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# Monitoring and Evaluation for Niger Delta Development Commission, Nigeria: A blueprint

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***Abstract***
*The study seeks to develop a practical implementation blueprint for ensuring successful project completion in the Niger Delta Development Commission (NDDC), Nigeria, through the adoption of effective Monitoring and Evaluation (M&E) strategies. The instantaneous value addition is to prevent project abandonment by NDDC in the Niger Delta region of Nigeria. The study, in doing this, conducted a critical review of 135 peer-reviewed empirical studies on M&E. Findings of the critical review were utilized to develop a practical project monitoring and evaluation(M&E) blueprint, for instance, a certain project M&E-blueprint was developed and comprised of Six (6) practical and interconnected steps. The practical implication of the developed M&E-blueprint provides a comprehensive step-by-step guide with which the NDDC can adopt to prevent project abandonment and ensure successful project completion in the Niger Delta region. No doubt, the above developed comprehensive step-by-step M&E-blueprint provides one of the first guides towards successful project completion in the context of a developing country.*

***Keywords:*** *monitoring and evaluation, blueprint, critical review, project abandonment*

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## I. Introduction

Project abandonment is a global phenomenon; the information system projects in the United Kingdom (UK), power generation projects in Africa, and construction projects in Asia are all classical examples (Okereke, 2017; Eja&Ramegowda, 2020). However, in doing a comparative analysis of abandoned projects between developed and developing countries, Damoah (2015) revealed that the rate of project abandonment in developing countries is higher than the rate in developed countries (Ogwueleka, 2011; Damoah, 2015). In Nigeria, as one of the developing countries of the world, the increase in abandonment of development projects handled by the Niger Delta Development Commission (NDDC) in the Niger Delta region has reached an alarming rate. For example, recent forensic audit report of the NDDC indicated that, within the last 22 years of the Commission's operations (2020-2022), there are over 13,000 abandoned projects within the Niger Delta region with huge financial implications (Soonest, 2021). This phenomenon is largely due to poor project supervision, corruption, poor funding, poor risk management strategies, quackery, variation of project scope, political factor, and natural disasteramong others as well as poor Monitoring and evaluation (M&E) of the projects (Rajablu*et al.,* 2015;Shahhossein*et al.,* 2018). Project abandonment has resulted in many adverse consequences including waste of public resources, reduced aesthetics of the neighborhood, reduction in employment opportunities and rate of economic development in the region (Shinkafi, 2021). A project is considered abandoned when there is a discontinuation in any activity or maintenance works on such project within a time frame of the contract agreement and with no intention of returning back to the project (Damoah, 2015; Shinkafi, 2021). Abandonment may happen at any stage of a project lifecycle and incur significant amount of loss. The litany of this scenario across the Niger Delta region amongst others is what prompted the need to investigate the role that M&E plays in addressing the phenomenon.

Monitoring is a continuous function, based on systematic collection of data on specified indicators to provide management and stakeholders with indications of progress of an ongoing project/programme (Niyivuga, 2019; Waylen, 2019; Tegan*et al.*, 2019). It is not a one-time activity, but more of day-to-day activity, usually in the context of implementation schedules and the use of project inputs (Niyivuga, 2019; Tegan*et al.*, 2019). Evaluation on the other hand is the assessment of the effectiveness and efficiency of a project in meeting its objectives, through a periodic and systematic data collection to make certain judgments about the project (Tegan*et al.*, 2019; Waylen, 2019; McCauley, 2022). Both monitoring and evaluation are closely related, such that, to conduct an effective evaluation you need to use data collected during monitoring (Niyivuga, 2019; Tegan*et al.*, 2019). Both activities are aimed at tracking the progress of a project. M&E playsan important role in ensuring: effective project planning;informed and evidence-based management decisions; identification and documentation of mistakes/deviations very early for corrective measures; projects stay on track and perform well, and; effective and efficient resource allocation (Rae *et al.*, 2019; Niyivuga, 2019; Waylen, 2019). M&E has been successfully used to ensure successful project completion in a number of projects acrossthe globe, however, project abandonment remains a serious problem in the Niger Delta region of Nigeria.

It is against this backdrop that this paper sought to develop a practical, step-by-step blueprint for the achievement of successful project implementation in the Niger Delta region of Nigeria. In order to achieve this aim, the paper has two broad objectives: 1) To conduct a critical review of extant empirical articles on M&E in order to address four research questions, which include the following: a) was M&E effective in preventing project abandonment?; b) whatwastheevidencethatM&Ewassuccessfullyusedto address projectabandonment?;
c) how was M& Estrategy implemented successfully to prevent project abandonment?;
d) whydidM&Enotworkincertainareas?2) To use the knowledge and evidences obtained from the critical review along with the researchers' knowledge of the Nigerian experience to develop an M&E-Blueprint for the NDDC. The rest of the paper proceeds as follows: Literature/methodology used to review and conduct empirical search for M&E articles as presented for analysis. Second, the findings of the review and their implications for the development of the blueprint were discussed. Third, the M&E-blueprint was presented and discussed while the conclusions were made from the study findings accordingly.

## II. Literature/ Methodology

The study has two important objectives; first, to critically review extant, high-quality empirical articles on the efficacy of Monitoring and Evaluation (M&E) in preventing project abandonment. Second, to develop a practical and comprehensive M&E blueprint for the NDDC based on the lessons learned from the critical review conducted and the researcher's in-depth knowledge of the peculiarities of NDDC as well as the Nigeria's society. This section therefore presents the achievement of the paper's second objective; Figure 1 presents the step-by-step M&E Blueprint for the NDDC (ME-NDDC).The first step of the ME-NDDC blueprint is a clear *identification of project objectives*. This involves a clear statement of Specific, Measurable, Achievable, Realistic and Time-bound (SMART) objectives intended to be achieved at the end of the project. Objectives need to be specific, so that they can be easily measured using accurate data for proper determination of success. When objectives are too lofty, even team members will resent them and as a result, might not even try, and in the long run nothing is achieved. Since the creation of the NDDC in the year 2000, a lot of projects have been initiated aimed at improving the quality of lives of the people of Niger Delta region in Nigeria.

