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Assessing the Innovative M&E Product Feasibility to Improve Efficiency in Social Programme in India

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Abstract:
Background*: The feasibility study of the product named MONEVA is conducted from 3 dimensions and found that the MONEVA comprehensive M&E service is highly feasible with respect to economic, social, marketing, and operational aspects. The basic prototype is designed and will be presented to one international client for its Indian operation.*
Materials and Methods*: Market feasibility is assessed through collection of primary data from different non-government organizations. Data has been collected with structured questionnaire from 100nonprofit officials from different non-government organization who are responsible for implementing M&E service to ensure differentsocial service delivery in selected study area.*
Results*:It is evident that organizations following 'poor' M&E standard show over 80 per cent of them has huge systemic gap, organizations with 'moderate' standard of M&E show mostly moderate (40 per cent) and lower (40 per cent) gaps, organizations following comparatively 'good' M&E standard have moderate gap. The Kernel density estimate shows that most of the organizations are concentrated in huge gap zone. Almost all the organizations conduct risk evaluation, among organizations that perform evaluations only at the local level, 73 per cent of them only conduct baseline before launching programme and do not conduct any mid-term or end-line evaluation.*
Findings of the study show thatif MONEVA service is implemented it can acquire 75 per cent of the market share if properly promoted. Economic and social feasibility is estimated by cost benefit analysis and it is reflecting higher social and economic benefit will be generated compared to economic and social costs to be incurred.
Conclusion:*To ensure success in all the projections, 2 to 3 international workshops and conferences are to be arranged in the first year where people from different segments of development sector are to be invited to acquire fund.*
Key Word*: Product Feasibility; Process Innovation; Monitoring; Evaluation; Disaster Risk Reduction.*

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I. Introduction

Literature shows that success of business depends on efficiency of managerial practices and potential capabilities of handling projects from planning phase to implementation, monitoring and evaluation[1]. According to different empirical works, to predict success or failure in a business conducting feasibility study is the prerequisite component. On assessing the relevance of feasibility study before initiating new project the research shows 40 per cent business practitioners in the study – managers, experts and management consultants of different organizations – perceive it is highly important and another 40 per cent believe that it is normal to conduct such study before launching a project[2].

Indicators considered in feasibility study are execution time, accuracy in cost estimation, design and implementation technique, transparency in objectives, application of scientific methods in project control, compliance with regulation and law, availability of skilled personnel, equipments etc.[2,3,4]. Another study shows that result based monitoring systems starting from preliminary feasibility assessment to evaluation helps to accurate estimation of returns with optimum use of assets[5]. Studies also reflect that lack of feasibility assessments causes over or under estimation of project costs – found in almost 47 per cent of studied projects[6]. It is evident that most of them increased allocation through revised budget but at the end actual implementation is less than planned implementation[6].

Therefore projects are to assess the timeframe which are scheduled to achieve specific outcomes at a given budget to manage time and cost efficiently to accomplish goals so that value for money can be ensured and sustained[7]. Previous research also has shown that almost 60 per cent projects failed to anticipate risk followed by wrong modifications in time and scope resulting in inefficient resource utilization[8].

After creation of draft business plan, it is evident that the service proposed seems relevant for social development sector as according to previous research, monitoring and evaluation service elements help to achieve programme outcome, determine optimum processes to achieve it in given timeframe and recommends ways to replicate the technical support elsewhere[6,9]. Monitoring consists of ongoing assessment of process and intermediate results while evaluation comprises of periodic assessment of outcome achievements[10].Lack of knowledge regarding context analysis and periodic analysis leads to ignorance about the utility of M&E system as project component in different enterprises. As a consequence, the market for M&E exists in the development sector but the need is underutilized. It can be expected that proper planning of project phases after context analysis may help to feel the need followed by execution[7]. Another study in Kenya shows that among 20 education projects 45 per cent of them utilised fund excellently, 40 per cent used fairly and 15 per cent used poorly while this 55 per cent can be converted to excellent utilization if M&E system can be introduced and effectively run as a significant project component[11]. The current research is presenting the study to examine one M&E product feasibility in the context of India to increase the efficiency of M&E system of the disaster management department in the state of West Bengal.

The current feasibility study has 3 components - Market, Technical or Operational, Economic and SocialFeasibility. This feasibility study will help to assess whether the project is possible, whether it will benefit the intended clients, and how much additional social benefits can be created from the new innovative product.

II. Material and Methods

Study Design: The method followed purposive sampling covering different nonprofit officials in different locations. From literature it is evident that intergovernmental organizations and donors spend 15 to 20 per cent of their programme budget on monitoring and evaluation[11]. Among the sample of 16 nonprofit organizations, 2 organizations work as both donor[1] as well as implementing partner[2]. Other 14 non-profits are implementing partners.

Study Location: The study location covered four disaster prone districts of West Bengal – Malda, Purulia, South 24 Parganas and Murshidabad. The four administrative districts in the state of West Bengal, India were selected depending on the disaster severity, degree of access to public services during and after disaster, performance gaps visible within local service providers.

Study Duration: June 2019 - July 2019.

Sample size: 100non-government M&E and programme officers.

