सत्यमेव जयते
NITI Aayog

DEVELOPMENT MONITORING AND EVALUATION OFFICE

M&E @70: STRENGTHENING INDIA'S EVIDENCE SYSTEMS FOR ACCELERATED REFORMS AND INCLUSIVE GROWTH

A Compendium of Essays

March 2022

M&E@70: Strengthening India's Evidence Systems for Accelerated Reforms and Inclusive Growth

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NITI Aayog

M&E @70: STRENGTHENING INDIA'S EVIDENCE SYSTEMS FOR ACCELERATED REFORMS AND INCLUSIVE GROWTH

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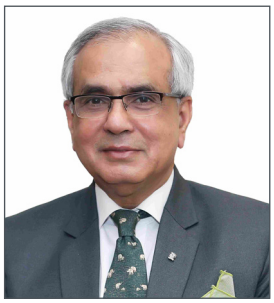


In 2022 India celebrates 75 years of its independence. This year also marks 70 years of the establishment of the Programme Evaluation Organization (PEO) by the Government of India. This marks a formal recognition of the monitoring and evaluation function within the government system. India is at a critical juncture – with future development contingent on carefully designed investments that are implemented efficiently. This will yield the intended developmental outcomes and help achieve our national priorities. Monitoring and Evaluation (M&E) is the cornerstone of this paradigm of output-outcome based performance measurement and public expenditure efficiency.

Since 2015, the Development Monitoring and Evaluation Office (DMEO) at NITI Aayog has supported rigorous, data-driven, citizen-centric, and outcomes-driven program management and policy-making. DMEO has consistently undertaken initiatives to strengthen M&E systems and capacities necessary for addressing the complexities, diversities, and inequities across the country. DMEO is also partnering with States for facilitating cross-learning across all levels of the government.

It has increasingly become evident that M&E is imperative for sustainable development. In this context, DMEO has curated this Compendium of Essays encompassing various themes. These themes address different aspects of strengthening the M&E eco-system at the national and state levels. They will improve the understanding of the challenges in diverse M&E contexts and exploring the potential of data, technology and innovation in M&E for supporting evidence-based policy making. These essays will enable identifying institutional gaps in M&E systems and sharing good practices for course correction.

Cooperative federalism is the cornerstone for achieving the national development agenda. It is therefore imperative that M&E systems are further integrated as part of sub-national planning, implementation, and budgeting processes. This Compendium also includes experiences and lessons learnt from various States in India including Karnataka, Meghalaya and Uttar Pradesh, among others.

The essays cover a variety of relevant topics such as leveraging data for evaluation; formulation of evaluation policies; leveraging technology for monitoring of the delivery of public services; building capacities for evaluative thinking, as well as making evaluations inclusive and sensitive to the needs of the marginalized.

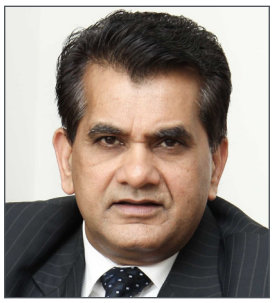
Alongside contributions from the DMEO team, authors from several reputed organisations have contributed to this Compendium. These include the Karnataka Evaluation Authority, National Council of Applied Economic Research, Evaluation Community of India, Centre for Policy Research, Bill & Melinda Gates Foundation, Grassroots Research and Advocacy Movement, World Food Programme and the Population Council of India.

I hope this Compendium will be a valuable resource for promoting M&E learning among stakeholders within and outside the government. My congratulations to the DMEO team that has worked under the guidance of Dr. Sekhar Bonu, DG, DMEO. My gratitude to the distinguished authors from various organizations who have contributed to this Compendium.

Dr. Rajiv Kumar
(Vice Chairman, NITI Aayog)

सत्यमेव जयते

FOREWORD - CEO, NITI AAYOG



Since the Programme Evaluation Office (PEO) was established by the Government of India (GoI) in 1952, there has been considerable evolution of the Monitoring and Evaluation (M&E) systems in the country at the national and state levels. Evidence-based policymaking has become integral to the governance structure in New India.

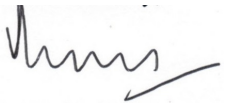
To build a strong M&E ecosystem in the country, the Development Monitoring and Evaluation Office (DMEO) at NITI Aayog has been mandated to actively monitor and evaluate the implementation of schemes, programs and initiatives of GoI to strengthen their implementation on an ongoing basis. DMEO is also collaborating actively with various State Governments to improve outcomes monitoring and institutionalize best practices emerging from the international and national arenas in the domain of M&E.

Sustainable development is not possible without strong M&E systems at both the national and state levels. This requires building institutional and resource capabilities for M&E at the sub-national level; making evaluations inclusive and sensitive to marginalized and vulnerable populations as well as contextualizing evaluation systems to measure the performance of public programs, track key development results, and support evidence-based policy planning and budgeting in states.

These are some of the key themes highlighted in this Compendium of Essays curated by DMEO. The diverse topics include various facets of strengthening the M&E ecosystem in states, capacity building, use of big data, participatory monitoring and optimizing government M&E systems during crises, among others. Alongside the DMEO team, this Compendium includes enriching contributions from highly distinguished experts across various organizations.

I appreciate the work of the team at DMEO, led by Dr. Sekhar Bonu, DG, DMEO. The editorial team consisting of Ashish Desai (Director), Urvashi Prasad (Director), Minal Malik (Research Officer), Veenu Singh (Research Officer) and Siby Christopher (Young Professional), worked under the overall guidance of Shri S.K. Dwivedi, Joint Secretary, DMEO in curating this compendium. DMEO's editorial team was supported by Nandu S. Nair (Academic Associate Economics, IIM Kozhikode).

I hope that this Compendium will be a valuable resource for various stakeholders and promote the sharing of best practices as well as lessons learnt in building robust M&E systems in India, at the national and sub-national levels.



Amitabh Kant
(CEO, NITI Aayog)

FROM THE EDITOR'S DESK

As India celebrates 75 years of its Independence, the country is at an opportune juncture – it is positioned among the fastest-growing large economies of the world with the asset of being home to one-fifth of the world's youth population. Achievement of its development potential hinges not only on investing in the right policies and programmes but also implementing them effectively, wherein Monitoring and Evaluation (M&E), plays a crucial role. However, in a large and diverse country such as India with a federated structure, M&E is all the more complex and challenging. Efforts to strengthen M&E systems and capacities must address complexities, diversities, and inequities. Experiencing an exogenous event such as the Covid-19 pandemic, has highlighted the importance of innovation in M&E.

This compendium of essays explores topical issues and trends for strengthening the M&E ecosystem. It is a curated invitation for papers from thought leaders, academicians, and policy makers.

The essays cover a broad range of topics from policy formulation, to use of technology and the role of capacity building in M&E. National policy is imperative for optimal utilization of resources but also to systematize the evaluation process and practice. The essay "**Evaluation Policy at The Core of Evaluation Eco-System**" highlights the importance of a coherent national policy for evaluation at the Central and State levels. Karnataka is one of the first States in the country to evolve an Evaluation Policy in 2000. Over time, the State has developed a strong planning, monitoring and evaluation system in a decentralized, multi-dimensional and participatory manner for pooling knowledge and resources by involving different stakeholders, including the public, private sector and civil society. "**Strengthening the M&E ecosystem in States: Experiences from Karnataka**" articulates the approach, challenges, and benefits of executing data management systems, for enabling effective M&E systems.

Apart from having a coherent policy, in the current Volatile, Uncertain, Complex and Ambiguous (VUCA) world, M&E has to be capable of addressing the uncertainties of exogenous shocks. The essay "**A Framework for Optimizing Government Monitoring and Evaluation Systems During Crises**" articulates, an M&E implementation framework to address the challenges of the VUCA world.

The M&E Framework needs to be supported by appropriate methodology and tools. While gold standard evaluations involve carefully calibrated before-and-after research designs, real-world policymaking and exogenous shocks often do not allow for planned evaluations

with phased programme implementation. The Essay titled "**Leveraging Longitudinal Data for Evaluation**" highlights how monitoring instruments can be pivoted into evaluation instruments with a longitudinal focus and incorporation of a causal lens. While we explore causality, it is imperative to go beyond "causality" to understand the "Why" and "How". The Essay titled "**Mixed Methods in Evaluation: Beyond "causality"; to understand the 'Why' and 'How**" highlights how mixed methods can strengthen M&E.

Use of data not only necessitates availability of data but also a cultural perspective. Supporting the mixed method approach in the Essay, "**Building capacities for evaluative thinking and learning in Indian states: centering the role of values and norms**" the authors draw on their experience of working with the Government of Meghalaya to center values and norms as a critical precursor to decision-making for evaluation. The Essay highlights the importance of long-term, process-focused, mixed-method, complex evaluations and the capacities that are required to support them. "**Capacity Building of National Rural Livelihood Mission Personnel on Evaluations and Data Utilization for Evidence-based Decision Making**" further amplifies importance of capacity building, especially for large-scale scheme evaluation programs. Culture and capacity are an integral part of successful M&E. "**Developing a Culture of Evidence Use: Experiences from Uttar Pradesh**" articulates a culture of data use for decision making in the Health Department of Government of Uttar Pradesh supported by the Uttar Pradesh Technical Support Unit (UPTSU).

In evidence-based policy making, quality of data is key, and technology can be leveraged for the same. Using a case experience, the Essay titled "**Community Monitoring for strengthening responsible participation leveraging ICT**" highlights how simple communication technology can be leveraged for unbiased, free and efficient participative monitoring. Moving beyond survey and administrative data; the essay "**Big Data: Transforming Evidence based Policy Making**" highlights how governance can be improved, made more efficient and effective through the use of Big Data.

Development must be inclusive of the marginalized classes as well. "**Inclusivity in Evaluations and Equity-Centric Budgeting",** attempts to underscore the role of equity-centric evaluations for empowering marginalized groups while maintaining utmost sensitivity to their needs and requirements. One of the important dimensions of inclusivity is accessibility and affordability of food. The Essay, "**Road to Zero Hunger: Review of Evidence on India's Food Safety Nets**" undertakes a review of available literature on the effect of food safety nets on achieving food security and improving nutrition outcomes for the beneficiaries.

The Essay "**Enabling Coherence in Monitoring by Breaking Informational Silos**" details how India's ability to break information silos can pave the way to a new phase of equitable, efficient, effective and sustainable resource utilization. In "**Improving States' Capacities for Responsive Social Protection Systems**", the author describes the relevance of building State capacity for designing, implementing, and financing social protection.

We are grateful to Honourable Vice Chairman, NITI Aayog; CEO, NITI Aayog; DG, DMEO and Shri S.K. Dwivedi, Joint Secretary, DMEO for their encouragement and guidance in putting together this compendium. We are also thankful to all the authors who shared

their contributions with us in a limited timeframe. Finally, this publication would not have been possible without the hard work and dedication of our team – Nandu S. Nair, Siby Christopher, Minal Malik and Veenu Singh.

We hope that this Compendium will provide valuable insights for strengthening the M&E ecosystem in the country.

Ashish Desai
Director – DMEO, NITI Aayog

Urvashi Prasad
Director – DMEO, NITI Aayog

BUILDING CAPACITY FOR LEVERAGING LONGITUDINAL DATA FOR EVALUATION

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1. Introduction

A fundamental tenet of impact evaluation involves examining causal linkages that help establish how an intervention affected key outcomes and constituencies, whether positively or negatively. Randomized Control Trials (RCT) have emerged as the gold standard for establishing causal linkages. However, it is often impossible to randomly assign individuals to control and treatment groups in real-world policymaking due to ethical or practical considerations (White & Raitzer, 2017). Moreover, programs that succeed during trials often do not fare well when scaled up (List, Suskind, & Supplee, 2021)^BT or efforts at ensuring internal validity focuses on what works and not why it works (Deaton & Cartwright, 2018), consequently we may find that what works in Uttar Pradesh does not work in Kerala.

This implies that instead of putting all our eggs in one basket, it would make sense to think of non-experimental or quasi-experimental designs for impact evaluation. One strategy is to leverage existing data collection systems. Using the monitoring framework for Sustainable Development Goals provides an exciting opportunity for building such linkages. Almost all state planning departments are undertaking surveys for SDG monitoring. If these surveys can be planned to serve the goals of impact evaluation in critical domains, considerable serendipitous benefits can be achieved.

As the examples below suggest, a variety of longitudinal survey designs can be used in impact evaluation.

2. Natural Experiments

A rapidly transforming society offers tremendous opportunities for undertaking impact evaluations. Many Centrally Sponsored Schemes in India are expected to be applied nationally. However, states may find it challenging to implement these schemes simultaneously through the state and may undertake phased implementation. Moreover, states often have latitude in structuring the execution mode and may also supplement some of the benefits from their own resources. This provides tremendous opportunities for comparing programmes at varying levels of intensity.

An example evaluating the impact of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) illustrates. India Human Development Survey (IHDS), organized by the National Council of Applied Economic Research and University of Maryland, USA, conducted over 40,000 households across India in 2004-5 and 2011-12. MGNREGS was implemented in 2006. Since the same households were in 2004-5 and 2011-12, this survey provides an interesting opportunity to compare household well-being before and after the implementation of MGNREGS. Since MGNREGS implementation varied substantially across states and villages in any given district, this variation provides an interesting opportunity to understand the opportunities offered by access to employment during lean seasons. Figure 1 (Desai, Vashishtha, & Joshi, 2015) describes the trend in borrowing from the moneylenders, who typically lend at much higher interest rates than banks and microcredit programmes over this period in time. Results show that as formal credit became more available during this period, reliance on moneylenders declined nationwide. However, the decline was much sharper in villages with well-functioning MGNREGS and households that could obtain work in MGNREGA.

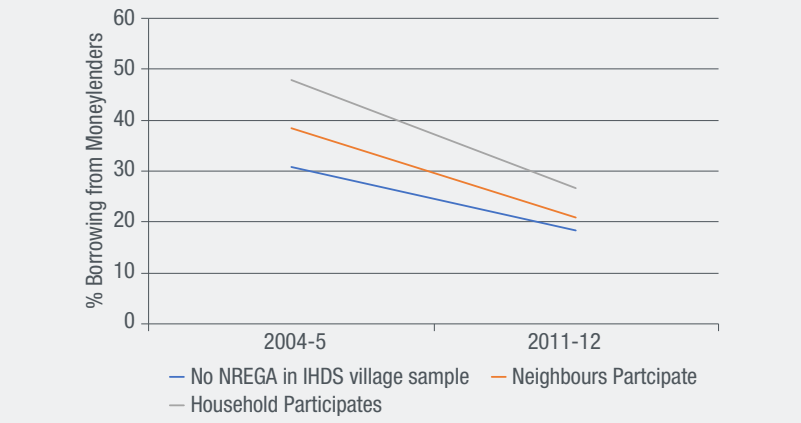

Fig 1: *Percentage of Rural Households Borrowing from Moneylenders, 2004-5 and 2011-12*

Source: *Desai, Vashishtha, and Joshi, 2015. P. 119.*

3. Heterogeneous Impacts

The IHDS data also provided an opportunity to study the impact of improvement in transportation on women's ability to participate in non-farm work (Lei, Desai, & Vanneman, 2019). Comparing men's and women's participation in non-farm work shows that villages that gained roads between 2004-5 and 2011-12 allowed both men and women to improve access to non-farm work by easing their commutes to nearby towns. This impact was greater and statistically significant for women but not for men since even before the roads were constructed, men could walk to nearby highways and find some mode of transportation which was difficult for women. However, opportunities offered by improved transportation had far more significant impacts in villages in which gender norms were more permissive when it came to women's participation in public life. In areas where gender norms were more restrictive as measured by the proportion of women who practiced ghunghat, it was more difficult for women to take advantage of improved transportation.

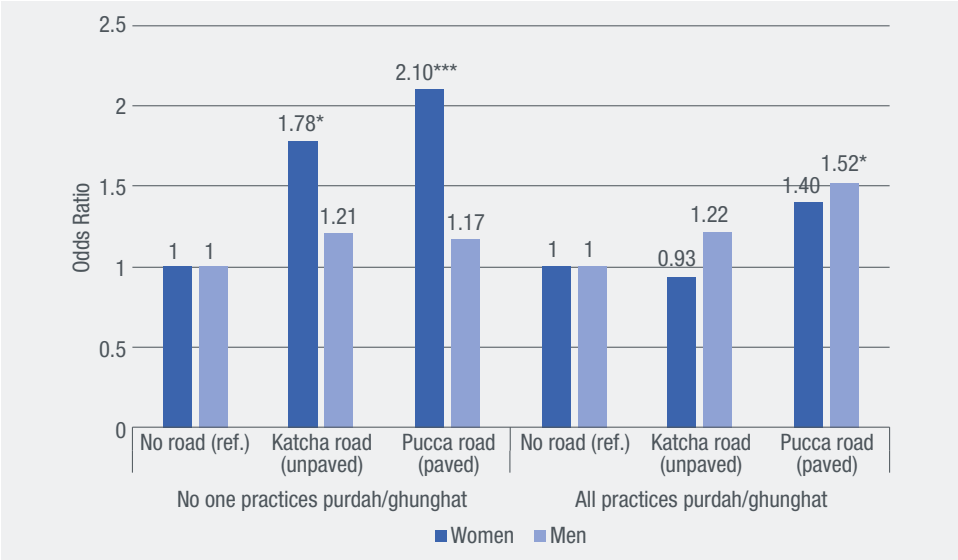

Fig 2: *The Effect of Road Access on the Odds of Rural Women's and Men's Non-agricultural Employment (RelaCve to Agricultural Employment), by Community Gender Context*

Source: *Lei, Desai and Vanneman (2019) P. 117*
Note: ****, **, * denote statistical significance at the 1, 5, and 10 percent levels, Respectively*

4. Unexpected Events

The pandemic has demonstrated the limit of our ability to undertake research in the face of disaster. When data collection structure was already in place, it was far easier to explore the impact of the pandemic than where new data collection systems had to be established from scratch. National Council of Applied Economic Research had begun data collection in the NCR region under Delhi Metropolitan Area Study in 2019. This study had a face-to-face interview and a telephone interview component. The telephone interviews included monthly 5-minute phone calls to collect data on employment of selected respondents, men and women ages 21-49 over the prior month. These surveys were continued throughout the pandemic, allowing for monthly data on employment for the same respondent and during the lockdown. Additionally, it was possible to contact respondents from the face-to-face survey sample to develop a representative sample of Delhi NCR residents to explore the impact of a pandemic.

Fig 3: *Predicted probability of different types of work before and during lockdown for men and women*

Source: *Based on Desai, Deshmukh and Pramanik (2021).*

The results suggest that most job losses occurred among men, contrary to the media claims. Women were somewhat protected because they tended to engage in farming, allied activities, and other forms of self-employment that were largely exempt from the restrictions placed by the lockdown. However, when we look at only loss in wage work, women experienced were relatively more disadvantaged than men (Desai, Deshmukh, & Pramanik, 2021).

These data also revealed greater vulnerability among urban households than rural households, highlighting the challenges facing urban informal sector workers. This study found that although the lockdown affected the urban poor more than the rural poor, safety net mechanisms were skewed towards the rural area and may partially explain the

urban to rural migration witnessed during the lockdown (NCAER National Data Innovation Centre, 2020).

5. Types of Longitudinal Studies

The examples above illustrate the opportunities longitudinal surveys can offer for impact evaluation using both prospective designs. It is also possible to conduct longitudinal research using a retrospective design that includes questions about past events and experiences. Still, in the interest of brevity, these are not included here. Below, I briefly describe different types of longitudinal studies and their advantages and shortcomings.

6. Repeated Cross-Sections in the Same Villages/Blocks

Instead of drawing fresh samples of villages and blocks for each maternal and child health survey, it may make sense to undertake surveys within the same villages and blocks, even if new households are selected each time. This would minimize respondent burden but allow the analyst to compare changes in the same area as infrastructure facilities and programme implementation change over time. For example, the impact of door-step delivery of vaccination services may depend upon the village's location. Households in a developed village where health services are readily available may not benefit from a door-step delivery programme as much as more remote villages. Thus, tracing the impact of localized programmes may require data collection within the same villages and urban blocks.

7. Repeated Surveys of the Same Households

The examples from IHDS and DMAS above involve interviews of the same households at different times. By allowing us to study change over time in the conditions of the same households, these panel studies offer an opportunity to imitate a pre- and post-intervention approach of RCTs. However, they also involve some challenges such as a collection of re-contact information to ensure that the same households can be located when the next round of data collection takes place; reducing differential attrition which may lead to a biased sample; and periodically refreshing the original sample to ensure new migrants are included. Despite these challenges, repeat surveys of households have been used extensively worldwide to provide impact evaluations. One of the most important and widely cited panel studies, Panel Study of Income Dynamics (PSID) in America, has been conducted for over 50 years with periodic sample augmentation and has yielded a large number of studies evaluating the impact of a variety of programmes and events (Johnson, McGonagle, Freedman, & Sastry, 2018).

8. Repeated Surveys of the Same Individuals

Given the complexities involved in maintaining household panels, many studies focus on individuals as their sampling unit and try to follow them regardless of their location. One of the benefits of studying individual panels is that it allows researchers to study the impact of programs over a more extended period of individuals' life. Some of the

interesting studies of this genre in India include research on the effects of participation in ICDS on subsequent health or learning outcomes (Vikram & Chindarkar, 2020) and the impact of husband's migration on the health of left-behind wives (Lei & Desai, 2021). Individual panels have been used successfully in various contexts for impact evaluation for long-term outcomes in many countries. They have a well-established framework that can be followed more quickly than household panels since they focus on single individuals and not a family group.

9. Building Capacity to Undertake Longitudinal Studies

Undertaking longitudinal analysis requires both pieces of training in structuring data collection and planning. However, a tremendous amount of data collection is currently taking place via monitoring studies carried out by the state Planning Boards. Most of these studies are cross-sectional, but with some foresight and planning, critical features of longitudinal studies can be easily incorporated. In the section below, I focus on what it would take to build capacity for undertaking longitudinal research in state Planning Boards. Still, it also applies to other ministries and departments that undertake monitoring studies (e.g., studies of migrants done by the Ministry of Labour and Employment).

Three aspects of developing the capacity to undertake longitudinal research are important: (1) Learning about different types of longitudinal studies and statistical techniques for analyzing longitudinal data; (2) Future-proofing monitoring and cross-sectional studies to preserve the possibility of turning them into prospective longitudinal studies; (3) Getting hands-on experience in designing and analyzing longitudinal data.

10. Learning Activities

1. **Studying Examples of Longitudinal Research:** Besides some of the readings above, there are many exciting examples of longitudinal research (Himanshu, Lanjouw, & Stern, 2018; Thorat, Vanneman, Desai, & Dubey, 2017).
2. **Reading Methodological Literature on Longitudinal Research Design:** Lambert and Gayle (2004) have a good reading list. *Longitudinal and Life Course Studies: An International Journal* offers excellent articles.
3. **Analyzing Existing Longitudinal Data Sets:** Besides the India Human Development Survey, WHO Sage surveys also offer Indian datasets that can be used for longitudinal research.

11. Future-proofing Cross-Sectional Studies

1. **Obtaining Identification and Recontact Information:** Following individuals, households, or communities over time requires ensuring that researchers contact these units. This involves:
    a. Collecting data on the location of villages and blocks, ensuring block maps and boundary information is preserved and collecting Local Government Directory ID so that external information about the communities from other sources

can be superimposed on any given data. Obtaining contact information about village Pradhan or RWA president is helpful, as is information about travel routes to the village.

b. Household address, phone number, name of relatives/friends who can provide information about the household, and GPS coordinates of the family would make it easier to trace the households.

c. Individuals' age, birthdate, full name, phone number, email information, and recontact information for the household make it easier to trace the individuals. It is essential to avoid writing down nicknames and collect data on full names. Many families call little girls Munni, but when the interviewers revisit, she may be known by her formal name. Parents' names will also help identify the individual.

2. **Obtaining Recontact Permission:** While Data Protection Bill is still under review, it would be helpful to develop a study plan that allows for potential recontact in cases where a longitudinal study is envisaged. This would require consent from respondents to store their identification information and permission for a return visit. Consent forms should be modified to include this.

12. Undertaking Longitudinal Studies

Some of the considerations for undertaking longitudinal studies include:

1. **Repeated Cross-Section in Same Communities**: This is low-hanging fruit. Most Planning Departments routinely carry out surveys for monitoring a variety of indicators. Undertaking surveys in the same locality would allow the study of changes over time while holding community factors and geography constant. Obtaining some community information through a community module that contains information about village or urban infrastructure (e.g., distance to the PHC or proximity to the highway) would help in analyzing how changes in various indicators being measured change over time and whether the changes are more significant for areas with better transportation.

2. **Repeated Surveys of the Same Individuals**: Growth monitoring for young children or antenatal/postnatal care for women may lend themselves very well to a short panel. Since the interviewer would visit the households in rapid succession (e.g., in the 2nd trimester of pregnancy, 3rd trimester of pregnancy, and six weeks after birth), it would be easier to track the individuals. If the interval between two interviews is longer, ensuring that the individual is contactable is somewhat more challenging. However, panel studies in rural areas have been quite successful given India's low level of migration. Urban tracking is a little more complicated. Note that non-contact may occur due to different reasons such as inability to find the individual, their or their guardian's refusal to be interviewed, or death. These various reasons for non-interview should be coded separately to aid in analysis.

References

1. Deaton, A., & Cartwright, N. (2018). Understanding and misunderstanding randomized controlled trials. *Social Science & Medicine, 210*, 2-21.
2. Desai, S., Deshmukh, N., & Pramanik, S. (2021). Precarity in a Time of Uncertainty: Gendered Employment Patterns during the Covid-19 Lockdown in India. *Feminist Economics, 27*(1-2), 152-172. doi:10.1080/13545701.2021.1876903
3. Desai, S., Vashishtha, P., & Joshi, O. (2015). *Mahatma Gandhi National Rural Employment Guarantee Act: A Catalyst for Rural Transformation*. New Delhi: National Council of Applied Economic Research.
4. Himanshu, Lanjouw, P., & Stern, N. (2018). *How Lives Change: Palanpur, India, and Development* New Delhi: Oxford University Press.
5. Johnson, D., McGonagle, K., Freedman, V., & Sastry, N. (2018). Fifty Years of the Panel Study of Income Dynamics: Past, Present, and Future. *Ann Am Acad Pol Soc Sci, 680*(1), 9-28. doi:10.1177/0002716218809363
6. Lei, L., & Desai, S. (2021). Male out-migration and the health of left-behind wives in India: The roles of remittances, household responsibilities, and autonomy. *Social Science & Medicine, 280*, 113982. doi:https://doi.org/10.1016/j.socscimed.2021.113982
7. Lei, L., Desai, S., & Vanneman, R. (2019). The Impact of Transportation Infrastructure on Women's Employment in India. *Feminist Economics, 25*(4), 94-125. doi:10.1080/13545701.2019.1655162
8. List, J. A., Suskind, D., & Supplee, L. H. (Eds.). (2021). *The Scale-up Effect in Early Childhood and Public Policy: Why Interventions Lose Impact at Scale and What We Can Do About It*. New York: Routledge.
9. NCAER National Data Innovation Centre. (2020). Delhi NCR Coronavirus Telephone Survey Round 3: Preliminary Report.
10. Thorat, A., Vanneman, R., Desai, S., & Dubey, A. (2017). *Escaping and Falling into Poverty in India*. Underr review.
11. Vikram, K., & Chindarkar, N. (2020). Bridging the gaps in cognitive achievement in India: The crucial role of the integrated child development services in early childhood. *World Development, 127*, 104697. doi:https://doi.org/10.1016/j.worlddev.2019.104697
12. White, H., & Raitzer, D. (2017). *Impact Evaluation of Development Interventions: A Practical Guide*. Retrieved from Manila: https://www.adb.org/sites/default/files/publication/392376/impact-evaluation-development-interventions-guide.pdf

STRENGTHENING THE M&E ECOSYSTEMS IN STATES EXPERIENCES FROM KARNATAKA

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Karnataka Evaluation Authority

1. Introduction

The recent revolution in data management systems, has spurred a slow but steady evolution in the field of monitoring and evaluation systems involving a movement away from traditional implementation- based approaches to development planning towards new evidence -based and outcome focused approaches to maximize gross welfare with optimum utilization of resources. For ex. in health programmes, it is not enough to simply implement health programs, construct hospitals and provide infrastructure and assume that successful implementation is equivalent to actual improvements in public health. One must also examine outcomes in terms of decline in incidence of diseases, decline in mortality rates, and impacts in terms of better health for all, improvement in health index and quality of life. This is also strengthened by growing public awareness to assess the performance of the government periodically in terms of efficiency and outcomes of public expenditures. The introduction of a results-based M&E system therefore, takes decision makers a step further in assessing whether and how goals are being achieved over time and thus making the system accountable for public welfare.

An evidence-based approach to policymaking is now being accepted as an effective tool to improve policy outcomes on the assumption that better quality decisions will be made if the process is informed by robust evidence. With this structured approach to evaluation, knowledge generated can be used to improve practice, allowing successful programs to develop iteratively over time. Rigorous evaluation can end the spinning of wheels and bring more effective social policy outcomes. At global level, J-PAL has shown that how complex development challenges can be solved with data analytics and evidence-based decisions. (J-PAL OES-2015).

In India the evaluation culture and practice were institutionalized through establishment of an independent Programme Evaluation Organization (PEO) in October 1952. (Dr S Chandrashekhar) & later an Independent Evaluation Office of Planning commission in 2010 for evaluation of Govt. programmes and schemes. However, the culture of evaluation was not able to establish identity due to lack of demand. There were questions of autonomy also. Now the agenda is taken forward by Development Monitoring & Evaluation Office of NITI Aayog. The efforts are on to strengthen the M&E ecosystem at the Centre and in the States.

2. M&E Ecosystem at Sub- Regional Level- Karnataka Model

Evaluation must satisfy a need. “What is involved is a complex mixture of institutional pre-conditions, political culture, exposure to intellectual traditions, as well as sectoral concerns dominating the political discussion ...” (Furubo, Rist, and Sandahl 2002, p.16).

Establishing a M&E ecosystem at sub-regional level pre-requisites the following:

- Readiness of the system- Government commitment & Basic Institutional arrangements
- Agreement among Departments to evaluate the schemes -ownership and accountability.

- Establishing data base -secondary & Primary
- Documentation of Physical & Financial progress.
- Monitoring the indicators.
- Establishing evaluation system and process
- Evaluation reports- findings and suggestions.
- Action taken on reports by stakeholders- follow up process
- Governance outcomes and Sustainability

(Based on Jody and Rist, 2004)

Karnataka had a favourable environment enabling it to meet many of these basic requirements. Karnataka was one of the first States in the Country to adopt an Evaluation Policy in 2000. An evaluation division of Planning Department was overseeing the Evaluation of schemes and Programmes. An evaluation system and culture were established with departments participating in it. Later, for facilitating independent evaluation of Schemes/programmes, Karnataka Evaluation Authority (KEA) was set up vide Government of Karnataka order no. PD/8/EVN (2)/2011 dated 11th July 2011 and registered as a Society vide registration number DRB-C/SOR/140/2011-12 on 19th September 2011 under the Karnataka Societies Registration Act, 1960. It functions under Planning, Programme Monitoring and Statistics Department (PPMS).

The State has established a strong data base and monitoring platform required to implement a result-based management system. The **Directorate of Economics and Statistics** (DES) is continuously involved in broadening and deepening the data base and provide all the relevant data for effective planning of schemes and activities and devise KPIs for designing effective monitoring tools. DES is a data mining platform; it has been empowered to act as Nodal Agency by Government in respect of all the statistical activities of the state and to provide advice to all the government departments on all the statistical matters. Statistical data on various socio-economic activities of the state are being collected, processed, analysed and published on regular basis.

The Directorate prepares estimates for Gross State Domestic Product (GSDP), Gross Districts Domestic Product (GDDP), Per capita Income of the State and Districts, Wholesale and Retail Price Index, Annual survey of Industries, Estimation of Area, Yield and Production of various crops grown in the state during kharif, rabi and summer seasons, reconciliation of crop area statistics, conducting sample check on important developmental programmes, National Sample Survey, Agriculture Census, Economic Census, Registration of Births and Deaths and publishing various reports. In addition to this, the Crop Insurance Scheme Division conducts crop cutting experiments on major selected crops through mobile app and estimates average yields at the Gram Panchayat, Hobli, Taluk and District wise for settlement of insurance claims to the farmers for crop loss by Agriculture Department.

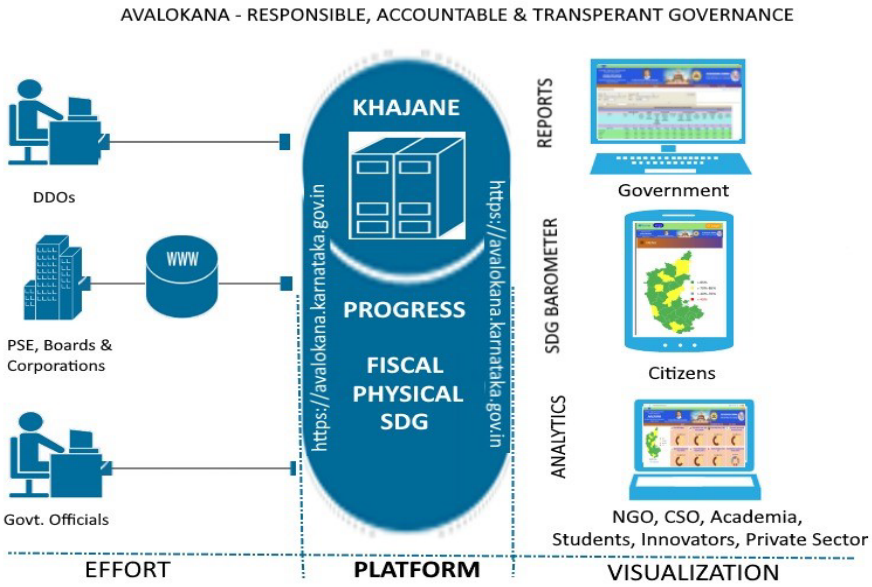
The Directorate publishes important publications called “Karnataka at a Glance” (GoK2021) and “District at a Glance” every year which contains taluk/district level information, linking with the Geographical Information System developed by Karnataka State Remote

Sensing Applications Centre (KSRSAC). These publications contain information about 2000 parameters both static as well as dynamic (Population Census, Agricultural Census and Animal Husbandry Census) on yearly basis. The information is available on the website des.karnataka.gov.in and planning.karnataka.gov.in. Recently, NITI Aayog has evolved 49 Indicators/87 data points spread across 5 sectors namely, Health & Nutrition (30%), Education (30%), Agriculture & Water Resources (20%), Basic Infrastructure (10%) and Financial Inclusion & Skill Development (10%) to monitor the transformation of Aspirational Districts (NITI Aayog 2018). Based on the information, the data for 49 indicators/87 data points is collected for all the taluks of the state to identify the development gaps across the talukas from the state average.

