued collaboration have not proved fruitful. The transition of the project to the CHUK could therefore not leave lasting gains over time because the staff involved in its implementation at the CHUK level did not make the project their own. The problem of sharing incentives on the envelope given to the CHUK was an important factor in the non-success of this collaboration. It should also be noted that the fact that the administration of the CHUK is the responsibility of the Ministry of Higher Education and not the Ministry of Health may have had an impact on this collaboration. Indeed, in the absence of previous collaboration between MSF and the Ministry of Higher Education, the project could not take advantage of previously established partnership relations.

The coordination of the Arche project had to start a decentralization plan B at the HPRC, which led to a delay in the start of the transfer of skills on the management of moderate (orange) and severe (red) cases.

A flat-rate envelope system to make up for the shortfall in health facilities, due to the free care on the Arche project, has been used as a means of giving priority to staff, but this solution **is not sustainable if the means of maintaining it are not discussed and the transparency of the distribution of the envelope is not ensured.**

The transfer of competences to decentralisation structures was limited in time **and its monitoring too limited to be sustainable** (< 1 year for HPRC). Some of the new procedures and techniques transferred may not continue.

ANALYSIS AND CONCLUSION ON DECENTRALISATION, EXIT STRATEGY AND SUSTAINABILITY

The evaluators raise the question whether capacity building should not have started earlier than 2019, given the time needed to negotiate the modalities of the transfer of competences and formalize them.

Partial sustainability of the intervention can be achieved through training and equipment in decentralised structures. However, the theft of some equipment, the limited budget for maintenance, the insufficiency of performance in the monitoring of stocks, limit and put at risk the durability of technical solutions.

CONCLUSION

The evaluators found many points to praise, as well as areas that could have been improved. The speed of the initial response was remarkable with a launch of the project within just 3 months after the start of political violence in 2015. MSF OCB has rented a private facility for the treatment of trauma cases allowing the management of cases in a neutral setting. In coordination with the BRC (which supported the transport of the wounded), this structure initially focused on dealing only with serious cases of political violence. Given that there was some underutilized capacity, another positive point was the extension of the criteria to severe cases of road accidents although this had a significant impact on the project's finances after 2015 and the circumvention of the national reference-counter-reference system in health care.

Unfortunately, this expansion of patient admission criteria has led to other challenges related to the size of the relatively small Arche Centre which was quickly overloaded; this would have had a negative impact on the quality of care, including the application of hygiene precautions by some caregivers, although the data available was limited for the evaluators to explore and understand the situation of cases of infection.

Cases of head injuries associated with other injuries and burns were removed from management, in part due to recurrent hygiene problems, high infection rates whose causes could not be sufficiently documented, and lack of neurosurgical skills. The lack of reporting on the causes of infection or death has made it difficult to pass judgment on how the quality of care has been managed and valued. In the various monitoring reports, the reported infection rate remained low; However, the interviews reported variable and sometimes very high rates, particularly among burns, calling into question the reliability of certain data and information received.

The key element of the transfer of competences to local actors was unfortunately delayed by unexpected bureaucratic difficulties and only started effectively in 2019, in a limited framework. The organisation of the transfer of competences also experienced organisational difficulties, mainly linked to a lack of analysis of the needs and partnership dynamics that were to be put in place. Indeed, the needs analysis was not sufficiently participatory to take into account the opinions of all stakeholders, including healthcare providers, and the lack of transparency on the management of the partnership and the bonuses allocated to people in decentralization structures had a perverse effect on motivation.

The evaluators wonder why MSF's lessons and rich experience from similar operations around the world (e.g. tropical wound management, post-operative care organisation, process and logistics organisation) do not appear to have been robustly applied to the Arche project. During the seven years of the project, no mid-term evaluation was carried out, which represents a missed opportunity to improve the project during its implementation.

In conclusion, we believe that with MSF's high operational, organisational and medical capacities, this project could have been carried out with significantly better efficiency and impact. We remain optimistic that MSF, as a learning organisation, will be able to meet this challenge in future projects.