Sample size calculation: To get an indicative assessment of the M&E systemic gap in nongovernmental organizations – one group of prospective clients – a primary study has been conducted in West Bengal state of India covering 16 non-profit organizations. The organizations were selected on the basis of their nature of operation – 2 acts as donor as well as implementing NGO (13 per cent), 5 of them (31 per cent) implement government programmes and 9 of them work for bigger NGO or INGOs at field (56 per cent).

Interviews were conducted with sample organizations inface-to-facemode.

Inclusion criteria:

1. Officials of non-government organizations who provide M&E support to government departments.
2. Officials of non-government organizations who knows the system better and linked to the direct programme implementation.
3. Vulnerable administrative blocks where population subgroups frequently face extreme climatic events.

Exclusion criteria:

1. Community people – The study focused on assessing the feasibility of a M&E product so explored the requirements to filled in the system to improve process efficiency in offering service delivery, so, serving population is excluded.

Procedure methodology:

Market feasibility is assessed through secondary research and primary study on the current M&E practice in non-profit organizations. Keeping in mind the socio-cultural sensitivities, the respondents were asked for free and informed consent.Having the consent, a structured close-ended questionnaire was administered to

[1]Donors distribute fund to local non-profits in order to achieve social development goals of a particular region.

[2]*Implementing partners are organizations which operate locally and implement programmes as per the requirement of the donors to reach those social objectives.*

collect data from the nonprofit officials. The questionnaire included questions regarding gaps in M&E systems and perceived necessities of M&E outsourcing. They were asked questions on nature of operation; fund utilization capabilities; type of M&E system (if they have); focus of monitoring activities; nature, type and scope of evaluations conducted; operational efficiency gained after following M&E techniques.

Statistical analysis: Bivariate analysis is conducted to understand the market feasibility. Based on the resultsestimated future market size, financial, operational, socioeconomic, technical, legal and technological feasibilities are predicted.To measure the strength of M&E system they were asked how far they conduct such activities for project improvement, to prove accountability to management and donors, for compliance check, impact measurement and efficiency of fund utilization. A score was generated using additive method to rank and categorize the respondent organizations into poor, moderate or good M&E standard. In addition to this further, they are ranked as per the M&E system they use indicated by variables describing whether projects monitored with plans at inception, Monitoring results are aggregated periodically, Results are shared with Communities and other Stakeholders, Monitoring results in modification in targets and strategies, Monitoring plans are integral part in evaluation framework, M&E logical framework is separate than main logical framework, leads to design of action plans, involves follow-up, Programme team has enough financial resource and dedicated time for M&E, Acceptance of programme monitoring results among programme team, Degree of integration between M&E team and programme team. According to the variable values lower the score better the standard and the system.
The quantitative data was analyzed using STATA version 14 (STATA Inc., Texas, USA)[12].

III. Result

Market Feasibility

Table no1: From the primary survey of 16 non-profit organizations, it is evident that 12 per cent of them directly provide M&E support to the donor organizations, 31 per cent support the government system and more than 50 per cent provides M&E service to the social implementing institutions. The existingM&E support is exerted at different hierarchies of implementation of social programmes – Gram Panchayat, Community Development Block and District. The relevant visible gap is three-fourth of them depends on external technical consultants to provide M&E service, and they are only successful to bring 70 to 100 per cent accomplishmentfor 43 per cent of the programmes.

Table no1: Nature of the M&E followed in studied organizations

Nature of operation	%
Donor	12.5
Government	31.3
Implementing partner	56.3
Nature of M&E	
District level M&E	31.3
Block level M&E	37.5
GP level M&E	31.3
Structure	
Dedicated M&E division	25.0
Depend on external firms / consultants	75.0
Programme reached outcome	
70 – 100 percent	43.8
40 – 69 percent	56.3

Table no2: To assess the efficiency of the existing M&E system, the focus of the organizations were assessed. It is evident from their reporting that 62 per cent focus on project improvement, 56 per cent tries to ensure higher accountability of the programme, 75 per cent targets on enhancing the performance effectiveness and value for money. However, only 31 per cent of them strongly focus on impact measurement, 37 per cent on ensuring compliance to a great extent. All of them mainly focus on routine activity.

Table no2: Focus of M&E in studied organizations

Project Improvement	%
To a great extent	62.5
To some extent	37.5
Accountability to Management	
To a great extent	56.3

To some extent	43.8
Performance Management	
To a great extent	75.0
To some extent	25.0
Impact Measurement	
To a great extent	31.3
To some extent	68.8
Compliance	
To a great extent	37.5
To some extent	62.5
Value for money	
To a great extent	87.5
To some extent	12.5
Routine activity	
Yes	100.0

Table no3: While examining the existing M&E techniques followed in the organization, it has been evident that 81 per cent of them always monitor projects with plans at inception, data analysis is generally presented with averages and aggregates on monthly basis, but, only 50 per cent of them share the results with the stakeholders on regular basis. Nevertheless, 60 per cent of them use monitoring results to modify implementation strategies. In relation to main programme, 80 per cent of the clients have integrated logical framework – M&E and core programme component and leads to action plan design. There also exists scope for improvement in the acceptance of monitoring results in programme process, technical support for technical conflict resolution at field level and building integrated programme and M&E team.