3. Avalokana-Monitoring System

Avalokana, symbolizing transparency in governance, was launched on 20 Jan 2021 redesigning the Decision Support System. It serves as an example of responsible, accountable, transparent and sustainable governance. The citizens at a click can view the Government spend by sector, geography, department, view SDG barometer etc. The platform assimilates and integrates data from the GP level to the State. More than 30,000 Government officers are onboarded in the system. Avalokana provides real time information on more than 1700 schemes (Central Sector and District Sector). The State Treasury system Khajane II is integrated with Avalokana to provide seamless real time information on the dashboards. The boards and corporations of the Government also update their financial information on Avalokana.

4. SDG Barometer



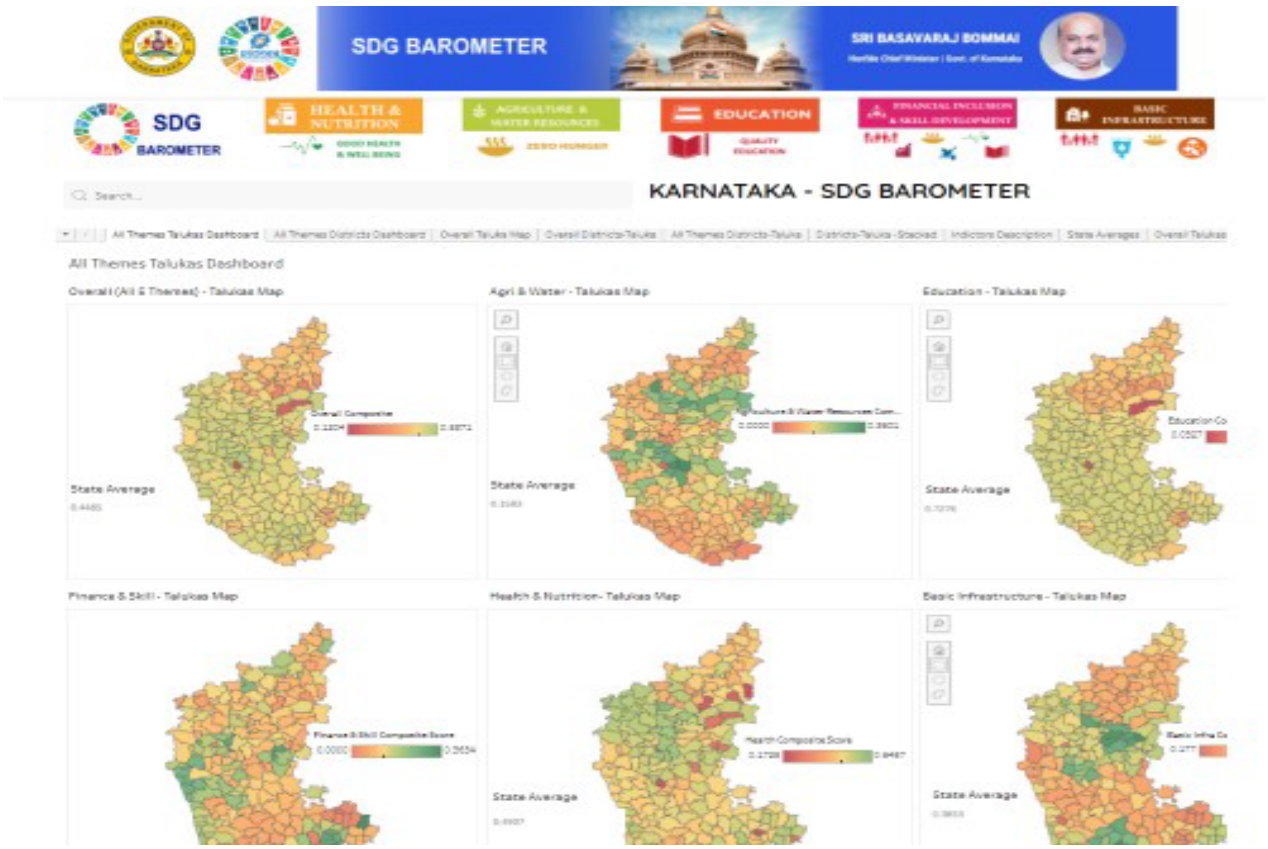
Source: *Centre for Sustainable Development Goals, Karnataka (UNDP Project)- GoK 2021*

The overall goal of the SDG Barometer is to obtain updated insights into the SDG landscape in Karnataka for various types of organizations, including companies, governmental and

non- governmental organizations, and educational institutions. The SDG Barometer stimulates and facilitates the adoption of SDGs by organizations, contribute to developing new governmental action programs, and provide insights for non- governmental organizations, business networks, and knowledge institutions to spur the effective implementation of the SDGs. Data has been organically collected in way of input from the taluk level, APIs with various departments are being integrated on https://avalokana.karnataka.gov.in. Progress is monitored with 49 Key Performance Indicators (KPIs) under 5 broad socio-economic themes - Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development and Infrastructure.

5. Karnataka Evaluation Authority

KEA was established to supervise, facilitate, build capacity and handhold all departments for effective Planning, Monitoring and fine tuning of the policies, programmes, and schemes for result oriented and outcome-based implementation. The changeover from financial allocations and expenditures to output and outcomes was to ensure a transparent, accountable and outcome-oriented mechanism to bring out the impact of every rupee spent by the Govt. on welfare of the masses.



Source: *Centre for Sustainable Development Goals, Karnataka (UNDP Project)- GoK 2021*

- The **State Evaluation policy** was framed in 2000. It envisaged that- Schemes over Rs.1 crore outlay evaluated at least once in Plan period & 1% of the total outlay of a project/scheme to be kept for project evaluation purpose. Outcomes to be used for Improving Program Design and Delivery & accordingly Justification to take a Program forward beyond the Plan period.

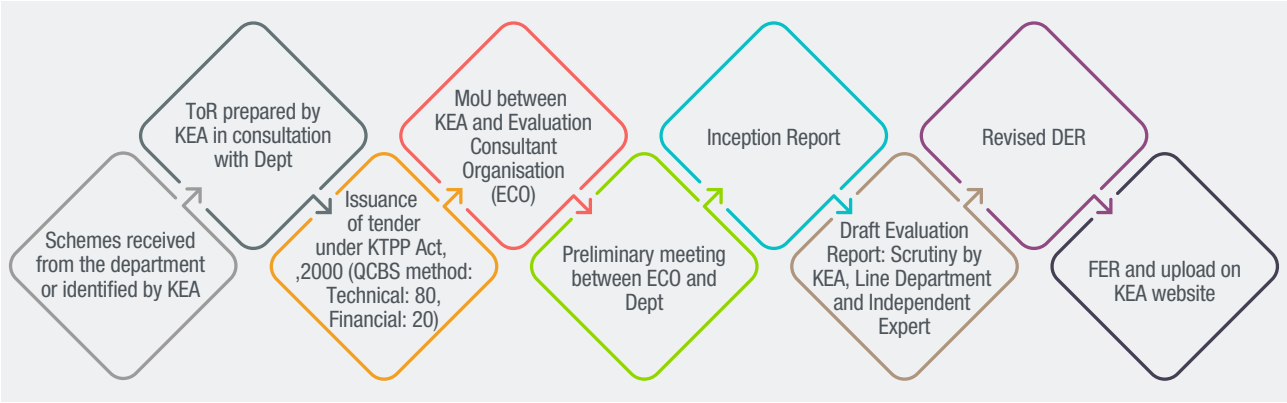
- Establishment of "Karnataka Evaluation Authority" as registered society in 2011.
- The General Body and Governing body of KEA is aligned with Government structure in a mixed model with adequate autonomy. The members are from the Government- Secretaries from the Departments, the evaluation experts and research organizations.
- KEA adopts strategies with wide networking, diverse functioning, and participatory approaches to **establish identity, ensure efficiency and accountability.**

Committees with an embodied structure ensuring autonomy and accountability

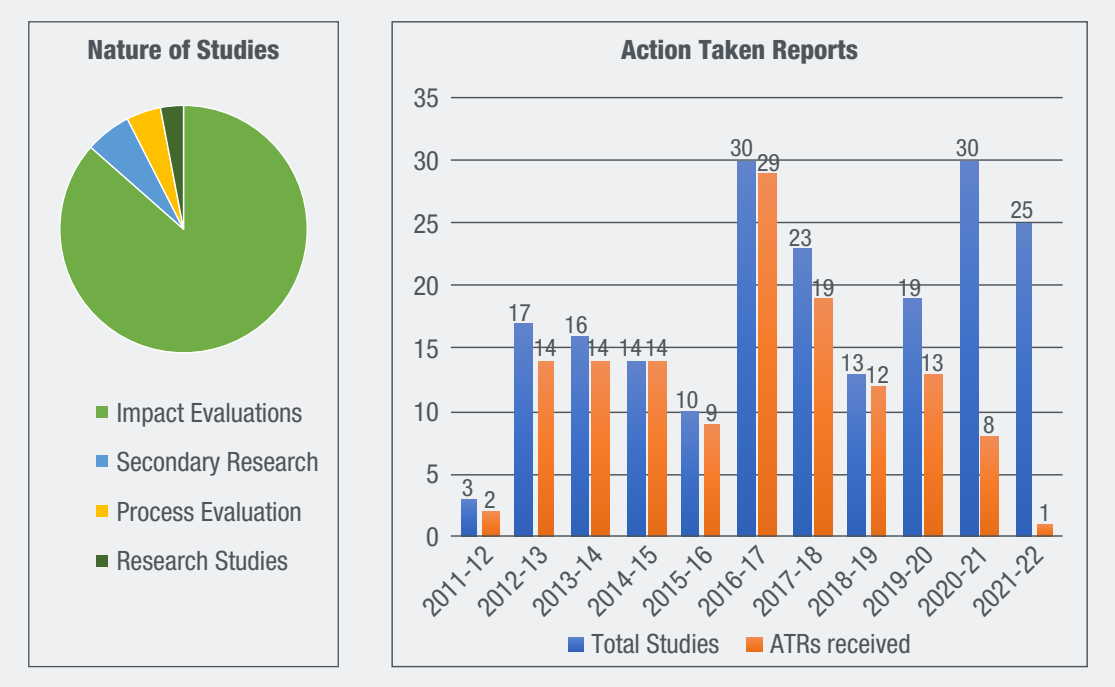
- The General Body - Chaired by Dev, commissioner
- Governing Body - ACS/PRS planning
- Technical committee - ACS/PRS/Planning
- For approval of TOR, Draft Evaluations reports
- Action Taken Report Review committee
- Empanelment committee
- Tender Evaluation Committee,
- Sampling Committee
- Subject Experts/Advisors
- Every committee has a member from the concerned Department and outside experts.

  - Work with the departments for analytics and guidance for concept notes, scheme evaluations and internal evaluations.
  - Work closely with the Planning Department for providing technical inputs to prepare important documents – State human development report, Economic survey, SDG reports, (SDG vision document 2020) Budget document, training programmes etc.

- Organized end -to-end process- from concept note for evaluation to final evaluation report and Action taken on findings and recommendations with involvement of all the stakeholders.
- Review of the Action taken reports in the monthly Karnataka Development Programme by Chief Secretary to Govt. of Karnataka.
- As per budget announcement 2021-22, (para 184) KEA has been given a mandate to evaluate the Schemes with annual outlay exceeding Rs. 100 crores and Departments also request for evaluations depending on their requirements.
- In selections of schemes for evaluation, Beneficiary Oriented, and SDG poor performing indicators related schemes are to be Prioritized.



- Small outlay schemes to be evaluated by the Dept. with technical support from KEA.
- The emphasis is on conducting impact evaluations.



Source: *Annual Performance Report KEA Jan. 2022*

6. Assuring Quality and Reliability

The reports are of high technical quality with specific action points as recommendations to improve performance and outcomes. The quality is ensured through following mechanisms.

- A clear and comprehensive Terms of reference for the study, covering all the dimensions in processes, outcomes and impact with measurable indicators encompassing Gender, social, and spatial equity.
- Suitable modifications in RFP on regular basis to capture good technical proposals, Scientific criteria for evaluation of proposals based on QCBS method in a competitive framework, Tender evaluation committee with technical experts to identify expert agency for evaluation.

- Scientific evaluation methodology (UNDP20210- Mixed methods, Literature review Theory of Change, evaluation matrix in REESI&E (Relevance, effectiveness, efficiency, impact, and sustainability) framework, scientific sampling methods for a representative sample, Case studies and Focus Group discussions. Ethical standards, (UNEG 2016) framework.
- Experimental and control group, Before & After – application of DID approach to capture the exact change due to program intervention.
- Inception report framework, Review meetings every month, feedback on progress, field checks. Interim report and Draft Evaluation Report reviewed at KEA.
- Review of the report by the Department and an Independent Assessor before presentation to technical committee of experts. Revision of the report based on expert comments at every stage. Recommendations based on field evidence as action points for scheme redesigning, modification of guidelines, implementation process, policy formulation etc.
- Mechanism for review of Action taken reports and the outcomes of it.

7. Impact of Evaluations at A Glance

7.1. Evaluation of Mid -Day Meals scheme by KEA

A report on midday meals in the state by the Karnataka Evaluation Authority says that 2.1 lakh children — 6.4% of total children in government schools — do not get breakfast at home. For them, milk given in school is the first meal of the day, pointing to the need of expanding the mid-day meals to breakfasts too. Noting that milk and midday meal scheme have done wonders in enrolment, retention, learning levels and health of children. Read more at: http://timesofindia.indiatimes.com/articleshow/81441002.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst&pcode=461

Change in Guidelines for Bhagyalaxmi Scheme

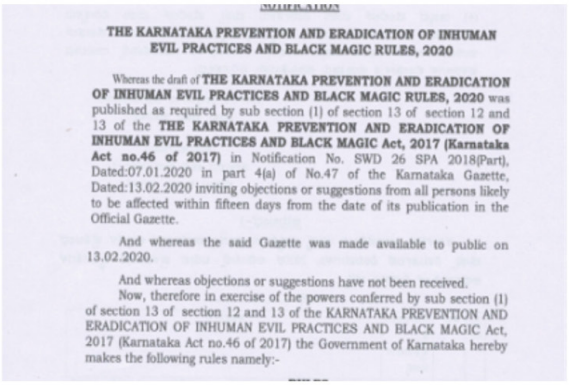
The scheme was launched in 2006–07 to improve the status of girl children in BPL families. The study observed Change in attitude towards girl child & Registration of the birth of a girl child was 100%.

The report noted, “With 18 years of age and minimum eighth standard education, the scheme looks somewhat marriage oriented.” as majority of parents (76.7%) use the Bhagyalakshmi scheme used money for marriage purpose when the girl child attains the age of 18.

The State Cabinet, took a decision on Oct. 22, 2020 to increase the age limit to 21 for withdrawal of the full amount under the scheme.

The remodeled scheme allows for withdrawal of a portion of the total amount of Rs. 1.27 lakh to be withdrawn at the age of 18 for pursuing education and the remaining at 21 years. *(The Hindu Oct. 23, 2020)*

KARNATAKA ACT NO. 46 OF 2017 (First Published in the Karnataka Gazette Extra-ordinary on the 7th day of December, 2017) THE KARNATAKA PREVENTION AND ERADICATION OF INHUMAN EVIL PRACTICES AND BLACK MAGIC ACT, 2017 (Received the assent of Governor on the 6th day of December, 2017)



THE KARNATAKA PREVENTION AND ERADICATION OF INHUMAN EVIL PRACTICES AND BLACK MAGIC RULES, 2020

Whereas the draft of **THE KARNATAKA PREVENTION AND ERADICATION OF INHUMAN EVIL PRACTICES AND BLACK MAGIC RULES, 2020** was published as required by sub section (1) of section 13 of section 12 and 13 of the **THE KARNATAKA PREVENTION AND ERADICATION OF INHUMAN EVIL PRACTICES AND BLACK MAGIC Act, 2017 (Karnataka Act no.46 of 2017)** in Notification No. SWD 26 SPA 2018(Part), Dated:07.01.2020 in part 4(a) of No.47 of the Karnataka Gazette, Dated:13.02.2020 inviting objections or suggestions from all persons likely to be affected within fifteen days from the date of its publication in the Official Gazette.

And whereas the said Gazette was made available to public on 13.02.2020.

And whereas objections or suggestions have not been received.

Now, therefore in exercise of the powers conferred by sub section (1) of section 13 of section 12 and 13 of the KARNATAKA PREVENTION AND ERADICATION OF INHUMAN EVIL PRACTICES AND BLACK MAGIC Act, 2017 (Karnataka Act no.46 of 2017) the Government of Karnataka hereby makes the following rules namely:-

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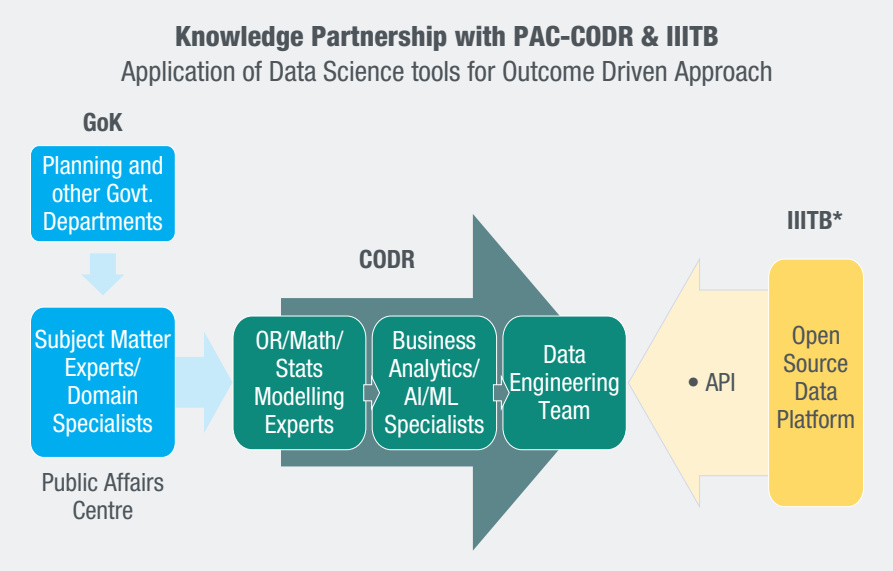
Change in the prevalence of some of the Malignant, Exploitative and Offensive to Human Dignity Superstitions of Karnataka in past 25 years

Source: *KEA Report on Studying the status of malignant exploitative and offensive systems; superstitions of Karnataka 2017*

7.2. Innovative practices: big data analytics of SDGs for location specific interventions to enhance outcomes.



Source *: PAC, Centre for Open Data Research 2020*

KEA through Centre for Open data Research (CODR) has carried out the SDGs 1-5 on poor performing indicators to identify location specific focus of schemes/programmes for achieving SDG-2030.

7.2.1. SDG-1: No Poverty

The analysis of Multi-Dimensional Poverty Index has identified that out of the total population in Karnataka, 1.01 crore population is poor (incidence of poverty) and 34.9 lakh population is multidimensionally poor (intensity of poverty). The five districts which are poor performers (high incidence, intensity and MPI) are Yadgir, Raichur, Bidar, Vijayapura and Gadag.

7.2.2. SDG-2: Zero Hunger

To break the vicious cycle of low productivity, 398 critical GPs require immediate attention. These are in the districts of Chikkamagalur, Raichur, Kalaburagi, Vijayapura Koppal Mysore Mandya, Ballari, Belgaum, Dakshina Kannada, Davangere and Hassan, especially in the priority agro-climatic zones-North Eastern dry zone, Northern dry zone & Southern transition zone. The main crops which require immediate focus are-maize, ragi, jowar, paddy and wheat.

7.2.3. SDG3: Good Health and Well Being

Data on Morbidity and Mortality of Diseases from 2011 to 2020 was obtained from HMIS and Epidemiological Transition Level Ratio (ETL) Ratio was drawn for each Taluka. ETL Ratio was calculated to determine the Burden of Communicable disease to non-Communicable disease. 57 Talukas were under High ETL Ratio. Shivamogga, Belagavi, Kalburgi, Dharwad and Haveri Districts were under High burden of Non – Communicable diseases. 57 talukas in Eight districts need focus to address anaemia among women.

7.2.4. SDG 4: Quality Education

Learning outcomes and dropout showed that 3 districts fall in the high-risk category-Kalaburagi, Koppal and Bengaluru Urban where dropout is high, and the learning outcomes are low. One of the possible ways of reducing the dropout rate at secondary level and increasing learning outcomes would be through priority spending on secondary education under Samagra Shikshana Abhiyan. It should include focus on quality components, development of school infrastructure, ICT labs and digital infrastructure, transport and hostel facility. To improve the PTR, rationalization and redeployment of teachers from low PTR to high PTR talukas should be considered. Quality teachers must be recruited from DIETs to fill in the vacancies of teachers in blocks with high PTR.

7.2.5. SDG 5: Gender Equality

The analysis revealed that 112 talukas are below the State average in Gender Equality score. 16 Talukas reporting poor performance in all five themes used to compute GEI, health, Education, employment, empowerment, and infrastructure warranting immediate interventions. The major factors affecting the Female Labour Force Participation Rate (FLFPR) are -lack of skills, bank account, digital literacy, land ownership and house, access to decision making process in the family & fear of violence.

8. Knowledge Dissemination

The findings and suggestions in evaluation reports need wide dissemination for enhanced outcomes. KEA. The reports are placed in public domain on KEA website (https://kmea.karnataka.gov.in/english).

Source: *KEA Website*

A chapter is published in **Economic Survey** of Karnataka providing the details about studies conducted and the findings and recommendations in these studies. Reports are shared with the Departments -both in English and local language-for bringing the required change in programme design and implementation. Reports are shared with **media and civil society organizations, and research and academic institutions** for knowledge sharing and its use in teaching and research.

9. Way Forward

- As per the directions from the Govt. KEA to focus on evaluation of major schemes and programmes as related to health, education, women empowerment, SCP/TSP, drinking water and sanitation, housing related schemes are taken up for evaluation to provide adequate inputs to the Government for effective outcomes.
- KEA will also focus on concurrent evaluations to provide adequate feedback for mid-course corrections in major schemes and take up in-house studies to build the capacity of young Research staff.

- Support the Planning Department to build up new knowledge partnerships to bring innovations in planning and development & to establish a robust high-quality Monitoring and Evaluation system in the State.
- Strengthen Internship Programme for capacity building of young PG students and Research scholars. Integration of secondary and primary data in evaluation studies and data analytics for drawing scientific results for evidence- based policy, KEA will work with KODI (Karnataka Open Data Initiative), CODR (Centre for Open Data Research) and SDGCC (Sustainable Development Goal Coordination Centre).

Karnataka State is moving towards rapid progress in recent years. The evidence-based planning and evaluation system and the partnerships with research organizations and civil society institutions have played a key role in this process. The State has set forth a M & E model that has potential for scaling up and transformation.

References

1. Furubo, J.E., Rist, R. and Sandhal, R, eds., (2002), International Atlas of Evaluation, New Brunswick, NJ: Transactions Publishers p. 16.
2. Chandrasekar, D. S. Development Evaluation in India. Retrieved from Yojana: yojana.gov.in/Development%20Evaluation%20in%20India.pdf, (13th Feb. 2022)
3. Jody and Rist, (2004) Ten Steps to a Results-Based Monitoring and Evaluation System: A Handbook for Development Practitioners, World bank.
4. NITI Aayog (2018); Deep Dive- Insights from Champions of Change -GoI.
5. Planning Department, GoK (2020) SDG - 2030 Agenda & Action Plan for Karnataka.
6. UNDP (2009) Handbook on Planning, Monitoring and Evaluating for Development Results New York.
7. Independent Evaluation Office, (2021) Evaluation Guidelines, UNDP New York June 2021.
8. United Nations Evaluation Group (2016) Norms and Standards for Evaluation.

EVALUATION POLICY – THE CORE OF EVALUATION ECOSYSTEM

Authors:

Rashmi Agrawal, Rajib Nandi, Banda VLN Rao

Evaluation Community of India

Abstract

Development evaluations strengthen evidence-based decision-making and help the policy makers achieve the SDGs. National evaluation policies provide the necessary institutional frameworks and mechanisms to systematise the evaluation processes and standards that contribute to enhance the demand for evaluations and create scope for building capacities of the development professionals and institutions. Evaluation policies steer, coordinate and systematize evaluations, helping in institutionalizing evaluations and contributing to the development of a strong evaluation ecosystem by bringing all relevant stakeholders to work together. Even though India recognized the value of evaluations as early as 1950, and has been conducting evaluative studies at national and state levels since then, the absence of coherent national evaluation policy renders them ad hoc exercises. The paper elaborates the importance of such a policy and what aspects it should cover, such as to what development interventions need to be evaluated and how often, adherence to national technical and ethical standards, necessary institutional mechanisms for capacity building and professionalization of evaluation through the involvement of professional associations and academic institutions, building partnerships with various institutional stakeholders, allocation of adequate resources, etc. Once a national policy is adopted, the next step would be to encourage various state governments through approaches of cooperative federalism to adopt similar policies and weave them together into a coherent evaluation ecosystem for the country. The paper argues that it will not only lead to optimal utilisation of resources but also systematise the evaluation process and practice.

1. Introduction

The post Second World War decades have witnessed a quantum expansion in programme evaluation activities, both in theoretical discussions as well as in the methodological quality and geographical reach of practical applications. This happened initially due to the large number of international development assistance programmes embarked upon by the advanced countries and the desire of the donors to get the money's worth from the assistance extended by them, but later the developing nations started realizing the importance of country-led evaluations and evidence-based decision making for their own development interventions. Soon enough, the process of institutionalization of evaluation began in several countries in different forms and to different degrees. In recent years, there have been a number of studies to assess the progress of various countries in this direction, to identify factors contributing to this process, such as the constitutional or legislative mandate, executive instructions, etc.[1] One of the important ingredients of this process of institutionalization is the adoption of a national evaluation policy (NEP). An evaluation policy acts like a rudder that steers activities relating to evaluation both for the national governments and non-government organizations. NEPs in a way demonstrate the willingness of the governments to review their policies and programmes and take appropriate actions. They also lay down evaluation standards that enhance the credibility of evidence produced on the effectiveness of development interventions in the country

1 One such example is evaluation globe of Saarland University, Germany. See more at https://evaluation-globe.com/

and contribute towards building confidence and ensure accountability to the tax payers, donors and development investors. On the other hand, absence of a policy could lead to pitfalls like uncoordinated planning and execution of evaluations, poor quality of results and under-utilization of evidence, and inadequate review systems and standards.

NEP, in this paper, is intended to mean an official document approved by the government, spelling out the planning and implementation of the evaluations in the government sector, which can be extended to the private sector as well. Not many developing countries have as yet adopted evaluation policies of their own, though many of them have been undertaking evaluations for decades. For instance, in Africa, only 5 countries (South Africa, Benin, Uganda, Nigeria and Zimbabwe) have established evaluation policies. Some others, like Kenya and Ghana are in the process of adopting such a policy. In Asia, a recent study on the status of national evaluation policies and systems in Asia Pacific Region found that out of the 14 responding countries, only Nepal has evaluation integrated in the country's Constitution, whereas Sri Lanka has an evaluation policy approved by the national government. Japan has an Evaluation Act in place and Republic of Korea has drafted a bill, which is under process. (Diwakar et al., 2021). Bhutan too has a draft evaluation policy (Bhutan, 2017).

India presents a case of curious exception. It does not have a Constitutional mandate or enacted statutes or frameworks of standards for evaluation. However, it has been carrying out evaluations for almost seven decades, and has some M &E institutional infrastructure. It cannot, however, be said that evaluation has become institutionalized. As pointed out by Mehrotra (2013), the evaluation ecosystem in India is indeed a 'work in progress'. This paper looks at the imperatives and implications of a NEP for India, the aspects that such a policy should guide government's planning and execution of evaluation functions to optimize the benefits, and more broadly, the place and role of the policy in creating a strong evaluation ecosystem in the country. It also emphasizes the need to encourage various state governments through approaches of cooperative federalism to adopt similar policies and weave them together into a coherent evaluation ecosystem for the country.

2. Evaluation Ecosystem and Evaluation Policy: The Concept and Linkage

It is important to look at the overall evaluation ecosystem and the role of NEP within that ecosystem. Evaluation ecosystem refers to an overarching structure in which various types of organizations and partners in the field of evaluation interact, learn and grow together. It does not mean the mere existence of institutions that conduct evaluations from time to time; rather, it means mechanisms that encourage and promote evidence-based decision-making, streamline commissioning and conducting of high-quality evaluations, highlight the importance of maintaining ethical norms and standards, develop processes that ensure the results are utilized and finally connect all evaluation stakeholders, both government and private, through a network and learning process. The ecosystem also ensures development of institutional and individual capacities of the evaluators to the required level. Therefore, some of the prominent elements that characterize the ecosystem are the existence of a monitoring and evaluation system in a country, engagement of both

state and non-state stakeholders, recognition of the importance of evidence-based policies and interventions, use of evidence generated by evaluations, establishing evaluation as a separate discipline to professionalize this field, and existence of functioning professional associations of evaluators. Evaluation ecosystem in a country contributes to create both demand for evaluations and supply of quality evaluators.

An evaluation ecosystem can exist and be functional even without a NEP. For example, countries like Australia, United Kingdom and Singapore don't have any evaluation policy but they function within a well-developed ecosystem. However, a national policy has the ability to bind various elements of the ecosystem together into a coherent whole. It ensures that there is a mechanism to promote general awareness on the importance of evidence in developing effective policies and their implementation. A policy can boost the demand for quality evaluations (Højlund, 2015). The aspects of policy on capacity building, on the other hand, promotes supply of quality evaluators. Further, an evaluation policy helps in bringing together the state and the civil society together and promote the involvement of all segments of the society in planning, implementation and reviewing of development interventions, so that no one is left behind.

The United Nations Evaluation Group's (UNEG) Norms and Standards for Evaluation prescribe that an organization should have an evaluation policy to ensure evaluation function's adherence to set standards. This applies, not only to individual organizations but to governments as well. The Global Parliamentarians' Forum for Evaluation (GPFE) also stressed the importance of national evaluation policies (see box)

What can a National Evaluation Policy achieve for parliaments and governments?

A National Evaluation Policy can:

- Build public trust and confidence in parliamentary and governmental accountability, and the effectiveness of national development interventions
- Ensure more effective resource allocation, by monitoring and reviewing successes and barriers to achieving outcomes
- Provide assurance to tax payers, donors and investors for the accountability of resources and their appropriate investment in effective programmes
- Provide a framework and evidence-based learning to support civil society interventions, to ensure more holistic and aligned programming
- Assist in most efficiently meeting national Sustainable Development Goal targets, and achieving social equity and human rights
- Demonstrate the tangible achievements of the parliament in order to encourage popular public support

National Evaluation Policy Improving parliamentary outcomes
Global Parliamentarians' Evaluation Forum 2018

https://globalparliamentarianforum.files.wordpress.com/2018/01/national-evaluation-policy.pdf

3. Need for an Evaluation Policy in India

In India, Government have recognized monitoring and evaluation as important tools for the optimum utilization of resources for development right from the 1950's. Subsequently, certain monitoring systems were put into place in different Ministries for the major developmental schemes and programmes. Those monitoring systems gradually evolved into results-based budgetary management systems and real-time monitoring systems. Evaluations are also conducted from time to time of individual schemes and programmes, generally as and when a need was felt, though some ministries like the Ministry of Rural Development and Panchayat Raj, conduct evaluation on a fairly regular basis. Recently in 2016, the Ministry of Finance (Department of Expenditure) has issued instructions to all Ministries/Departments (D. O. No. 66(01)/PF. II/2015 dated 18 May 2016) require, inter alia, that (a) measurable outcomes need to be defined for each scheme over the medium term, and (b) an evaluation framework would be designed for each scheme. Any continuation of the scheme beyond 2019-20 would be contingent on the result of such evaluation by the National Institution for Transforming India (NITI).

In spite of extensive development evaluation practice, India doesn't have a national policy to coordinate and guide different components of the evaluation function for enabling delivery of high-quality evaluative evidence. Except the state government of Karnataka, no other state in India adopted an evaluation policy. Generally, evaluations are commissioned by individual ministries and departments independently, often in response to the need to fulfil the requirements of processing proposals for the continuation or scaling-up of programmes and not necessarily as a part of the learning process to improve performance. Many evaluation findings go unutilized, and there is no system of tracking the use of evidence. At times, in the absence of nationally laid down uniform technical and ethical standards the quality of evaluations also may not measure up to the required level. Simultaneously, evaluation has not yet been recognized as a professional field of study and usually generalists with added qualifications in M&E carry out this function. Unlike in some advanced countries, there are no full-time academic courses in M&E in higher educational institutions in India. Under the circumstances, evaluators are drawn from diverse fields of study with a top-up of short-term training or practical experience. Competency requirements and a system of certification of skills in this field are absent in India.