However, very few of these projects have been successfully completed. Majority of the projects have either been grossly underfunded, poorly executed or completely abandoned after embezzling the funds meant for their completion. This phenomenon is evidenced by the litany of failed/abandoned projects across the Niger Delta region which are mostly involve construction of infrastructure such as roads, hospitals, bridges and schools, as well as water and electricity projects, including sea embankment and dredging of rivers. In order for the NDDC to address this menace, the Commission must not only acknowledge the problem at hand, but also design strategies for addressing them and succinctly establish ways through which the project staff will know when the projects have been successful in solving the identified problem.

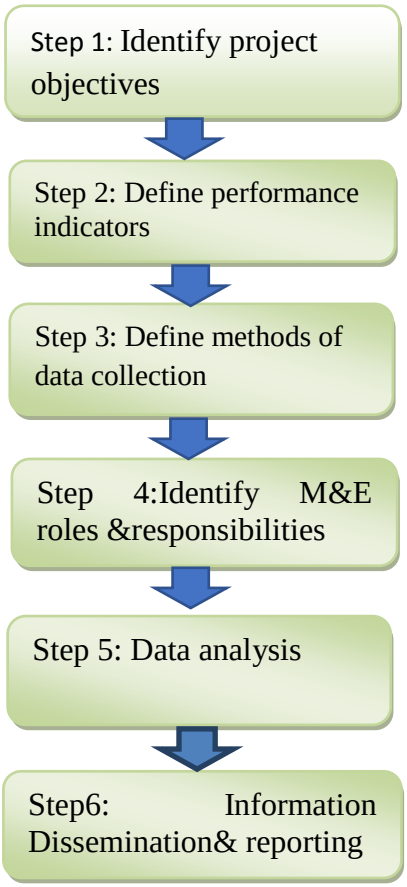


**Figure 1: ME-NDDC**
**Source: Authors (2022)**

Clear project objectives will help the NDDC project staff to: know what the organization is out to achieve; evaluate their work; know whether the project is succeeding or failing; know when improvements on the existing plan is necessary; and lastly; continue moving in the right direction. This is why step 2 of the Blueprint emphasizes a structured set of *performance indicators* covering: inputs, process, outputs, outcomes and impact. Project performance indicators are aimed at tracking progress towards achieving the set objectives. Performance indicatorsshould be not only beSMART, but also be a mix of those that measure project implementation processes, and those that measure outcomes. Process indicators track the progress of the project implementation and they help to answer the question, "are activities being implemented as planned?" Outcome indicators track how successful projects have been at achieving desired objectives, they help to answer the question, "has the project made a significant difference?". The NDDC as an agency of the Government whose primary responsibility is to provide essential services to the people must focus on successful project completion on time, budget and according to desired quality.

After the project performance indicators are determined, step 3 of the Blueprint is a decision on the most appropriate and convenient *method(s) of data collection*, and the frequency in order to track performance. This should be a conversation between the NDDC management staff, the project team and other stakeholders. The source of data depends largely on what each indicator is trying to measure. NDDC projects will likely need multiple data sources to answer all the questions concerning the projects at hand. Data on the project being handled can be generated from the internet, through interviews in order to get first-hand accounts from the affected actors, observation as well as survey. Quality data provides clear evidence of real project performance thus allowing the project team to make decisions grounded in reality and facts, instead of assumptions. The most applicable method of data collection is also largely determined by the nature of the project and other factors specific to the peculiarities of the project. How often the data would be collected must also be clearly defined for reporting and decision-making purposes, including baselines and a means to compare progress and achievements against targets.

The NDDC staff cannot all be involved in data collection at the same time, and thus step 4 of the Blueprint therefore suggests a clear *identification of M&E roles and responsibilities*. The NDDC must assign some project officers to be responsible for collecting the data for each \indicator, accurately and in a timely fashion. Data management roles should be decided with input from all team members so everyone is on the same page and know which indicators they are assigned.

Data on its own does not make sense, step 5 of the Blueprint therefore suggests that the *data collected be compiled and analysed* for internal review within the NDDC and external reporting to relevant stakeholders. The method of data analysis to be conducted and the data analysis tools to use should depend largely on the type of data collected (either quantitative or qualitative). Effective data analysis techniques enable project managers to use charts to break down complex project data, predict their behaviour and outcomes in real-time for better decisions in order to keep projects on schedule and within budget. NDDC must ensure that this is done objectively so that strategic decisions and commitments can be based on verifiable facts.

Knowing that the analyzed data are not just kept but given out as processed data (information), step 6 of this Blueprint is focused on *dissemination and reporting* of information. This describes how and to whom information should be disseminated. The NDDC must design a reliable and sustainable structure of passing M&E information to project officers and stakeholders about the success and progress of the project, also about how the information can be used to help staff make modifications and course corrections in the project implementation process, as necessary, to achieve successful project implementation.Project information should be for internal dissemination among the senior management team, project team members, as well as wider dissemination among stakeholders and the project sponsor (Government), including the project beneficiaries. Information is power, and the more informed that the project stakeholders are, the better their input in the project decision making process. The NDDC must therefore keep all relevant stakeholders informed about the progress of the project. This will help everyone involved in the project to learn from the successes and failures as they come, and also help the NDDC to ensure full transparency and accountability on its part.