RECOMMENDATIONS

⇒ Recommendation 1:

Improve project management on programmatic aspects including needs analysis, definition of logical framework indicators, monitoring, evaluation and reporting, as well as the management of partnership relations. It would be necessary to strengthen the support of project managers by the programme referents at headquarters with follow-up of the reporting and more regular reviews of programme and project with the field teams, in order to make early adjustments during project life cycle. In general, ensure that participatory approaches are in place at all stages of the project.

As for the transition from Epool management to the regular mission, clarify the transfer criteria and mechanisms and introduce a formalized and signed transfer between EPool and regular mission (structured review or evaluation).

⇒ Recommendation 2:

Improve the management of project data and information by setting up simple standard tools in the form of a database allowing the exploitation of data and enabling evidence-based management. Specifically:

- Conduct clinical audits on all cases of death and investigate cases of infections associated with care at Arche from a broader perspective, not limited to clinical data, including conducting patient surveys for data triangulation;
- Harmonize the color triage system, so that the definitions are the same for inpatients and those in the emergency room;
- Implement semi-annual reports beyond individual records in similar future facilities - easy to compile or mission reports with mandatory assessment questions - number and types of infections, types of surgeries performed, treatment results, beds, non-functional equipment, summaries of death audit reports.

⇒ Recommendation 3:

For projects including the development of care protocols, ensure that the protocols are adaptable to the local context, particularly with regard to surgical care procedures, drugs in common use locally, wound treatment, and monitoring / evaluation of the quality of care. Organize periodic reminders for staff about hygiene, especially in wound care settings. Implement stricter hygiene controls beyond simply observing hygiene practices.

Recommendations 4 to 7 (of total 7)

⇒ **Recommendation 4:**

Improve budgetary and financial monitoring through better recording of expenses and regularly carry out an annual analysis of cost variations year by year and by cost category with project coordinators. Particular attention should also be paid to the efficiency of interventions, particularly in terms of the allocation of expenditure between the different budget lines and in terms of human resources.

⇒ **Recommendation 5:**

Ensure the control of the pharmacy ideally with digital tools to maintain transparency regarding the stock situation, the schedule of orders, and consumption.

⇒ **Recommendation 6:**

Extend the Arche project by at least 6 months to give it time to execute the recommendations of the collective participatory diagnosis carried out with the Prince Regent Charge Hospital in September 2021, as recommended by the evaluation team during the presentation of the preliminary results of the evaluation. Indeed, the effective start of the decentralization and transfer of skills to this hospital started late and some missing data / information did not allow to obtain the results in the period planned to carry out this transfer. Focus on the quality of services and the harmonization of protocols with the local context.

In general, institutionalize the transfer of skills from year 2 of the projects. In the case of the Ark, think about an integration into the E-Prep.

⇒ **Recommendation 7:**

Conduct interim evaluations for all projects with a duration of 3 years or more to take advantage of these evaluations in realigning projects to changes in context and needs. Establish rules for internal and external evaluations. Ensure that lessons learned from this and other projects such as the MSF OCB surgical project in Tabarre, Haiti, are collected and implemented.

ANNEX: EVALUATION MATRIX

Table 6. Evaluation Matrix (from the inception report)

CRITERIA AND EVALUATION QUESTION	SUB-QUESTIONS	INDICATORS	DATA SOURCES
<p><u>Relevance:</u></p> <p>Did the project remain relevant from year to year, given the needs?</p>	<p>1.1 What were the needs? Have they been independently evaluated?</p> <p>1.2 How did the project take into account the needs expressed by patients and communities?</p> <p>1.3 Did the project objectives and corresponding activities meet the identified needs?</p> <p>1.4 Was the project relevant and consistent with MSF's priorities?</p> <p>1.5 Has the project been able to adapt in a relevant and timely manner to changing needs?</p> <p>1.6 How could the project have been more relevant?</p>	<p>A. Documentation of the formal needs assessment that takes into account the needs of patients and the community.</p> <p>B. Stakeholder perceptions of the congruence between project objectives/activities and identified needs.</p> <p>C. Stakeholder perceptions of project adaptations or modifications in response to changing needs.</p> <p>D. Documentation of adaptation or modifications of the project in response to changing needs.</p> <p>E. Stakeholder views on increasing the relevance of the project.</p>	<ul style="list-style-type: none"> ▪ Literature review ▪ Key Informant Interviews (CITS)
<p><u>Coherence:</u></p> <p>Was the strategy, design and implementation of the project coherent given the context?</p>	<p>2.1 Was the project adequately designed given the context?</p> <p>2.2 Has the project been able to adapt over time to changes in context?</p> <p>2.3 How did the project take into account the other actors?</p> <p>2.4 How could the strategy have been more coherent?</p>	<p>F. Stakeholder views on the link between the project design and the local context, and its ability to adapt to contextual change.</p> <p>G. Documentation of project changes in response to contextual change</p> <p>H. Stakeholders' perception of the inclusion of other actors.</p> <p>I. Stakeholder views on increasing project coherence.</p>	<ul style="list-style-type: none"> ▪ Literature review ▪ Key Informant Interviews (CITS)
<p><u>Effectiveness:</u></p>	<p>3.1 What are the results obtained (outputs)?</p> <p>3.2 To what extent are these results in line with quality</p>	<p>J. Documentation of project results and comparison with expected results in the logical framework.</p>	<ul style="list-style-type: none"> ▪ Literature review ▪ EIIC ▪ Field visits ▪ Medical data