It is indeed necessary to formulate NEP that could lead to embedding evaluation function formally and firmly in the decision-making process in governance. NEP would sensitize decision makers, program implementers and managers about the importance of measurement, evidence and learning. In other words, it would create evaluative thinking at all levels of the government. NEP will enhance the accountability of the state for its citizens. The specific objectives of an evaluation policy are as shown in Figure 1 below:

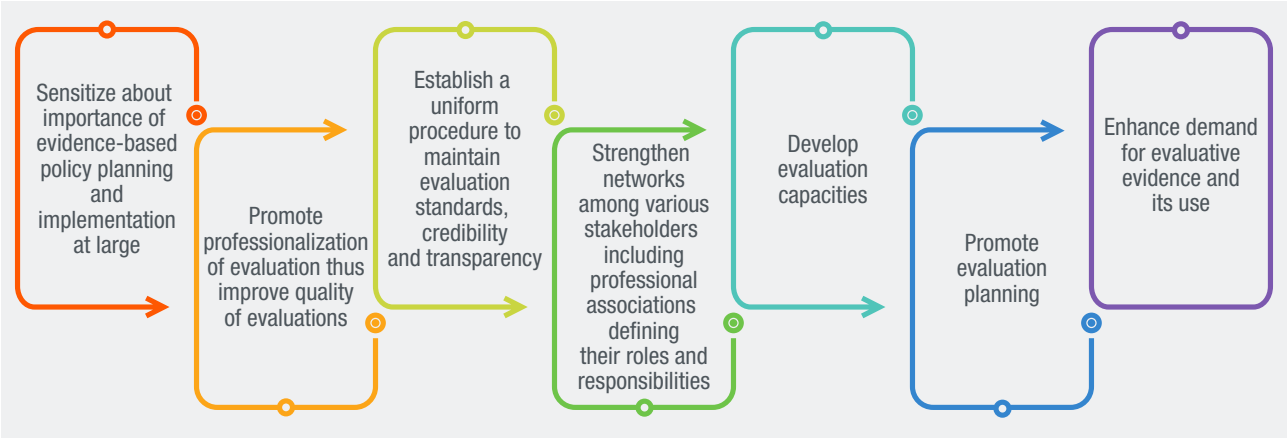


Fig 1: *Objectives of Evaluation Policy*

Source: *Author*

4. The Ingredients of an Effective Evaluation Policy

According to the Norm 12 of the UNEG Norms and Standards 2016, an organization's "evaluation policy should include a clear explanation of the purpose, concepts, rules and use of evaluation within the organization; the institutional framework and roles and responsibilities; measures to safeguard evaluation independence and public accountability; benchmarks for financing the evaluation function that are commensurate with the size and function of the organization; measures to ensure the quality and the use of evaluations and post-evaluation follow-up; a framework for decentralized evaluations, where applicable; and provision for periodic peer review or external assessment" (UNEG, 2016). While this prescription is primarily for individual organizations, it can easily be adapted to national evaluation policies, *mutatis mutandis*. Countries which have adopted an evaluation policy did so according to their needs.

The revised National Evaluation Policy Framework adopted by South Africa (South Africa Planning Monitoring and Evaluation, 2019) is very comprehensive and provides the basis for a minimum system of evaluation across government with the purpose of guiding and promoting relevance, efficiency and quality in evaluation processes. The policy is structured into three broad sections the first providing the background (purpose, applicability, achievements, situational analysis, relevant legislations etc.), the second providing conceptual framework of evaluations (such as definitions, rationale for evaluations, types and approaches, evaluation criteria and questions, location of evaluation in policy/programme cycle, and links between evaluation, planning and budgeting) and the third institutionalization and evaluation practice in government (identification of evaluands, planning, preparing for evaluations and implementation, monitoring use of evaluation results, standardized systems and processes, and capacity development.

The draft Development Evaluation Policy of Bhutan (Bhutan Gross National Happiness Commission, 2017), lists as its objectives, a) providing an overall framework for evaluation, b) streamlining evaluation initiatives, and standardize evaluation processes and products, c) promoting quality and credibility of evaluations, and d) promoting use of evaluation

findings. The key sections of the policy relate to protocol for evaluation, promotion of evaluation culture, financing and monitoring the implementation of the policy.

Uganda's Public Sector Monitoring and Evaluation Policy (Uganda Prime Minister's Office, 2013) provides a framework for strengthening the coverage, quality and utility of the assessment of public policies and investments. It outlines the objectives of the policy, key concepts, guiding principles, policy requirements, roles and responsibilities of various ministries, departments and agencies, coordination and implementation plan. The Policy aims to enhance the basis for decision makers at all levels starting from the cabinet to the local councils. It, *inter alia,* proposes clear allocation of finances for monitoring and evaluation within the national budget.

Nepal's Monitoring and Evaluation Guidelines (Nepal National Planning Commission, 2013) sets out the provisions in 6 parts, viz., (a) background, objectives, concepts and evolution of M&E system in the country, (b) concepts and processes of results based management, monitoring and evaluation, (c) institutional structure of M&E at various levels, (d) monitoring and evaluation reports and their dissemination, their analysis and feedback, and implementation plan, (e) ensuring transparency, accountability and social responsibility, and f) miscellaneous provisions, including for human resources development and budget for monitoring plan.

In India, only the state government of Karnataka adopted an evaluation policy as early as in 2000, according to which all schemes (PLAN) with more than Rs. 1 crore outlay were required to be evaluated at least once in 5 years by all the government departments, corporations, boards, local bodies and other publicly funded entities and 1% of the total outlay of a project/scheme, with an upper limit of Rs. 5 lakhs, is to be kept for evaluation purpose. It is mandatory for a scheme/project to continue beyond plan period to be justified by evaluation. A Karnataka Evaluation Authority was created to implement the policy.

Recently, the Evaluation Community of India (ECOI), a Voluntary Organization of Professional Evaluators (VOPE) has suggested a draft policy which provided for a preamble tracing the history of monitoring and evaluation in India, applicability of the proposed policy, key definitions of terms relating to evaluation, evaluation principles and ethics, evaluation criteria, gender and equity, evaluation methods, evaluation management, professional standards and capacity building, annual evaluation plan, and implementation and governance of policy**.**

Broadly speaking, the components that need to be considered for inclusion in NEP are:

- The background and rationale for an evaluation policy
- The applicability
- Definitions of principal Terms
- Evaluation methods
- Professional standards and capacity building
- Implementation and action plan
- Institutional arrangements and roles and responsibilities

The policy should also clearly indicate as to how the issues of gender equality and social equity need to be integrated into evaluations with special focus. Climate change is a rapidly growing concern all over the world. It is essential that all development interventions are also evaluated on nature and extent of their environmental effects.

The policy should emphasize on the time bound evaluations of various programmes/ projects/policies and prescribe criteria for prioritization. For example, a programme/project lasting less than three years may need only a terminal evaluation after it completes the period. Longer interventions may require both formative and summative evaluations. Special situations may call for more frequent evaluations.

The policy should suggest mechanisms for tracking evaluation use, systematic assessment of evaluation quality, and specify roles of various stakeholders including VOPEs. The entire policy has to emerge out of a comprehensive consultative process that includes central and state government, legislators, civil society, academia and VOPEs.

5. Way Forward

Ideally, the principles set out in NEP should guide both public and private sector organizations. However, in a federal set-up like India, the constituent States are generally independent and can formulate their own policies. Hopefully, once a national policy is adopted, in due course a common pattern would emerge through consultative processes. Evaluations conducted based on a set of standard principles, norms and methods would perhaps create good examples for others to adopt appropriate policies.

The success of an evaluation policy depends on its implementation and enforcement, and the implementation depends on the existence of an apex institution that oversees the implementation of the policy. To be effective, this central institution should ideally be a commission headed by the Prime Minister.

A set of post-policy adoption activities must be designed to address the implementation and enforcement of the policy, including: (a) researching how the policy should be implemented and enforced to be effective; (b) renewing relationships with the relevant and influential institutions during the advocacy campaign and developing new relationships with the institutions and individuals involved in implementing the policy; (c) enlisting the public offices as an ally in the implementation and enforcement effort by increasing public awareness; and (d) evaluating the effectiveness of the implementation and enforcement effort. Previous experience suggests that these activities are effective tools for the government departments, nongovernmental organizations, policy advocates like VOPEs to employ to help ensure that enacted policies are implemented and enforced as intended. Voluntary organizations of professional evaluators (VOPEs) can work as nodal points for extensive outreach, advocacy and sensitization. Their role in knowledge sharing and professionalization and creating networks for targeted learning is crucial.

Finally, the policy also should provide spaces for periodic review. For example, the South African Policy, originally adopted in 2013 has been amended in 2019 to extend it to state-owned enterprises and to provide for inclusion of principles of gender equality and social equity. Adoption of the policy and its periodic review should be in consultation with various stakeholders including, in particular, VOPEs and other civil society organizations.

References

1. Bhutan Gross National Happiness Commission. (2017). Development Evaluation Policy of Bhutan 2017. Retrieved February 12, 2022, from https://www.gnhc.gov.bt/en/wp-content/uploads/2017/05/Evaluation-Policy-March-2017.pdf
2. Diwakar, Y., De Mel, R., & Samarasinghe, H. (2021). *A Study on the Status of National Evaluation Policies and Systems in Asia Pacific Region*, Manila: Asia Pacific Evaluation Association.
3. Højlund, S. (2015). Evaluation in the European Commission: For Accountability or Learning? *European Journal of Risk Regulation, 6*(1), 35-46. doi:10.1017/S1867299X00004268
4. Mehrotra, S. (2013). *The Government Monitoring and Evaluation System in India: A work in progress*. ECD Working Paper Series, No. 28. Independent Evaluation Group, The World Bank. https://ieg.worldbankgroup.org/sites/default/files/Data/reports/ecd_wp28_india_me_0.pdf.
5. Nepal National Planning Commission. (2013). National Monitoring and Evaluation Guidelines.
6. https://www.npc.gov.np/images/category/ME_GuidelineEng.pdf
7. South Africa Planning Monitoring and Evaluation. (2019). National Evaluation Policy Framework.
8. https://www.dpme.gov.za/keyfocusareas/evaluationsSite/Documents/National Evaluation Policy Framework_Nov 2019.pdf
9. Uganda Prime Minister's Office. (2013). National Policy on Public Sector Monitoring and Evaluation. https://gpffe.org/wp-content/uploads/2019/07/Uganda-National-ME-Policy-July-2013.pdf
10. United Nations Evaluation Group (2016). *Norms and Standards for Evaluation.,* New York: UNEG.
11. http://www.unevaluation.org/document/download/2787

COMMUNITY MONITORING FOR STRENGTHENING RESPONSIBLE PARTICIPATION LEVERAGING ICT – EXPERIENCE OF AROGYA SHRENI IN KARNATAKA AND JAN AROGYA SHRENI IN JHARKHAND

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Abstract

Monitoring, which has the goal of ensuring the implementation of activities vis-à-vis the plan, is often considered a fault-finding process. The essence of monitoring, however, is to be vigilant about the processes and align the project activities to achieve the planned outputs. Community is usually considered as a beneficiary or target of interventions, instead of being given the status of stakeholder. Community, in practice, is often either considered a policing entity or remains a passive service recipient group. The effort previously done by GRAAM through its Arogya Shreni project in Karnataka, and being done presently in Jharkhand through its Jan Arogya Shreni action research project, is to provide the community with 'stakeholder' status. Involving the community as part of the solution instead of seeing them as the reason for the problem is a paradigm shift in planning and thinking.

The National Health Mission recognises that the community should be an integral part of the public health system. Jan Arogya Samiti is one such platform at the grassroots level, created through the guidelines of Ministry of Health and Family Welfare, to enable effective community monitoring of Health and Wellness Centres. While expecting the community to participate in such structures, it is most important to create an enabling environment, build capacity and establish means and ways (process) for their engagement. The Jan Arogya Shreni action research project of GRAAM is one such initiative to establish processes of community engagement. Evidence from GRAAM's Arogya Shreni project in Karnataka shows how the community participates in a positive way if stakeholdership is provided. Initial insights from the Jan Arogya Shreni experiment in Jharkhand reveal that the community is interested in participating in planning and monitoring health care delivery. This paper elaborates the concept, design and outcomes of community participation in monitoring of health services at the grassroots level. The innovation in the whole process lies in how the project leverages simple communication technology for unbiased, free and efficient monitoring.

Keywords: Community monitoring, Participation, Health systems, Jan Arogya Samiti, Technology.

1. Community Monitoring – Meaning, Purpose and Spirit

Traditionally, Monitoring and Evaluation (M&E) has been the domain of experts who measure performance against predetermined indicators, using standardised procedures and tools (Dillon, n.d.). However, in recent years there has been an emphasis on participatory approaches to monitoring such as Community-Based Monitoring (CBM). In India, mechanisms of participatory monitoring have been implemented in multiple sectors such as health (Village Health Sanitation and Nutrition Committee or VHSNC and Jan Arogya Samiti), education (School Development and Monitoring Committee), livelihood (social audit under MGNREGA), and WASH (Jal Samitis or Water User Groups).

The term "Community-Based Monitoring" (CBM) is generally used for the relevant participatory mechanisms in the public health domain, though its features make it applicable to other development domains. The Global Fund defines CBM as "Mechanisms that service users or local communities use to gather, analyse and use information on an

ongoing basis to improve access, quality and the impact of services, and to hold service providers and decision makers to account" (Global Fund, 2020). A key principle of CBM is that communities decide what to monitor, and act upon the data collected (Global Fund, 2020) Garg & Ray Laskar (2010) define CBM as a process that involves "drawing in, activating, motivating, capacity building and allowing the community and its representatives e.g., community-based organizations (CBOs), people's movements, voluntary organizations and Panchayat representatives, to directly give feedback about the functioning of public health services."

CBM is thus needed to strengthen community oversight, ownership and expression of community voices with respect to service delivery. It can help to collect data that is essential for scrutinising public programmes and improving policies and programmes; the evidence and observations resulting from CBM can often be quite different from the results of monitoring undertaken or controlled by governments (Global Fund, 2020). The accountability that can be strengthened through CBM can in turn strengthen the access, quality and responsiveness of service delivery.

Monitoring is often considered a fault-finding process. However, the essence of monitoring is to be vigilant about the process and align the project activities to achieve the planned outputs. We term community monitoring as supportive supervision. It is to provide necessary support to make the program successful by supervising the inputs, process and outputs, periodically and responsibly. In its desired or ideal form, CBM is constructive in nature; the concept of CBM emphasises the spirit of 'fact-finding', 'learning lessons for improvement' rather than 'fault finding' (Garg & Roy Laskar, 2010) and being part of the solution.

In the world of development, community is usually considered as a beneficiary or target of interventions, instead of being given the status of stakeholders. Community, in practice, is often either considered a policing entity or remains a passive service recipient group. In CBM, however, the community is considered not just a service receiver but a stakeholder that can take responsibility to improve the health service delivery. CBM does not end with the members scrutinising service providers; it also includes acting on the evidence and observations gathered. Advocacy based on the evidence and observations gathered is thus an essential outcome of community-based monitoring (Global Fund, 2020).

An effective community-based monitoring system thus should lead to nuanced constructive feedback that can be a force for positive change, and can also make the community (or its representatives) find solutions to perceived problems.

2. Challenges in Community Monitoring

1. CBM has highly desirable features and objectives. However, as the literature and authors' practical experience with CBM experiments reveal, implementation of CBM may be ridden with challenges. These may lead to a gap between the intent and reality of CBM.
2. The foremost challenge is to make service providers appreciate the ability and wisdom of the community, consider them as stakeholders and not just beneficiaries, and foresee the long-term advantages (rather than initial challenges) of engaging with them.

3. The need to build the capacity of the members of the community who would be involved in CBM, and to ensure not just the transfer but also the sustained retention of the required knowledge and competencies
4. The difficulty of motivating, building and sustaining people's voluntary participation in meetings and various monitoring activities.
5. Lack of consistent and stable funding (Global Fund, 2020).
6. The possibility of elite capture or domination by powerful interests (Dillon, n.d.)
7. The processes involved in executing CBM are complex and require contextualising in response to local community structures, needs, and diversities.
8. Attitudinal change is necessary among all stakeholders in order to have more synergy. A paradigm shift is required in perceiving their role from 'questioning' to 'understanding'.
9. There is a need for effective coordination and strong partnership among all stakeholders. This may be difficult to achieve in social contexts which have divides based on caste, religion, ethnicity, class etc.

3. Mechanisms for Community Monitoring under National Health Mission: Communitization of Primary Health Care

The Communitization of health care (i.e., the promotion of community action in health care, especially primary health care) has been a longstanding priority under the National Health Mission (NHM). Under this priority, structures such as Village Health Sanitation and Nutrition Committee (VHSNC), Rogi Kalyan Samiti (RKS) and Planning and Monitoring Committee (PMC) were created for enhancing people's participation in planning, implementing and monitoring primary health care (details in Appendix I).

With the advent of the Ayushman Bharat and the conversion of Sub Health Centres and Primary Health Centres to Ayushman Bharat Health and Wellness Centres (AB-HWCs), a need was felt for creating a Health Facility Committee at the Sub Health Centre-Health and Wellness Centre (SHC-HWC) level, equivalent to the Rogi Kalyan Samiti at PHC level. The Jan Arogya Samiti (JAS), created at the level of the SHC-HWC, is supposed to serve as a platform for community participation in the management and governance of the SHC-HWC. One of the functions of the JAS is to "support and facilitate the conduct of activities pertaining to social accountability at AB-HWC in coordination with VHSNCs." (NHM, n.d.) Such a function implies that JAS have an important potential role to play in the community monitoring of SHC-HWCs. More details on the role and composition of JAS can be found in Appendix I.

4. The Arogya Shreni Experiment

4.1. Background

The Arogya Shreni experiment was conceptualised by Grassroots Research and Advocacy Movement (GRAAM) to create a platform and establish a process for community

engagement in public health delivery as a stakeholder. Information and Communication Technology (ICT) was leveraged to make the initiative scalable, cost-effective and interesting to the stakeholders. It facilitated Community Monitoring of rural Primary Health Centres (PHCs) in Mysore District, Karnataka. The endeavour was to experiment whether the community can really participate in monitoring the health system, which is perceived as a more technical subject that the common man cannot understand. The experiment also intended to understand whether 'community initiated' change through grassroots advocacy and dialogue is possible. The Planning and Monitoring Committee (PMC) platform was strengthened with necessary capacities related to monitoring as part of the experiment.

4.2. Project Framework

Arogya Shreni was designed as a 3-year action research project (2011-2014), covering seven talukas and 112 rural PHCs of Mysore district. It was intended to build the capacities of local communities in monitoring the PHCs. PMC members were the community monitors as mandated by NRHM. The selected PMC members participated by responding to a questionnaire about the availability and quality of services of their PHCs using Interactive Voice Response System (IVRS) technology. The responses to the questionnaire were used to construct facility scores and a ranking of PHCs in the district. With increasing awareness, the community members took a step beyond just monitoring. They were involved in carrying out advocacy efforts at the grassroots level to bring about changes in their PHCs. The project's field facilitators worked intensively with PMC members, facilitating regular meetings among the members, carrying out dialogue with health providers, identifying problems and strategizing on addressing them locally, or escalating the matter appropriately. These efforts yielded positive changes on the ground as well as in attitudes and perspectives.

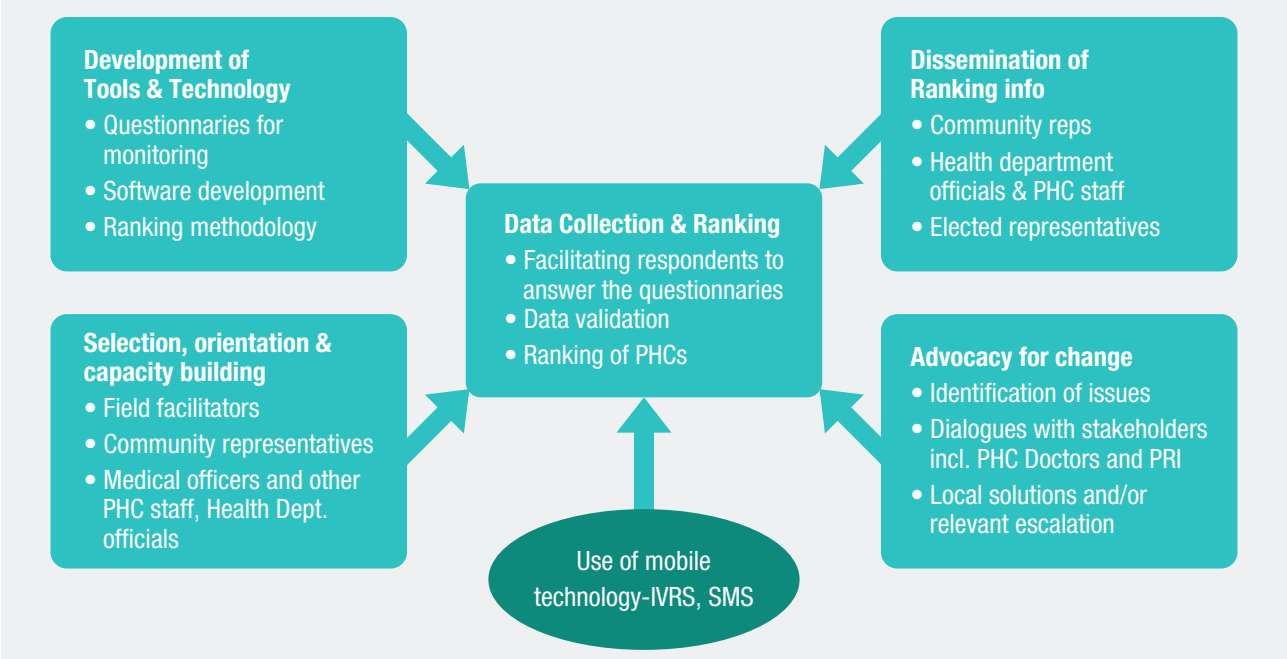

Fig 1: *Schematic representation of Arogya Shreni process*

Source: *Author*

4.3. Challenges faced in Arogya Shreni

Any new initiative at the field level faces numerous challenges. Arogya Shreni wasn't an exception from those systemic, implementation and community-level challenges.

1. The experiment brought the gaps in PHC service delivery to the fore, and created a fear of inspection and other repercussions among PHC staff.
2. The community representatives who participated in the CBM developed an expectation of change 'too early' and also of comprehensive transformation in the functioning of PHCs, which is not possible to achieve within the short or medium term.
3. Arogya Shreni required the participants to respond to monthly IVRS-based monitoring rounds. The participants needed convincing that responding at such frequency was necessary.
4. The technology-based CBM exercise was implemented through 'yes-no' responses on IVRS. A limitation of such responses is that they don't reveal detailed information on the service gaps that exist.
5. Certain issues could not be addressed or corrected through the CBM exercise which included matters where authority lay beyond the PHC. Deep-seated malpractice could also not be addressed.
6. Considerable time and efforts were needed for validation or back check of the IVRS generated responses and for the analysis of the responses obtained through IVRS

4.4. Outcomes of Arogya Shreni

The Arogya Shreni experiment generated a positive community response in terms of impressive participation in monitoring and advocacy. This proves that CBM experiments can be successful, provided that an enabling environment is available. The following positive outcomes were generated by the Arogya Shreni experiment:

- **Improved capacity and awareness**: Through consistent capacity building efforts of the project, communities could discuss the subject of health with a greater understanding of underlying factors. The communities were not only more aware of the facilities and schemes, but also of the health system and processes. Technology use played a positive role in kindling community interest and also in capturing comprehensive information of PHCs. The project demonstrated that communities need continuous hand-holding in the form of sustained coordination and motivation by organisations working at the grassroots.

> "We have seen a change in the way communities articulate the problems of their PHCs. From making ambiguous comments about their PHCs such as "this PHC is of no use" or "this is a bad PHC; nothing works here", the same community members now refer to specific issues, rather than making any sweeping statements. That is an important indicator of the success of the model." - Arogya Shreni Field Team

- **Dialogue and relationship building:** The platform provided by the project for dialogue helped the community members build and improve relationships with the doctors and other PHC staff significantly. This, in turn, led to a better articulation of the change desired and the mobilisation of resources required to address the same
- **Ownership and advocacy:** A sense of ownership drove community members to use their circle of influence innovatively and consistently follow-up till the issues were addressed. With increasing awareness and not being satisfied by merely responding to questions, the PMC members showed keen interest in addressing issues at their PHCs, including through their own efforts. For instance, land for the construction of a PHC was mobilised in a village (where a Primary Health Unit with only a rudimentary setup was converted to a PHC). Villagers were also seen to be taking out rallies to make people aware of the facilities in their PHC and encouraging people to use the PHC instead of going to private hospitals.
- **The use of technology and generation of useful data:** The use of technology generated a comprehensive database of responses on the perceived state of services in the PHCs that could be analysed and used for planning and monitoring in the primary healthcare domain.
- **Improvement in infrastructure and human resource availability:** Out of 34 PHCs selected for intensive advocacy efforts, positive changes in the availability of human resources (such as filling of vacancies) and infrastructure (such as provision of drinking water facilities) were noted in at least 26 of them as a result of community involvement in monitoring.

5. From Arogya Shreni to Jan Arogya Shreni

That communities have the willingness and the capacity to drive changes was effectively demonstrated in the Arogya Shreni experience. One of the lessons of Arogya Shreni was that community monitoring can be strengthened through capacity building at the grassroots level in partnership with reliable civil society organisations. Arogya Shreni also demonstrated the effectiveness of technology as a catalyst for strengthening community monitoring.

As mentioned earlier, with the advent of Ayushman Bharat Health and Wellness Centres in 2018, Government of India conceived a participatory mechanism known as Jan Arogya Samiti at the level of the SHC-HWC and issued guidelines for operationalizing the same. A need was felt to pilot test these guidelines in the field to understand the operational modalities and the ground realities that shape the functioning of such mechanisms. Having had the experience of executing the Arogya Shreni model in Karnataka, GRAAM was provided with an opportunity of piloting a CBM framework in 2 districts of Jharkhand, with the establishment and strengthening of Jan Arogya Samitis at the core of such framework. Supported by USAID - JHPIEGO PROJECT NISHTA, the goal of this 'Jan Arogya Shreni' project is to demonstrate community participation, ownership and monitoring mechanism at AB- HWCs so as to improve health service delivery and health outcomes.

5.1. Objectives and Design

The objectives of the Jan Arogya Shreni project are as follows:

- To facilitate the establishment of Jan Arogya Samiti (JAS) at 35 HWCs through a community consultation process.
- To build the capacity of JAS in effectively implementing community monitoring and 89social audit
- To demonstrate community engagement and monitoring through community structures such as Jan Arogya Samitis to create a vibrant healthcare system at the primary health care level
- To establish and demonstrate a framework of community accountability and social audit of AB-HWCs in line with the JAS guidelines issued by NHM.

The Jan Arogya Samiti project, like Arogya Shreni, is largely based on, but not limited to, the use of the technology-enabled mechanism (collection of IVRS based responses from JAS members on the state of health service delivery, human resources and infrastructure at the SHC-HWC) for strengthening CBM at the SHC-HWC level. It is essentially a replication of Arogya Shreni project done in Karnataka, with certain modifications

Table 1: Differences between Arogya Shreni and Jan Arogya Shreni

Arogya Shreni	Jan Arogya Shreni
Implemented at PHC level	Implemented at Sub-Centre-Health and Wellness Centre (SHC-HWC) level
Involved PMC members as participants	Involves JAS members as participants
Worked on the existing community structures (PMCs) and strengthening their capacity to monitor	Worked on establishing and constituting the new community structures (JAS) and building their capacities to monitor
Implemented in an area with relatively higher levels of socio-economic development	Implemented in relatively less developed areas with high tribal population
Limited to IVRS-based collecting of responses as a monitoring mechanism	Based on a comprehensive monitoring framework, including facilitation of Annual Public Dialogue and Social Accountability exercise
	Includes capacitating JAS to develop health planning and monitoring plan at the SHC- HWC Level

5.2. Outcomes of Jan Arogya Shreni

Jan Arogya Shreni aims to achieve the end of effective CBM through active Jan Arogya Samitis with pro-active people's participation. Given the nascent stage of the project, these outcomes are yet to be demonstrated. However, the following initial outcomes have been noticed:

1. Stipulated JAS meetings are being held in most places: Out of seven HWCs visited by the M&E team during a recent field visit, five centres had conducted both the meetings required to have been held by that date, and two centres had conducted only one meeting.
2. JAS is involved in health visioning and grassroots health planning: For better reflection of local needs in the functioning of the AB-HWC, the Jan Arogya Samitis have expressed their needs, preferences and health-related priorities through the health visioning exercise. As a next step, the participatory health planning exercise has also been piloted. Once the planning capacities of the JAS are developed, it is expected that they will play an important role in preparing locally grounded plans that are infused with the support of the local communities.
3. JAS have emerged as potential support for the HWC staff: It is expected that the constituted Jan Arogya Samitis will play an active role in guiding the management of the AB-HWCs and especially in organizing community-led health promotion activities. In this way, the HWC would be a valuable support structure to the HWC, especially for the Community Health Officers, a new cadre created to lead the HWCs.

5.3. Challenges

Initial efforts to facilitate the establishment of Jan Arogya Samitis and to get community representatives to attend the meetings and training programmes have encountered a number of challenges, which illustrate some of the possible challenges of CBM stated at the early part of this paper:

1. Some JAS members were not interested to attend the meeting as they have seen the non-functionality of the various committees formed in the past. It is also difficult to get JAS members together for meetings at times when they are busy with agricultural activities such as the harvest season.
2. For conducting training programmes, it is difficult to coordinate the availability of all JAS members on a single date
3. Some JAS members including health functionaries consider JAS as an additional burden in addition to their existing workload.
4. In Khunti district, the extremist Pathalgadi movement has affected the regularity of VHSNC meetings; similar factors are likely to constrain the Jan Arogya Samiti's meetings and functioning too.
5. As of now, the awareness of JAS among the larger community is low.
6. School teacher/school health ambassadors who are members of JAS require official letters to leave school duties and come for meetings.
7. Certain HWCs are far away from village areas and habitable land, and some are inaccessible. In such a context, there would be logistical difficulties in organising meetings and getting JAS members to attend them.

8. Some JAS members feel the need for financial remuneration for the time they spend on attending meetings.
9. Contextual adaptations have had to be made with respect to National Guidelines: the JAS guidelines issued by NHM don't mention the inclusion of customary or traditional authorities such as tribal leaders. It was observed on the field that in some places in Jharkhand, the tribal leader known as 'Munda' was included in JAS under the bracket of 'peer educator'. Munda is a powerful person in tribal contexts, and his inclusion is seen by the field implementation team as critical for enhancing the community acceptance of JAS.

6. Discussion: Learning from the Experience and Way Forward

GRAAM's experiences with Arogya Shreni and its initial observations from Jan Arogya Shreni reveal the following lessons:

1. In any kind of community involvement, people do expect to see some positive results. Once this is achieved, it helps build the confidence among the community to involve more intensively.
2. Community driven changes are possible with empowerment and consistent involvement. The importance of locally grounded civil society organizations to play the roles of capacity building, facilitation and constant handholding is very evident from the experiments.
3. Advocacy successes show that communities have the knowledge to use a wide variety of channels and engage with different stakeholders to bring changes.
4. The model has revealed the usefulness of a nuanced, non-confrontational and ownership-based approach to monitoring where the community itself takes responsibility to resolve certain issues.
5. Questionnaire-based survey is an important tool to help communities focus on issues and follow-up on identifying solutions. It is also a tool that helps them engage more qualitatively with other stakeholders
6. Rural communities have been able to successfully use a complex technology interface (IVRS + questions requiring numerical inputs). This implies that more advanced technology usage can be tested.
7. Acceptance of ranking cards by the health providers such as doctors is a way to successfully bring about healthy competition between PHCs, which in turn can lead to positive changes in the PHCs.
8. Advocacy successes show that communities have the knowledge to use a wide variety of channels and engage with different stakeholders to bring changes
9. The experiments have generated an enhanced understanding and re-affirmation of certain public health issues such as a) poor planning by the Govt. (less rational spatial distribution of PHCs and allocation of medicines to PHCs) b) lack of adequate focus on preventive health c) doctors are expected to be well-versed

with accounts, handling administrative issues, etc in addition to being culturally sensitive d) PHC infrastructure is not the sole determinant of quality healthcare services.

10. The experiments have generated an understanding of the diversity in behaviour and responses of community members, which is important at both institutional and individual levels.
11. The piloting of the model is needed in different regions/districts before a state-level rollout is tried. The same model may play out differently in different socio-economic contexts, and necessary process adaptations may be required. It is important to extensively document the processes followed in community engagement, CBM and troubleshooting of problems that arise on the ground so that such process documentation can become the basis for more refined and robust guidelines for CBM in a range of contexts.

Appendix I: Participatory Structures formed under NHM

- Rogi Kalyan Samitis (Patient Welfare Committees): These are participatory committees supposed to act as groups of trustees to manage the affairs of health centres such as the Primary Health Centres, Community Health Centres and other public hospitals.
- PHC Planning and Monitoring Committees (PMC): The function of the PMC is to monitor the availability of facilities and services at their PHCs, oversee the utilization of untied funds and carry out dialogue with the local health functionaries on issues affecting the health centre. The PMC comprises elected members of the Village Panchayat and VHSNC members.
- Village Health and Sanitation Committees (VHSNCs): VHSNCs are formed at the revenue village level. VHSNCs are required to comprise elected members of the Panchayat, health workers, and other community representatives. Their role includes community-based planning and monitoring.
- Jan Arogya Samiti (JAS): The Jan Arogya Samiti (JAS), created at the level of the SHC-HWC, is supposed to serve as a platform for community participation in the management and governance of the SHC-HWC. One of the functions of the JAS is to "support and facilitate the conduct of activities pertaining to social accountability at AB-HWC in coordination with VHSNCs." (NHM, n.d.) The suggested functions of the JAS (as per the JAS guidelines) reveal that JASs are intended to act as important stakeholder in the primary health care domain, going much beyond establishing the answerability of the health centre. JAS are also envisaged to lead community-led health promotion activities, mobilise funds from various sources such as panchayat and CSR funds, and support Gram Panchayats in undertaking health planning (NHM, n.d.).
- As per the JAS Guidelines, the Sarpanch of the Gram Panchayat (GP) falling under the AB-HWC area shall be designated Chairperson of the JAS. The Community

Health Officer (CHO) of the HWC is supposed to be the Member-Secretary. Sarpanches of the other GPs of AB-HWC area, President of VHSNCs, ASHAs and All Multi-Purpose Health Workers (Male and Female) of AB-HWC are supposed to be ex-officio members of JAS. Other JAS members are SHG representatives, peer educators, school health ambassadors and special invitees such as TB champion, youth representatives and a sterilised male (NHM, n.d.). The total number of members in a JAS is expected to range from 15-19.

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References

1. Dillon, L.B. (n.d.). Participatory monitoring and evaluation. https://sswm.info/arctic-wash/module-3-health-risk-assessment/further-resources-participatory-approaches-and-health/participatory-monitoring-and-evaluation.
2. Garg, S., & Ray Laskar, A. (2010). Community Based Monitoring: Key to success of National Health Programmes. Indian Journal of Community Medicine, 35(2), 214–216. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2940173/.
3. Global Fund. (2020). Towards a common understanding of Community Based Monitoring and Advocacy. https://www.theglobalfund.org/media/9632/crs_2020-02cbmmeeting_report_en.pdf
4. NHM (n.d.) Community Ownership of Health and Wellness Centres: Guidelines for Jan Arogya Samiti.