Improving the quality of lives of the people of Niger Delta region is a fundamental duty of Government. The empirical evidences in this paper have proved that effective projects Monitoring and Evaluation is a necessary tool for ensuring successful completion of projects that will have positive impact on the lives of the people. This paper is therefore confident that this practical and comprehensive step-by-step guide (ME-NDDC) will facilitate the NDDC in preventing project abandonment. It will also help the Commission in addressing the challenges of corruption, diversion and embezzlement of funds meant for project implementation, engagement of incompetent personnel in project execution and poor supervision.As earlier observed, the study has been wittingly guided by four research questions which are restated as follows: i) Was monitoring and evaluation (M&E) successfully used to address project abandonment? ii) What was the evidence of successful use of M&E in addressing project abandonment? iii) How was M&E successfully implemented to address project abandonment? iv) Why wasn't M&E successful in addressing project abandonment in certain contexts? In answering these research questions, relevant articles were reviewed. For the first research question which sought to know whether M&E was successfully used to address project abandonment, relevant information was obtained from the "findings" and "discussion" sections of the empirical studies reviewed.

The information collected were further divided into two groups, that is; the group of those studies who found that M&E was successfully used to address the problem of project abandonment, and the group of those who found that M&E failed in addressing the problem.

As for the second research question which sought to know the evidence of successful use of M&E in addressing project abandonment, the information to answer the question was obtained from the findings of studies reviewed, by using the performance indicators adopted in measuring successful implementation of M&E. In order to answer the third research question which sought to understand how M&E was successfully implemented in addressing project abandonment, the different M&E implementation strategies of the studies were used. The information to answer this question was obtained from the literature review section of the studies reviewed, where M&E implementation strategies/dimensions were clearly defined/conceptualized (How information obtained were presented is not disclosed).The fourth research question which sought to explain the reasons why M&E was not successful in addressing project abandonment was answered by obtaining information from the discussion of findings as well as the concluding section of the studies reviewed.

The unsuccessful strategies were grouped based on the reasons given as being responsible for their failure to address the problem of project abandonment. This study relied exclusively on empirical articles published by six major academic publishers (Emerald, Elsevier, Sage, Springer, Taylor and Francis, Wiley). Studies from these major academic publishers were used because they were considered to be of high-quality standards and evidence based (Krah&Mertens, 2020). The studies which were all M&E related, were authoritatively used to validate the efficacy of using M&E in addressing the problem of project abandonment. Google scholar was used as the main source of relevant articles for review in this paper. This is because Google

Scholar is fast and easy to use, it is up to date, comprehensive and guarantees access to a wide range of data bases and academic publications. The article search process involved the following steps:

**Step 1:** Log on to the Google Scholar home page

**Step 2:** Click on the "advanced search" menu item in the upper left-hand side of the screen. The advanced search allows the researcher to give specific search instructions to google in terms of years, publishers and search terms with exact phrase.

**Step 3:** Find relevant articles by typing preferred search terms or keywords in the Google Scholar interface.The main search term used in searching for relevant articles for this paper was "Monitoring and Evaluation", all-in-title search. The search term was required to be in the title of the articles downloaded so as to have studies that focused directly on the issue being investigated. Also, only articles dated between 2000 to 2022 were included in the search. Use of the timeframe between 2000 and 2022 was informed by the fact that this paper's case study, which is, "Niger Delta Development Commission" (NDDC) was created in the year 2000, and the problem being investigated is "projects abandonment" by the NDDC, which started after the Commission was created. The idea behind this is to find the M&E technologies/strategies that have been available since the establishment of the Commission. It is important to also note that during the search, citation was removed, as it is full articles that were searched for. The major academic publishers used in this paper included the following: Emerald, Elsevier, Sage, Springer, Wiley, Taylor and Francis (alphabetically arranged publishers). They were used in the column for "return articles published in" one after the other to know the total number of articles published by each of the publishers.

Furthermore, only peer-reviewed journal articles were included; conference papers and book chapters were excluded due to a lack of a robust peer-review process which serves as an important quality check for articles. The article selection process ensured that the downloaded articles' abstracts were read to ensure that the articles were empirical. Furthermore, only empirical articles dealing with community development projects were selected because this is the critical objective of the Niger Delta Development Commission which this paper developed an M&E blueprint to guide its activities and improve its ability to successfully complete projects. Table 1 presents the articles search result.

**Table 1: Articles search result**

| S/N | Publisher | Total number of articles found | Total number of articles selected |
|---|---|---|---|
| 1. | Emerald | 7 | 3 |
| 2. | Elsevier | 158 | 55 |
| 3. | Sage | 43 | 16 |
| 4. | Springer | 172 | 21 |
| 5. | Taylor and Francis | 64 | 31 |
| 6. | Wiley | 64 | 16 |
| | **TOTAL** | **508** | **142** |

## III. Findings and discussion

Thissectionpresentsthefindingsofthecriticalreviewconducted,anditcontainsfour sub-sections,whichpresentstheanswerstothestudy'sfourresearchquestions. Each section provides the answers to one of the four research questions of the study. The concluding part of the paper provides a summary of findings of the critical review conducted.