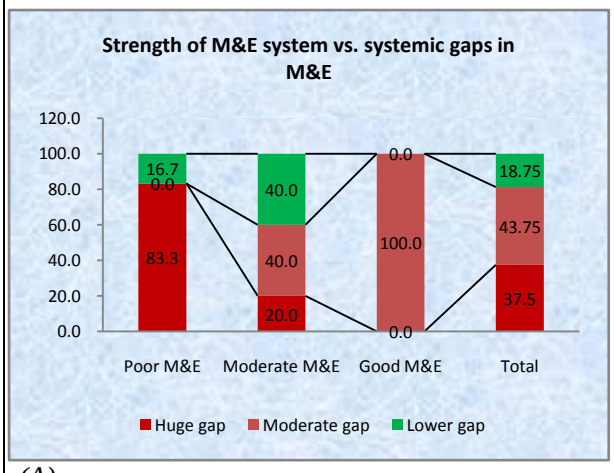
Table no3: M&E techniques followed in studied organizations

	%
Projects monitored with plans at inception	
Always	81.3
Sometimes	12.5
Never	6.3
Monitoring results are aggregated periodically	
Daily	37.5
Monthly	62.5
Results are shared with Communities and other stakeholders	
Always	50.0
Sometimes	43.8
Never	6.3
Monitoring results in modification in targets and strategies	
Always	62.5
Sometimes	37.5
Monitoring plans are integral part in evaluation framework	
Always	68.8
Sometimes	31.3
M&E logical framework is separate than main logical framework	
Always	18.8
Sometimes	81.3
Monitoring leads to design of action plans	
Always	68.8
Sometimes	12.5
Never	18.8
Data collection frequency	
Every 3 Months	50.0
Every 4 Months	6.3
Every 6 Months	6.3

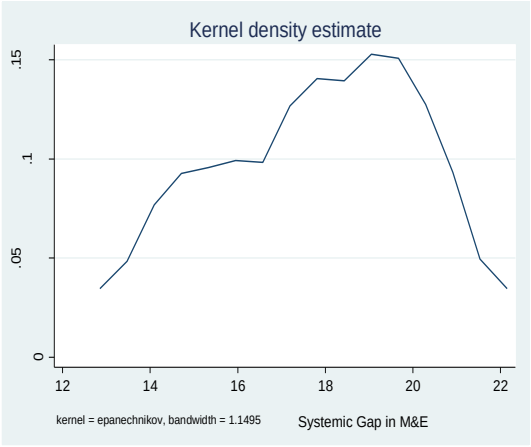
Annually	37.5
Monitoring follow up frequency	
Every 3 Months	31.3
Every 6 Months	68.8
Programme team has enough financial resource for M&E	
Yes	56.3
No	43.8
Programme team has enough time	
Yes	75.0
No	25.0
Acceptance of programme monitoring results amongprogrammeteam	
To a great extent	56.3
To some extent	43.8
Degree of integration between M&E team and programmeteam	
To a great extent	46.7
To some extent	53.3
How integration is established	
HQ has policies regarding conflict resolution	43.8
Field office manages the situation	37.5
Programme person is also member in M&E team	18.8

Table no4: It is evident (Cell A) that organizations following 'poor' M&E standard show huge systemic gap (83.3 per cent), organizations with 'moderate' standard of M&E show mostly moderate (40 per cent) and lower (40 per cent) gaps, organizations following comparatively 'good' M&E standard have moderate gap. The Kernel density estimate (Cell B) shows that most of the organizations are concentrated in huge gap zone. Almost all the organizations conduct risk evaluation, among organizations that perform evaluations only at the local level, 73 per cent of them only conduct baseline before launching programme and do not conduct any mid-term or end-line evaluation (Cell C). Organizations who conduct impact measurement 50 per cent of them follow case-control method. Scope of evaluation is also very narrow as most of the organizations concentrated in the area between the value 8 to 12 – higher values indicating lower scope – measured with whether ensure lessons learnt from success and failure, overcome challenges, improve impact, feeds policy, increases donors attraction, ensures financial efficiency, transparency and accountability (Cell D). Then how far they are successful in gaining operational efficiency is measured through generating efficiency score using same method where variables used are – Programme team changes strategy based on M&E results, Operational system related practice change take place, Detailed documentation through comprehensive report generated to feed policy, Dissemination and discussion on way ahead are conducted –higher values indicating poor efficiency gain and vice versa (Cell E). Results show that distribution density is very high where values are higher - indicating poor efficiency gain. Organizations maintaining M&E at local level 45.5 per cent of them shows evaluations conducted by them improved efficiency in programme implementation to a great extent or to some extent. But who outsourced the M&E task to external evaluator firm gained 100 per cent operational efficiency (Cell F).