VALUING EVALUATION: BUILDING CAPACITIES FOR EVALUATIVE THINKING AND LEARNING IN INDIAN STATES

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1. Reframing the Problem

Conversations with public administrators about evaluation often begin with a distinct sense of apathy, anxiety, or scepticism. These reactions persist even when the need for integrating evaluation is increasingly emphasised as a critical element of any government program. Yet, while there now appears to be greater formal recognition of the benefits of evaluation and even a greater commitment of resources towards carrying them out, there continues to be little genuine appetite within public systems for evaluation. All too often, evaluation continues to be at best an after-thought, a response to requirements by funding organisations, or a time-bound strategic exercise to demonstrate success.

In contrast, innumerable informal conversations with bureaucrats and field functionaries across government programs reveal, time and again, that practitioners are able to articulate deeply nuanced, reflective, constructive, and often causal and systemic explanations for the successes and failures they have experienced in the course of their work. These insights are shared with a great deal of enthusiasm and convey the extensive learning that happens on the field. Yet, while practitioners are learning, and are enthusiastic about critically assessing and reflecting upon their roles, programs and systems in more informal exchanges, such knowledge and insight largely remains personal and tacit rather than shared, acknowledged and applied. This is true even when diverse individuals across organisations express similar views and analyses, indicating that these are not just the subjective observations and opinions of a few. There seems to be little expectation, however, that their experiences and insights might be taken up as part of wider organisational learning, let alone have the scope for catalysing actual organisational or systemic change.

These paradoxes and tensions are not peripheral to the larger institutional challenge of building evaluation capacities and ensuring better public programs and systems. Indeed, understanding and addressing them may be the key to ensuring that present and future investments in research, monitoring and evaluation do not suffer what unfortunately seems to be a common fate across many countries and international development bureaucracies. Certainly, it seems the Indian experience is not exceptional. For instance, a recent analytical review (Yanguas 2021) of the relationship between knowledge and organisational change in international development agencies, found that even after spending significant time and resources building large M&E departments and deploying new knowledge management tools and systems, development professionals still really only learned personally, and knowledge from evaluation did not easily translate into organisational learning and change. 'At the end of the day, individual practitioners tend to learn from personal experience and rely on personal contact networks,' 'tacit learning prevails, while explicit knowledge management systems flounder,' and 'external agendas appear more compelling than internal research and evaluation' (Ibid: 21). What's more, it seems that this rather sharp finding itself doesn't seem to really surprise either practitioners or evaluators.

As union and state governments across India consider mobilising and committing greater resources and expertise towards strengthening development monitoring and evaluation capacities, what are we to make of such disappointing and disheartening experiences? If public programs and systems aren't actually going to learn from evaluations, are they worth it? Can we learn from what we do know to approach the challenge differently?

In this essay, we argue that we can and we must, but that it will require us to be both more realistic and more idealistic. More realistic because we must fully understand and respond practically to the contexts, constraints and experiences that determine why politicians, civil servants, field administrators and frontline workers have come to distrust or disengage from current practices of program evaluation. And we must be more idealistic: first and foremost, by acknowledging the existing desire and capacity that public functionaries have for learning, which is amply demonstrated by their high levels of personal learning and tacit knowledge. But we would like to suggest that we can build on this further to direct greater attention to the vital role that organisational norms and values play in creating and sustaining capacities for evaluative thinking and learning in public systems. For it is on the strength of these more foundational capacities that public programs and organisations might then be able to proactively determine their own needs for evaluation and other forms of learning, competently engage with monitoring, evaluation and other learning processes, and constructively absorb and integrate these learnings into systemic practice. This is what it would mean to genuinely value evaluation.

This might seem like a tall order especially given the multiple constraints and complexities that characterise public systems and programs, but this is precisely why one can no longer avoid a deeper engagement with the foundational dimensions of the problem and continue to primarily think about building evaluation capacities as a matter of securing technical and material resources. We must also be willing to ask another set of questions. What are the values and norms that underpin current approaches to evaluation within government programmes? And how do these deeply embedded values and norms impede or enable the adoption of appropriate forms of evaluation for different public sector initiatives and shape a larger ecosystem of learning?

2. Why don't we Value Evaluation more?

Over time, engagement with and observation of evaluation experiences across government programs yields a common set of concerns, both from public administrators and evaluators. If there is to be change, we will have to take these criticisms and constraints seriously, and consider how both evaluators and government programs might be able to respond, adapt and evolve if systemic learning and improved outcomes are indeed the intended goals. There are a number of 'supply side' and 'demand side' factors that seem to have brought us here.

First, we have often heard in conversations with bureaucrats that *evaluation is only an academic exercise* and therefore is less than useful for practice. There are good reasons for why this perception is so common. Partly, this has to do with a global academic phenomenon in which researchers based in the global north locate their research in developing countries because of cost as well as ease of access to respondents. The desired outcome for researchers is usually academic in nature, such as a journal publication. While researchers and government officials might try to meet the goals of both academic knowledge production and practical, programmatic insights, the outputs are often geared towards the former because the process is primarily led by academic researchers. Government officials we've spoken to find the process to be often one-sided and at odds with the goals they are trying to meet.

While this tension and misalignment is valid and can be both frustrating and extractive from the point of view of practitioners on the ground, the dismissal of evaluation as an academic exercise is a more serious problem because it *perpetuates an artificial distinction between theory and practice*. But while policymakers and program implementors might feel that theory has no tangible value, this is a concession on their part and diminishes the state's own analytical capacity to make better use of valuable insights from scholarly research even when such knowledge could significantly improve the quality of public policy and programs. Of course, there is much that academics can do to dramatically increase the public accessibility of their research and writing, but in the end the greater costs of government systems not learning from existing academic knowledge are borne by the public. Research and evaluation processes done well builds bridges by synthesising relevant and rigorous existing knowledge for systemic learning, but this will not serve the purpose if evaluation itself is consigned to be a largely irrelevant academic exercise.

If academic evaluators are associated with producing esoteric knowledge, there are other concerns raised with evaluators who come in as *'independent' consultants* on behalf of a funder, or on behalf of higher-tier governments evaluating the work of other units. Not only does this run the risk of the process being viewed more as an examination than an evaluation (more on this point below) but *external consultant-evaluators often concern themselves primarily with the narrow scope of evaluation* itself. An evaluation is conducted and a report on the results is produced. They do not, or are unable to, convert the findings into learning opportunities for governments over the long term. What happens once an evaluation report is submitted? How are results translated into lessons across different levels of employees in the government system? Are relationships of trust built between evaluators and implementors? Objectivity and external review are important, but how can these be balanced with structured co-production of the evaluation for enhanced learning?

A third, related challenge centres on the range of tools the evaluation community is able to provide the public sector. This has more to do with the dominant trends in the evaluation community rather than choices made by individual evaluators. The now well-established preference for causal studies that focus on specific 'treatments' has also unfortunately led to *evaluations turning into tests of success and failure*. While this might help for furthering knowledge about specific research questions and trade-offs, a success-failure binary is less well-suited to the range of actors, activities, processes and relationships that occur and emerge in practice. Binaries can create anxiety about the results of evaluation, and also under-estimate the complexity of practice. Public sector programmes are often better served by complex and adaptive evaluation techniques (Sridharan and Nakaima 2020). However, even though the case for such approaches have been powerfully made, the support for complex and adaptive evaluations and the capacity among evaluators for conducting them remains limited.

Fourth, within government programs and systems, there is the problematic tendency for processes of evaluation to be associated with performance measurement, a matter of considerable importance and anxiety. There is a constant concern that evaluations may become proxies for performance measurement particularly when multiple tiers of government are involved and the results of an evaluation may be linked to subsequent

fiscal transfers or other forms of continued support for programmes at lower tiers of government. But the problem of performance and evaluation is perhaps even more acute in a routine sense. Evaluation as learning is more likely to occur in environments that make space for reflection and discussions about the reasons behind failures, as much as about success. Too often, failure invites penalty and creates incentives for gaming behaviour and measure-fixation, or the foregoing of evaluations altogether.

Finally, while government programs are reluctant to identify, discuss and learn from failures, they are not particularly good at learning from success either. A large part of this problem can be related to the *value placed on novelty*. Each government programme claims to be the first to employ a certain strategy for service delivery or meeting developmental objectives. Novelty is important because governments need to signal distinctive contributions and progress to voters, or state governments need to signal innovation to the centre, or individual bureaucrats need to signal achievement to advance in their careers. But this comes at the cost of creating institutional memory, and of seeing the linkages between the programmes we have today and the rich history of programmes that have often attempted exactly the same processes earlier. A system characterised by short tenures, frequent transfers of bureaucrats and over-burdened field functionaries inundated with orders, circulars and multiple, contradictory demands further widens the gap in creating a system that can hold, transfer, and learn from the knowledge accumulated through decades of practice. Over time, public servants have had to live with this structure—*re-inventing the wheel each time*—creating minimal scope for sharing credit and responsibility across different tiers and generations of government.

Moreover, the *political and administrative problem of attribution* (both in terms of credit and discredit for schemes and programs) not only plagues learning within states but also among states and between union and state governments. New portals and platforms for experience sharing and knowledge exchange therefore seem to quickly lose profile and dynamism. It seems that everybody wants to become a best practice or a model, but no one is particularly inclined to learn from them! Indeed, this is an issue at the heart of building evaluative capacities for cooperative federalism.

3. Principles and Practice: Shifting Norms and Values Towards Evaluative Thinking and Learning

Confronted with this extensive (and even then, only partial) list of challenges and constraints that impede evaluation and learning in government, it is tempting to take recourse to the common Indian refrain: we are like this only! And there is of course a grain of truth here. But such acknowledgement need not lead to resignation or the search for work-arounds that lead us back to the original problem.

First, in our experience, understanding the contexts and priorities under which governments work can actually help position evaluation efforts much more constructively within larger programmatic learning environments. For example, claiming political credit and gaining political support for major development programs is an important priority for political and bureaucratic leadership; in it essential to the work of keeping programs

going under challenging and uncertain conditions. Maintaining a certain perception and aura of programmatic success, especially at certain moments, is therefore part of programme management, even when there may be relatively limited concrete evidence on outcomes. Sometimes this is necessary to even enable the space for course correction that administrators know is needed. This does not have to impede deeper programmatic learning as long as practitioners and evaluators alike can value and create space for internal, low profile, routine and rigorous systemic learning as part of programme evaluation processes, which also acknowledge the ways in which data and documentation will often be deployed in different ways to secure the program. Similarly, while reformers often try to reinforce the importance of training and learning by linking it more tightly with individual performance measurement and review, this often leads to gaming rather than actual engagement. Again, certain contextual and collective learning and evaluation processes might gain more from being kept out of such direct entanglement with the systemic and programmatic imperative for performance measurement.

Second, efforts towards building individual, organisational and systemic capacities for evaluative thinking and learning should be undertaken *ahead of* and *alongside* efforts to build monitoring and evaluation capacity itself. This should be more of a pre-condition rather than an assumption or an afterthought and must be a sustained process at all levels of the system.

And third, whenever an opportunity arises it is worth the effort (and the discomfort) to consciously and sensitively bring to the surface the presence and role of deeply embedded organisational norms and values in creating, nurturing and disabling cultures of evaluative thinking and learning. It is only when these are brought up and discussed that individuals and organisations begin to articulate the shared values that they wish to uphold and recognise that their organisational norms can indeed be adapted and changed in a way that enables them to serve their core public purpose (Cialdini and Goldstein 2004).

4. Learning about Learning by doing in Meghalaya

Much of our own recent experimentation and learning on how we might do things different is emerging from the ongoing efforts of the Government of Meghalaya's State Capability Enhancement Project (SCEP). Over a period of only a few years, the SCEP has initiated pioneering work to transform public systems, public service delivery, community institutions and social accountability in Meghalaya. During this time, the SCEP's approach to adaptive leadership and systemic, iterative and collaborative problem solving has demonstrated significant progress in strengthening MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act), public health (especially the response to the Covid-19 pandemic, immunisation services, and prevention of maternal deaths) and has prioritised new approaches to addressing the challenges of climate change and Natural Resource Management (NRM) in the state (Kumar et al. 2021).

One of the critical elements of this initiative is the attempt to open up spaces for collective and individual learning and reflection within public administration and program implementation at all levels. This includes sites of knowledge exchange and learning such as the Meghalaya State Capability Forum hosted by the chief minister and attended

by ministers and senior bureaucrats and regular weekly meetings of district and field functionaries to review and analyse progress. In each case, in different ways the effort is to break down the distinction between theory and practice or academic knowledge and programmatic insight by creating room for deeply informed, open, analytical and reflective discussion within and across different levels in the system: it is in this sense that these are efforts build the capacities of thinking evaluative in the everyday course of political and administrative work.

As part of the process of systemic change, the Government of Meghalaya has also created a number of new organisations and invested in galvanising and re-designing older institutions to rediscover and pursue their core purpose. Here, the effort is focused on building learning and evaluative thinking into organisational design. The Centre of Excellence (CoE) for Sustainable Natural Resources Management and Livelihoods is one such newly formed organisation which from its inception is trying to instil purposeful learning and evaluation at the core of the organisation's mission. Another vital initiative is the renewed vision for the Meghalaya Administrative Training Institute (MATI) as a centre of administrative *learning* and thinking through the organisational design and capacities that would enable this evolution.

Finally, there is a conscious effort to bring to the surface the often-silent questions of norms and values in public administration as part of processes of training and skill building. Civil service training programs typically focus on substantive policy issues, public administration theory, or on imparting specific skillsets. Rarely is the opportunity used to initiate conversations about the norms and values that inform decision-making within government. For example, we worked with the Meghalaya Administrative Training Institute (MATI) in 2021 to deliver a course titled Values for the 21st Century Civil Servant. Through lectures, simulations, small group discussions, and in-class surveys, we explored the norms and values that underpin a diverse set of issues such as professional identity, diversity and inclusion, trust and collaboration in the public sector, the theory versus practice binary, and performance.

One exercise was particularly illuminating: we asked trainees to respond to an in-class survey, the results of which were shared and discussed. Trainees were surprised to discover that the batch, who had been together in training for nearly six months, was divided on whether teamwork was considered important in the bureaucracy. They were also surprised and troubled by the divided views on whether colleagues would voluntarily share information and knowledge without being instructed to do so by a senior and on what they thought was the appropriate degree of public disclosure. This led to a discussion about both trust within the system and trusting the citizen and the public, as well as the common perception that the system prioritised individual glory and novelty rather than collective initiative. As the class prepared to take up their first field postings in blocks and districts across the state, each trainee also reflected on how they might personally want to contribute to changing such norms in the course of service and what that might take or look like. These are undoubtedly very small steps and slow processes of change, but they do point to the possibilities for building evaluative thinking and learning within government without being naïve and yet not embarrassed to begin with norms and values!

References

1. Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annu. Rev. Psychol.*, *55*, 591-621.
2. Kumar, S., Manoharan, A. P., & Chandrakalatharan, J. (2021). Applying Competencies: State Capability Enhancement Project (SCEP). *The Public Productivity and Performance Handbook*, 453.
3. Sridharan, S., & Nakaima, A. (2020). Valuing and embracing complexity: How an understanding of complex interventions needs to shape our evaluation capacities building initiatives. *Evaluation and Program Planning*, *80*, 101440.
4. Yanguas, Pablo (2021). What have we learned about learning? Unpacking the relationship between knowledge and organisational change in development agencies, Discussion Paper, No. 9/2021, ISBN 978-3-96021-146-4, Deutsches Institut für Entwicklungspolitik (DIE), Bonn, http://dx.doi.org/10.23661/dp9.2021

DEVELOPING A CULTURE OF EVIDENCE USE: EXPERIENCES FROM UTTAR PRADESH

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Bill & Melinda Gates Foundation

1. Introduction

The state of Uttar Pradesh (UP) provides an important context to understand and develop a theory of change of data use capacity building over time. In this paper we describe a culture of use of data for decision making in the health department of GoUP supported by the UP Technical Support Unit (UPTSU) established under the Memorandum of Cooperation between Government of UP (GoUP) and Bill and Melinda Gates Foundation and provides technical assistance to the department to improve access and quality of care to women and newborns at health facilities and outreach using a life cycle approach. The key areas of focus also include strengthening of the core foundations of Health System in UP, especially in the areas of Human Resources for Health, Medical Supply Chain, and use of data for improve decision-making.

UP has a population that has been estimated to be more than 230 million by 2021 (Ministry of Health and Family Welfare, 2019), with about one-sixth of the India's population and having multiple administrative layers that include 18 administrative divisions, 75 districts, 820 sub-district boundaries, and more than 107,000 rural villages (Office of the Registrar General and Census Commissioner, 2011).

UP provides a unique opportunity to explore the role of evidence use in helping improve health systems across the state.

The overall objective of establishment of the Monitoring and Evaluation (M&E) unit under UPTSU is to provide techno-managerial support to health department of the Government of UP (GoUP) to enhance the use of data for decision making. The specific objective can be listed as follows

- Strengthen the availability and quality of government data system
- Increase the use of data for problem solving by gap analysis and prioritization
- Strengthen system capacity for concurrent monitoring, ensuring data quality, and its use for effective decision-making

Table 1 describes some of the gaps that the UPTSU attempted to address as a part of data system strengthening efforts.

Table 1: Prior context- Gaps in data availability, quality & use

Domain	Gaps
Data Availability	✦ Paper based data collection, compilation, reporting (MPR) and duplication of efforts ✦ Critical data elements were missing in routine Health Management Information System (HMIS) ✦ All facilities were not mapped for reporting in HMIS ✦ Non-uniform reporting of data from facilities
Data Quality	✦ Platform and system of data quality were not in place ✦ Quality of data suffered from mis-reporting

Domain	Gaps
Data Use	✦ No uniform framework for evidence-based review meetings ✦ Monthly review mostly focused on financial progress ✦ Non-friendly data structure to make the data use further difficult ✦ Lack of resources to analyse the data for evidence-generation and program planning

2. The Role for Evaluations

Building capacities for evidence use is rarely a mechanical process. While technical and managerial inputs matter for capacity building, there also is a recognition in the literature and practice that sustaining a "culture" of evidence use often needs more than technical and managerial support.

In our experience, the pathways by which capacity building initiatives work are often under-theorized. The evaluation itself has a role in helping refine the theory of change over time. This paper is structured as a dialogue between the programming and the evaluation teams. We start with an initial theory of change and raise a few evaluative questions that can help refine the planned program for capacity building over time.

In this paper, we argue that even with deep understanding of the technical and managerial processes involved in improving the use of evidence in a state such as UP, evaluation has a role in refining the theory of change for capacity building for evidence use in UP. Note that the pathways by which investments in data and cultures of evidence use more broadly impact health outcomes are in all likelihoods long and convoluted. When faced with complexity, as described by Pawson et al, (2004) evaluation itself needs to provide a way forward: evaluations provide "a process of thinking through the tortuous pathways along which a successful programme has to travel. It concludes with reflections and considerations on how to navigate some significant highways and byways".

This paper is organized as follows. In Section 2 we briefly share our understanding of a culture of evidence. Section 3 briefly introduces an initial program logic that the UP-TSU is using to implement a program of work. In section 4 we explore how an evaluation of the capacity building effort of the UP-TSU can help interrogate the initial program logic and help refine the theory of change over time.

3. Capacity Building for Evidence Use as a Dynamic Process

It's important to conceptualize capacity building for evidence/data use as a dynamic process that goes beyond a series of activities, events, or investments. Capacity building will require great attention to the context in which these activities, events, and structures are introduced. It requires paying attention to relationships between multiple actors, including key leaders and champions. It also means that building a culture of evidence use takes time and depending on contexts, different settings will have differential timelines of progress in building a culture of evidence use.

A culture of evidence goes beyond applying high-quality research, analysis, and evaluations to make program decisions. In the field of education, for example, Spurlock and Johnston (2012) argue that a "culture of evidence" differs from a "culture of justification" on multiple dimensions including (See Table 2):

1. Intentionality
2. Perspective
3. Critical linkages
4. Initiatives and directions
5. Planning processes

Using the framework offered by Spurlock and Johnston (2012), Table 2 describes how a culture of justification can differ from a culture of evidence.

Table 2: Differences between Cultures of Evidence and Justification (Adapted from Spurlock and Johnston, 2012)

	Culture of Justification	Culture of Evidence
Intentionality	"People can describe what they are doing (i.e., operational or procedural specificity)"	"People know that they are doing the right things and can describe why they are doing them and what they are accomplishing."
Perspective Critical	**After the fact:** "Data are used retroactively as justification for pre-determined positions or previous decisions."	"Data are collected and regularly used to inform processes. Data help close the loop on improvement processes" and outcomes
Critical links Initiatives	**Cloudy:** "Assessment is conducted from a defensive posture, especially related to questions of budgetary and operational efficiency.	**Transparent:** "Outsiders can see and understand contributions to. Information on progress and performance is shared with all stakeholders
Initiatives and directions	"Administration initiates assessment and it is done only when asked for or required"	"All stakeholders own assessment. Success is operationalized, concretely described, and evaluated on the basis of evidence".
Planning processes	"Sporadic and limited to immediate question or application: Data are linked retroactively to strategic context, goals, and expectations, but the process is not planning-oriented."	"Ongoing, strategic, and clearly linked to past and future: Triangulation of findings through multiple/established assessments. Data are incorporated into continuous strategic thinking."

We believe that understanding a culture of evidence use needs to go well beyond data availability or quality. It needs to pay attention to the "choice making capacity" (Pawson,

2008) of key practitioners and policymakers. As Table 2 highlights, the focus in a culture of evidence is 'continuous strategic thinking' and ownership of performance. This implies that a focus on the culture of evidence needs to pay attention to the "resources and reasoning" (Pawson, 2008) of key decision-makers as they make strategic decisions. The literature on the culture of evidence use (Lorenc et al, 2012) further reinforces the need to consider multiple factors in understanding evidence-practice (see Figure 1). Several factors including organization resources, routines and procedural knowledge, cultural norms all matter in influencing evidence-based practice.

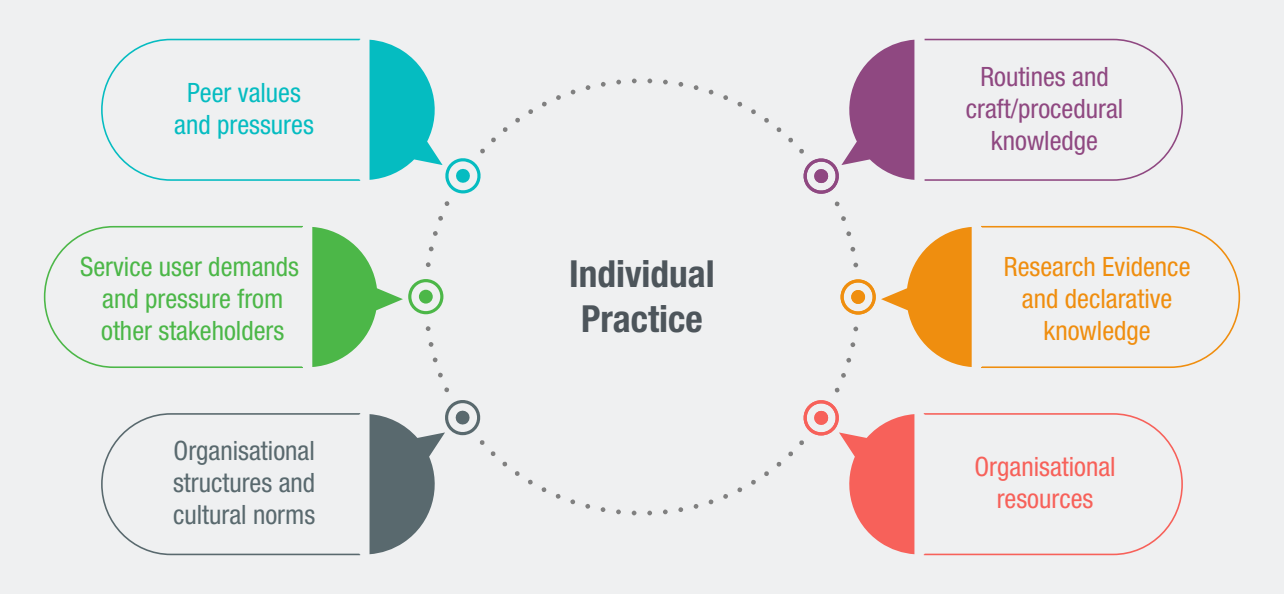

Fig 1: *Categories of Factors that Determine Evidence Use Practice*

Source: *Adapted from Davies and Nutley, 2003*

4. Proposed Program Logic for Building a Culture of Evidence Use

The program logic for the UP-TSU program of work in building a culture of evidence use that can lead to improved health outcomes is described in Figure 2. While Figure 2 provides some initial idea of the connections between inputs, processes, outputs, and outcomes, like all 'initial' theories of change, there are several implicit assumptions. In the next section, we argue that it's an important function of the evaluation to help interrogate the program logic in greater detail, identify ways in which this initial program logic is incomplete, and also, consistent with a dynamic process view of capacity building, explore what additional inputs could help create a culture of sustainable evidence use in UP.

Figure 2 provides a useful narrative for the proposed work but is also a significant simplification of the change process. Some high-level questions that emerge in response: Will improvements in availability, quality, and enhanced review suffice to build a culture of evidence use? What are some barriers and bottlenecks that still need to be addressed?

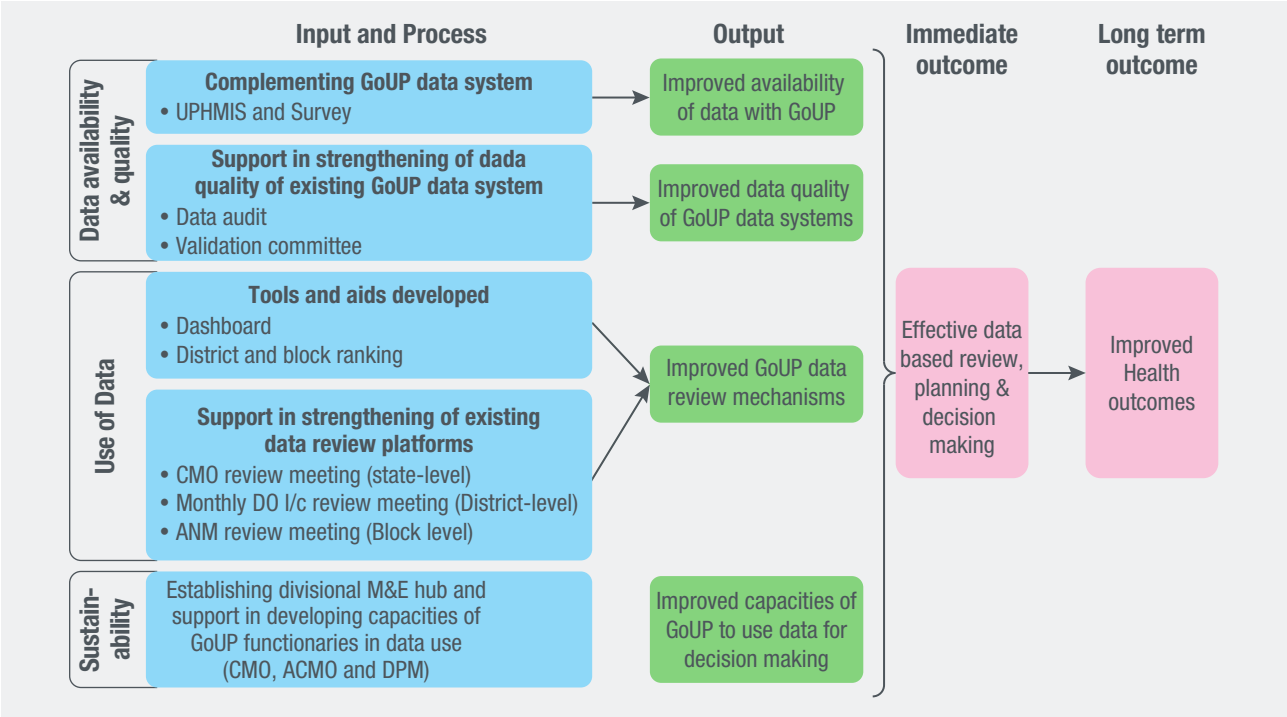

Fig 2: *Initial program logic linking proposed activities related to evidence use to longer term outcomes*

Source: *Author*

Key work streams for this phase of work include (see Figure 3): government data systems, evidence generation and routine program monitoring, implementation research, and transitions and sustainability. See Table 3 for additional details on the work streams.

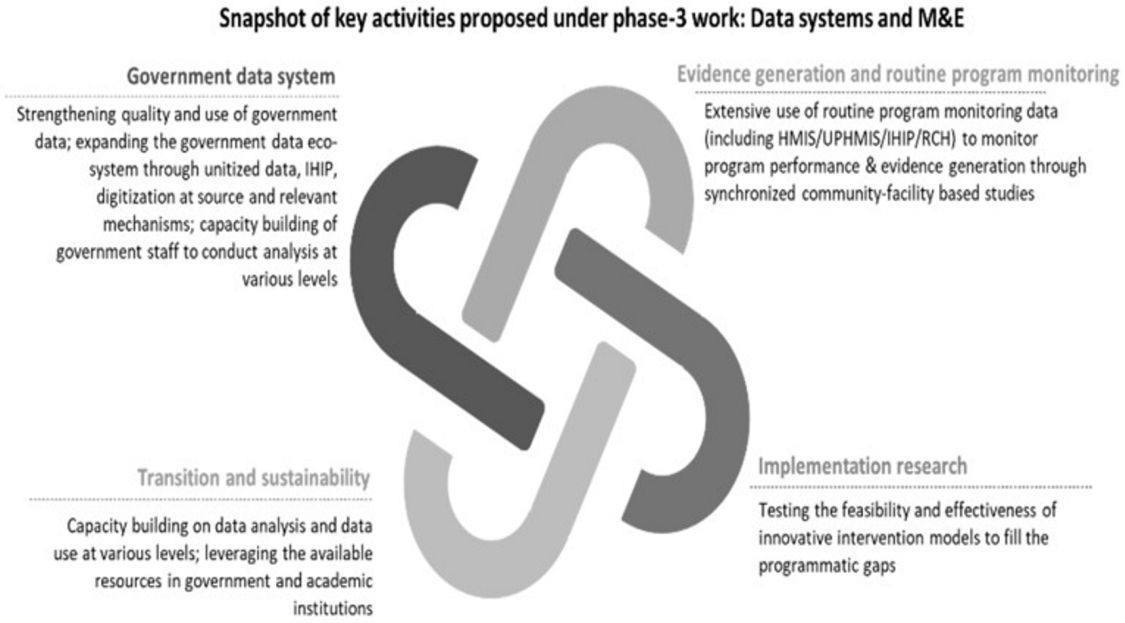

Fig 3: *Workstreams proposed for capacity building for the present phase of work*

Source: *Author*

Table 3: Summary of Work Streams Proposed by UPTSU for Enhancing Data Use

Despite the fact the positive change has been noted across all the key thematic areas of government data system strengthening, yet there has been a persistent gap in achieving the universal use of data for decision making due to persisting differentials across the geography (high-priority districts[2]) and different levels (types of facilities). These gaps can be classified into gaps in data availability, data quality, data use and challenge in sustainability of the innovations and approaches implemented by GoUP.
Drawing upon the learnings from its' previous phases of the work, the next phase of the data system would primarily dependent on leveraging government resources to drive the works around data-based decision-making. Post-transitioning the UP-HMIS system to the government, TSUs support will primarily be on providing technical support to the state, district and divisional level M&E staff on ensuring data quality and data use through enhanced capacity-building efforts. Recognizing the fact that the new data systems like IHIP (new HMIS), ANMOL, data digitization at source and other FLW level unitized data systems are paving its's path in the data eco-system in the state, the role of UP-TSU will largely be on quality assurance and helping the state to build its' capacity on the data analysis and use. However, establishing the data-based review system at the district-hospital level will be one of the key interventions that UPTSU will be focusing upon as such mechanisms are completely absent at the moment.
Some of the other focused areas of work under the data system would be community and facility-based synchronized evidence generation by leveraging the resources and expertise of the other government and specialized partners in the eco-system, establishing a routine program monitoring framework encompassing the high-level analysis of routine HMIS/UPHMIS/IHIP/RCH data and evidence synthesis through the secondary data sources for TSU's priority program, assisting GoUP in building its capacity to engage specialist partners to design and conduct population-based surveys for tracking the directionality of change in key outcomes of interest, in sync with and not duplicating, the national initiatives such as National Family Health Survey (NFHS), and conducting scientific implementation research to test the feasibility and effectiveness of various pilot interventions proposed under the phase-3 intervention. Efforts will be made to ensure that the implementation research does not become a standalone activity in itself rather act as a responsive mechanism of addressing key gaps by offering system-level solutions in an almost real-time basis. Usually, most of the implementation research would be for 1.5 to 2 years, and hence, it will have an opportunity to feed into system-level solutioning within the Phase-3 intervention timeline. A systematic analysis of the understanding of heterogeneity and disparities would enable to identify and test the feasibility and effectiveness of innovative models in UP.
All the interventions planned in the next phase of work would keep the transition and sustainability perspective from the beginning itself. Accordingly, fostering the skill of data analysis at the state (NHM, directorate) and divisional levels has been proposed so that appropriate and specific solutioning to the district-level problems could be provided. At present, district-level officials use the data for decision-making through the use of dashboards, however, these skill has to spill over to the sub-district level for greater sustainability. We can't ignore the role of local government institutions and other academic partners like Kings George Medical University, Lucknow University etc. on routine analysis and research. We plan to further collaborate to enhance capabilities in data analysis and research and use them as an important lever in implementing any research going forward.

Some of the key achievements to date are described in Table 4;

2 25 districts of the state have been categorized as high-priority districts based on the poor health outcomes like neonatal and infant mortality rates, total fertility rate, modern contraceptive prevalence rate, safe delivery and full immunization levels as per the Annual Health Survey 2012-13.