**3.1 Was Monitoring and Evaluation (M&E) effective in preventing project abandonment?**

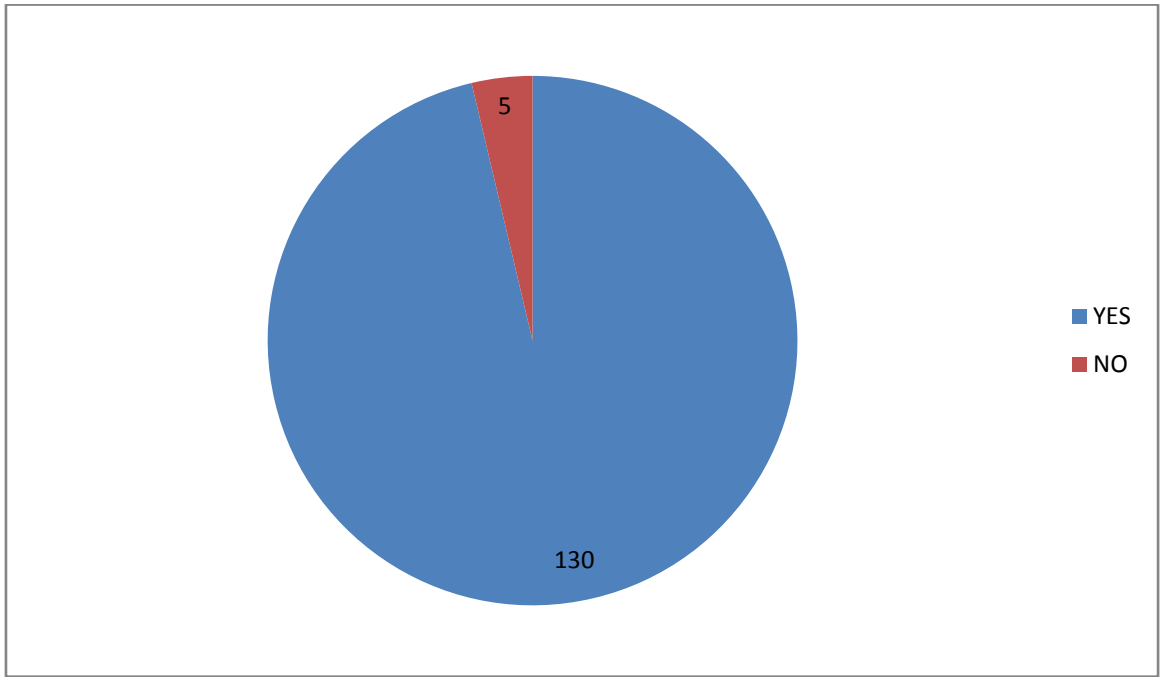


Figure2: A pi**e** chart showing th**e** findings of the first research question

Fig 2isapiechartshowingthatM&Ewassuccessfullyusedinaddressingtheproblemofprojectabandonment in 130 ofthe135empiricalstudiesreviewed (96%) in differentcontextsacrosstheglobe(Abdullah,2017;Mulatu*etal.*,2018;Mgoba&Kabote,2020;Rae*etal.*,2021; Kibukho,2021;Feng*etal.*,2022).Forexample, Kibukho(2021) examined the influence of ParticipatoryMonitoringandEvaluation(PM&E) on a social project known as the "Karemo Area Development Programme" (ADP) inKenya, using, "citizenempowerment" as indicator for measuring sustainability of the programme. Karemo ADP is a programme that is community based and focused on the needs of the poor and the disenfranchised members of the community. It was initiated to respond to myriads of development challenges facing Karemo Division, key among these are challenges posed by HIV and AIDS. It was found that thereisapositiverelationshipbetweenPM&Eandcitizenempowerment, meaning that the application of PM&E led to attainment of citizen empowerment and sustainability of Karemo ADP. Similarly, Tengan*et al.* (2019) analyzed the outcome features of effective M&E in all kinds of construction projects delivery in Ghana. Focus of the study was on the construction industry of Ghana.

From the findings of the study, there is evidence of effective M&E leading to project success, thus achieving value for money, successful project closure, end-user satisfaction and cost efficiency (within budget). In addition, Mgoba and Kabote (2020) examined a water project by the Government of Tanzania. The idea was to determine the effectiveness of PM&E on achievement of the community-based water projects' objectives. Objectives of the water project included to: have functionality of water points, increase water availability, and reduce time spent by women and girls to collect water for domestic use in the villages. Findings of the study revealed that PM&E was effectively employed and it led to achievement of the water projects' objectives

It was only in 4% of the studies reviewed (5 out of 135) that M&E did not lead to successful projectcompletion (Finke &Schreffler, 2004; Ivan, 2017; Baodu& Ile, 2019). For example, Tegan and Aigbavboa (2017) examined the public construction projects in Ghana and sought to know why most of the projects are abandoned. To do that, data was collected from some selected stakeholders (contractors, material suppliers and consultants) involved in construction project delivery in Ghana. Findings of the study revealed that there was a high level of stakeholder engagement in project implementation process, but the participation of stakeholders in M&E of public projects was very poor due to lack ofknowledge and time devoted for M&E of projects by stakeholders. These have contributedtothe impediments of successful projectdelivery in Ghana. Similar to the study of Tegan and Aigbavboa (2017) who examined the construction industry of Ghana, Collistus and Clinton (2016) also did not have a particular project in mind, but focused on the entire

construction industry of Ghana, and aimed to identify the barriers to successful projects implementation in the Ghanaian construction industry.

The study found that the implementation of M&E in the Ghanaian construction industry is facedwith the following problems: weakinstitutionalcapacity;limitedresources;weak linkagebetweenplanning, budgeting andM&E;noneutilizationofM&Eresultsandfinally;poordataquality, leading to the failure of M&E in preventing project abandonment. In the case of Baodu and Ile(2019), the study observed the consistent failure of skills acquisition and employment generation efforts of the Government of Ghana under an arrangement known as the "Youth Intervention Programmes". The study examined the phenomenon to identify the reasons for such failures despite application of PM&E in the programme implementation process. Findings revealed that power struggle amongst the stakeholders (that is, the youths, implementers, government and the beneficiaries) in the programme implementation process was responsible for the PM&E's inability to ensure successful programme implementation.

These findings further imply that thereareempirical evidences showing theefficacyof M&E in addressing the problem of project abandonment (Tengan*et al.*, 2019; Mgoba&Kabote, 2020; Kibukho,2021). This should therefore givethe leadership of Niger Delta Development Corporation (NDDC) the assurance that theuse ofM&Ecanalsobeadopted in toaddressthemenace ofprojectabandonmentwhilsttaking intoconsiderationthe peculiaritiesof the Niger Deltaregion.M&E has beenused globally by various private and Government institutions to ensure value formoney,effectiveresourceallocationandtimelycompletionofprojects.Giventheempirical evidences showing the application of M&E as a tool for successful projectcompletion, embracing it would therefore be the right step in the right direction for theNDDC. It is also important to note that M&E has failed to ensure successful project completion in some places owing to certain factors which include power struggle, weakinstitutionalcapacity,limitedresources;weak linkagebetweenplanning, poor budgeting and M&E; noneutilization of M&E results and finally, poordataquality (Collistus& Clinton, 2016; Tegan & Aigbavboa, 2017; Baodu&Ile, 2019). These must be avoided by the NDDC in order to prevent project abandonment in the Niger Delta region.