Table no4:Strength and gap in M&E system of the studied organizations



(A)



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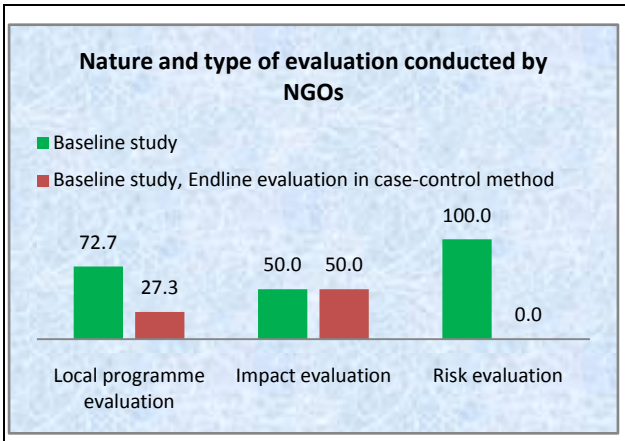

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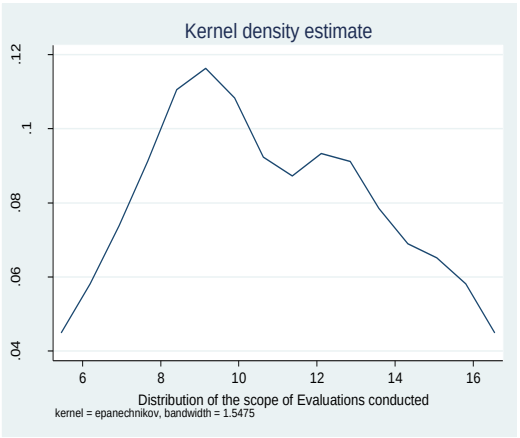

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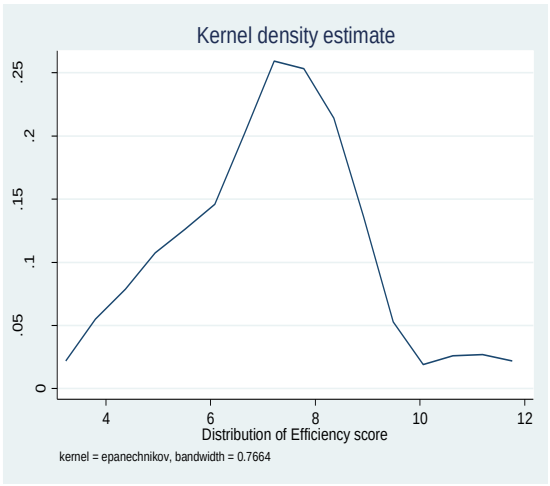
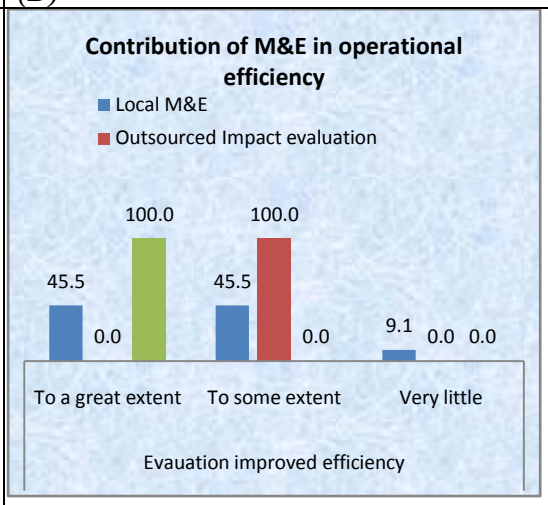


(E)



(F)

Source: Primary Survey 2019

Table no5: It is evident that without MONEVA application one comprehensive M&E project can be completed in a minimum period of the project duration of one programme. Whereas with MONEVA the data collection, entry, cleaning, analysis and report or fact sheet generation will be done much faster so in the same timeframe 3 clients can be served given the same quantity of resource – ensuring cost and time efficiency. As per the table, 35.2 per cent time is required for evaluations, 23.5 per cent for baseline study and action plan design, 41.2 per cent for monitoring purpose. With MONEVA, one project will require 1/3rd time compared to conventional M&E process.

Operational Feasibility

Table no5:Performancetime distribution of project components during the implementation period

	Estimated time for serving one client without MONEVA	**Number of clients can be served within the timeframe. Without MONEVA**	**Number of clients can be served within the timeframe. With MONEVA**
Baseline	17.6	2	5
Action Plan	5.9	2	5
Periodic collection of activity data	20.6	1	3
Producing monthly and quarterly monitoring reports	20.6	1	3
Mid-term evaluation	17.6	2	5
End-line evaluation	17.6	2	5

Source: Primary Survey 2019

Economic and Social Feasibility – Cost Benefit Analysis

Table no6: Economic feasibility can be ensured if benefit accrued from the project exceeds the total cost of the project. In estimating the costs and benefits both financial costs and benefits related to M&E implementation i.e., direct cost and direct benefit as well as social costs and social benefits i.e., indirect costs and indirect benefits are estimated. In 4 intervention districts under social projects, if the total government expenditure was say, € 517.6 million in 2017 – 18 (annual Administrative Report, 2017-18); with new M&E implementation the department of disaster management and civil defence will work in close coordination with all line departments and prepare preparedness, response, recovery and mitigation plan to reduce the impact of disaster on child-centric services offered by them. It is expected to reduce at least 5 per cent government expenditure on social sector in the next financial year. Therefore, socioeconomic benefit to be achieved from new M&E implementation will be € 25.96 million government fund. Therefore the direct benefit from MONEVA implementation in new M&E project and social impact measured by saving of government expenditure – the total socioeconomic benefit will be € 25.89 million.