Table 4: Key progress to Date on Evidence Use Capacity Building

Themes	Progress
Improving data availability of health systems in the state of UP	a. Integrated Uttar Pradesh Health Management Information System (UP-HMIS) portal setup in the state since May 2017 to enhance the data reporting, thereby data availability, in the state. More than 25k facility staff and officials at different level were trained in the beginning (July-August 2017) and were mentored regularly thereafter. b. More than 95% facilities are uploading data on portal and sustained c. Data rationalization of the UPHMIS format has been conducted and around 60% of the redundant data points have been reduced to improve the use and quality of data d. UPHMIS Sub Center application developed and rolled out in all 75 districts of the state. More than 99% of the ANMs at SCs are directly entering their data for integrated format of HMIS and UPHMIS *(Data entry at source)*
Improving data quality and establishing robust governance structures for ensuring quality of reported data	a. Data quality audit has been demonstrated by TSU as an intervention for data quality improvement and GoUP has constituted state data audit team since January 2018. 7 rounds of data quality audit completed covering 51 districts of the state. b. Guideline has been released on process of validation committee meeting at district, block and district hospital level (Sep 2019) and district level meeting was conducted in 23 High Priority Districts (HPD) and 32 non-HPD in March 2020. c. There is significant improvement in data quality over time i. About 90% (in all 75 districts) of the facilities are having completeness of more than 80% (May 2020). The improvement is significantly higher in HPDs in comparison to non HPDs ii. Data matching with source document has shown an increase from 57% (Jan 18) in round 1 to 74% in round 7 (Feb 20)
Promoting data-driven review of health systems by government leadership across all levels	a. Review framework has been developed and guideline is released by the state in December 2018 b. Data use training of all 75 districts begun in August and September 2018 and continued thereafter c. UP health dashboard developed by using ranking concept. All the districts and blocks can review and track the performance on 12 performance and 2 data quality indicators. d. More than 90% of the districts of the state are using dashboard and 41 districts (24 HPD and 17 non HPD) have developed an action plan based on it in last quarter of 2019-20 e. IT enabled decision tracker module has been developed and rolled out across all 75 districts District level program managers have taken and tracked 374 data-based decisions across in the year 2019-20 across 42 districts (25 HPD and 17 non HPD). However, 78% of all the data-based decisions were from HPDs

Themes	Progress
Ensuring sustainability and transition of key strategy and interventions	UPTSU has supported GoUP in establishment of Divisional M&E hub (August 2018) under NHM in all 18 divisions of Uttar Pradesh covering all 75 districts The engagement and mentoring plan have been developed on key capacity building packages and implemented with an agreement of UP NHM to build the capacity of divisional M&E hub on data quality and program gap analysis

5. The Role for Evaluation in Refining the Theory of Change

Figure 2 also suggests that the drivers of improved health outcomes are data availability, quality, improved capacities, and enhanced reviews. While it might be a truism that enhanced data availability, quality, and data-driven review of health systems can lead to better health outcomes, this is by no means certain. An evaluation needs to demonstrate or provide evidence for the causal linkages described in Figure 2.

Some important evaluative questions that emerge include (see Figure 3):

- In what specific ways did improve availability or quality of data lead to better decision making? What are some concrete examples of 'better' decisions?
- Is there evidence or early signals that improved availability and quality of data also led to improved health outcomes? How can the contribution of improved data on better outcomes be demonstrated? (Note that both the attribution and contribution problem implied by this causal chain is not easy to demonstrate because typically in a large complex system, a several factors drive health outcomes).
- Further, given the heterogeneities in district-level systems, are there some districts in which there is tangible evidence that high-quality review and planning processes aided by improved data availability and quality led to substantially improved outcomes?
- What role do organizational culture and local leadership play in driving effective data-based reviews? What kind of individual capacities need to be built for effective analytics and evidence synthesis at various levels?
- Were there large amounts of variations in the quality of data-based reviews across the districts?
- We also have an opportunity to learn about the types of support that are needed from the state to build capacity of such M&E hubs over time. Are there plans in place to sustain the dynamic process by which the divisional M&E hubs provide supports to improve the capacity of GoUP after the TSUs are no longer supporting the state government?
- In what ways can the evidence culture be sustained by the State over time? How can a pipeline of HR competent in analytics, evidence synthesis, visualizations, etc., be set up in UP?

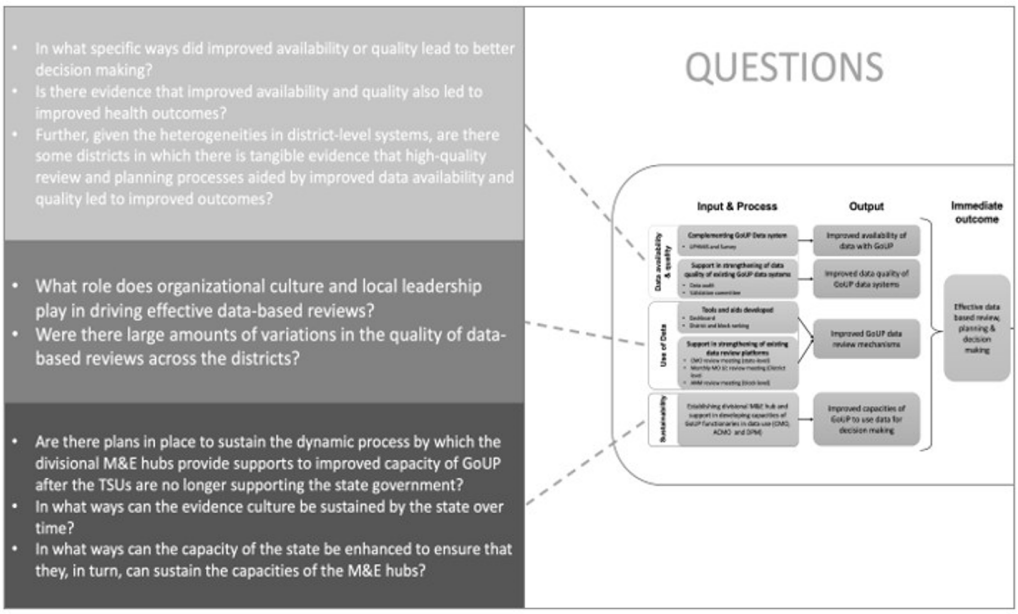

Fig 4: *Evaluation Questions to Refine the Theory of Change*

Source: *Author*

Note that these questions are only illustrative to highlight those evaluations themselves have a role to refine the theory of change, enhance the implementation of capacity building programs and also plan for sustainability.

Addressing such questions would require a movement away from a mechanical, summative view of evaluation that simply asks, Did the program of work build capacities? Instead, the focus needs to be *developmental* (Patton, 2010) in which the evaluation team working collaboratively with the program team needs to help enhance the programing and refine the theory of change. Such a developmental focus is especially needed for planning for sustainability (Sridharan and Nakaima, 2019). For example, it's important that multiple views of sustainability are adopted as we explore how the M&E hubs can help sustain the dynamic capacity building process. This implies thinking of sustainability as *mainstreaming*, exploring what needs to be done to ensure that the capacity building supports have been institutionalized within the state and can be sustained over time. It also implies incorporating of view of sustainable impacts to explore if the interventions that form part of the capacity building package of work continue to have impacts after the UPTSU ceases.

References

1. Ministry of Health & Family Welfare. (2019). Population Projections for India and States 2011 – 2036: Report of The Technical Group on Population Projections November, 2019: MoHFW: National Commission on Population, New Delhi.
2. Office of the Registrar General & Census Commissioner. (2011). Primary Census Abstract, Uttar 3 Pradesh-2011: Data highlights. 2011. New Delhi, India: Ministry of Home Affairs, New Delhi.

3. Lorenc, T., Tyner, E. F., Petticrew, M., Duffy, S., Martineau, F. P., Phillips, G., & Lock, K. (2014). Cultures of evidence across policy sectors: Systematic review of qualitative evidence. European Journal of Public Health, 24(6), 1041–1047. https://doi.org/10.1093/eurpub/cku038.

4. Nutley S, Davies H. Making a reality of evidence-based practice. In: Davies H, Nutley S, Smith P, editors. What Works? Evidence-based Policy and Practice in Public Services. Bristol: The Policy Press, 2000: 317–50.

5. Patton, M. (2010). Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use. New York, NY: Guilford Press.

6. Pawson, R., Greenhalgh, T., Harvey, G. et al. (2004). Realist Synthesis: An Introduction. ESRC Research Methods Programme, University of Manchester. RMP Methods Paper 2. http://www.ccsr.ac.uk/methods/publications/RMPmethods2.pdf.

7. Pawson, R. (2008). Causality for beginners. NCRM Research Methods Festival 2008. Retrieved from http://eprints.ncrm.ac.uk/245/.

8. Spurlock, R.S. & Johnston, A.J. (2012). Measuring a Culture of Evidence. In M. Culp & G. Dungy (Eds.), Building a Culture of Evidence (p. 65). Washington, DC: NASPA.

9. Sridharan, S., & Nakaima, A. (2019). Till time (and poor planning) do us part: Programs as dynamic systems—Incorporating planning of sustainability into theories of change. Canadian Journal of Program Evaluation, 33(3), 375–394. https://doi.org/10.3138/cjpe.53055.

A FRAMEWORK FOR OPTIMIZING GOVERNMENT MONITORING AND EVALUATION SYSTEMS DURING CRISES

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Abstract

The number and intensity of natural and man-made disasters is increasing across the world at an unprecedented pace, putting extreme pressure on governments and humanitarian actors to respond rapidly and with accountability. In India, the national and state governments have used their massive social safety net programmes as a first line of response to crises such as COVID-19 and cyclones. However, the Monitoring and Evaluation (M&E) systems of these government programmes require strengthening in order to be fully effective in times of crisis, including the ability to assess needs as a result of a crisis and provide a framework of accountability for the response. This paper presents a framework for strengthening government M&E systems during crises. It argues for four key strategies that can help government M&E systems to be responsive during crises.

a. ***Prepare: Strengthening M&E systems, pre-crisis***

   i. *Crisis situations demand extraordinary measures. To make the M&E systems effective and responsive during crises requires the strong M&E systems during pre-crisis situation i.e., during normal times.*

b. ***Balance: Demand data is just as important as supply data***

   i. *Existing government M&E systems are largely supply-driven, yet in order to capture the demand created from a crisis, they need to be adapted and strengthened through use of regular systematic data collection.*

c. ***Prioritize: Monitoring is vital during crises***

   i. *Crisis situations demand tracking the beneficiary needs and the service delivery. Modern remote monitoring tools and techniques needs to be strengthened within government systems. Strengthened monitoring systems can provide a solid baseline of updated information against which the impact of a crisis can be measured and can provide information on numbers and location of people affected by a crisis.*

d. ***Learn: Evaluations to assess effectiveness of crises response***

   i. *Using monitoring data, evaluations can be conducted in the post-crisis period to examine the adequacy and effectiveness of the response. Planned or ongoing evaluations during crisis will also require mitigation strategies in place by the government institutions.*

Disasters and its impact on Exacerbating Vulnerabilities

In the last five decades, the world has experienced more than 11,000 disasters[3] which have resulted in an economic loss of USD 3.6 trillion and more than 2 million reported deaths (WMO, 2019). The number of disasters has increased over time, especially flood-related disasters. In India, extreme weather conditions have continued to threaten sustainable development. The estimated Average Annual Loss (AAL) for India due to tropical cyclones,

3 Disaster related to weather, climate or water hazard.

floods, and droughts was USD 87 billion (WMO, 2020).Besides, in 2020 and 2021, due to the COVID-19 pandemic, the country experienced an unprecedented health crisis triggering national and state lockdowns. This led to a sharp economic decline during 2020-21, and spike in unemployment, with an eventual recovery towards the end of year (PIB, 2021).

Disasters often have a disproportionately severe impact on the poorest households. Global studies have found that socio-economically deprived populations are more vulnerable directly and indirectly as they live in remote and marginalized locations in rural areas and cities with poor infrastructure. It becomes difficult for the government and humanitarian actors to respond to their needs due to lack of real-time information.

The negative impact of disasters on income and consumption levels for the poorest is disproportionately strong (Rentschler, 2013). As a result, disasters are also amongst the main drivers of hunger and malnutrition in the world. Their impact results in loss of lives and livelihoods, destruction of homes, damage to productive assets and infrastructure, and reduced availability of food and water. The strategies affected people adopt to cope with disasters (i.e., reducing number of meals, selling livestock, debts, taking children out of school) has long-lasting effects, trapping them in cycles of hunger and poverty (WFP, n.d.). The COVID-19 pandemic and economic disruption shave further exacerbated pre-existing food insecurity, with 118 million more people facing hunger globally in 2020 than in 2019 (FAO, IFAD, UNICEF, WFP, & WHO, 2021).

2. India's Social Safety Nets During Normal Times And Crises Situations

About one-fourth of the country's 1.3 billion population fall below the multidimensional poverty benchmarks (NITI, 2021). Poor nutrition, access to cooking fuel, adequate sanitation, and housing are some of the major contributors to this trend. Furthermore, some of the poorest regions/districts in the country are the most vulnerable to disasters, such as the Himalayan regions, alluvial plains, and coastal areas (NIDM, 2014).India implements one of the largest social safety programmes in the world to improve the standard of living of its population and insulate it from socio-economic vulnerabilities during normal times as well as during disasters. Government Central Sector (CS) and Centrally Sponsored Schemes (CSS) are the primary mode of funding the various development initiatives at the cost of INR 16.10 lakh crores or $US 215.3[4] billion (2021-22), entailing multi-sectoral programmes on food security, sustainable livelihoods, drinking water and sanitation, nutrition, public health, agriculture, etc. (GoI, 2022).

3. Case of the National Food Safety Net During Crises

Provision of essential food supplies form an integral part of India's development priorities during normal and disaster situations. The erstwhile Public Distribution System (PDS), with its origin during the Second World War and Bengal Famine of 1943, is a notable example which was conceptualized as a measure for food assistance during disasters, stabilizing

4 Exchange rate, 1 USD = 74.80 INR.

food prices, and increasing agricultural productivity (Saini & Kozicka, 2014) (PEO, 2005). Today, the National Food Security Act (NFSA), subsuming TPDS,MDM and ICDS makes quality food provision in adequate quantities a legal mandate for the government.

TPDS has been extensively used and instrumental in providing food assistance and relief during cyclone Fani in Odisha in 2019, floods in Kerala 2018, Bihar 2016 and 2017, Tamil Nadu 2016, Jammu and Kashmir floods in 2014, etc (DFPD, n.d.). The National Disaster Management Plan 2019 and its state counterparts have articulated the role of TPDS in supplying essential food commodities as a part of crisis response activities (NDMA, 2019). Most notably, the TPDS was used to deliver subsidized food grains to more than 800 million beneficiaries, poor families, and migrant workers amidst the COVID-19 crisis and containment measures in 2020-2021. Additional food grains, over and above the entitled quantities, were distributed free-of-cost to prevent severe food insecurity (GoI, 2021).

4. Architecture of Monitoring and Evaluation Systems for Social Safety Nets in India

Monitoring and Evaluation (M&E) systems are integral to the effective functioning of social safety nets before, during, and post disasters. In normal times, they provide empirical evidence for planners and decision-makers on existing vulnerabilities, needs of the community, coverage and quality of the services delivered, outcomes achieved, and identification of challenges with possible course-correction options (Bene, Frankenberger, & Nelson). During crises situations, they inform emergency response in identifying the number and location of people who are most affected and track the speed and quality of post-disaster recovery. Finally, systematic evaluations help improve the adequacy and effectiveness of the social safety nets and emergency disaster response policies from a resilience-building lens.

In India, M&E systems, and evidence framework for social safety nets in normal times comprise of a network of scheme-specific tools such as Management Information Systems (MIS), social audits, implementation progress reports/bulletins, and periodic external evaluations. It also draws data and evidence from periodic national-level surveys such as the Census of India, National Sample Survey (NSS) rounds, National Family Health Survey (NFHS), Socio-Economic Caste Census (SECC), etc. A snapshot of some flagship schemes under the social safety nets and their M&E framework is provided in the annexures (Table-01).

The year 2005 saw an articulation of the need for evidence and M&E to support disaster management planning and post-disaster recovery under the national Disaster Management Act. Under this legislation, needs assessment of the affected populations and M&E of disaster response became a major part of the recovery phase (NDMA, 2019). Specifically, relevant ministries/departments implementing social safety net programmes have to, (a) undertake post-disaster baselines to estimate damage, loss, and needs across sectors and administrative levels, and (b) formulate M&E plans to track recovery.

5. Framework for Strengthening and Crisis-Proofing M&E systems

But addressing the evidence needs during disaster response and post-disaster recovery requires a large-scale strengthening of M&E systems in normal times, in terms of the frequency of evidence generation, nature of information collected, and tools/technologies used. Strengthened systems can then be further crisis-proofed to be disaster responsive. In this essay, we lay down an M&E framework for crisis with four strategies to guide government institutions in strengthening and crisis-proofing their M&E with a special focus on social safety net programmes.

5.1. Strategy-1: Strengthen existing M&E systems during normal times

Crisis situations demand extraordinary measures and are characterized by, (a) "time compression" or the short amount of time available for response, and (b) "tension between speed and deliberation" which is the choice between rebuilding quickly or slowing down to development comprehensive plans for betterment during the recovery period (Johnson & Olshansky, 2016). Effective M&E systems can help balance priorities for both these aspects by providing evidence under time and resource constraints. This requires systematic strengthening of the system in normal times, to make it reliable and responsive during the crisis. Relevant learnings for India can be drawn from countries such as Indonesia who have used M&E effectively for post-disaster reconstruction, recovery, and resilience building. There are a very few examples of collecting baseline data for any government programmes. As a result, it leads to a very difficult situation to monitor or evaluate the performance of any programme. Such baseline data if collected during normal times will be very useful during the crisis times.

Indonesia is one of the major South-East Asian economies to make extensive use of M&E as part of its public service delivery in normal times. In 1996, the country implemented its National Policy on Development Project Performance Evaluation, making M&E an essential part of government processes (Barbarie, 1998). The 2004 Sumatra earthquake and tsunami resulted in 128,645 deaths and more than 500,000 displaced people in Indonesia. The recovery and reconstruction phase, spanning four years, made extensive use of M&E for collecting information on needs of the affected populations. The post-disaster recovery and response plan was shaped to fit these documented needs, leading to continuous self-reflection and innovation across stakeholders. The Sumatra-model was successfully replicated in the disaster response plan for the 2006 Java earthquake, which saw one of the fastest reconstruction projects in the world (Johnson & Olshansky, 2016).

Key lessons

Enhance the capacity and use of government M&E during normal times. This includes, (a) the use of outcome-based approaches for annual M&E planning and programme reviews, (b)increasing the coverage and frequency of outcome evaluations across all major development programmes and especially those that act as a first line of response during disasters at least once in 2-3 years, and (c) strengthening capacities of government

functionaries in designing M&E.A readiness assessment of the existing M&E systems can be undertaken to check their crisis-responsiveness including strategies for tracking of beneficiaries, adequacy of the information collected, possible alternate sources of data, and mechanisms for using evidence to support decision-making during crises situations.

5.2. Strategy-2: Balancing focus between supply and demand data

M&E for social safety nets globally tend to be more supply focused and track more outputs than outcomes (WB, 2011). India is no exception. An overview of existing M&E and evidence framework (refer to Table-01) shows, with a few exceptions, the skewed focus towards capturing routine implementation data such as beneficiary coverage, financial expenditure, and quantity of service delivery with some quality dimensions, compared to beneficiary demands/needs, unmet needs, or standard of living outcomes. However, the simple quantification of supply during normal times and especially during crises situations can ignore dimensions of equity, socio-cultural dynamics of recovery, and household/ community needs. Need of the hour is to increase the capacity of existing M&E systems to capture more demand-side information in normal times and thereby increasing its responsiveness during emergency response planning or post-crisis recovery process.

Learnings can be drawn from the rapid need assessments undertaken during the first wave of COVID-19 (2020) in India, wherein impact of the lockdown and relief measures was analyzed through telephonic surveys and in-person interviews. In a short span of time, information was collected on key issues such as food insecurity, impact on livelihoods, access to healthcare, and household coping strategies from vulnerable households, migrant workers, and existing beneficiaries of social safety net programmes (APU, n.d.).The assessments were undertaken by several government and non-government agencies across most states including Bihar, Uttar Pradesh, Delhi, Jharkhand, Odisha, Madhya Pradesh, Maharashtra, etc., and informed the crisis-response and post-crisis recovery planning (WFP, 2020) (WB, 2021) (Kesar, Abraham, Lahoti, Nath, & Basole, 2021).

Key lessons

Periodically collect demand and need-based information from existing beneficiaries of the social safety net programmes during normal times and leverage this mechanism during crisis-situations to identify key deviations and critical issues. Approaches such as rapid needs assessments and remote monitoring solutions offer a cost-effective method of generating critical information. These can be included as part of M&E frameworks in normal times for some of the flagship social safety net programmes and undertaken bi-annually or annually.

5.3. Strategy-3: Monitoring gets precedence over evaluation during crisis

Crisis and disaster situations demand a greater use of monitoring systems to track affected populations, locations, as well as the coverage and adequacy of relief measures. Most social safety net programmes in India use internal MIS and traditional monitoring solutions to track service delivery and beneficiary coverage. These systems can gain from the use of

new and emerging technologies and monitoring approaches. Learnings can be borrowed from the experience of disaster-recovery in New Zealand in the wake of 2010 and 2011 earthquakes, which used a recovery monitoring and reporting framework including monthly economic recovery dashboard, quarterly reports of economic indicators, and semi-annual well-being surveys to track social recovery of affected families (Johnson & Olshansky, 2016).

Crisis situations also disrupt traditional forms of monitoring data collection (i.e., field monitoring, surveys). A potential alternative is offered by remote monitoring solutions which leverage digital and technology platforms for generating real-time insights. World Food Programme (WFP) uses solutions like mobile Vulnerability Analysis and Mapping (mVAM) and Hunger Map LIVE across 90 countries to remotely monitor household food security, nutrition, and food-market related trends in real-time as well as assess the impact of climate variability and disasters on food security (WFP, n.d.) (WFP, 2022). The remote monitoring solutions do not replace existing systems but complements them.

Post-disaster recovery also provides an opportunity for building-back-better, as opposed to simply returning communities to pre-disaster conditions. Strong monitoring systems supplement these efforts by building a pre-disaster baseline during normal times using relevant supply and demand data. The baseline provides a solid benchmark for assessing the extent of damage and speed of physical, economic, and social recovery of affected communities and individuals. More importantly, the baseline data informs planners and decision-makers about the existing vulnerabilities and equity dimensions to be considered during the post-recovery period (Joakim & Wismer, 2015).

Key lessons

Strengthen current monitoring systems for social safety net programmes to create baselines in the normal times which can serve as a benchmark for post-disaster recovery and building back better. New and emerging technologies such as remote monitoring systems and community well-being scorecards can complement traditional monitoring data collection tools during crisis situations. Their inclusion in the current government M&E systems can be tested through pilots.

5.4. Strategy-4: Evaluations in assessing overall crises response

Evaluations in the post-disaster period serve two overarching purposes; (a) "learning" which includes development and improvement of the emergency response and disaster management policies, (b) "accountability" mechanism for the allocation and use of resources (Beerens, Tehler, & Pelzer, 2020). In the past, India has undertaken strategic evaluations of relief measures and disaster management policies with development partners. The post-disaster evaluation of preparedness and emergency response during the 1999 Cyclone in Odisha, affecting almost 19 million people in almost 18,000 villages, offered several important lessons in emergency response and accountability of state and non-state actors which helped shape the Odisha disaster management policy (Thomalla & Schmuk, 2004). The state subsequently ramped up its emergency response capacities and has averted loss of life in future cyclones such as Phailin in 2013 and Fani in 2019 (WB, 2019).Evaluations,

leveraging data from monitoring systems, also provide critical feedback for building-back-better by enhancing resilience and reducing vulnerabilities. The evaluation of damage, loss, and needs by Cyclone Fani recommended increasing the attention and expenditure on resilient infrastructure and livelihoods for commensurate economic growth in the post-disaster period. It also brought to light the differential impact of the cyclone on the most vulnerable communities.

Learnings from Odisha can help strengthen government evaluation frameworks by, (a) incorporating the lens of resilience and equity as part of periodic assessments undertaken during normal times, (b) leveraging information from monitoring systems and baselines to identify existing needs and vulnerabilities, and (c) reviewing the adequacy of emergency response during disasters to address those needs.

Evaluations by government and non-government institutions during normal times also need mitigation plans to adapt itself during sudden onset of crisis situations. Lessons can be drawn from the COVID-19 pandemic that nudged several organizations to experiment with alternative approaches in this regard. Evaluations planned or occurring in affected locations were strengthened to collect information on beneficiary needs and impacts using a mix of remote data collection tools and in-person surveys. Multi-sectoral evaluations were combined to capture information on different dimensions at one-go and reduce workload. Finally, evaluations that were less relevant to the crisis context were postponed until post-crisis period (UNODC) (WFP) (IOM, 2020).

Key lessons

Social safety net programmes and relevant ministries should incorporate the lens of resilience and equity as part of their evaluations during normal times. Valid baselines should be drawn periodically with a focus on identifying vulnerabilities. Post-disaster evaluations in the affected regions can be undertaken to assess the adequacy of emergency response and seek learnings for strengthening safety nets going forward. Planned or ongoing evaluations can be further crisis-proofed to make them more responsive and relevant.

6. Conclusion and way forward

The last few decades have witnessed an increase in the frequency and intensity of disasters and crises situations. Social safety nets in India act as the first line of response to insulate vulnerable populations from severe negative impacts of such events. M&E systems act as a critical tool for tracking the performance of safety nets and beneficiary well-being during normal times, but their role in informing disaster response and post-disaster recovery is still an evolving field. Existing M&E systems require further crisis-proofing to support planning, emergency response, and post-disaster recovery.

Learnings and key lessons can be borrowed from national and international experiences in the use of evidence for disaster planning, response, and recovery. A framework with four strategic action points have been presented for government institutions to further strengthen their M&E architecture and make it more crisis responsive. Going forward, the action points can be tested through pilot exercises, especially within the flagship

social safety net programmes and in disaster-prone locations. Relevant central and state ministries/departments can also undertake a periodic disaster-readiness assessment of their M&E systems to identify gaps and undertake specific capacity building activities.

Finally, evidence from international case studies suggest that strong M&E systems in normal times can be relied upon to address evidence needs during crisis situations. A key lesson for India is to continually strengthen the capacity, experience, and expertise of its government institutions in undertaking and using M&E, as well as foster innovative and evidence-based thinking during crisis.

References

1. Annavitran. (n.d.). *Distribution of food grains through ePoS devices*. Retrieved from https://annavitran.nic.in/welcome
2. APU. (n.d.). *Database of COVID impact surveys*. Retrieved from https://cse.azimpremjiuniversity.edu.in/covid19-analysis-of-impact-and-relief-measures/#other_surveys
3. Barbarie, A. (1998). *Indonesia's National Evaluation System.* Retrieved from https://ieg.worldbankgroup.org/sites/default/files/Data/reports/ecd_wp3.pdf
4. Beerens, J., Tehler, H., & Pelzer, B. (2020). How Can We Make Disaster Management Evaluations More Useful? An Empirical Study of Dutch Exercise Evaluations. *International Journal of Disaster Risk Science*. Retrieved from https://link.springer.com/article/10.1007/s13753-020-00286-7
5. Bene, C., Frankenberger, T., & Nelson, S. (n.d.). Design, Monitoring and Evaluation of Resilience Interventions: Conceptual and Empirical Considerations. *IDS Working Paper, 2015*(459). Retrieved from https://www.researchgate.net/publication/280013496_Design_Monitoring_and_Evaluation_of_Resilience_Interventions_Conceptual_and_Empirical_Considerations
6. DFPD. (n.d.). *Additional Allocation Orders*. Retrieved from https://dfpd.gov.in/annual-allocation-orders-tpds.htm.htm
7. DFPD. (n.d.). *PDS- Evaluation, Monitoring and Research*. Retrieved from https://dfpd.gov.in/tpds-emrs.htm
8. FAO, IFAD, UNICEF, WFP, & WHO. (2021). *The State of Food Security and Nutrition in the World.* Retrieved from https://www.fao.org/3/cb4474en/cb4474en.pdf
9. GoI. (2016). *Monitoring and Evaluation Framework under MGNREGA.* Retrieved from https://nrega.nic.in/netnrega/writereaddata/Circulars/1947Monitoring_and_evaluation_order.pdf
10. GoI. (2021). *Pradhan Mantri Garib Kalyan Anna Yojana.* Retrieved from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1713824
11. GoI. (2022). *Outlay on Major Schemes, Union Budget 2022-23.* Retrieved from https://www.indiabudget.gov.in/doc/Budget_at_Glance/bag7.pdf

12. GoI. (n.d.). *The Disaster Management Act, 2005*. Retrieved from https://legislative.gov.in/actsofparliamentfromtheyear/disaster-management-act-2005

13. IOM. (2020). *Continuity of Monitoring and Evaluation Interventions During Covid-19.* Retrieved from https://www.iom.int/sites/g/files/tmzbdl486/files/about-iom/evaluation/me-continuity-in-covid-08-april-20-version1.pdf

14. Joakim, E., & Wismer, S. (2015). Livelihood recovery after disaster. *Development in Practice*. doi:http://dx.doi.org/10.1080/09614524.2015.1020764

15. Johnson, L., & Olshansky, R. (2016). *After Great Disasters: How Six Communities Managed Community Recover.* Lincoln Institute of Land Policy. Retrieved from https://www.lincolninst.edu/sites/default/files/pubfiles/after-great-disasters-full_0.pdf

16. Kesar, S., Abraham, R., Lahoti, R., Nath, P., & Basole, A. (2021). Pandemic, informality, and vulnerability: Impact of COVID-19 on livelihoods in India. *Canadian Journal of Development Studies*. Retrieved from https://cse.azimpremjiuniversity.edu.in/wp-content/uploads/2021/01/Kesar_etal_Pandemic_Informality_CJDS.pdf

17. MoHFW. (2014). *Framework for Implementation of the National Health Mission - 2012-2017.* Retrieved from https://nhm.gov.in/New_Updates_2018/NHM/NHM_Framework_for_Implementation__08-01-2014_.pdf

18. MoRD. (2015). *Framework of Implementation for NRLM.* Retrieved from https://aajeevika.gov.in/sites/default/files/nrlp_repository/nrlm-framework-for-implementation.pdf

19. NDMA. (2019). *National Disaster Management Plan.* Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/ndmp-2019.pdf

20. NDMA. (2019). *National Disaster Management Plan.* Retrieved from https://ndma.gov.in/sites/default/files/PDF/ndmp-2019.pdf

21. NIDM. (2014). *National Disaster Risk Profile.* Retrieved from https://nidm.gov.in/easindia2014/err/pdf/country_profile/India.pdf

22. NITI. (2021). *National Multidimensional Poverty Index.* Retrieved from https://www.niti.gov.in/sites/default/files/2021-11/National_MPI_India-11242021.pdf

23. PEO. (2005). *Performance Evaluation of Targeted Public Distribution System.* Retrieved from https://niti.gov.in/planningcommission.gov.in/docs/reports/peoreport/peo/peo_tpds.pdf

24. PIB. (2021). *Provisional estimates of Annual National Income, 2020-21 and Quarterly estimates (Q4) of Gross Domestic Product, 2020-21.* Retrieved from https://pib.gov.in/PressReleasePage.aspx?PRID=1723153

25. Rentschler, J. (2013). *Why Resilience Matters?* World Bank. Retrieved from https://documents1.worldbank.org/curated/en/613071468159301542/pdf/WPS6699.pdf

26. Saini, S., & Kozicka, M. (2014). *Evolution and Critique of Buffer Stocking Policy in India.* Retrieved from https://www.researchgate.net/publication/304527268_Evolution_and_Critique_of_Buffer_Stocking_Policy_of_India

27. Thomalla, F., & Schmuk, H. (2004). We all knew that a cyclone was coming: Disaster preparedness and cyclone of 1999 in Orissa, India. *Disasters*. Retrieved from 10.1111/j.0361-3666.2004.00264.x

28. UNODC. (n.d.). *Planning and Undertaking Evaluations in UNODC During the COVID-19 Pandemic and Other Crises.* Retrieved from https://www.unodc.org/documents/evaluation/Guidelines/COVID-19_Guidance_document.pdf

29. WB. (2011). *An Evaluation of World Bank Support, 2000-2010, Social Safety Nets.* Retrieved from https://www.oecd.org/derec/worldbankgroup/49023353.pdf

30. WB. (2019). *What states can learn from Odisha in disaster preparedness and mitigation*. Retrieved from https://www.worldbank.org/en/news/speech/2019/06/14/odisha-fani-disaster-preparedness

31. WB. (2021). *Economic Effects of COVID-19: Rapid surveys of rural households in India.* Retrieved from https://pubdocs.worldbank.org/en/645971613651626018/Economic-Effects-of-COVID19-Rapid-Rural-Surveys.pdf

32. WFP. (2020). *Joint Rapid Needs Assessment in Odisha - A detailed analysis of food and nutrition security during COVID-19.* Retrieved from https://reliefweb.int/report/india/joint-rapid-needs-assessment-odisha-india-detailed-analysis-food-and-nutrition-sector

33. WFP. (2022). *HungeMapLIVE*. Retrieved from https://mvam.org/

34. WFP. (n.d.). *About mVAM*. Retrieved from Key lessons: Enhance the capacity and use of government M&E during normal times for its social safety net programmes from a crisis-proofing lens. This includes, (a) the use of outcome-based approaches for annual M&E planning and programme reviews, (b) inc

35. WFP. (n.d.). *About mVAM*. Retrieved from https://mvam.org/info/

36. WFP. (n.d.). *Disaster Risk Reduction*. Retrieved from https://www.wfp.org/disaster-risk-reduction

37. WFP. (n.d.). *Technical Guidance Note for Planning and Conducting Evaluations During Covid-19.* Retrieved from https://docs.wfp.org/api/documents/WFP-0000115094/download/

38. WMO. (2019). *WMO Atlas of Mortality and Economic Losses from Weather, Climate, and Water Extremities.* Retrieved from https://library.wmo.int/doc_num.php?explnum_id=10902

39. WMO. (2020). *State of the Climate in Asia 2020.* Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/1273_State_of_the_Climate_in_Asia_2020_en.pdf

Annexure – Snapshot of M&E Framework for Flagship National Social Safety Nets

Table 1: M&E framework for India's flagship social safety net schemes

Sl. No.	Type of scheme under social safety net	Social safety net dimension	Components of M&E and evidence framework in normal times	Overview of information tracked
1	TPDS (Annavitran, n.d.) (DFPD, n.d.)	Food security	✦ Annavitran MIS ✦ Food grain bulletins ✦ Concurrent evaluations ✦ Independent evaluations	✦ Ration card coverage and purchases ✦ Production of food grains ✦ Stock, allocation, and distribution of food grains
2	ICDS- Prime Minister's Overarching Scheme for Holistic Nutrition (POSHAN)	Nutrition security	✦ POSHAN tracker MIS and data management application ✦ NFHS and national surveys ✦ Field monitoring visits	✦ Beneficiary registration and coverage ✦ Vaccination coverage ✦ THR and home cooked meal coverage ✦ Village functionaries
3	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) (GoI, 2016)	Employment generation and village infrastructure	✦ NREGASOFT MIS ✦ SECC ✦ Field monitoring visits ✦ Independent National Level Monitors (NLMs) for monitoring	✦ Job cards issued ✦ Worker's bank account and financial transaction related ✦ Employment generated ✦ Works undertaken ✦ Willingness to work by non- beneficiaries
4	National Rural Livelihood Mission (NRLM) (MoRD, 2015)	Sustainable livelihoods	✦ DAY-NRLM MIS and dashboard ✦ External social audits, public expenditure tracking, community scorecards ✦ Independent impact assessments	✦ Geographical coverage of NRLM ✦ Self-help groups created and promoted ✦ Village organisations and cluster level federations promoted ✦ Bank linkages ✦ Financial disbursals

Sl. No.	Type of scheme under social safety net	Social safety net dimension	Components of M&E and evidence framework in normal times	Overview of information tracked
5	National Health Mission (MoHFW, 2014)	Public health	✦ Large-scale health surveys and vital statistics by NFHS, Sample Registration System (SRS), Civil Registration System (CRS), NSS, etc. ✦ Independent evaluations ✦ Health MIS (HMIS) ✦ Field visits and monitoring	✦ Mortality and morbidity ✦ Healthcare service delivery and quality of care ✦ Cost of healthcare ✦ Coverage of population and tracking of unmet needs

CAPACITY BUILDING OF NATIONAL RURAL LIVELIHOOD MISSION PERSONNEL ON EVALUATIONS AND DATA UTILIZATION FOR EVIDENCE-BASED DECISION MAKING

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Population Council & Bihar Rural Livelihood Promotion Society

1. Introduction

The National Rural Livelihood Mission (NRLM) in India aims to support women's self-help groups[5] (SHGs) and developing institutions of the poor that address economic security, women's livelihoods and importantly, gender norms in the community. Various states are also forming SHGs through State Rural Livelihood Mission (SRLM) that provides financial services to its members and includes wide range of services such as credit, savings, insurance, and remittances. The goal is to help in achieving social and financial inclusion through mobilizing and organizing women of the most marginalized households into SHGs and build their capacities for self-employment and entrepreneurship (NRLM, 2017). NRLM has mobilized over 81 million households into SHGs in approximately 6,700 blocks across the country (NRLM dashboard, 2022). The highest number of women's SHGs have been formed in Bihar (>10 lakh), followed by Uttar Pradesh (>9 lakh) and Andhra Pradesh (>8 lakh) (NRLM, 2022). These days women's SHGs are not only addressing economic security, livelihood and gender norms; they have emerged as a promising platform for multiple development outcomes including but not limited to income generation, agriculture, behaviour change communication and awareness generation. (Nicholos, 2021). During the COVID-19 pandemic, the SHGs and their federations played a significant role in extending support to the community during the lockdowns, spreading messages on COVID appropriate behaviours, and COVID vaccination drive (NRLM, 2020).