### 3.2 EvidencethatM&Ewassuccessfullyusedto address projectabandonment

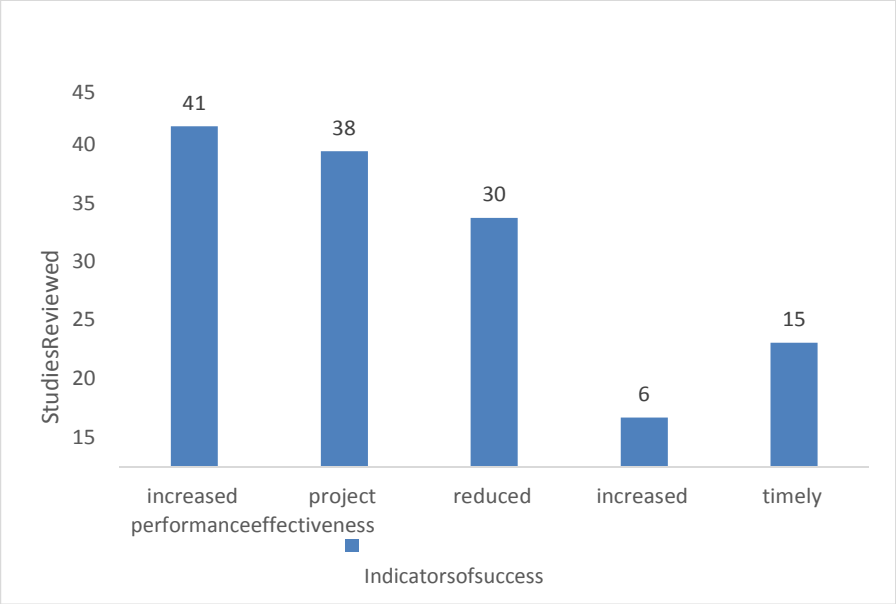


Figure3: Evidence that M&E was successfully used to address project abandonment

As can be seen in Figure 3, different indicators have been used by various scholars tomeasure the efficacy of M&E in ensuring successful project completion. These indicatorshavebeengenerally groupedintofive,allofwhicharediscussedinthesubsequentparagraphs,beggingwith“projectperformance”.41ofthest udiesreviewedusedincreased “project performance” as indicator for measuring successful implementation ofprojects(Mahmood,2011;Xue,2013;Lamhauge*etal.*,2013;Mpofu*etal.*,2013;Govender, 2016). An example is seenin the study of Govender(2016), who assessedM&E capacity development inlocalmunicipalities in the KwaZulu-Natal Province.ItwasfoundthatM&Ecapacitydevelopmentwasperceivedtopositivelyimpactstaff motivation, thereby increasing their overall performance. This study is significant as

itprovidesempiricalevidence of how employeeperformance canbe increasedthroughM&E. The management of NDDC can by implication do same in order to ensure that theNDDCstaffs arewellmotivatedsoastoincreasethesuccessrateoftheirprojects.

Secondly, 38 of the studies reviewed adopted the use of projects "effectiveness" as theindicator for measuring success (Lowrence, 2007; Marshall & Suarez, 2014; Lajevardi*etal.,* 2015; Mgoba&Kabote, 2020; Feng*et al.,* 2022). Effectiveness refers to the extent towhich desired outcomes or objectives are achieved. As seen in the study of Mgoba andKabote (2020) who sought to determine the effectiveness of PM&E on achievement ofcommunity-basedwaterprojects'objectives.Usingbothqualitativeandquantitativemeans of data collection and analysis, it was found that community-based water projects'objectives were achieved. It was further found that PM&E was the effective tool used inachieving the water projects' objectives. This finding has further lent credence to theefficacy of M&E in achieving successful project completion. This indicator would beuseful to NDDC especially in executing social investment programmes aimed at povertyreduction, economic empowerment of the people and distribution of relief materials tovictimsof natural disasters.
Thirdly, "prevalence rate" was used as the indicator for measuring success by 30 of thestudies reviewed, especially those that focusedon health-related projects/interventions(Barbara*etal.,*2012;Fernandez-Lope,2016;Mulatu*etal.,*2018;Rae*etal.,*2019;Holt*et al.,* 2021). Prevalence rate is the proportion of a particular population found to beaffected by a medical condition (typically a disease or a risk factor such as smoking orseatbeltuse)ataspecifictime(Rae*etal.,*2019;Holt*etal.,*2021).Prevalencedecreases in certain instances, including; when the disease is cured, when the patient dies, or whentheriskfactorisreduced(Rae*etal.,*2019;Holt*etal.,*2021).M&Ehasbeenidentifiedas a tool for successfulreduction ofmedical conditions by various studies (Rae *et al.,*2019;Holt*etal.,*2021).