CRITERIA AND EVALUATION QUESTION	SUB-QUESTIONS	INDICATORS	DATA SOURCES
Was the project effective?	<p>standards and expected results?</p> <p>3.3 What were the reasons for whether the expected results were achieved or not?</p> <p>3.4 What could have made the project more efficient?</p>	<p>K. Stakeholder reports on the reasons for insufficient results (if any).</p> <p>L. Stakeholder views on how to make the project more effective.</p>	
<p><u>Efficiency:</u></p> <p>Was the project efficient?</p>	<p>4.1 What resources (human, logistical, financial, advocacy, etc.) have been allocated to achieve the above results?</p> <p>4.2 How has MSF coordinated and collaborated with other actors, including to strengthen existing capacities and the public health system?</p> <p>4.3 Could resources have been used more efficiently?</p>	<p>M. Document review to assess resources (human, logistical, financial, advocacy, etc.) allocated and trends over time.</p> <p>N. Documentation of collaboration with other actors (MoU).</p> <p>O. Stakeholder perceptions of collaboration with other actors.</p> <p>P. Stakeholder views on the efficient use of resources over the life of the project.</p>	<ul style="list-style-type: none"> ▪ Literature review ▪ EIIC ▪ Field visits
<p><u>Impact:</u></p> <p>Has the project had an impact?</p>	<p>5.1 To what extent has the project achieved its general and specific objectives?</p> <p>5.2 What are the effects of the project as perceived by beneficiaries and other counterparts?</p> <p>5.3 Did the project have any unintended consequences?</p>	<p>Q. Review of project indicators from project reports.</p> <p>R. Stakeholder perceptions of the impact of the project and any unintended consequences (positive/negative).</p>	<ul style="list-style-type: none"> ▪ Literature review ▪ EIIC
<p><u>Sustainability:</u></p> <p>To what extent are the results achieved by the project sustainable?</p>	<p>6.1 Was the exit strategy coherent and planned, and its implementation online, including communication and advocacy?</p> <p>6.2 Did the exit strategy take into account the potential challenges, and how were they addressed?</p> <p>6.3 What local capacities and resources have been identified? How did the project link with them in order to ensure the sustainability of the results?</p> <p>6.4 Are there any facilitating/considerate factors specifically related to the Burundian context?</p>	<p>S. Review of documents to map the exit strategy, its implementation and potential challenges.</p> <p>T. Stakeholder perception of the exit strategy, including implementation, modification/adaptation, communication and problem solving.</p> <p>U. Documentation of the link/capacity utilization/local partners for the exit strategy.</p> <p>V. Stakeholder perception of the link/use of local capacities/partners,</p>	<ul style="list-style-type: none"> ▪ Literature review ▪ EIIC ▪ Field visits

CRITERIA AND EVALUATION QUESTION	SUB-QUESTIONS	INDICATORS	DATA SOURCES
	6.5 What general elements could be reproduced in other contexts?	including barriers and facilitators. W. Stakeholder views on lessons learned and elements that can be replicated in other contexts.	

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Médecins Sans Frontières

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