Table no6:Total Cost and Benefit from project, Socioeconomic Benefit and Net Benefit for 2 years (in Euro)

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Total
Total Cost (Fixed + Variable)	2,520	1,260	3,250.80	3,250.80	4,529.70	3,269.70	3,269.70	4,529.70	25,880.40
Operational expenses	8,694	12,726	8,316	7,434	8,694	7,434	7,434	8,694	69,426
Total	11,214	13,986	11,567	10,685	13,224	10,704	10,704	13,224	95,306
Total Benefit (From project)	6,930	4,158	529.2	1,411.20	4,920.30	1,392.30	1,392.30	4,920.30	25,654
Social Benefit	3244557	3244557	3244557	3244557	3244557	3244557	3244557	3244556.5	25956452.12
Net Socio-economic Benefit	32,40,273	32,34,729	32,33,519	32,35,283	32,36,253	32,35,245	32,35,245	32,36,253	2,58,86,800

The MONEVA

The MONEVA will contain product offering service to provide comprehensive M&E service for enhancing programme effectiveness through different solutions like –

- Baseline analysis,
- Design of Action Plan,
- Periodic collection of activity data,
- Producing monthly and quarterly monitoring reports,
- Data collection, analysis and report under mid-term evaluation,
- Checking implementation based on mid-term evaluation feedback,
- End-line evaluation and report submission.

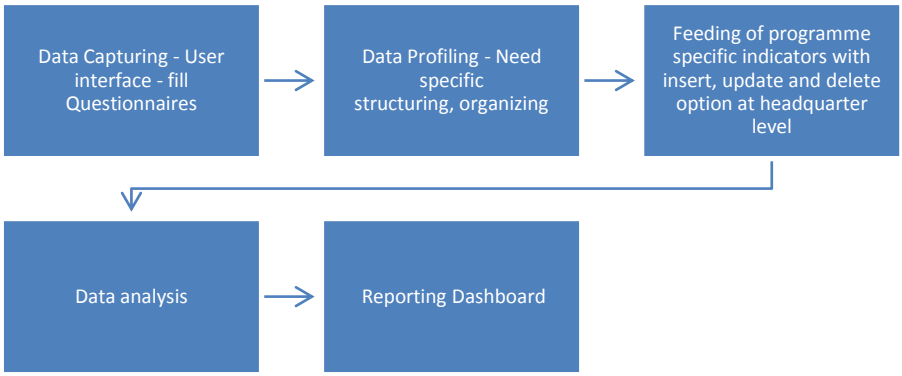
It will be developed using big data analytics with the application of smart methodology – Specific, Measurable, Attainable, Result-oriented and Time-bound – to make more effective with process innovation in the application process as mentioned in another study of[13].

Table no7:MONEVA product has two parts – MONTRAIL and EVATRAIL.There will be one Dashboard, one database and inserted datawillestimate result based monitoring and evaluation indicators to generate reports on dashboard.The main dashboard will have tabs for each project (for example, $Project_1$, $Project_{2,.....,}$ $Project_i$).Each project specific tab will have field specific tabs (for example, $Field_a$, $Field_b$ under $Project_i$ and $Field_c$, $Field_d$ under $Project_j$).Each field and project specific tab will be linked with respective locational databases through ODBC[3] connector. At project level database is to be created after collecting data from each partner who performs activities daily and based on that a dailly database will be created. Under this product, they will maintain daily database which can be accessed through $MIS_{Daily}$and Daily Report Dashboard tab will generate daily factsheet from daily database. There will be another database which will be updated monthly – cumulative data from daily database – can be accessed through $MIS_{Monthly}$ and Monthly Report Dashboard tab will generate monthly factsheet from monthly database.Similarly $MIS_{quarterly}$ at project lavel will access quarterly

[3]Open Database Connectivity

updated database storing cumulative information on quarterly basis and Quarterly Report Dashboard tab will generate quarterly factsheet from that database.

Table no7: The Product



The audience for MONEVA product will comprise of donors and big players in development sector.

Visual Display of the Product, Prototype

Table no8: The MONEVA application is designed as a demonstration version to apply in one project area in West Bengal. The project name is not mentioned following ethical aspects. The project will be implemented in disaster prone vulnerable areas of four districts in West Bengal state of India. The project is childcentredand aims to reduce the impact of disaster on children – an initiative of Department for Disaster Management and Civil Defence, Government of West Bengal and international organization –planned and designed to achieve risk adjusted programme planning and implementation in Health, Nutrition, Education, WASH and Child Protection services. The interventionaims to reduce the vulnerabilities and exposure of children to risk which are responsible for interruption in access to child specific services. It involves steps to strengthen the capacity of DM&CDofficials, sector specific stakeholders to combat the deprivations with proper preparedness, response, recovery and mitigation strategies.