ThiswasconfirmedbyRae*etal.*(2019)whoinvestigatedtheroleofM&Ein ensuring functional access to community-based earlydiagnosisand treatment in a malaria elimination programme in Eastern Myanmar. Findings of thestudy revealed that the malaria posts (facilities for malaria treatment) operating under theprogrammeperformedtoahighstandard,withthemajorityofthemofferinguninterruptedaccesstodiagnosisandtreatmentfollowingtheadoptionofM&E.Usingthis indicator in measuring successful project implementation is relatively quick,cheapandeasytoconduct.Itisimportantinpublichealthforassessingtheburdenofdiseaseina specified population and in planning and allocating health resources. It is however notsuitableforstudyingrarediseasesordiseaseswithashortduration,anditissusceptibletobiasessuchasresponderbias,interviewerbiasandsocialacceptabilitybias.ThebaneofruralhealthcaredeliveryintheNigerDeltaregionisthelackofbasicmedicalinfrastructure,equipment,andevenmedicalinterventionstomitigatethespreadofcertain medical conditions. Therefore, the intervention of the NDDC in this regard hasalwaysbeenawelcomedevelopmentexceptthatmostofinterventionsendupabandoned. Empirical evidences have proved the applicability of this indicator, hence theneed foritsadoptioninNDDC healthrelatedprojects.

Fourthly, 6 of the studies reviewed measured success using "safety" (Ran, 2011; Zhang,2011).This is evidenced in the study of Ran (2011) who felt concerned due to thecomplexityanduncertaintyinherentinexcavationactivitiesduringmetrostation excavationswhichbroughtachallengetocivilengineeringcommunitiesandposesthreatto the public safety in metropolitan regions. The stability of deep excavation and adjacentbuildingsgainedhighlightedconcernsduringmetrostationconstruction.Thestudyfound that a viable and practical way to ensure the construction safety was by executingreal-time monitoring strategy with the aid of advanced sensing and signal processingtechnologies. Thisimplies that the safety of construction workersandthegeneral publicis a global concern which the NDDC must key into to avoid the problem of buildingcollapse during orafterconstruction.

Lastly, 15 of the studies reviewed measured success using timely completion of project(Moreno*etal.,* 2010).Projectcompletionistimely whenall thenecessary activitiesrelatedtotheprojectarecompletedonorbeforethescheduleddate(Sezer&Fredriksson, 2021). Thisis a major factor in determining the success or failure ofaproject. It is important for projects to be completed on schedule as it does not only allowfor the project objectives to be achieved within budget, but also bring about increasedefficiency andproductivity. Unfortunately, thisisone areawhereNDDCprojects havenot been fairly treated, leading to their abandonment. To address this ugly phenomenon,projects must be well planned, executed by experienced professionals with the necessarytools to do the job. Most importantly, projects must be adequately funded and monitoredregularlyto avoidabandonment.
In analyzing the indicators of M&E success identified in this study, a critical review of empirical studies creates the understanding that there is no one best indicator for measuring the success of a project, rather the project's

objective determines the most appropriate indicator. The NDDC must therefore clearly define its objectives for easy identification of the indicators used in measuring performance in order to be able to easily track its performance. Generally, projects in the Niger Delta region are aimed at improving the welfare and quality of life of the people in various aspects of their lives. Therefore, timely completion of these projects within budget and according to specifications would be ideal for the NDDC, as project abandonment would have been prevented.

**3.3 M&Estrategya n d projectabandonment**

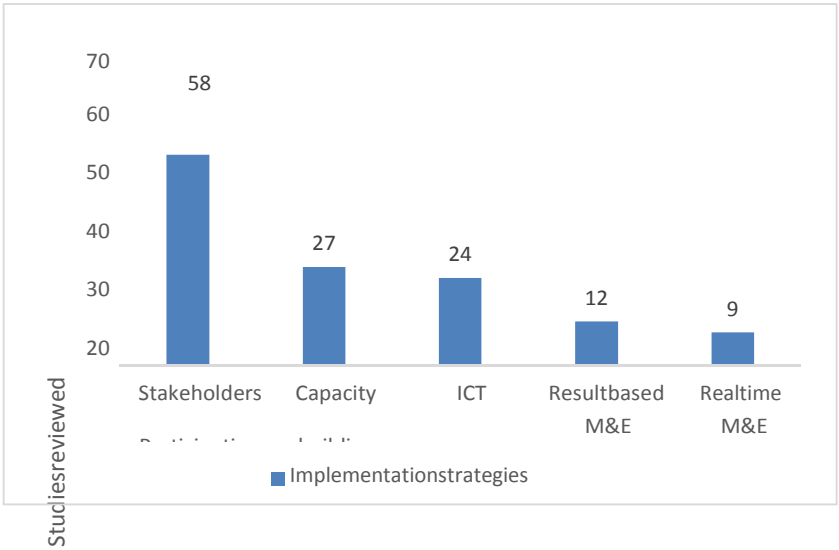


Figure4:M&Eimplementationstrategies

As seen in Figure4,differentM&E strategies were adopted in various studies reviewedall of which have been generally grouped into five, namely: stakeholders' participation,capacitybuilding,InformationandCommunicationsTechnology(ICT),Result-basedM&E, and lastly, Real-timeM&E. Eachgroup contains a number of related strategiesthat have been adopted in ensuring successful project completion. The strategies arediscussedinsubsequentparagraphsbeginningwiththemostfrequentlyusedamongstthestudiesreviewed,whichis"stakeholders'participation"(Koukounari,2011;Govender,2016;Mgoba&Kabote,2020;Holt*etal.*,2021;Kibukho,2021).Stakeholders are people who may be affected by the decisions of an organization or caninfluencetheimplementationprocess(Zhu*etal.*,2022).Stakeholders'participation therefore,involvessharing a commonunderstanding withstakeholdersandinvolvingthem in the decision-making process of a project (Zhu *et al.*, 2022). Participation bystakeholders leads to empowerment and joint ownership of a project. Despite the factthat the strategy requiresmore time, resources and may bemore difficult to implement;the result is an increase in commitment to the project (Lethi*et al.*, 2022). The strategy:allows thatproject plansarea reflection of the real needsandpriorities; allows thevoicesofthestakeholdersbeheardwhichleadstosustainability;andpromotestransparency(Galukande-Kiganda&Nalumansi,2021;Lethi*etal.*,2022).Thisisevidenced in the study of Mgoba and Kabote (2020) who investigated the effectiveness ofPM&Eonachievementofcommunity-basedwaterprojects.Findingsofthestudyrevealed that water projects achieved targeted objectives in increasing water availabilityand reducing time spent by women and girls to collect water for domestic use. Also, theoverall effectiveness of PM&E on achievement of community-based water projects washigh. This strategy has been empirically proven to have worked and led to successfulprojectscompletioninvariouspartsoftheglobe,thereforemakingitanecessarystrategy for adoption by the NDDC in addressing the problem of project abandonment.The strategy is a criticaltool to gaining commitment to NDDC projects, and ultimatelyhas the capacity to increase the chances of projects completion and sustainability, as itsefficacyisnotlimitedtosocialprojects,butextendstoconstructionandotherprojects.