The federated structure[6] of NRLM has emerged as a critical component of reaching more women effectively and building women-led institutions at the community level. NRLM has developed over 3.7 lakhs Village Organizations (VOs) and 3.4 lakhs community resource person across 2.5 lakhs villages to function at ground level (NRLM dashboard, 2022). The magnitude and scale of the program is vast that requires strong monitoring, review and evaluation mechanism to track the progress of the overall objectives and goals. Evidence suggests that programs with strong monitoring and review system help in getting desired results (Kusek & Rist, 2004). The success of programs depends upon the capacity of individual members involved in the mechanism. A lot of community members in the NRLM/SRLM structure collect numerous data which get digitized into management information system (MIS). Although, some dashboards are generated using information from MIS, many data remain unanalyzed. More importantly, the data collectors, who are also peer-educators or provide support to the community, do not get to see the results for their community for whom they gathered data. In this essay, we wanted to highlight the need of building the capacities of the system as well as of the community institutions of large programs like NRLM toward monitoring and evaluations that can go a long way.

5 A group of 12-15 women, who voluntarily come together to form a group that follows five principles (Panchsutras) of regular savings, regular meeting, internal lending, regular repayment of loans, and update of registers.

6 SHGs are federated at village level and form Village Organization (VO), which are federated at cluster level (a segment of a block) to form Cluster Level Federation (CLF).

2. Case Study: Bihar

We illustrate the rationale for building evaluation capacities of NRLM, through an example from Bihar. The Bihar Rural Livelihoods Promotion Society (BRLPS), synonymous known as JEEViKA, under the SRLM, has been a forerunner in innovating approaches to working with SHGs at a large scale. Over the past few years, JEEViKA, with support from external partners, has been trying to strengthen its capacities in multiple domains including but not limited to monitoring and evaluation. Population Council, as an external evaluation partner, conducted implementation research to measure the system capacities of JEEViKA through qualitative in-depth interviews with various staff and cadres at all levels. The assessment measured the changes over past five years around data collection, validation, data utilization in evidence-based decision making, and sustainability of community institutions.

2.1. Structure of JEEViKA

JEEViKA's structure can be outlined at the system level and community institution level. At the system level, it has a three-tier structure: 1) State Project Management Unit (SPMU) with state project managers and project managers of different verticals such as social development, health and nutrition, communication, financial inclusion, institution building and capacity building, livelihood – farm, non-farm and livestock, MIS, monitoring and evaluation; 2) District Project Coordination Unit (DPCU) with district level staff for each thematic area; and 3) Block Project Implementation Unit (BPIU) with block level staff, i.e., block project manager, area coordinator (AC), and community coordinator (CC). Planning and designing of strategies take place at SPMU, which are shared with DPCUs for coordination at district level with different thematic departments, and activities that are planned and designed at state level are implemented at different blocks through BPIUs. The community institutions also have a three-tier structure and comprises of SHGs at ground level, VOs at village level and CLFs at the cluster level. Functionaries at these structures include office bearers and cadres who work at the community level such as community mobilizers (CMs), community nutrition resource persons (CNRPs), and master resource persons (MRPs). In Bihar, JEEViKA has formed more than 10 lakhs SHGs, more than 68,000 VOs and approximately 1300 CLFs in all the 534 blocks across the state (JEEViKA dashboard, 2022).

2.2. Data collection mechanism and data flow

JEEViKA has designated several community functionaries to carry out the planned activities within the community. To track the process and progress of activities carried out by community functionaries, a chain of data collection process is followed. The CMs are responsible to collect and compile data at SHG level. VOs office bearers validate the data collected by CMs from all SHGs within a village; CNRPs placed at the gram panchayat level and MRPs placed at cluster level also supports in collecting data for the health behavior change communication intervention by JEEViKA. VOs are also responsible to review, validate and plan the activities conducted by SHGs. At CLF level, compiled data from VOs are submitted, which are further transferred to JEEViKA BPIUs at block level.

Block level officials enter these data into MIS, which is reviewed at district and state level. The feedback on the data quality flows back from state level to community institutions through monthly review meetings. This process is explained through Figure 1.

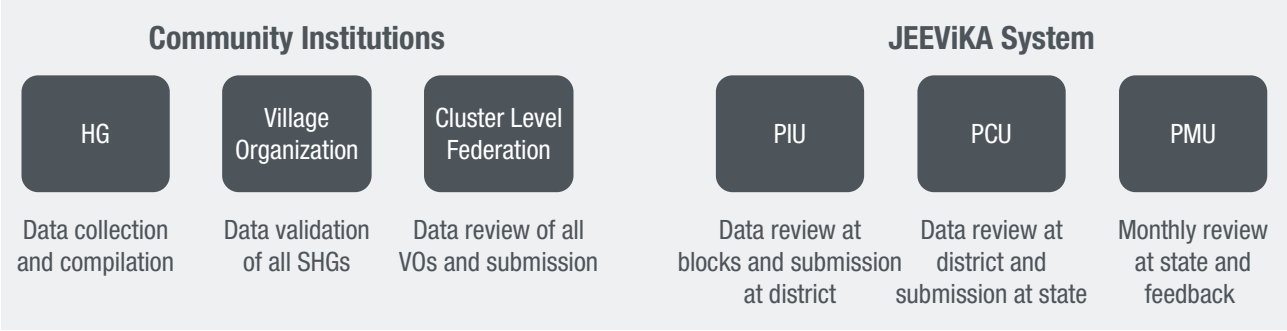

Figure 1: *Data collection mechanism at community institutions and JEEViKA system*

2.3. Quality of data collection and capacities of community institutions

The community functionaries collect numerous data which are entered into online MIS. JEEViKA has been shifting its approach of paper-based data collection to digital data collection through mobile phones and use of various 'Apps'. For example, data collection using 'Health and Nutrition App' is happening at SHG meeting and places where events/ activities are conducted. The complied data comes to the VO dashboard for validation and then CLF reviews it at the CLF level meetings. VO also reviews performance of CM and similarly CLF reviews the work of CNRP and MRP. CC and AC also do sample verification of data of their catchment area.

It was noted that JEEViKA has strengthened its data collection techniques and developed certain apps to be used at SHG level for data entry. JEEViKA has been utilizing digital medium to provide training, monitoring and validating the data through rigorous quality checks. Some dashboards have been developed which includes in-house portal to collect information on various indicators. Staff from state level reported that the collection of online data through mobile apps can be validated at SHGs/VOs level and thus escalating it to next level can be avoided. Currently, more than 47,000 CMs are using the App, however, the online data collection is not universal in all the blocks. *"...now we have made a new MIS and recently it has been launched. Everyone is not getting a mobile phone. So, they are using their own mobile phones, and some are facing app compatibility issues. There are other technical operating issues as well. Despite all this, 60% of our stuff is digitized but since it takes 2-3 months, decision making gets affected...So, data collection and compilation online is a very good thought for decision making but it has its own challenges."*

[State level staff, JEEViKA]

Quality checks and validations have been added to this system; however, staff at lower level expressed the incomplete digitization for data entry resulting in delayed process. Although, VO level validation access has been given to VO office bearers, the community institutions may benefit more through handholding support in utilizing those apps for data analysing, evidence generation as well as data visualization. One block level staff said *"... we are doing work in the hard copy...We find it to be very expensive. If any such app is*

developed that CM when goes to the field, she can fill in the details in that app...CMs also need training to learn using apps."

[Block level staff, JEEViKA]

JEEViKA has strengthened its monitoring system and are increasingly utilizing MIS data for decision making and planning at state level; however, due to large volume of data, a lot of data remain unanalysed by M&E staff. Despite monthly review of community institution's work, the community cadres, who collect data at the ground level do not get to see the evidence emerged from the data that could help them assessing the progress in their community as a resultant of their efforts.

Over the past five years, there has been improved participation of community institutions in planning and review meetings. Rotation of leadership within SHGs and VOs emerged as an encouraging mechanism in building leadership capacities within members of the group. Conscious effort has been made by JEEViKA in capacitating VOs/CLF for better community mobilization, reporting, review mechanism and self-sustainability of these institutions. While the community institutions still lack capacity in planning and designing the activities, and systematic review of their activities, the state level functionaries mentioned about the need for external support in building their capacities in preparing theory of change and evaluation methodologies which can help them develop and assess request for proposals for evaluating their programs.

3. Summary and Conclusion

SHGs formed through NRLM/SRLM operate at a large scale and address the burning issue of rural poverty and livelihood. Large number community institutions have been developed throughout the country to manage their social and economic aspects, and these institutions function in similar fashion in almost every SRLMs. The capacity assessment of JEEViKA in Bihar suggest that there is an openness of higher structure to engage the lower cadres in participatory planning and having a decentralized mechanism for data use. There is a need and scope for building capacities of two types of individuals: a) at the system level who collate and analyse MIS data, and b) community level functionaries who collect data and are also important players in many intervention activities. There is a great scope to strengthen their capacities to monitor, track their own activities and review the progress. For this, building the capacities of these two sets of people for data collection, quality checks, compilation, synthesis and basic understanding of utilization of data for decision making is priority. Most of the women engaged in community institutions are from marginalized community and it may not be possible to build their capacity through sporadic trainings. Some mechanism to support the community cadres towards the costs for mobile phones and mobile internet, and data entry cost can certainly facilitate a greater data generation and utilization.

Based on the learnings from our case study assessment in Bihar, we recommend making sustained effort and adopt innovative ways to build the capacity of staff and cadres around evaluating their own efforts for informed decision making at their end rather continuous guidance from outside. At system level, our recommendation is to strengthen the evidence-

based monitoring, review and feedback mechanism. This can be achieved through two possible ways: through building the capacity of cadres and community institutions to utilize data in evidence-based decision making and second, through sharing evidence from internal/external evaluations with all levels of staff for validating program activities.

References

1. Day – NRLM. (2017). "A Handbook on SHG – Bank Linkage". Ministry of Rural Development, Government of India.
2. JEEViKA Dashboard. (2022). http://20.198.83.63:9090/dashboard/.
3. Zall Kusek, J., & Rist, R. C. (2004). Ten steps to a results-based monitoring and evaluation system: a handbook for development practitioners.
4. Nichols, C. (2021). Self-help groups as platforms for development: The role of social capital. World Development, 146, 105575.
5. NRLM. (2021). "COVID 19 response by Women SHG warriors". Ministry of Rural Development, Government of India.
6. NRLM Dashboard. (2022).https://nrlm.gov.in/dashboardForOuter.do?methodName=dashboard
7. NRLM. (2022) https://nrlm.gov.in/shgReport.do?methodName=showPage.

INCLUSIVITY IN EVALUATIONS AND EQUITY-CENTRIC BUDGETING

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DMEO, NITI Aayog

Abstract

The principle of leaving no one behind from the benefits of development progress is embedded in the 2030 Agenda for sustainable development. Many nations and governments today are designing their developmental programmes and policies in alignment with the sustainable development goals. As evidence-based policymaking has become the norm, it is imperative for evaluations to be more inclusive, equitable and sensitive in their approach. Evaluation studies that are centered on the idea of inclusivity, by providing evidential insights about the experiences of the marginalized and the underrepresented, allow policy-makers to better acknowledge and address the dimension of inclusivity in policymaking as well. Failure to make evaluations inclusive might result in incomplete or biased representation of the reality, which in turn can lead to a policy response that fails to recognize the needs of the marginalized.

Against this background, this essay attempts to underscore the role of equity-centric evaluations for empowering marginalized groups while maintaining utmost sensitivity to their needs and requirements. The first section allows the evaluators and other stakeholders to acquire a broader understanding of how an evaluation as a whole as well as its parts such as theory of change, selection of stakeholders, research design, instruments of observation, data collection and so on, can be designed to ensure better capturing of the perspectives and participation of the marginalized. The second section stresses on application of principle of equity to the process of budgeting since one of the goals of evaluations is to provide pertinent inputs to policy makers to improve efficiency and optimize resource-allocation of the schemes.

1. Including inclusivity in Designing, Planning and Implementing Evaluations

Evaluations provide a powerful tool to challenge the existing limitations of the public programmes and schemes in ensuring inclusivity. In order to achieve this objective, all facets of an evaluation study, starting from planning and designing stage to the reporting of results should be viewed from an equity-lens. Inculcating the idea of inclusivity as an integral and intrinsic metric of outcome and impact assessment can safeguard evaluations of government programmes/schemes and corresponding policy responses from overlooking socio-economic biases. Therefore, before planning any evaluation, it is crucial to determine the contextual relevance of measuring equity and the degree to which it should be embedded in an evaluation model. A2011 United Nations Evaluation Group (UNEG) guidance document[7] proposes an assessment of evaluability of human rights and gender equality dimensions to broaden the scope of evaluations. This entails developing an understanding of characteristics of an intervention and its focus on inclusivity. Once such an understanding is established, it can be utilized to formulate an approach that addresses the limitations of the current system and strengthens inclusivity dimension of the evaluation.

7 UNEG. (2011). Integrating human rights and gender equality in evaluation–Towards UNEG guidance. United Nations Evaluation Group

1.1. Theorizing Equity in Evaluations

A planner or an evaluator should make an effort to factor in inclusivity while designing or revising theory of change and logical framework of an intervention. Impact pathways or outcomes should be clearly laid down for different socio-economic groups. Indicators, both qualitative and quantitative, should be selected so as to adequately capture the variations in coverage, effectiveness and impact of the programmes across different groups of population. In addition to this, and depending on the context of the programme, indicators should be disaggregated on the basis of different criteria such as gender, caste, religion, disability, rural/urban, income and so on. Data collected and analyzed based on this groundwork has the potential to allow the evaluators and policy-makers to assess if there is any divergence in the development pathways across different socio-economic groups.

A handbook on inclusive education by Save the Children[8] observes that an overall improvement of learning outcome is not a sufficient indicator of the success of an educational programme, a Monitoring, Evaluation, Accountability, and Learning (MEAL) analysis should be comprehensive enough to indicate *"which children had improved learning outcomes, and which are still struggling".* Similarly, learnings from evaluations, which by highlighting inequities increased the programmes' focus on addressing them, prompted the Gates Foundation's office in India to embrace a gender equity lens into its health strategy and construct meaningful metrics around equity (Hay, 2017).

1.2. Utility of Qualitative Evidence

Quantitative evidence from inclusive and disaggregated indicators should be supplemented and triangulated by qualitative insights. Qualitative methods provide rich behavioral and experiential insights from people's lives. These can be an effective way of including equity component in policy-making by capturing perspectives and learnings from a specific group of stakeholders, and driving policy-decisions that are cognizant of people's views and experiences (Ford et al. 2021).Participatory tools, such as participatory learning and action (PLA) method, also provide a useful platform for not only understanding the cultural and social constructs of a community but also gaining from the knowledge of varied groups of end-users in planning, improving and managing the development programmes. Thus, a mixed method evaluation design, comprising of quantitative, qualitative and participatory tools, is important for eliciting information on how populations belonging to different socio-economic groups experience development.

1.3. Leaving no stakeholder behind

Efforts should be made to imbibe the value of equity at all stages of evaluation. Identification and selection of stakeholders must be scientifically done so as to ensure that voices of diverse population groups, especially the most vulnerable and marginalized, receive accurate representation. A stakeholder analysis, which identifies and classifies all

8 Heijnen-Maathuis, E.(2016). Inclusive Education: What, Why, and How: A handbook for program implementers. Save the Children

the relevant stakeholders on the basis of their role in the intervention, their importance in the evaluation, level of their participation and so on, can be conducted (Faúndez, A. et al. 2013). Such an analysis can aid evaluators in minimizing the exclusion error and ensuring adequate participation of the underrepresented.

1.4. Learnings from Evaluations of 125 centrally sponsored schemes (CSS) of Government of India

Another important component that requires to be regarded from an inclusivity lens is the formulation of evaluation criteria and evaluation questions. The designing, implementation and reporting of third-party evaluations of 125centrally sponsored schemes (CSS)[9] of Government of India, which were conducted by Development, Monitoring and Evaluation Office (DMEO) of NITI Aayog, provide a good example in this regard. DMEO adopted the OECD Development Assistance Committee (DAC) framework of evaluating the programmes which included the principles of *Relevance, Efficiency, Effectiveness, Sustainability* and *Impact* (REESI).[10] This framework was innovatively modified to **REESI + E** by adding the principle of *Equity* (**REESI + E)**. The figure below summarizes the focus of each of these six principles in the evaluations

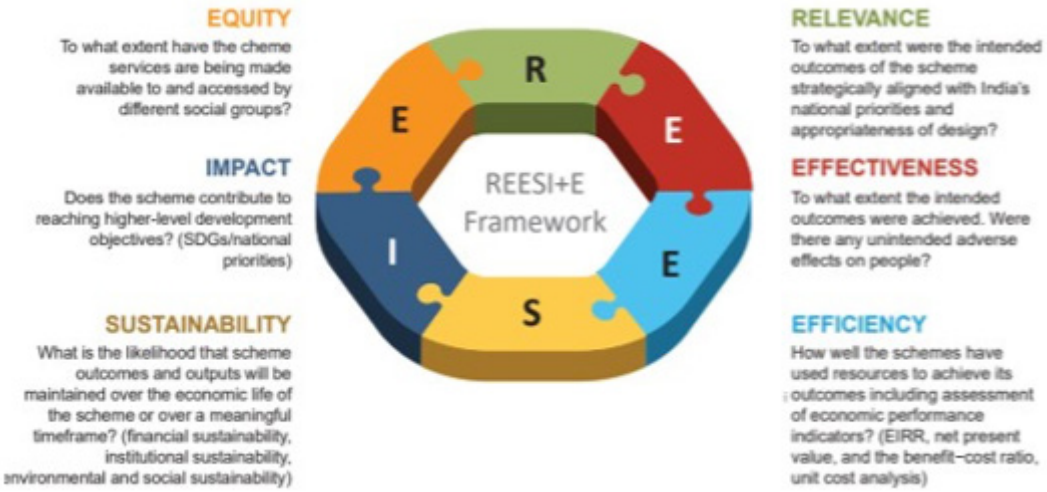

Figure 1: *REESI+ E Framework adopted by DMEO for conducting evaluations of CSS schemes*

Source: *Guidelines on Quick Assessment, DMEO NITI Aayog*

Inclusion of equity as one of the evaluation criteria increased the studies' coverage on assessing the inclusivity of the schemes. It strengthened the scope of evaluations by enabling the studies to define objectives and explore corresponding evaluation questions along the lines of equity, besides other criteria. Cross-cutting themes such as gender mainstreaming and social inclusion were investigated across all the schemes and sectors. Some major insights on gender mainstreaming and social inequities from the evaluation of the schemes under Rural Development and Agriculture, Animal Husbandry and Fisheries are summarized in the Box below.

9 Government of India schemes that are funded jointly by the Centre and the States and implemented by the States

10 The framework was revised in 2019 to include *Coherence* as one of the criteria (RCEESI).

Box 1: Gender mainstreaming and social inequities from the evaluation of rural development and agricultural schemes: Learnings from an Indian experience

1. Gender Mainstreaming in Rural Development Sector

Although schemes in rural development sector have led to an enhancement in women's access to income generation activities, economic independence, skill-development activities, and entrepreneurial opportunities, more concerted efforts are required for provision of *sex-disaggregated data to recognize women's rights to resources and their rights as workers*. There is a need to focus on inclusivity and development outcomes for single women.

While the formation of self-help groups under National Rural Livelihoods Mission (NRLM) has increased opportunities for financial inclusion and granted more decision-making autonomy to women, there is still scope for enhancing women's access to technology and infrastructure and strengthening women's engagement across various activities along the livelihood value chain.

Women's political participation and appointment to local leadership roles remains low because of several institutional and social barriers. Lack of training and skills among women leaders is also another barrier to women empowerment in political arena.

Insights from Rural Development Sector Report, Development Monitoring and Evaluation Office, NITI Aayog (2021)

2. Mainstreaming of Tribal and Scheduled Caste population in Agriculture sector

Analysis of the Key Indicators of Situation of Agricultural Households in India (NSS) show that bottom three decile classes in terms of monthly per capita consumer expenditure (MPCE) are dominated by Schedules Caste (SC) and Scheduled Tribe (ST) households. This inequality is also reflected in the size of the land holdings. The percentage share of SC/ST agricultural households in landholding declined from lowest size class (less than 0.01 ha) to highest size class (more than 10 ha).

The household survey conducted as part of the evaluation reveals that 44.9% of all disadvantaged groups (SC/ST/other backward classes) are part of SHG or producer groups as compared to 54.3% for other social groups (other than SC/ST/other backward classes). Similarly, 83% of all farmers from disadvantaged groups are beneficiaries of the Green Revolution scheme against 92% for all farmers from other social groups. *Regional differences in the quality of extension services and infrastructure* also hinder the economic development of farmers belonging to socially-marginalised classes.

Insights from Agriculture, Animal Husbandry and Fisheries Sector Report, Development Monitoring and Evaluation Office, NITI Aayog (2021)

Designing instruments of observation and questionnaires is one of the most important activities of any evaluation study. The endeavor should be to include relevant questions for all the relevant stakeholders, including the disadvantaged and marginalized, in order to capture diversity in responses. The data collected using such instruments can be used for analyzing the level of programme's emphasis on ensuring inclusivity of the marginalized. In fact, assessment of the programme's role in addressing inequities can be included as an objective of the data analysis plan.

1.5. Making evaluation sensitive to the marginalized

Any form of data collection or interaction, especially with the marginalized sections of the society, must be carried out with utmost sensitivity. Evaluators should be cognizant and respectful of the cultural and socio-economic milieu in which the participants live and work. The data collection team should also batten to such sensitivities. The selected team is required to be sensitized and trained properly before establishing any contact with the participants, and consent must be sought from the participants before any interaction. The evaluation team should also maintain information privacy; a breach of which, without consent, has the potential to lead to economic, social, or physical harm for the participant or the community (Ford et al. 2021). In other words, it is unequivocally imperative to maintain the ethical and safety considerations of the participants of any evaluation study.

2. Equity Centric Budgeting

The objective of ensuring inclusivity in evaluations of government schemes is to inform policy makers about the performance of the schemes in coverage and extent of benefits to different socio-economic groups, particularly the vulnerable and marginalized communities. It provides pertinent inputs to policy makers in designing interventions that would improve inclusivity in government schemes. One such intervention is equity centric budgeting. Applying the principle of equity to budgeting brings forth concerns related to equitable allocation of resources to various socio-economic groups, and monitoring of their performance thereof.

An important principle of good governance and a central discourse in public policy is analyzing if the budget outlays translate into outputs in the form of services to the people and how they lead to the improvement in the overarching developmental outcomes for the people and the country. Earlier, typically the budget document in India only had information about the money allocated and spent under various heads. This was not adequate to enhance public expenditure and increase accountability; especially in the social sector which is critical for the protection of the rights of the marginalized. To address this, the Government of India, in the recent years, has brought in major expenditure reforms such as easing of appraisal and approval processes and structural changes in the process of budget making itself, such as, doing away with Plan/Non-plan distinction. This has resulted in the cost borne by the center being treated in an integrated manner and brought public schemes and projects under an output-outcome framework (OOMF). Beginning with the financial year 2017-18, in addition to the financial outlays of schemes of the Ministries being indicated in the Budget document, the expected outputs and outcomes of the schemes

are also presented in a consolidated Outcome Budget document. While output refers to the direct and measurable product of an intervention/activity, outcome is the collective result brought about in the delivery of the services. Thus, the Outcome Budget includes the financial outlay for each central sector scheme (CS) and centrally sponsored scheme (CSS) for each financial year along with clearly defined outputs, outcomes and the targets to be achieved in the said financial year.

While the outcome budgeting exercise is an important reform aimed at promoting the ideals of good governance such as transparency and accountability, it is not enough to ensure the equitable coverage and empowerment of the marginalized. For this, it is imperative that equity considerations are included in the outcome budgeting by integrating specific inclusivity related indicators and targets in both outputs and outcomes of the schemes. Evaluations build on the idea of inclusivity can facilitate this decision-making process, such as integrating insights from the assessment of Equity and Efficiency criteria of *RCEESI+E* framework (discussed in the previous section) can provide practical recommendations for equitable budgetary allocations. Equity centric budgeting will help in prioritizing spending where it is required most and help utilize public resources to support the historically disadvantaged. As an example of equity centric budgeting, gender responsive budgeting is discussed below.

2.1. Gender responsive budgeting

Gender responsive budgets have now emerged as a strategy to evaluate government budgets for their contribution towards gender equality. The integration of gender perspective into budgetary analysis and decision-making process was included for the first time in the Beijing Platform for Action in the year 1995. The call for mainstreaming of gender into macroeconomic policy analysis involves the assessment of the government expenditure and its impact on the socio-economic position of the women, men, girls and boys. Gender budgeting initiatives have three core goals as shown in the figure below:

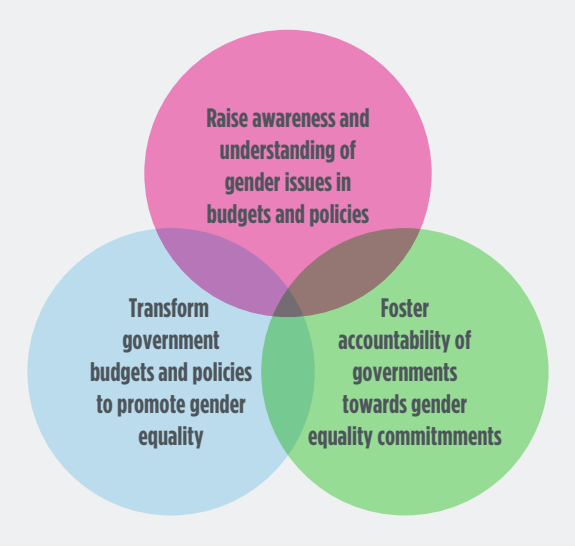

Figure 2: *Three core goals of gender budgeting initiatives*

Source: *Budgeting for Equity, Rhonda Sharp*

While drawing on the concepts of transparency and accountability of the good governance discourse, the emphasis of gender budgeting initiatives on participatory principles have played an important role in promoting gender equality. Such initiatives can also be aligned to the Sustainable Development Goals (SDGs), particularly to Goal-5 indicators and targets which aim towards achieving gender equality and empowerment of all women and girls. Thus, gender responsive budgets help in identifying gender gaps and unmet needs and provide a blueprint towards implementing gender sensitive processes throughout the planning, budgeting and implementation cycles of government schemes.

Moreover, gender budgets acknowledge the fact that the impact of government budgets occurs through both direct and indirect channels (Elson and Sharp 2011). Thus, a gendered lens is required to examine how these direct and indirect effects of the budget and policies have varying impacts on different groups of men and women.

Initiatives such as gender responsive budgeting are ushering structural shift in the decision-making processes and priorities of the governments which will ensure that going forward the policies would be responsive to the needs of the vulnerable and marginalized sections in a way that will promote equitable growth.

References

1. UNEG. (2011). Integrating human rights and gender equality in evaluation–Towards UNEG guidance. United Nations Evaluation Group.
2. Heijnen-Maathuis, E.(2016). Inclusive Education: What, Why, and How: A handbook for program implementers. Save the Children.
3. Hay, K. (2017). Equity Is Not an Intervention: Implications of Evaluation—Reflections from India. New Directions for Evaluation, 2017(154), 79-89**.**
4. Faúndez, A., & Weinstein, M. (2013). Guide for the evaluation of the programmes and projects with a gender, human rights and intercultural perspective.United Nations Entity for Gender Equality and the Empowerment of Women (UN Women).
5. OECD Development Assistance Committee (DAC). (2019). Better Criteria For Better Evaluation, Revised and Updated Evaluation Criteria. OECD.
6. Development, Monitoring and Evaluation Office (DMEO), NITI Aayog. (2021). Agriculture, Animal Husbandry and Fisheries Sector Report.
7. Development, Monitoring and Evaluation Office (DMEO), NITI Aayog. (2021). Rural Development Sector Report.
8. Development, Monitoring and Evaluation Office (DMEO), NITI Aayog.(2020). Guidelines on Quick Assessment Studies.
9. Ford, N.T., & Goger, A.(2021).The value of qualitative data for advancing equity in policy. Brookings.
10. Falkenburg, N. (2021). A beginner's guide to inclusive monitoring and evaluation: from talking to doing. ActivityInfo.

11. Baur, V. E., Abma, T. A., &Widdershoven, G. A. (2010). Participation of marginalized groups in evaluation: Mission impossible?. Evaluation and program planning, *33*(3), 238-245.

12. *Coping with the Pandemic: A third tier dimension*. Reserve Bank of India. (2021, November 30). Retrieved February 19, 2022, from https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/3COPINGPANDEMIC70985CBB99AA40659419FA2FDD6F16C6.PDF

13. Elson, Diane and Sharp, Rhonda. 2010. "Gender-responsive Budgeting and Women's Poverty" in Sylvia Chant, ed. Women and Poverty, London: Edward Elgar pp 522- 527.

14. Government of Haryana. (2021). *Output-Outcome Framework Report* (pp. 1–260). Panchkula, Haryana. Retrieved February 19,2022, from http://web1.hry.nic.in/budget/Output-OutcomeFrameworkReport.pdf

15. Kavanagh, S., & Kowalski, J. (2021). The basics of equity in budgeting. *National Civic Review ,110*. https://doi.org/https://www.nationalcivicleague.org/ncr-article/the-basics-of-equity-in-budgeting/

16. Kleine, A. (2021, June 16). *How governments can create budgets for more equitable communities*. EY. Retrieved February 19, 2022, from https://www.ey.com/en_us/government-public-sector/budgeting-for-more-equitable-communities

17. Mahendru, V. (2021). (publication). *Outcome Budgeting in India: The efforts being made at the Union and State levels* (pp. 01–13). New Delhi , New Delhi : Centre for Budget and Governance Accountability (CBGA).

18. Sharp, R. (2003). Budgeting for Equity: Gender budgeting initiatives within a framework of performance oriented budgeting. In *Budgeting for equity: Gender budget initiatives within a framework of performance oriented budgeting.* story, United Nations Development Fund for Women (UNIFEM). Retrieved February 19, 2022, https://www.researchgate.net/publication/237129554_Budgeting_for_Equity_Gender_Budget_Initiatives_within_a_Framework_of_Performance_Oriented_Budgeting.

19. Sharp, Rhonda (2016) 'Gender Budgeting' in Nancy Naples, Renee C Hoogland, Maithree Wickramasinghe and Wai Ching Angela Wong, editors, The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies, London: Wiley Blackwell, SBN: 978-1-4051-9694-9

ROAD TO ZERO HUNGER: REVIEW OF EVIDENCE ON INDIA'S FOOD SAFETY NETS

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Abstract

India implements one of the largest Food Safety Net (FSN) programmes in the world under the National Food Security Act (NFSA, 2013) covering almost a billion beneficiaries at a mammoth cost of Rs. 2.86 lakh crores (2021-22). The NFSA is a watershed initiative by the Government of India in achieving food and nutrition security in the country as it makes available adequate quantity of quality food to its vulnerable population. Also, it plays a pivotal role in achieving the SDG Goal 2 of Zero Hunger by 2030.