There is one M&E element in the project. It consists of components to assess the existing risks and vulnerabilities in service delivery and access, estimate the increasing gaps in service delivery due to exposure to risk, how far service delivery gets affected during disaster and ultimately how it impacts on child well-being.M&E element aims to reduce child specific vulnerabilities through situation analysis, design of action plan based on analysis followed byimplementation to ensure sector specific delivery of child centric services. In the planning phase the findings of analyses are to be incorporated in district level disaster management plans (DDMP) covering prevention, response, recovery and mitigation aspects related to natural hazards and shocks in four intervention districts -Malda, Murshidabad, South 24 Parganas and Purulia in West Bengal, India. Incorporation of district specific analyses in DDMPs will help the disaster management department and other line departments in optimal allocation of resources in relevant sectoral elements to ensure accomplishment of child related outcomes. MONEVA will help to efficiently implement the M&E with less resource use in terms of cost and time.

Tableno8: AppMoneval Dashboard at district level

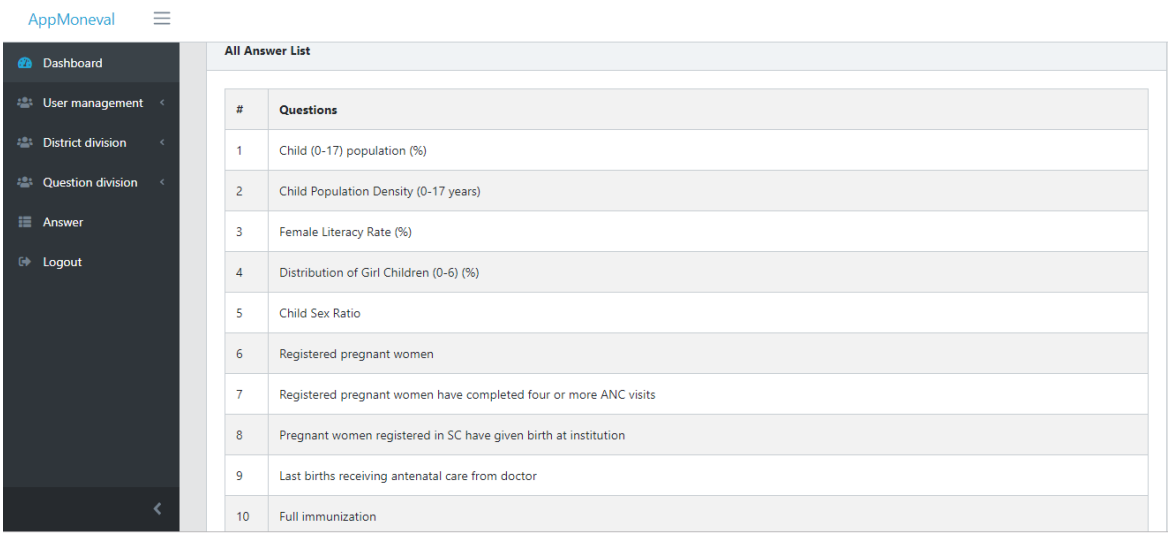


Table no9: The project will tentatively collect monthly data on 50 child specific indicators to analyse temporal and spatial variation of risk and impact of disasters in four districts of West Bengal state of India – Purulia, South 24 Parganas, Murshidabad and Malda.

Table no9: AppMoneval page showing 4 districts under study

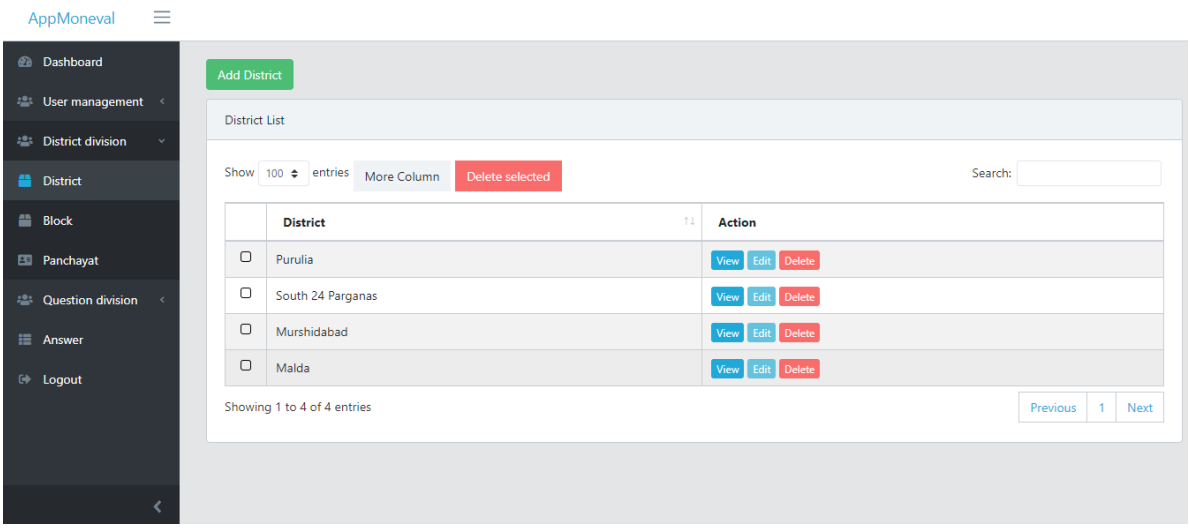


Table no10: The project will tentatively be implemented in 8 community development blocks (next level of administrative jurisdiction after district) listed in the Block dashboard. These blocks are most vulnerable with respect to disaster proneness as exposure to disaster increases the risk of lower developmental achievements and impact of disaster further reduces the progress towards human development - worsening all the indicators further. At ground level data will be gathered at gram panchayat level – the level of local self-governance below the level of community development blocks.