Secondly, 27 studies adopted the use of "capacity building" as the M&E strategy forsuccessful projects completion (Mpofu*et al.*, 2014; Govender, 2016; Mahmood, 2011;Vernooy*et al.*, 2006). Capacity building involves the improvement of an individual's ororganization'sabilitytoproduceorperform(Asuquo&Okon,2020).M&Ecapacity development is intentional and conducted to meet specific needs. This strategy enablesorganizations and their leaders to develop competencies

and skills that can make themmore effectiveand sustainable, thus increasing the potentials to solve society'smostintractable problems (Asuquo&Okon, 2020). This is seen in the study of Mpofu*et al.*(2014) who investigated the M&E of health programs in Botswana, where universitygraduateswithnoexperienceinM&Ewererecruitedandprovidedwithon-the-jobtraining to develop a new cadre of health worker. Three years after establishment of thecadre,anassessmentwasconductedtodocumentachievementsandlessonslearnt.Usingqualitativemeansofdatacollectionandanalysis,findingsrevealedthatthedevelopmentofa dedicatedM&Ecadrecontributed positively to healthinformationsystemsinBotswanabyhelpingbuildM&Ecapacityandimprovingdataquality,management,anddata usageinhealthcare delivery system.

Thirdly,24ofthestudiesreviewedusedICTasthestrategyforeffectiveM&Eimplementation(Lowrence,2007;Zhang,2011;Neupane,2014;Dong*etal.*,2015;Mulatu*et al.*, 2018; Dube, 2021). As seen in the study of Ran (2011) who felt that thestability ofdeepexcavationandadjacentbuildingshasgainedhighlightedconcernsduring metro station construction in China. The study found that a viable and practicalway to ensure the construction safety is by executing real-time monitoring strategy withthe aid of advanced sensing and signal processing technologies. For successful projectimplementationintheNDDC,thereisaneedtointegrateICTintoM&Eprocesssoastoguaranteeshigherqualitydatagenerationinlesstime,lesseffortwithminimalfinancial resources. This will lead to higher efficiency and productivity and subsequentsuccessful projectsimplementation.

Fourthly, 12of the studies reviewed used Results BasedMonitoring andEvaluation(RBM&E)strategytoachievesuccessfulprojectimplementation(Lamhauge,*etal.*,2013,Xue*etal.*,2013;Marshal&Shuarez,2014).AgoodexampleisthestudyofXue*etal.*(2013)whoappliedtheRBM&Esystemtoanalyzeninekeyinfrastructureprojectsatvariousstagesoftheirlifecycle,includingdesign,constructionandoperation. The study found that project performance and successful completion can beachieved by adopting RBM&E throughout the project life cycle. This strategy involves asystematic approach for monitoring performance and evaluating the long-term results ofprojects instead of just short-term output. The strategy enhances the effectiveness ofdevelopmentprogramsandprojectsimplementedbyorganizations.

Empirical evidences have proved that the adoption of M&E is critical in preventing project abandonment, more critical is the M&E strategy deployed in the project implementation process. M&E capacity building which is the second most frequently used M&E strategy in the studies reviewed ensures that the necessary skills are acquired by the relevant stakeholders, however, if the major stakeholders in the Niger Delta region are not committed to the project through active participation in the implementation process, successful implementation will be difficult. Similarly, the application of ICT as M&E strategy is cost effective, guarantees fast data processing and analysis for decision making, however, it requires specialized skills which might be too difficult for other stakeholders in the Niger Delta region to understand and support. The result-based monitoring and evaluation strategy is also suitable for monitoring of NDDC construction projects since it is focused on the performance of long-term results ofprojects as the strategy is rarely designed for short-term projects. For the NDDC to prevent project abandonment, an integration of these aforementioned M&E strategies would play a critical role in serving the purpose with emphasis on the most frequently used strategy amongst the studies reviewed, which is "stakeholders' participation. This allows the stakeholders to be committed and take ownership of the project implementation process.