This article undertakes a review of available literature on the effect of FSN on achieving food security and improving nutrition outcomes for its beneficiaries. The paper summarizes key findings related to various food security and nutrition measures in India along with the impact of NFSA in key thematic areas. The review is based on articles from peer-reviewed journals, which have been analyzed through the deployment for relevant content analysis techniques in order to synthesize the findings. The reference period for the review is 2000-2021.

Key findings from the review suggest that, with the implementation of the NFSA, important strides have been taken in the positive direction, such as broader coverage, lower targeting errors, accelerated PDS reforms and positive impact on nutritional status. Addressing the existing inefficiencies in the system is necessary to further strengthen the delivery mechanism. Overall, the review also points to a lack of comprehensive review of the NFSA after its enactment and need for further evidence for policy strengthening.

1. Background

Food and Nutrition Security (FNS) programmes have been a pillar of India's social policy since independence. The Public Distribution System (PDS), which started as a wartime measure during the Second World War (Bhattacharya et al, 2017), has undergone several transformations in the last seven decades. The multi-pronged approach under this system has been instrumental in sustaining and improving the availability, access, affordability, and utilization of food for beneficiaries. This strategy covers new technology generation and adoption adequate availability of inputs, institutional credit, subsidy on farm inputs, improved infrastructure, expansion of irrigation, institutional reforms, competitive markets, remunerative prices for farmers/producers, public procurement, system of buffer stocks, open market sales, supply of food through public distribution system, nutrition interventions and trade policy (Chand and Jumrani, 2013)

A landmark judgement by the Supreme Court of India in 2001recognized food security as a fundamental right and paved the way for the introduction of National Food Security Act (NFSA)[11] in 2013. The NFSA is an umbrella legislation aimed at providing food and nutrition security in a life-cycle approach for socio-economically vulnerable households, individuals, and age-groups. The legislation and its current policies play a pivotal role in (a) India's policy efforts towards achieving sustainable food systems, and (b) meeting targets under the Sustainable Development Goal-2 (Zero Hunger). The food-safety net created under

11 https://nfsa.gov.in/portal/NFSA-Act https://nfsa.gov.in/portal/NFSA-Act

NFSA, one of the largest globally, comprises of three major schemes, namely: Targeted Public Distribution System (TPDS), Integrated Child Development Services (ICDS), and Mid-day Meal (MDM) scheme.[12]The Targeted Public Distribution System (TPDS), the largest component under NFSA based on number of beneficiaries,currently provides subsidized food grains at the price of INR 3,2 and1 for rice, wheat, and coarse grains respectively to roughly 77 crore beneficiaries (23.12 crore ration cards approximately, that includes Priority Households and under Antyodaya Anna Yojana (AAY)) catered through a network of 5.44 fair price shops (FPS).[13]

Post-NFSA, the increase in population that was entitled to receive subsidized food grains under TPDS also resulted in increasing the national food subsidy bill. The food subsidy[14] bill increased from INR 63,844 crores in 2010-11 to INR 1,08,688 crores in 2019-20. It further shot up to INR 4,22,618 crores in 2020-21 (revised estimates) on the account of relief-packages to mitigate the effect of COVID-19 pandemic and payment of pending dues of the Food Corporation of India (FCI).[15] However, the increase in public expenditure on food and nutrition security schemes such as TPDS has not been accompanied by any significant improvement in the developmental outcomes. The recent estimates from the National Family Health Survey (NFHS)-V observe that more than 1/3rd of children <5 years are stunted (35.5%, 2019-20 in India compared with 22% globally[16]), and more than half of all women aged 15-59 years and 15-19 years are anemic (57% and 59.1%, 2019-20). This is in stark contrast with only 14.6 percent of women in Northern America and Europe being affected by anaemia.[17]India also accounted for roughly 30% of the global burden of hunger in 2020-21[18].

Against this backdrop, a review of the existing literature on Food and Nutrition Security policies and NFSA in India was conducted with the objective of identifying key areas of implementation challenges, inefficiencies, and mitigation measures for achieving national and international targets, and to identify evidence gaps.

2. Research Approach and Methodology

The research articles have been searched comprehensively through the electronic databases for the last two decades from 2000 to 2021 and conducted a screening of databases to identify articles with reference to food and nutrition security in India.[19] The databases

12 Annual Report 2018-19, Department of Food and Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution, Government of India.

13 Information as of December 2021. URL: https://nfsa.gov.in/

14 Difference between the economic cost of food grains and the centrally issued prices

15 Demand for grant analysis for Department of Food and Public Distribution. URL: https://prsindia.org/budgets/parliament/demand-for-grants-2020-21-analysis-food-and-public-distribution

16 https://www.who.int/data/gho/data/themes/topics/joint-child-malnutrition-estimates-unicef-who-wb

17 State of food security and nutrition in the world: Report 2021 (https://www.fao.org/3/cb4474en/online/cb4474en.html)

18 State of food security and nutrition in the world: Report 2021 (https://www.fao.org/3/cb4474en/online/cb4474en.html)

19 The search terms included "food security" OR "NFSA" AND "India" OR "food insecurity" OR "PDS" AND "India" OR "TPDS" AND "India" OR "RATION CARD" OR "FAIR PRICE SHOPS" AND "India", among others.

included in the search were PubMed, Scopus, Google Scholar, NITI Aayog library, among others. Articles compiled included peer-reviewed journal articles, book chapters, working papers/white papers, national and international reports, white papers etc. For the scope of this review, only peer-reviewed articles, which appeared in journals with a high impact factor, were considered for the review. With the enactment of the NFSA in 2013, the temporal limits for this review were pegged from 2000-2021, in order to satisfactorily cover literature published before and after this milestone. The inclusion criteria for the articles for this review were: 1) full-text of the article published in English; 2) publication in peer-reviewed journal; 3) focus on food and nutrition security in India; 4) focus on overall NFSA and its implications. Articles focusing on specific components of the NFSA, *viz.* TPDS, MDM and ICDS were not included for this review. After an initial screening of the articles by time period, title and abstract, as per these inclusion criteria, the remaining articles were then reviewed in entirety for final assessment.

The research approach developed for this analysis aimed to mirror a systematic literature review, as defined by the widely accepted PRISMA guidelines.[20]For analyzing the final articles to be reviewed, directed content analysis approach was used to review and synthesize the findings. The articles were arranged thematically into categories and based on relevant themes emerging during the analysis, key insights were highlighted as "codes". This approach helped in developing a comprehensive understanding of the various aspects of food and nutrition security in India, along with identifying the gaps in evidence based on the review.

3. Key Findings: Methodology

Based on the search criteria, a database of 427 articles was collated, of which 15 were duplicates and 3 were temporal outliers. The eligibility of the remaining 409articles was then determined through review of titles and abstracts. This led to rejecting 309 articles, leaving 100 articles to be included for the analysis of the text based on the inclusion criteria. A total of **29** articles were finally reviewed after meeting the inclusion criteria. (Fig 1)

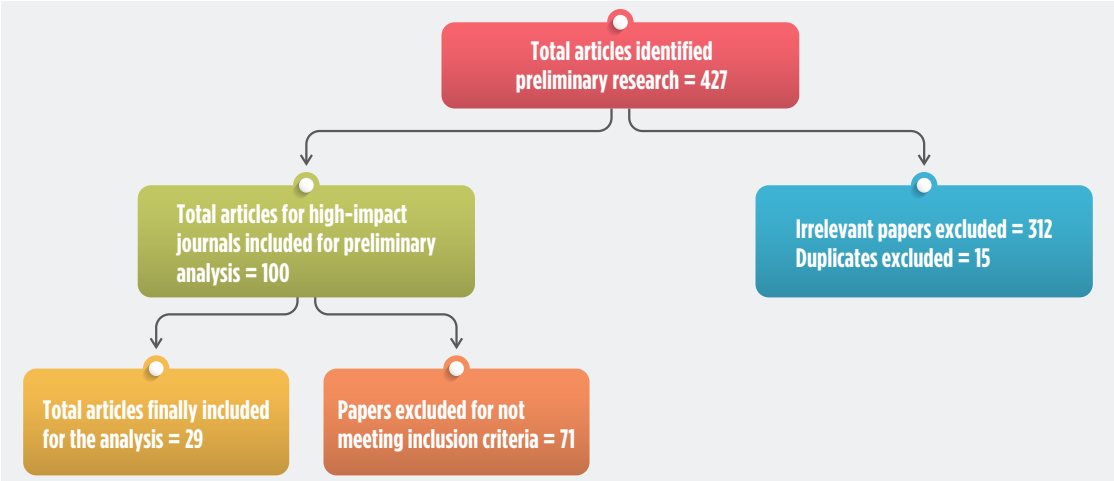

Figure 1 *Flow chart depicting article selection process*

Source: *Author*

20 http://www.prisma-statement.org/PRISMAStatement/PRISMAStatement

While the articles reviewed dealt with overlapping themes, based on a broad categorization of the overarching theme of the paper, the maximum articles dealt with the theme of food subsidies (n=13), followed by food security (n=10), nutrition (n=4), and NFSA (n=2).

The analysis also depicts an increasing interest in the domain of Food and Nutrition Security in India, markedly so since the enactment of the NFSA in 2013. The literature published within the 7-year reference period post NFSA (n=18) exceeds the cumulative literature during the 12-year period prior to it (n=11). The National Sample Survey (NSS), which collects nationwide data on various aspects of socioeconomic relevance, was the most frequently used data source (n=12) in the literature reviewed. This was followed by the National Family Health Survey (NFHS) (n=3) and National Nutrition Monitoring Bureau (NNMB) survey (n=1), which provides large-scale database on key health and nutrition related indicators, respectively. Three studies were based on primary surveys conducted in a specific state or a group of states, which included Odisha, Kerala, and Maharashtra.

The table below provides a snapshot of the key data sources along with the key indicators of interest in each, as cited in the literature.

Data source used	Indicators used
NSS	Monthly per capita expenditure; prevalence of undernutrition and malnutrition; average calorie intake; per capita calorie intake; food consumption patterns; PDS coverage, prices, offtake, consumption, access, and transfers
NFHS	Stunting; wasting; underweight; undernourishment; anaemia in children; anaemia in women
NNMB surveys	BMI - Chronic energy deficiency
Primary surveys	Dependence on TPDS; satisfaction with quantity and quality of grains; food intake pattern; dietary diversity; nutritional status; anthropometry
Rapid Survey on Children, 2013–2014	Underweight children below five years

Source: *Author*

4. Discussion

The key finding which emerged from undertaking this comprehensive review is that, while the NFSA has contributed towards improving the FNS status in the country, significant bottlenecks such as diversions and leakages; transportation and storage related spoilage; profitability of Fair Price Shops and technological improvements need to be tackled in order to further improve the nutritional and overall quality of life of the population.

The following section discusses high-level findings emerging from the literature. Following a brief discussion tracing the evolution of the PDS in India, the remaining findings have been synthesized under four thematic areas (Coverage, Supply Chain, Entitlement, and Impact), which have developed as the focal points for discussions on improving FNS and NFSA.

4.1. Evolution of NFSA in India

India's Public Distribution System (PDS), now under the umbrella of the NFSA, is the largest distribution network of its kind in the world. In its nascent stages, before the 1960s, the PDS was dependant on imports of food grains. In the 1960s and 70s, it was strengthened as a response to food shortages, with the Food Corporation of India (FCI) being set up to bolster domestic procurement, storage, and distribution capabilities. In the two decades following that, it developed from being a universal food subsidy scheme to a being revamped to target the poor and remote populations in the 1990s. It was in 1997, that the government of India introduced the Targeted Public Distribution System (TPDS), with the aim of providing subsidised food and fuel to the poor through a network of ration shops. The responsibilities of beneficiary identification, grain procurement and distribution of grains were shared by the centre and state.

This system was further reformed and strengthened with the introduction of the National Food Security Act, 2013. The Act emphasizes on a lifecycle approach to improve FNS outcomes and to recognize the Right to Food as a justiciable right. It introduces several improvements to the erstwhile TPDS in terms of beneficiary targeting, recognizing women as the head of the household, introduction of technological reforms, among others. The table below provides a chronological description of the evolution of the PDS, and concomitantly the FNS policies, in India.

Table 1 Evolution of PDS and FNS policies in India

Year	Evolution of FNS Policies in India
1939	Public Distribution System (PDS) started as war-time rationing measure
1958-59	Expanded Nutrition Programme launched in several states
1960s (mid)	Drought and food shortages highlight need for strengthening and continuing with a system of food distribution
1970s	PDS was made a universal scheme
1975	Integrated Child Development Services (ICDS) scheme launched
1982	Essential Services Programme (ESP)
1992	Revamped Public Distribution System (RPDS)
1995	National Mid Day Meal Programme (MDMP) re-launched
1997	Targeted Public Distribution System (TPDS)
2000	Antyodaya Anna Yojana (AAY)
2001	PDS Control Order
2001	PUCL vs. Union of India initiated (Right to food litigation, covering a range of issues)
2013	National Food Security Act (NFSA) signed into law

Source: *Author*

4.2. Coverage

The PDS has been riddled with charges of poor targeting, corruption, and inclusion-exclusion errors since its early years. However, the present literature suggests that the NFSA has led to broader coverage, lower targeting errors, accelerated PDS reforms. (Dreze et al, 2019)Ravi and Nair (2019) find that the NFSA has led to an increase in the number of beneficiaries who were dependent totally on the PDS in Kerala. There has also been an increase in the purchase of subsidized grains from the PDS shops over the years. (Kishore and Chakrabarti, 2015)

4.3. Supply chain

The key concerns around the PDS supply chain have been around the issues of leakages, losses, wastages, and corruption. While the estimates for leakages/diversions from the PDS vary, this number is estimated to be "alarmingly high" at about one-third of total food grains. (Krishnamurthy et al, 2017) In terms of losses, it is estimated that about 10% of grains are spoilt during storage and transportation. (Jha et al.,2013) These issues, coupled with the "barely profitable" Fair Price Shops (FPS), lead to inefficiencies creeping into the system, which when addressed could significantly improve the performance and utility of PDS to address the objectives it set out to meet. Kaul (2018) finds that in states where corruption is significantly higher, the impact of calorie intake is significantly smaller. However, even at the existing rate of leakages and losses, the PDS contributed to an improvement in nutritional status. Eliminating such bottlenecks could improve the efficiency of the system by as much as 46% (Srivastava and Chand, 2017).

4.4. Entitlement

While there have been discussions pertaining to the merits of an in-kind food subsidy in comparison to a Direct Benefit Transfer (DBT) scheme, such as cash transfers, Srivastava and Chand (2017), demonstrate that "effect of subsidies spent on in-kind PDS transfer on calorie-intake is 3.5-3.9 times the effect of direct cash transfer of food subsidy." With this in view, they suggest strengthening of the PDS system or conditional cash transfers for improving nutritional status. Khera (2011) shows that in areas where there has been under purchase and low utilization of PDS commodities, it has been mainly due to supply chain constraints. Several studies indicate that further enhancing the scope of the distribution, adding to rice and wheat, through provision of commodities such as coarse grains, millets, highly nutrition foods, etc., could help in meeting the nutritional needs, especially of the poor populations. (Malaiarasan et al., 2021; Chand and Kumar, 2002)

4.5. Impact

Several data sources indicate that the distribution of subsidized food grains through the Public Distribution System in India has "significantly and positively impacted food consumption and nutritional intake across households" (Malaiarasan et al, 2021; Kishore and Chakrabarti 2015, Shrinivas et al, 2017). It is estimated that PDS beneficiaries consumed "83% of the subsidy's implicit income transfer in the form of food". (Srinivas et al, 2017).

Studies also indicate that there has been a small albeit positive impact on calories from all food groups, not just cereals. (Kaul, 2018). However, calorie deficiency has been reported to be higher in rural areas as compared to urban areas. (Ghosh, 2021)

5. Evidence Gaps

It has been emerged that there has been a paucity of comprehensive large-scale evaluation of the National Food Security Act (NFSA) since its enactment in 2013. The last evaluation of the erstwhile Targeted Public Distribution System was conducted in only 7 states in 2015, when the reforms directed under NFSA were still being implemented and in nascent stages of observation. While there have been guidelines and directives by respective government ministries for monitoring and evaluation of the implementation of the components under the ambit of the NFSA, it was observed that these did not contribute significantly to impact assessment evidence generation at a national scale, due to various factors, such as low sample size, region-specificity, etc.

As the NFSA completes almost a decade - with the recent COVID-19 pandemic further highlighting the need for a robust food and nutrition security programme for a large section of the country's population - it would be prudent to undertake a holistic systematic evaluation and impact assessment of the NFSA in its entirety, in order to bolster the system further through recommendations for course correction.

6. Conclusion

The NFSA is a milestone in India's food and nutrition security policy, resulting from decades of investment in adaptive governance and course correction of the food safety nets programmes in India. The findings of the literature review of food subsidies and NFSA in India suggest that important strides have been taken in a positive direction with the implementation of the NFSA. These include better efficiency, in terms of targeting, coverage etc., of the system as well as positive impact on nutritional indicators, such as dietary diversity. Their view also points to further needs for improvement in the system in terms of addressing leakages, wastage, and corruption; implementation of technological reforms; strengthening nutritional outcomes; and better and more transparent governance mechanisms. The NFSA, if implemented in letter and spirit, would significantly improve the food and nutritional security status in India. Overall, the review also points to a lack of comprehensive assessment of the NFSA and food safety nets in India to properly address the question of food policy in India and its efficiency and impact. Cross-learning of best practices can be used for improvement in its implementation to enhance its impact and to improve the food and nutritional security standards in the country.

References

1. Bhattacharya, Shrayana et al. (2017). The Public Distribution System in India: Policy Evolution and Program Delivery Trends. The 1.5 Billion People Question: Food, Vouchers, or Cash Transfers?. Pages 43-105
2. Chand, R. &Jumrani, Jaya. (2013). Food security and undernourishment in India: Assessment of alternative norms and the income effect. *Indian Journal of Agricultural Economics*. Volume 68, Pages 39-53.
3. Dreze, Jean et al. (2019). Casting the Net: India's Public Distribution System after the Food Security Act. Economic and Political Weekly. Retrieved from https://www.epw.in/journal/2019/6/special-articles/casting-net.html
4. Ghosh, Sourindra Mohan and Qadeer, Imrana. (2021). Impact of public distribution system on quality and diversity of food consumption. *Economic and Political Weekly*. Volume 56, Issue 5, Pages 52-59.
5. Jha, Raghbendra et al. (2013). Food subsidy, income transfer and the poor: A comparative analysis of the public distribution system in India's states. *Journal of Policy Modeling.* Volume 35, Pages 887-908.
6. Kaul, Tara. (2018). Household Responses to Food Subsidies: Evidence from India. *Economic Development and Cultural Change.* Volume 67, Issue 01, Pages 95-129.
7. Khera, Reetika. (2011). India's public distribution system: Utilisation and impact. *Journal of Development Studies*. Volume 47, Pages 1038–1060
8. Kishore, Avinash& Chakrabarti, Suman (2015) Is more inclusive more effective? The 'New Style' public distribution system in India, *Food Policy*, Volume 55, Pages 117-130.
9. Krishnamurthy, Prasad et al. (2017). Food Price Subsidies and Nutrition: Evidence from State Reforms to India's Public Distribution System. *Economic Development and Cultural Change.*Volume 66, Issue 01, Pages 55-90.
10. Malaiarasan, U et al. (2021). Does Food Price Subsidy Affect Dietary Diversity? Evidence from South India. *Margin: The Journal of Applied Economic Research.* Volume 15, Issue 2, Pages 268-290.
11. Ravi, Deepa & Nair, Ambili S. (2019). The Impact of National Food Security Act-2013 on the Public Distribution System: A Case Study of Kerala State. *International Journal of Engineering Research & Technology (IJERT)* Volume 08, Issue 06.
12. Srivastava, Shivendra & Chand, Ramesh. (2017). Tracking Transition in Calorie-Intake among Indian Households: Insights and Policy Implications. *Agricultural Economics Research Review.* Volume 30, Pages 23-35.

MIXED METHODS IN EVALUATION: GOING BEYOND "CAUSALITY" TO UNDERSTAND THE "WHY" AND "HOW"

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Abstract

Evidence-based approach to policy making has become the cornerstone of programme development and implementation. Much of program monitoring and evaluation designs emphasize on traditional quantitative and qualitative approaches which are used in silos and hence do not provide comprehensible findings of the evaluation. Information on policy and program will be more holistic if qualitative and quantitative data via mixed-methods approach is used. It will not only aid in identifying and explaining policy/programme impacts, but will go beyond "causality" to better understand the dimensions of "why" and "how" of observed impact effects. This paper highlights the key elements of mixed-methods design along with challenges and opportunities for strengthening the mixed methods for evaluation.

Keywords: Mixed-methods, evaluation, evidence-based policymaking, quantitative, qualitative.

1. Introduction

There has been a greater call for accountability for policy effectiveness and program outcome. Increase in data availability and advances in methodology, tools and technique have bolstered not only the demands but also the capability for evidence-based policymaking. Academic and policymaking circles [1] are collaborating to promote systematic approaches to review and evaluate policy using scientific evidence in social policy making. An evidence-based approach to policy making has become the cornerstone of programme development and implementation. Much of monitoring and evaluation forums emphasise mainly on quantitative methods, which provide evidence with high degree of internal validity, generalizability, and replicability with reference to its causal inferences. Question that is posed is, what methods constitute rigorous and reliable evidence and how research evidence should be generated and judged. In evidence-based policy making, there exists a generally established hierarchy of dominant research methods, with many forums have formally defined classifying studies according to research design and methodology, with highest value being awarded to Randomized Control Trials (RCT) (Burch & Heinrich, 2016). However, pursuing mixed methods have their own merits.

For evidence-based policy making, it is imperative to know what are the outcomes and outputs, but also what is the impact and why did citizens or program implementers behave the way they behaved. This can be provided by combining qualitative and quantitative methods, i.e., combining the inherent advantages of large sample size, probabilistic precision offered by quantitative analysis with adding deeper context and exploring phenomena in qualitative research. Numbers from quantitative research add precision, while words, pictures and narrative description from qualitative research adds the meaning and explanation to those numbers.

Quantitative methods which by definition itself is numerical based, provide uniform measure of output and outcome, enabling econometric analysis of identifying causality and relationship among variables but have their own challenges when it involves abstract constructs. Qualitative methods are better to capture abstract social issues, as it uses

more flexible, open-ended questions, connecting researchers with subjects, to elect more honest filter free responses. However, there is a trade off in terms of sample size, that is, on depth vs breadth thereby Quantitative and qualitative evaluation complementing and covering are cover each other's blind side. Combining qualitative and quantitative methods enhance generalizability and completeness through triangulation and corroboration of findings (Johnson & Onwuegbuzie, 2004) and at the same time, initiates the process of exploring new interpretation (Rossman & Wilson, 1985).

Mixed method does not and should not aim at addressing differences in paradigms but leverage dualism, which reflects the subject of our study in policy research, shedding new light not duplicating effort (Bryman, 2006)(Tashakkori & Teddlie, 2003). Mixed methods assist in building new perspectives or frameworks, or the reframing of research questions itself., augmenting depth in inquiry. Combining qualitative and quantitative data via mixed methods approach not only enables identifying and explaining policy/programme impacts but goes beyond "causality" to fathom the dimensions of "how" and "why" of observed impact effects.

This paper articulates the challenges and highlight opportunities, making a case for augmenting the mixed methods in the context of public policy evaluations.

2. Mixed Method Approach in the Programme Evaluation Context

2.1. Definition of mixed method approach

The central premise of using mixed methods research is to use both quantitative and qualitative approaches together. The methods draw on potential strengths of both the qualitative and quantitative approach in combination which maximizes the ability to assess the program performance. It provides complete information, that is more coherent and reliable, than a standalone quantitative or qualitative method of evaluation.

The use of mixed methods in development evaluations can be traced back to the 1800s (Play, 1855)(Bois, 1899). In 1959, Campbell and Fiske (Campbell & Fiske, 959) argued the need for using "more than one trait and more than one method" in the validation process, and to achieve this they proposed a multi-trait multi-method matrix (Campbell & Fiske, 1959). The chapter in the 1997 issue of the 'New Directions for Evaluation' by Greene and Caracelli, that explored the role of mixed methods in evaluations, played a significant role in forwarding this discussion in the evaluation communities.

USAID in its evaluation policy has strongly recommended the use of mixed-method approaches in evaluation studies, stating that a combination of qualitative and quantitative methods yield optimal results. The complementarity in both the methods aid in overcoming the weaknesses of one approach over the other when used in mix method research. In the evaluation context, mixed methods approach is defined as followed by USAID: *"A mixed-method evaluation systematically integrates two or more evaluation methods, potentially at every stage of the evaluation process, usually drawing on both quantitative and qualitative data"*(USAID, 2013).

2.2. Mixed method designs

While designing mixed method evaluations, it is important to carefully consider the design that would be right for the study. Qualitative and quantitative approaches may be conducted either in parallel, sequential. In case of parallel design, data collection and analysis are conducted separately for qualitative and quantitative methods during same or different time periods, and the results are then triangulated or synthesized based on whether the two methods were intended to answer the same question or different ones. In sequential design, one method precedes the other, in data collection and analysis. Based on the analysis from the data from the first method, the evaluator plans the next round of data collection and so on. Multi-level designs involve different methods being adopted at different levels in order to comprehensively understand the project outcomes and impacts (USAID, 2013). Mixed-method designs benefit in multi-level studies by often providing more accurate and credible findings from analysis on a smaller and more cost-effective sample (Bamberger, 2012).

Another major aspect to consider in the design of a mixed method approach is the dominance of one approach over the other. Based on the study requirements and the evaluators expertise, qualitative and qualitative approach may hold equal or skewed weightages. In a dominant quantitative approach, data analysis will heavily depend upon quantitative analysis techniques to draw insights from surveys administered across the sample, while the qualitative techniques like interviews, focused group discussions etc. conducted on a smaller sample are used to design or bolster the quantitative analysis findings. In an evaluation study skewed towards the qualitative approach, quantitative analysis usually supports in designing and sampling the qualitative study. In studies where qualitative and quantitative approaches are given equal weightage, quantitative surveys are combined with a range of different qualitative techniques to either analyses the same or different sets of questions (Bamberger, 2012).

Based on the placement of the two approaches in time and dominance, literature has identified five major mixed method designs - convergent parallel design, explanatory sequential design, exploratory sequential design, embedded design and multi-phase design. In a convergent parallel design, both methods are executed independently and in parallel with equal priority, with an objective that findings from both the methods answer the questions. Explanatory sequential design prioritizes quantitative methods in both weightage and time, while qualitative method is used to bolster the findings from the quantitative method. On the other hand, exploratory sequential design prioritizes qualitative method in sequence and weight, with quantitative data normally used to understand how it builds over the qualitative results. Embedded design involves collection of both qualitative and quantitative methods, with one having more weightage over the other. While planning studies over multiple phases, concurrent and sequential methods are executed over the multiple phases of the study with the results of one phase cascading inputs to the next phase. Such a design is called the multiphase design (Desalos, et al., 2020).

2.3. Added value of mixed methods

The mixed methods research plays an important role as the results obtained from mixed methods offsets the individual weaknesses of qualitative and quantitative research and provides better understanding of the research problems. Additionally, it provides more evidence for answering a broad array of research questions using different methods and not restricting to one single method. Complementarity of results (results from one method to be combined with other), alignment in methodical development (use results of one method assist other method) and expansion of analysis (enhancing the inquiry dimensions) help researchers to distil the most informative results(Greene, Caracelli, & Graham, 1989).

For evaluation of multi component programs, usually strong statistical designs such as RCTs and quasi-experimental designs often miss out on addressing the complexities of multi-component programmes. Qualitative methods when integrated with quantitative approaches help in providing deeper analysis of the issues at different levels. Further, mixed methods approach uses the same sampling frame to generate both large representative quantitative survey samples as well as small but representative samples for qualitative analysis (Bamberger, 2012). This allows for understanding the complex interplay of the findings from quantitative and qualitative methods across the multiple levels of the programme.

Secondly, strong designs are inflexible as they are applied on the same sample, with the same data collection instruments for measuring the same indicators across project implementation lifecycle (before, during and after). This makes them much less effective in monitoring and learning through real time doing. Most of the projects are not implemented as planned like definition of target population, changes in control group composition etc. Hence evaluation design must be flexible to adjust to changes. Here comes the additional value of rapid and quick feedback techniques provided by mixed method approach; thereby bringing in agility.

Quantitative methods attempt to identify and isolate specific variables (seeking correlation, relationships, causality) of the study. On the other hand, qualitative design bring focus on abstract constructs (fore.g.- beliefs, perceptions, institutional dynamics etc), which inherently requires a scale to be prepared (difficult to quantify through administrative data), but are key to fundamentally decipher the program outcomes. Let's understand this by an example: change in farmers income, crop yield are outcomes that are provided through quantitative methods. The reason behind increase in farmers income and crop yield due to adoption of the latest technology method via farmers organization is not reflected in the quantitative approach. On the contrary, qualitative methods will explain the social political relationship -why different types of farmers join and what different technologies were adopted which led to increase in income and crop yield. And, to understand whether the farmers will be able to generate the intended outcome under different circumstances. Hence, the quantitative survey is reflecting increase in income and farmers produce but not able to explain the reason behind increase in income and produce of the farmer. Similarly, the qualitative method helps us in understanding what different technologies were adopted and will they be able to generate the same outcomes despite the circumstances.

2.4. Towards fully integrated mixed method approach to evaluations

Fully integrated mixed methods research requires the integration and independent use of qualitative and quantitative methods throughout study from data collection and analysis. Further, a fully integrated mixed method approach does not privilege one approach over another (quantitative over qualitative or vice versa) but employs designs to leverage the strength of each approach to evaluate the outcomes and impact of the programme (Burch &Heinrich, 2016). Thus, in a fully integrated mixed method design, qualitative and quantitative methods are leveraged at each stage of the study right from inception phase of the study to design, data collection, and analysis.

During the evaluation inception stage, qualitative and quantitative methods can aid in finalization of the research questions. Qualitative methods can help in fine-tuning the research questions/objectives of the study, while quantitative methods can help in formulating research questions through analysis of secondary data. Literature of mixed method approach classifies qualitative research as inductive and quantitative research as deductive, and integrating both at the evaluation formulation stage helps in refinement of objectives of the evaluation study by leveraging the findings from each of the methods.

During the design stage, while exploring the secondary data plays a significant role in identifying historical trends and building plausible conjecture, qualitative data can aid in identifying anomalies and outliers in the data, and decoding the reasons behind certain patterns observed in the quantitative analysis. Appropriate inputs at the design stage assist in identifying the blind spots, reducing error in the econometric equation, and addressing the problem of endogeneity.

During the data collection stage, quantitative methods involve standardized numerical data collection that help in capturing trends across time and socio-economic groups. On the other hand, qualitative methods utilize less structured data collection methods that makes studying complexities, issues, process and behaviors in greater detail.

At the data analysis stage, quantitative methods infer statistical associations and qualitative methods help in understanding the reasons behind these associations. Quantitative methods can also help in understanding the representativeness of the beneficiaries in the qualitative method adopted under the evaluation study.

Appropriate implementation and analysis of data through mixed methods, can help in identifying causal, mediating, and moderating variables along with their relative weight towards the impact and thus helping in identifying causal, mediating and moderating variables along with their weight towards the impact.

3. Challenges of Mixed-Method Approach

Information from both methods can be combined to explore the different perspectives and dimensions of a common research question, Mixed method is not void of associated practical difficulties and challenges.

The difficulty that is posed in combining quantitative and qualitative research primarily roots from the difference in the epistemological and philosophical frameworks that guide the two approaches.

Many argue that both research methods have different assumptions towards addressing problem statement which makes it imperative to look at the findings from these approaches distinctly (Dootson, 1995)(Risjord, Sandra, & Margaret, 2002) (Salehi & Golafshani, 2010)

A major challenge for researchers is to decide the weight attribution for quantitative and qualitative information, whether the study would be dominated by one of the approaches and its assumptions (quantitative or qualitative), or consider equal weightage for both quantitative and qualitative approaches (Almalki, 2016). Deciding on the design for the study is a critical aspect that requires due deliberation by the researcher to make sure that all research questions are answered comprehensively.

Having mixed methods for data collection and analysis require, more time and expertise, which in turn making it not only time consuming but also expensive (Tariq & Woodman, 2013).

4. Opportunities

In spite of challenges, the growing interest in the mixed method reflects importance for strengthening the use of mixed methods in evaluation. Effective monitoring systems are a key for effective implementation as well as evaluation. Currently much less thought has been gone in designing of the monitoring systems as compared to different methods used in evaluations for measuring impact. Mixed methods aid in customized data collection for particular program and provides information which can be easily contextualized which proves to be helpful in designing of the monitoring systems.

Secondly, a lot of focus is given by the Economist on strong statistical designs which have their own set of limitations, i.e., it can only be applied in a small number of development evaluations. Currently, a lot of literature reviews haven't been done on strengthening of evaluation designs for the majority of the evaluations. This provides the opportunity for Mixed method designs to address this challenge with a cost-effective approach.

A third area of opportunity is to develop an alternative to the conventional statistical counterfactual. Techniques such as qualitative group consultation methodologies - Participatory Rural Appraisal (PRA) to obtain beneficiaries perception on concept map, causality and theory of change are still at a very nascent stage and no other alternative to counterfactual have been found. This is a niche for mixed methods.

There are a number of other opportunities like refining approaches to mixed method sampling, reconstructing of baseline data, incorporation contextual framework and analysis into strong statistical designs, demand for new evaluation methods which are more flexible to cater complex programs. These are numerous areas where mixed methods can make a valuable contribution.

5. Conclusion

Mixed method research in the evaluation context provides an avenue to leverage strengths of both methodical approaches to more holistically assess the policy/program performance and impact. Across the literature, mixed method designs have been tailored on aspects such as weightage given to the quantitative and qualitative methods and whether the two methods would be implemented parallelly or sequentially, based on the need of the evaluation study. With the growing recognition of mixed method approaches in policy/programme evaluation, there has been a greater focus on fully integrated mixed method approach, which integrates both methods with an equal priority, thereby enhancing the studies' credibility and its relevance to stakeholders. However, mixed methods research has its challenges. Complexity in designing of the study, enhanced data collection efforts, requirement of both qualitative and quantitative experts, all leading to increased cost and time for execution of the study are some of the challenges that evaluators face while adopting the mixed methods approach. Maintaining agility, mixed method approach poses exciting opportunities for the future to refine different approaches of sampling, to incorporate contextual framework and analysis and robust statistical designs for complex programmes.