Table no10:AppMoneval page for community development blocks

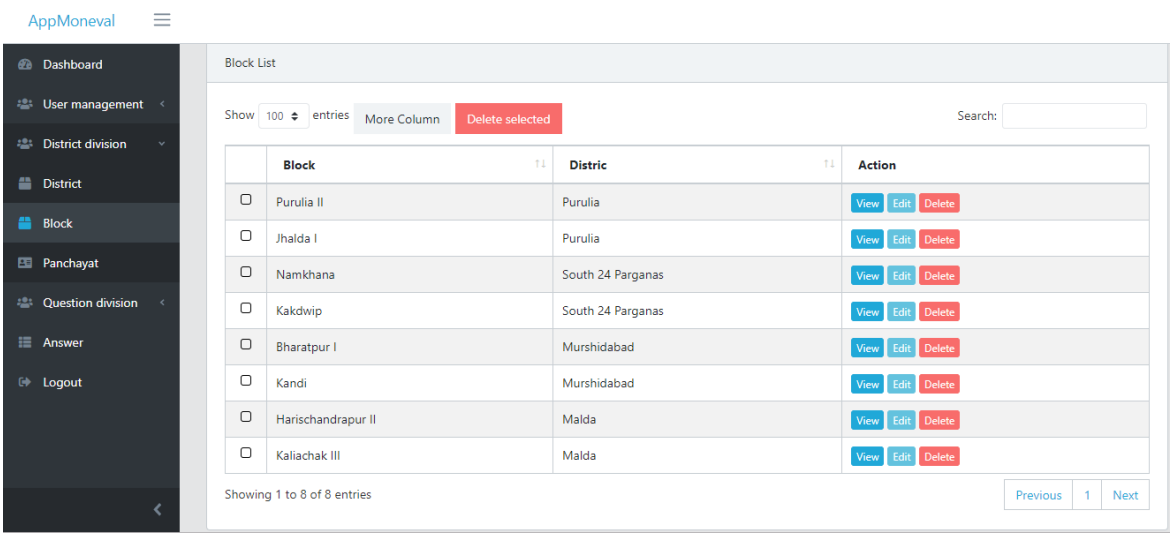


Table no11: It is the panchayat level dashboard showing the names of gram panchayats targeted for intervention to ensure child centric services in disaster prone areas. In each of the levels there are options for insert, update and delete of districts, blocks and gram panchayats. In main dashboard also the quantifiable indicators can be edited, new indicators can be inserted or existing indicators if not required in a particular phase can be deleted.