### 3.4 Why did M&E notwork in certain areas?

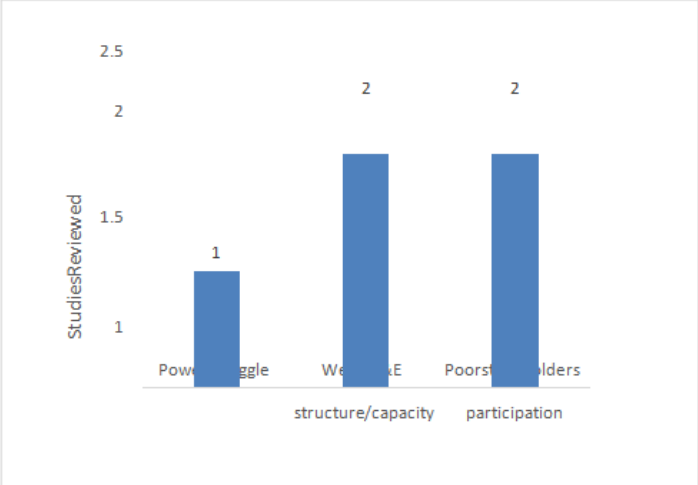


Figure5: Reasons for M&E Failure

Many factors have been found to be responsible for M&E failure in various studiesreviewed, these factors have been grouped into three, they include: power struggle,weak M&E capacity and poor stakeholders' participation as seen in figure 4. Thesereasons are discussed below one after the other beginning with "power struggle",whichsuggestsasituationwherepeopleorgroupscompeteforcontrolorrelevancein a particular sphere (Baodu& Ile, 2019). As earlier mentioned in the study of Baodu and Ile(2019), who observed the consistent failure of skills acquisition and employment generation efforts of the Government of Ghana under an arrangement known as the "Youth Intervention Programmes". The phenomenon was investigated and findings revealed that power struggle amongst the stakeholders in the programme implementation process were responsible for the PM&E's inability to ensure successful programme implementation. In the NDDC, power struggle is anunfortunate reality as the Niger Delta community leaders,youth organizations andthe politicians all struggle to get their share of the "largesse" from the Niger DeltaDevelopmentCommission.Thisimpedesprogress,asitcanleadtounpleasantconsequences (in most cases, project abandonment) which are not good for projectimplementation process.

ThesecondreasonwhyM&Edidnotworkincertainareasis"weakM&Ecapacity", whichrefers tothe inability of individuals or organizationstoperformthe required tasks related to M&E. The individuals or organizations in charge ofprojectsM&Eitherlacktherequisiteskillsandknowledgetocarryouttheirresponsibilities effectively, or simply chose to be corrupt in doing that. This oftenleads to project abandonment as in the case of NDDC. As earlier mentioned, Collistus and Clinton (2016) focused on the entire construction industry of Ghana, and investigated the barriers to successful project implementation in the Ghanaian construction industry. The study found that the implementation of M&E in the Ghanaian construction industry is facedwith the problems of weakM&E capacity among other reasons, leading to the failure of M&E in preventing project abandonment.

ThethirdandlastreasonwhyM&Efailedtoachievesuccessfulprojectimplementationin the studies reviewed is"poorstakeholders' participation',whichiseitherduetolackofknowledgeornon-involvementofrelevantstakeholdersintheprojectimplementationprocess. This is evidenced in the study of Tegan and Aigbavboa (2017) who examined the public construction projects in Ghana and sought to know why most of the projects were abandoned. The study found that there was a high level of stakeholder engagement in project implementation process, but the participation of stakeholders in M&E of public projects was very poor due to lack ofknowledge and time devoted for M&E of projects by stakeholders. These have contributedtothe impediments of successful projectdelivery in Ghana.

In view of the reasons found to have led to the failure of M&E under different circumstances in the studies reviewed, it is recommended that the relationships and roles of allstakeholders must be clearly defined to avoid conflict of interest and, execution of activities of the project mustbe done in the most transparent manner. Furthermore, those who act beyond their legitimateboundaries should be prosecuted toserveasdeterrenttoothers. Similarly, the serious challenge of weak M&E capacity must beaddressed by sending officers concerned for training, workshops and seminars, notonlyontheknowledgeacquisition,butalsoattitudinal change so that the institution can have the capacity to carry out M&E activities seamlessly. This will ensure stakeholders active participation in project implementation process. Finally, giventheempiricalevidencesshowingtheefficacy ofstakeholders'participationasa toolfor successfulprojectcompletion, the NDDCshouldinstitutionalizestakeholders'participationinallitsprojectssothatthestakeholderswillensuresuccessfulprojectsimplementationandputan end to projectsabandonment.

This paper critically examined the role of M&E in preventing project abandonment. To achieve this objective, four research questions were asked, and in answering the first one, it was found thatM&Ewassuccessfullyusedinaddressingtheproblemofprojectabandonment in 96%oftheempiricalstudiesreviewed, it was only in 4% of the studies that M&E did not lead to successful projectcompletion. The second research question revealed the indicators used by various studies to measure successful project implementation, the indicators include: project performance, effectiveness, prevalence rate, safety and lastly, timely completion of project. The third research question found the various M&E strategies used in preventing project abandonment, they include: stakeholders' participation, capacity building, ICT and Resource Based Monitoring and Evaluation. The last research question found the reasonsforM&Efailure in the studies reviewed to include: weak M&E capacity, power struggle and poor M&E participation. In meeting the desires of the NDDC to end the critical challenge ofprojects abandonment, the findings of this study will be useful indeterminingtheM&Etechniquesthatarerelevantandapplicabletoensuringsuccessful project implementation by NDDC. This will go a long way to increase productivityandacceleratetherateoftimely andsuccessfulprojectdelivery withinbudget.

## IV. Conclusion

To reiterate, this paper had two main objectives; first, to critically review extant, high-quality empirical articles on the efficacy of M&E in preventing project abandonment. Second, to develop a practical and comprehensive M&E-Blueprint for the NDDC, this could be used to ensure that all NDDC projects are

successfully completed. The first objective was achieved by critically reviewing 135 empirical studies on M&E published by the most reputable academic publishers in the world. The review revealed that: a) M&Ewassuccessfullyusedinaddressingtheproblemofprojectabandonment in 96%ofthe135 empiricalstudiesreviewed, and only in 4% of the studies that M&E did not lead to successful projectcompletion; b) the indicators used by various studies to measure successful project implementation include project performance, effectiveness, prevalence rate, safety and lastly, timely completion of project; c) the various M&E strategies used in preventing project abandonment include stakeholders' participation, capacity building, ICT and Resource Based Monitoring and Evaluation; d) the reasonsforM&Efailure in the studies reviewed include weak M&E capacity, power struggle and poor M&E participation. Based on the evidences obtained from the critical review and the in-depth knowledge of the authors regarding the Nigerian experience, an M&E-blueprint was developed for the NDDC and the implementation process explained in six (6) interconnected steps. The authors propose that if the M&E-blueprint is wholeheartedly implemented, preventing project abandonment in NDDC will become a reality in the not-too-distant future.

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