Table no11: Local self-governance units under study added in the database

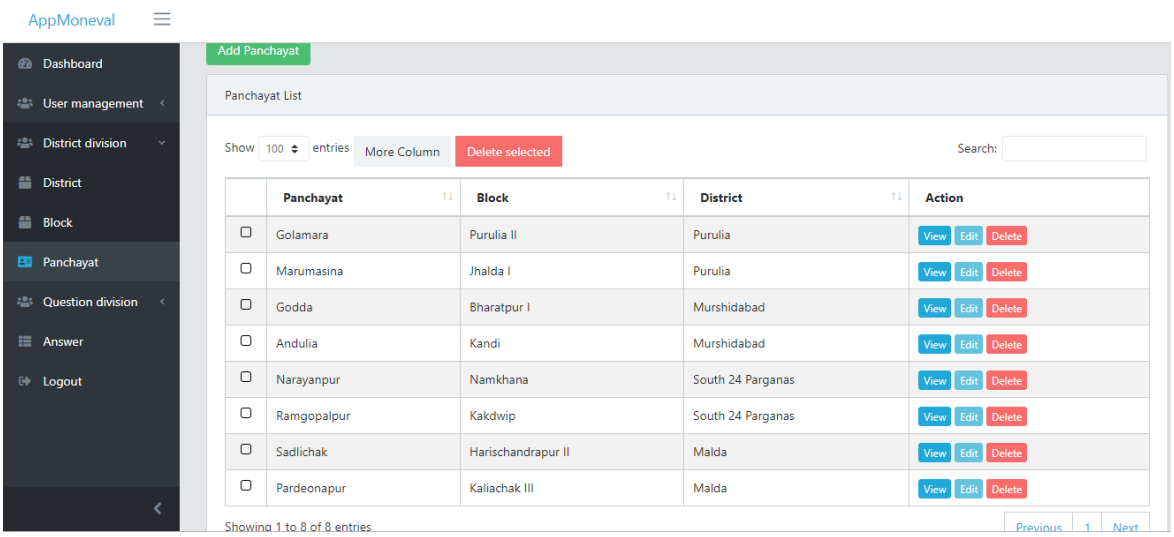
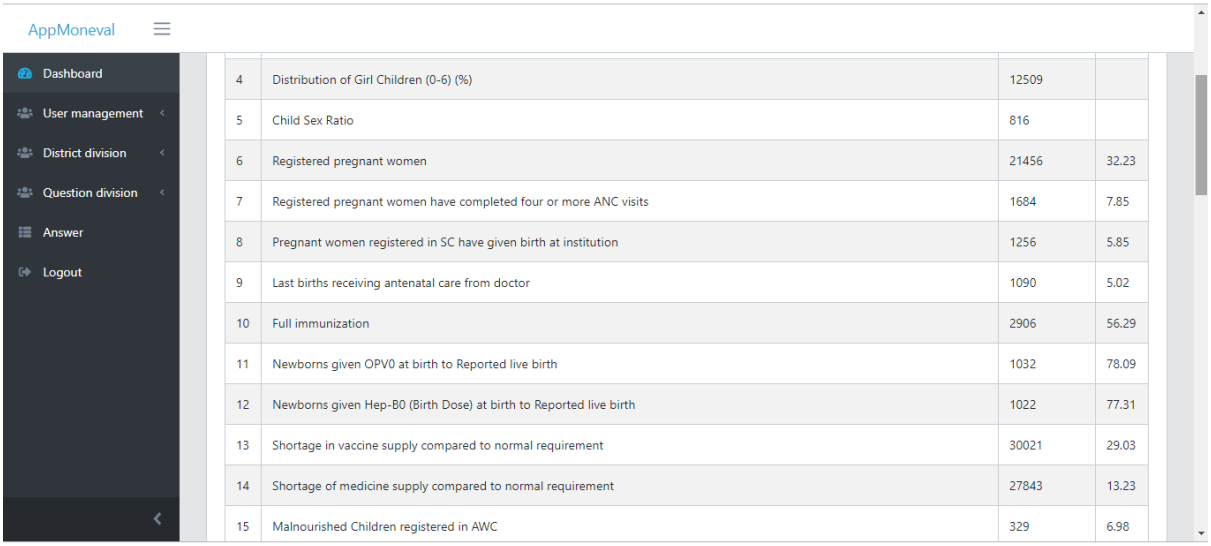


Table no12: Data entry will be done at gram panchayat level to display the demographic profile of children, exposure to risk and impact on children in accessing basic services during disaster with respect to health, nutrition, education, WASH and child protection indicators. Feedback from client will be collected to reflect how far the prototype of the product prove to be cost effective as proposed with respect to data collection, entry and analysis and also whether it saves time as well as ensures data accuracy.

Table no12: Tabular representation of entered data for monitoring purpose



4	Distribution of Girl Children (0-6) (%)	12509	
5	Child Sex Ratio	816	
6	Registered pregnant women	21456	32.23
7	Registered pregnant women have completed four or more ANC visits	1684	7.85
8	Pregnant women registered in SC have given birth at institution	1256	5.85
9	Last births receiving antenatal care from doctor	1090	5.02
10	Full immunization	2906	56.29
11	Newborns given OPV0 at birth to Reported live birth	1032	78.09
12	Newborns given Hep-B0 (Birth Dose) at birth to Reported live birth	1022	77.31
13	Shortage in vaccine supply compared to normal requirement	30021	29.03
14	Shortage of medicine supply compared to normal requirement	27843	13.23
15	Malnourished Children registered in AWC	329	6.98

IV. Discussion

According to previous research works, the application of big data would help the social programme process starting from the enhancement of the decision support system starting from the development of implementation model to execution as reflected in one previous work[14]. Enrichment and incorporation of the SMART methodology by using analytics will help to improve the service quality and control time and cost through tracking of the magnitude and impact it creates; real time process monitoring and evaluation – from data collection to visualisation; client relationship management, found in other studies too[13,15,16].

Literature also have mentioned about the efficient visualisation at different stages of implementation process and current feasibility study has also found that it helps to build more effective analytical foundation for social impact which ensures welfare gain in the society towards achievement of Pareto optimality[17]. Respondents reflected that there are scopes of this kind of utilisation and as per their recommendations, the innovative MONEVA product should deploy big data analytics with more focus on artificial intelligence – will enhance the outcome achievement like discussed in another study[18]. Additionally, the advantage of innovation led process reengineering using big data analytics in analysing unstructured and semi-structured data will also help social organizations to analyse new avenues which were limited previously and thereby enhances the implementation process with efficiency – as mentioned in Tao et al.[13].

V. Conclusion

The current feasibility study has been conducted based on practical experience on client demand and nature of limitation in the implementation process with respect to innovation - prevailing in the market. It can be predicted that to increase the acceptability of the product MONEVA its successful application in the proposed project is recommended. The success will help to scale up the demand for the product in national and international markets. In addition to this further, the market penetration and extension should be supplemented by promotional events and network building activities to generate new projects within the short run. Given the socioeconomic and operational feasibility of MONEVA, the effective implementation models are to be tested and executed.

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