References

1. Almalki, S. (2016). Integrating Quantitative and Qualitative Data in Mixed Methods Research—Challenges and Benefits. *Journal of Education and Learning 5(3)*.
2. Bamberger, M. (2012). *Introduction to Mixed Methods in Impact Evaluation.* Impact Evaluation Notes.
3. Bois, W. D. (1899). The Philadelphia Negro.
4. Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative research 6(1)*, 97-113.
5. Burch, P., & Heinrich, C. J. (2016). Mixed methods for policy research and program evaluation. *SAGE Publications*.
6. Campbell, D. T., & Fiske, D. W. (1959). Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix. *Psychological Bulletin 56(2)*, 81-105.
7. Campbell, D. T., & Fiske, D. W. (959). *Convergent and discriminant validation by the multitrait-multimethod matrix.*
8. Desalos, C., Herens, M., Kuperus, N., van Veen, S., de Winne, R., van Zaal, K., & Wattel, C. (2020). *Mixed methods in monitoring and evaluation of development projects: learning from the experience of practitioners.* Wageningen University & Research/Oxfam Novib.
9. Dootson, S. (1995). An in-depth study of triangulation. *Journal of advanced nursing, 22(1)*, 183-187.

10. Greene, J., Caracelli, V., & Graham, W. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational evaluation and policy analysis, 11(3)*, 255-274.

11. Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational researcher, 33(7)*, 14-26.

12. Play, F. L. (1855). Les ouvriers européens [European workers]. *Tours, France: Alfred Mame*.

13. Risjord, M. W., Sandra, D. B., & Margaret, M. F. (2002). A new foundation for methodological triangulation. *Journal of Nursing Scholarship 34.3*, 269-275.

14. Rossman, G. B., & Wilson, B. L. (1985). Numbers and words: Combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation review, 9(5)*, 627-643.

15. Salehi, K., & Golafshani, N. (2010). Commentary: Using mixed methods in research studies: An opportunity with its challenges. *International journal of multiple research approaches, 4(3)*, 186-191.

16. Tariq, S., & Woodman, J. (2013). Using mixed methods in health research. *JRSM short reports 4(6)*.

17. Tashakkori, A., & Teddlie, C. (2003). Issues and dilemmas in teaching research methods courses in social and behavioural sciences: US perspective. *International journal of social research methodology, 6(1)*.

18. USAID. (2013). *Conducting Mixed-Method Evaluations.*

BIG DATA: TRANSFORMING EVIDENCE BASED POLICY MAKING

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Abstract

With proliferation of technology and innovation, the creation and consumption of data has been growing at an unprecedented rate. Data-driven innovation can be transformative, as it provides plethora of opportunities to improve decision-making make more informed policies and strengthen economies by reducing waste and improving services. Data can improve social and economic outcomes, if used for generating evidence during formulating policies. So far improving governance, through the concept of e-Governance, has been the focus of technology utilization in public administration. However, use of big data can alter the pace of development. Appropriate policies and technologies must be structured to appropriately leverage big data. This paper aims to articulate "How can public sector use big data more efficiently and effectively"? Supported by policy cycle as a model this paper explores, how evidence-based policy making could be more efficient and effective by use of Big Data. It attempts to articulate a holistic process addressing issues of technology, citizen, and users, which often are moderated by culture and governance.

1. Introduction

Applications driven by development in technology and the advancement of mobile communications has generated a "data gold mine" (Kernaghan, 2014). Telecommunications, along with advancements in cloud computing and storage techniques has boosted Big Data adoption. In line with development scientific paradigms have also evolved through empirical science, theoretical science, and computational science. Now we are at the stage of data-intensive science - the latest approach to discover knowledge or extracting value through derivative of technology- Data (Chen et al, 2014; Chen & Zhang,2014). Usage of data can generate economic and social value far beyond anticipation.

So far, in the Governments, improving governance, through the concept of e-Governance, has been the technology focus in public administration. Referring to Janssen and Kuk (2016). Governments can also leverage such techniques to enhance accuracy, efficiency, speed of policy formulation and implementation, and evaluation of such interventions through analytics. Yet real value of data is not fully exploited for public policy(Gamage, 2016). We need data-driven innovation that is transformative and has the potential not only to make more informed policies but also to provide appropriate and applicable public services for the disadvantaged class (Manzoni, 2018). What are the areas where big data and related methodologies can be applied to enhance public administration and plausible approach for execution can be explored?

Based on policy cycle model this paper explores, how evidence-based policymaking can be optimized by data. The paper further aims to build a plausible approach that could be further optimized and institutionalized to enable use of Big Data in public policy making could be supported and promoted using Big Data and its application.

2. Data Sources

Data sources can be classified based on original intent of data collection and data source. It can be sorted using a 2-dimensional framework as shown in figure 1.0.(WDR 2021). One dimension classifies data based on original intent - public or commercial purposes. Traditional as well as new age data collected for commercial use is classified as Private Intent Data; Similarly, data collected for public intent, irrespective of method or instrument is classified as " Public Intent Data". By design, public data can be focused on purpose of its application and may be a representative of population; while private data may have a self-selection bias, OTT platform data might be more incidental than representative of population.

The second dimension represents methodologies - "traditional" Vs "new" methods.

Table 1: Illustrative – Intent Vs Collection methodology

Methods and tools	Public intent data	Private intent data
Traditional	Census, surveys- household, individual, businesses etc. and administrative records	Survey done by private entity; regulatory data filed by private entity
New	Geospatial data, e-gov data, C2G transactional data	Data from private sector digital platform

Source: *WDR 2021 team.*

2.1. Public Intent Data

This comprises of typically traditional data types- censuses and surveys, although geospatial have become more prevalent. Government data collection is for policy. Collection of public data via traditional methods being costly and time consuming, frequency of collection is reduced. Many a times the dimensions do not capture dimensions and nuances of subpopulations and micro segments. But traditional public intent data is more representative of population and less self-selection bias making them more affable to government officials. There are 6 different type of public intent data;

- **Administrative generated—Administrative Data** refers to data sets originating from transactional purposes. It is not designed with research as an objective. e.g. of same is Mortality record, transaction records such as GSTN. Administrative data can often be collected unobtrusively and non-reactively, so the challenges of 'faking' survey responses is minimal.
- **Censuses**, is aimed at recording information about an entire population. It can be aimed at individuals or business or be agriculture focused. For e.g., population and housing censuses
- **Sample surveys -** drawn to be representative of the entire population, using appropriate sampling technique.

- **Citizen-generated data**– Generated by individuals. Primarily focused in solving issues faced by citizen. This data, can provide significant value in solving citizen centric issues. Geospatial data can be enriched by combining with citizen generated data.
- **Machine- data** automatically generated by an IOT device. E.g.- Air pollution monitor.
- **Geospatial -** It primarily is satellite imagery data, providing information based on their geographic locale. With progress of technology, drone data is also adding significant value.

These data types are not mutually exclusive but each gives a different dimension of the variable. Every data point can then be represented with reference to time, space or person. Various data sources can be linked together through common identifier.

2.2. Private intent data

Private intent data are often, associated with digital tools and application. Though it lacks representativeness of whole population, this data has far greater frequency, granularity as compared to Public Intent data. Private intent data collected through wireless devices such as mobile phones, etc., provides geolocation information, which the conventional methods of public intent data collected through survey just cannot provide.

Everything a digital user does- call, text, search, leave a post, make a transaction, or accept services terms and conditions leaves a trail, which is called as a digital footprint.

The footprints can also be passively collected by tracing IP address and search history. Digital residuals have exceedingly high frequency and microgranularity, enabling to insights, inferences and understand characteristics at an individual level. Mobile network data is one of high velocity data providing information on behavior, attitude and location. Call Detail records (CDR) is intended to use for billing, it can be repurposed for behavior, attitude, and mobility patterns. Firms which rely on data, such as e-commerce or social media firms, additionally generate behavioral patterns. Combining, variables can assist in prediction of economic and social status and of behavior pattern. For example, having an Apple phone is correlated with top income quartile in US. Similarly., time of purchase on e-commerce has a correlation with default propensity.

Data residuals have big data characteristics. Various definitions of Big Data exist in literature. Initial literature speaks about “Three Vs”, i.e., “Volume” representing size of data, “Velocity” represents data accrual pace and “Variety” representing dimensions of data (Jordan, 2014; Kitchin & Lauriault,2014; Laney 2001). Subsequently, 3 more characteristics for explaining certain features of Big Data were added i.e., “Veracity” - data quality, “Variability” - variation in data, and importantly “Value” - the potential hidden intrinsic value (IDC, 2012; White, 2012). Big data is classified in four ways: 1. Structured. 2. Unstructured 3. Semi-structured and 4. Quasi-structured.

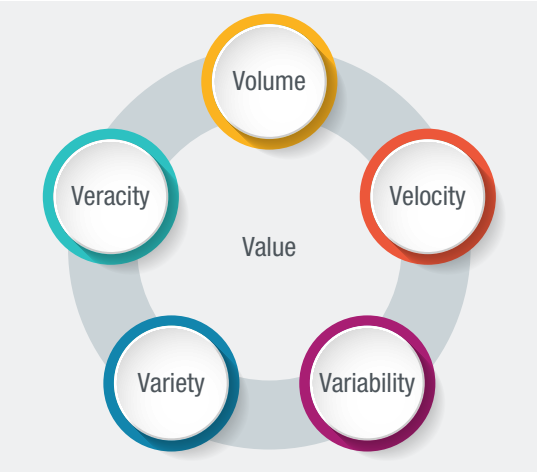

Fig 1: *6 Vs of Big Data*

Source: *Author*

3. Policy Cycle and Big Data

Government can move beyond e-Government and e-Governance, by transforming policy making approach and cycle. Big data can optimize the classical approach of policy cycle by reducing elapsed time by continuous evaluation, rather than end of cycle impact assessment (Johann Höchtl et al 2016)

The policy cycle is composed of mainly 3 steps - Formulation, Implementation, and Evaluation (Wegrich and Jann 2007). Utilization of Big Data can optimize the policy cycle by bringing efficiency and effectiveness in policy formulation, execution, and evaluation (see Figure 2). Policies can be more relevant, focused, and customized.

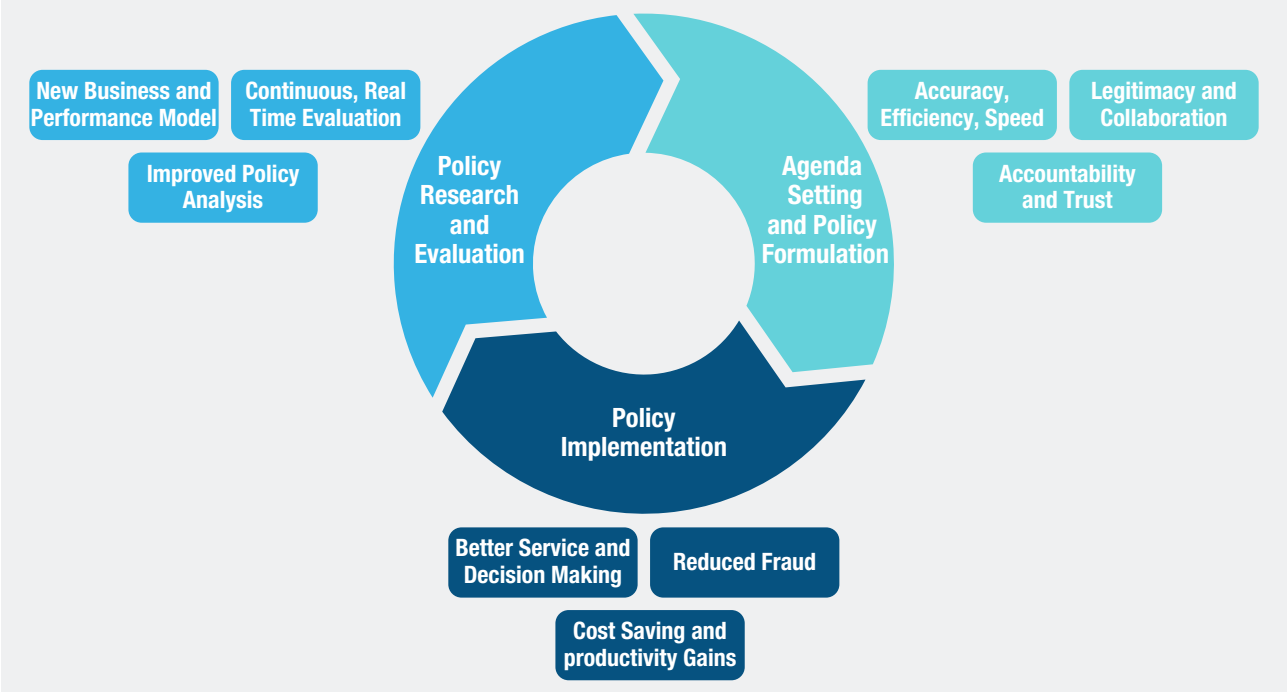

Fig 2: *Big Data impact on Policy Cycle framework*

Source: *Pencheva et al, 2020.*

3.1. Policy Formulation

Big Data, through use of social media and network can be more participative and collaborative in identifying priorities and formulating policies. (Dsouza & Bhagwatwar, 2012). Data points from social media can indicate preferences towards a particular policy, to set agenda. Big Data provides opportunity to leverage various sources for identification of issues and problems, and formulate an efficient and effective policy approach (Williams, 2014).

Information can support open policy discussions and debate, ushering efficiency implementation. In policy formulation, Big Data can help in building 'what if' scenarios to predict possible outcome (Cook, 2014). The high velocity of data enabled by social media and supported by digital arenas such as online consultation, virtual meet, enables policymakers to quickly respond and not depend on traditional channels of feedback which are time consuming (Hochtl et al, 2016; Mergel, 2017).

3.2. Policy Implementation

A more transparent, efficient and effective allocation and provision of resources can be done by identifying patterns in data. This will facilitate a goal oriented, output - outcome focused budgeting process .and the structuring a framework that could appropriately focus and priorities resources. It could enable the identification of hidden patterns and enables us to identify pathways to research difficult to reach citizens as well as detect irregularities during implementation (Maciejewski, 2017).

3.3. Real-time time Evaluation

Evaluation can be done instantaneously or near-instantaneously. This enables continuous evaluation as opposed to end of policy cycle evaluation; this approach is also termed as e-Policy (Höchtl J et al, 2016).

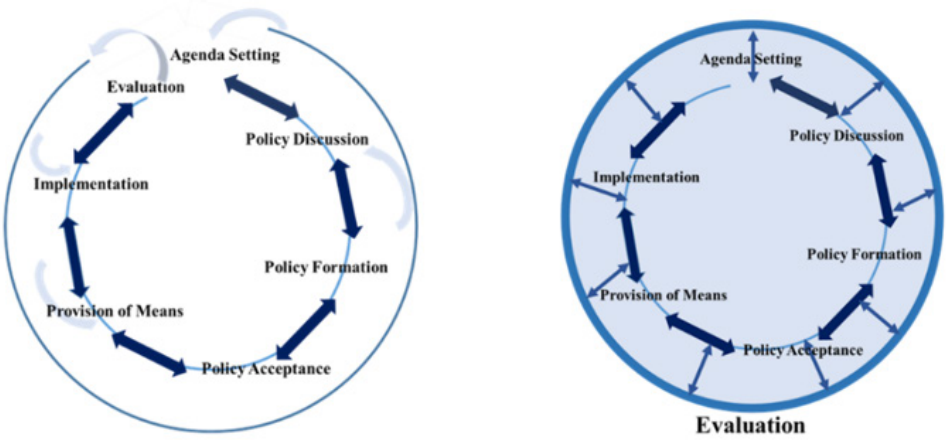

Fig 3: *Data Analysis Impact on Policy Framework*

Source: *Adapted from Johann Höchtl, Peter Parycek & Ralph Schöllhammer 2016*

However, data governance across departments and ministries is an imperative, so is cross-organizational collaboration are imperative (Penchava et al, 2020; Desouza and Jacob, 2017).

4. Connecting Data for Development

Materializing the points mentioned in the above sections are contingent upon availability of quality and granular data which is representative of the population being targeted. Public and Private intent data have their own merits and demerits; however, they have complementarities, which can be used jointly leveraged during analysis. For e.g. - A Health Ministry would better formulate a policy if it has data from Rural, Woman and Child Development ministries as well as from public and private health providers.

For this purpose, an Integrated National Data System designed is to be formulated. Governance system defines rules – dos and don'ts, while Integrated National Data System (INDS) can be envisioned as connectivity with provision to ensure data security. For INDS to be successful, all participants and stakeholders must align. INDS does not mean an integrated national database or a centralized governance structure. It is an ecosystem, wherein the data can be accessed, shared, used, and reused for the larger public good.

The conceptual framework links data to development (Figure 4). Data is contributed by government administrative systems or private sector platforms driven by technology. Data can be processed by various participant entities, for public policy analysis, primarily Government entities which happen to be the primary producers of public intent data as well. Civil society and Citizens play a role as the producers' data, but the role of private sector is also critical. They are data fiduciary, an important entity in the value chain to contribute data production in the national data system. Academica support and build programs for the analysis of data and policy suggestions. To manage this ecosystem, it is imperative, to set out norms and have an integrated framework of infrastructure policies, open data laws, appropriate information legislation, and policies. Often cited is how the policy framework can address the issues and challenges of data security and privacy.

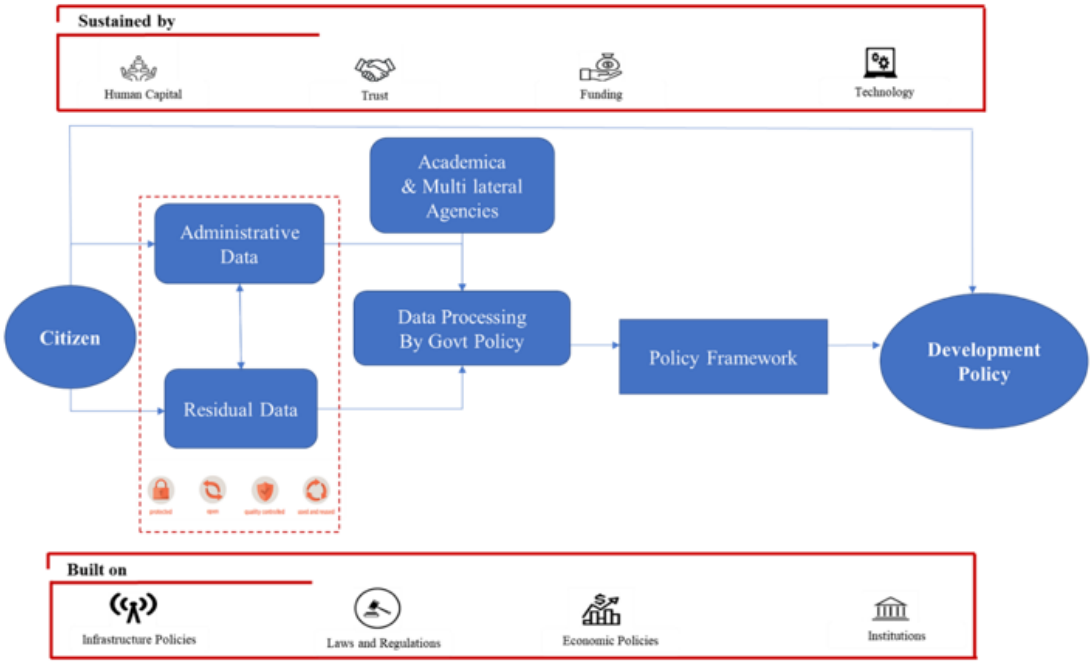

Fig 4: *Data for Development*

Source: *Adapted from WDR, 2021; Authors Input*

In this context of integrated framework, addressing personal and organizational privacy is important. Personal data points might permit connecting seemingly unrelated data points to provide hidden patterns; however, it is imperative not to undermine citizen's privacy. Techniques such as anonymizing data or informed consent can address challenges posed by data privacy (Penchava et al, 2020). Another important point is data security. The high volume of data might make it susceptible to cyber attach and cybercriminals.

To balance the use of data, there is a need to create a new social contract which provides equitable access, and is based on trust among participants. Government, civil society, academia and businesses must align to ensure safe, secure use of data for public good. (WDR, 2021)

A social contract is not new. EU's GDPR, and US Fair Information Principles aim at laws regarding govern data creation and protection. However, social contract in WDR 2021 has even enhanced framework. Data-creating and data-using parties must collaborate and have a safe secure framework to do so. Entities could be business, government or individuals. Social contract should enable appropriate reuse of data creating value in the process. A coherent planned effort is required to improve data governance as well as align with international principals through multi-lateral cooperation.

5. Illustrative India Policy Use Case

Empowerment has become a central theme of many programs and schemes across governments aimed to development. Opportunities lead to more choices. Empowerment can be said as a multi-dimensional concept and implies wherein people have freedom of expression and of exercising her choice to shape her life in all spheres of relevance. Economic freedom, freedom to transact and participate in economy. (Sen,81; Mandal, 2013). Different studies have measured empowerment differently, one measures actively used labour force participation and financial wellbeing, (Assad et all, 2014*, Haque, Zulfiqar, 2016*). A strong correlation exists between empowerment and development of economy. Higher participation in workforce, leads to higher is the economic development (Duflo, 2012). Labour markets differ based on markets. Mature markets are more non-agricultural sector while emerging markets are more agrarian in nature. In developed economies vast majority of workers are formal wage and salary earners, while in emerging market it is of self-employment (Rustagi, 2011).

There are some challenges to foster entrepreneurship in developing countries. Citizens are more constrained in economic initiatives by access to credit and infrastructure (Banerjee and Duflo 2007). Agency theory posits credit access is constrained by lack of information or rather asymmetric information availability coupled with perceived conflicting interest between financial institute and lender (Berger et al.,2001; Mason and Stark,2004). Credit hinged on transactional data is limited (Altman et al,2020; Van Caneghem&Van Campenhout,2012). Even in the Indian context, it can be very seen, there is a granger causality between digital transaction credit access (Chi Value 6.77 and P value 0.034).

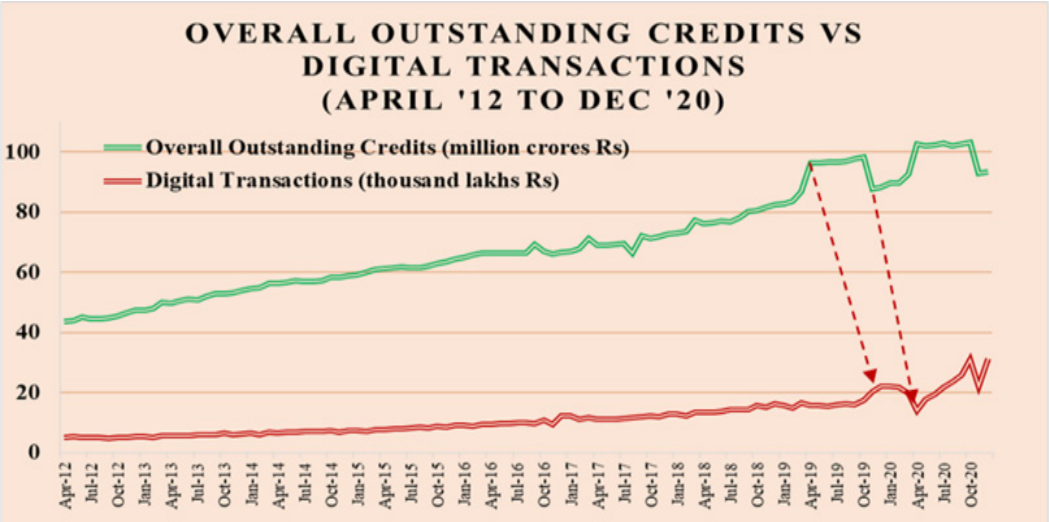

Fig 5: *Data Analysis Impact on Policy Framework*

Source: *RBI, NPCI data and Authors analysis*

Digital payments play a significant and important role in providing avenues to transact, (Pal et all, 2020), which leads to "economic facility" required for development (Jacob 2016, Sen 2001, Pal, 2020). To have access to credit, which leads to economic wellbeing, one of the key drivers is Digital transactions, which in turn is a function of infrastructure, ecosystem, financial literacy, and digital financial literacy. Clearly digital transactions are a lead indicator of impending credit access. Digital and mobile payments is also leads to social and health empowerment, which again leads to economic empowerment.

Prime Minister's Employment Generation Programme (PMEGP) was launched in 2008 by merging the two schemes namely Prime Minister's Rojgar Yojana (PMRY) and Rural Employment Generation Programme (REGP). The goal of the scheme is to generate employment opportunities through entrepreneurship. The Scheme envisages credit linked subsidy to setup and upgrade new micro enterprises in non-farm sector. Total actual expenditure for 2020-21 was INR1905Cr.

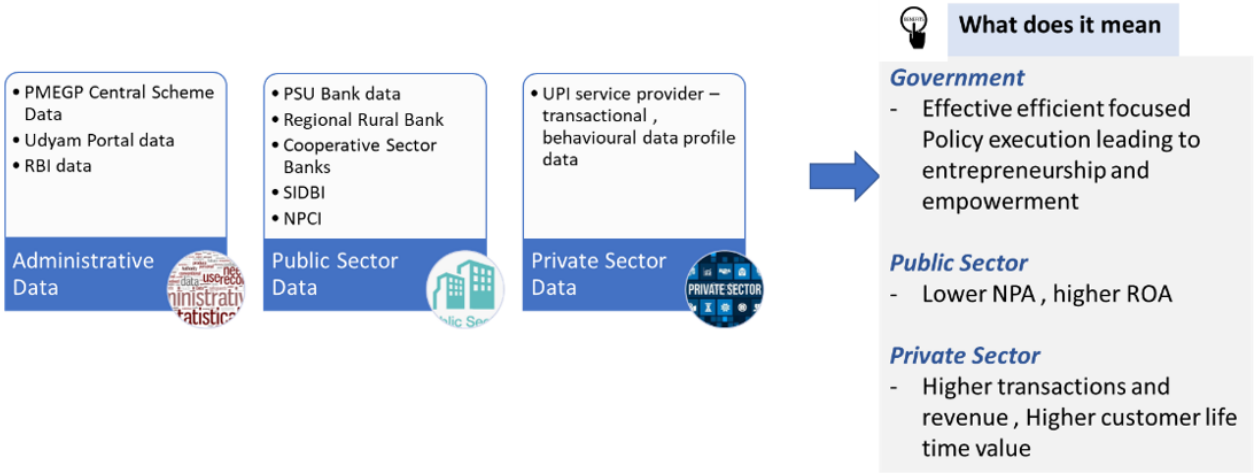

Fig 6: *Data Use and Benefits Prime Minister's Employment Generation Programme*

Source: *Author's creation*

PMEP, which aids microentrepreneurs' success; can be optimized by looking at digital payment data as well as mobility data. A confluence of administrative data, public sector data and private sector data will help us focus appropriate execution by prioritizing districts, sub- segments (segment profile) and financial institutions in that area. These exercises will not only help in accelerating growth, but also assist the financial institutions achieve appropriate level of profitability. It can provide, government as well as NGO to focus on areas of capacity building to ensure success of the intervention scheme.

6. Conclusion

There are complex issues to be considered when Big Data is studied concerning the public sector. This paper focuses on efficient and effective use of Big Data for public policymaking. It attempts to develop a holistic and systematic approach in leveraging big data technology for evidence-based policy making. To have access as well as the ability to process data, it is imperative for a national framework, which alleviates risks as well as protects citizens from infringement of personal privacy. Appropriate supporting technology infrastructure, appropriate policies and regulations are needed to create trust in data systems.

The proposed approach can be said as a starting point to build a detailed framework, which is not just comprehensive but also flexible and agile. Future research can investigate other factors that may influence the effectiveness of big data in policy making and incorporate it into the framework. Capital, land, and labor are inputs to development, but data allow us to make these inputs focused and drive efficiency. However, unlike other assets such as capital, value of data does not diminish on usage, in fact derivate of data adds more value and can be repurposed.

"Data is the new Sun"

References

1. Altman, E., Esentato, M., & Sabato, G. (2020). Assessing the credit worthiness of Italian SMEs and mini-bond issuers. *Global Finance J.* 43, 100450.
2. Assad Ragui, Rana Hendy, Moundir Lassassi and Chaimaa Yassine (2014). Where Has All the Education Gone?
3. Analyzing Trends in Labor Force Participation in MENA. Paper prepared for the 22nd Annual Conference of the Economic Research Forum Cairo, Egypt
4. Banerjee, A., & Duflo, E. (2007). The Economic Lives of the Poor. Journal of Economic Perspectives. 21. 10.1257/jep.21.1.141.
5. Berger, A.N., Klapper, L.F., & Udell, G.F. (2001). The ability of banks to lend to informationally opaque small business. Journal of Banking & Finance 25(12): 2127–2167.
6. Birckland, T. (2001). An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making. New York, NY: ME Shape.

7. Chen, C. L. P., & Zhang, C. Y. (2014). Data-intensive applications, challenges, techniques and technologies: A survey on Big Data. Information Sciences, 275 (10 August 2014): 314-347.

8. Chen, M., Mao, S., & Liu, Yunhao (2014). Big Data: A Survey. Mobile Networks and Applications, 19 (2): 171-209.

9. Clarke, A., & Margetts, H. (2014). Governments and citizens getting to know each other? Open, closed, and big data in public management reform. Policy & Internet 6(4): 393–417.

10. Cook, T. (2014). "Big data" in research on social policy. Journal of Policy Analysis and Management 33(2): 544–547.

11. Desouza, K., & Bhagwatwar, A. (2012). Leveraging technologies in public agencies: The case of the U.S. Census Bureau and the 2010 Census. Public Administration Review 72(4).

12. Desouza, K. & Jacob, B. (2017). Big data in the public sector: Lessons for practitioners and scholars. Administration & Society 49(7): 1043–1064.

13. Donner, J., & C.A. Tellez. (2008). Mobile banking and economic development: Linking adoption, impact, and use. Asian Journal of Communication 18 (4):318-332.

14. Duflo, E. (2012). "Women Empowerment and Economic Development." Journal of Economic Literature, 50 (4): 1051-79.

15. Dunleavy, P. (2016). "Big Data" and Policy Learning. In G. Stoker, & M. Evans (Eds.), Evidence-Based Policy Making in the Social Sciences: Methods that Matter (1 ed., pp. 143-168). (Evidence-Based Policy Making in the Social Sciences: Methods that Matter). Policy Press. https://doi.org/10.2307/j.ctt1t89d4k.15.

16. Gamage, P. (2016). New development: Leveraging 'big data' analytics in the public sector. Public Money & Management 36(5): 385–390.

17. Haque, A., & Zulfiqar, M. (2016). Women's Economic empowerment through Financial Literacy, Financial Attitude and Financial Wellbeing. International Journal of Business and Social Science, 7(3), pp. 78-88.

18. Höchtl, J., Parycek, P., & Schöllhammer, R. (2016). Big data in the policy cycle: Policy decision making in the digital era. Journal of Organizational Computing and Electronic Commerce 26(1–2): 147–169.

19. Huang, T., Lan, L., Fang, X., An, P., Min, J., & Wang, F. (2015). Promises and Challenges of Big Data Computing in Health Sciences. Special Issue on Computation, Business, and Health Science, 2 (1): 2-11.

20. IDC (2012). The Digital Universe in 2020: Big Data, Bigger Digital Shadows, and Biggest Growth in the Far East.

21. Janssen, M., & Kuk, G. (2016). The challenges and limits of big data algorithms in technocratic governance. Government Information Quarterly, 33(3): 371–377.

22. Jordan, S. R. (2014). Beneficence and the Expert Bureaucracy. Public Integrity, 16 (4): 375-394.

23. Kernaghan, K. (2014). Digital dilemmas: Values, ethics and information technology. Canadian Public Administration, 57 (2): 295-317.

24. Kitchin, R., & Lauriault, T. P. (2014). Small data in the era of big data. GeoJournal, 80 (4): 1-13.

25. Laney, D. (2001). 3D Data Management: Controlling Data Volume, Velocity and Variety. META Group Research Note, 6: 70.

26. Loftis, M. & Mortensen, P. (2018). Collaborating with the machines: A hybrid method for classifying policy documents. The Policy Studies Journal. DOI: 10.1111/psj.12245.

27. Maciejewski, M. (2017). To do more, better, faster and more cheaply: Using big data in public administration. International Review of Administrative Sciences 83(1): 120–135.

28. Mandal K C. (2013). Concept and Types of Women Empowerment. international Forum of Teaching and Studies Vol. 9 No. 2: 17-30

29. Manzoni, J. (2018). Civil service transformation speech. London. 24 January 2018. Available at: www.gov.uk/government/speeches/civil-service-transformation-speech (accessed 2 February 2022).

30. Mason, C., & Stark, M. (2004). What do investors look for in a business plan? A comparison of the investment criteria of bankers, venture capitalists and business angels. International Small Business Journal, 22(3), 227– 248. https://doi.org/10.1177/0266242604042377

31. Mergel, I. (2017). Building holistic evidence for social media impact. Public Administration Review 77(4): 489–495.

32. Nowlin, M. (2016). Modeling issue definitions using quantitative text analysis. The Policy Studies Journal 44(3): 309–331.

33. Pal, A., De, R., Herath, T., & Rao, H. R. (2019). A review of contextual factors affecting mobile payment adoption and use. Journal of Banking and Financial Technology, 3(1), 43–57.

34. Pal, A., De, R., Herath, T. (2020). The Role of Mobile Payment Technology in Sustainable and Human-Centric Development: Evidence from the Post-Demonetization Period in India. Information Systems Frontiers (2020) 22:607–631

35. Pencheva, I., Esteve, M., & Mikhaylov, S. (2020). Big Data and AI – A transformational shift for government: So, what next for research?. Public Policy and Administration 35(1) 24–44.

36. Sen, A. K. (1981). Poverty and Famines: An Essay on Entitlement and Deprivation. Oxford: Clarendon.

37. Sen, A. (2001). Development as Freedom (New Ed edition ed.). OUP Oxford, Oxford.

38. Siegler, M. G. (2010). 'Eric Schmidt: Every 2 Days We Create As Much Information As We Did Up To 2003.' TechCrunch. http://tcrn.ch/1h55bnj (Accessed 2 February 2022).

39. Smith, G., Noble, M., Antilla C., Gill, L., Zaida, A., Wright, G., Dibben C., & Barnes, H. (2004). The Value of Linked Administrative Records for Longitudinal Analysis. (London: Economic and Social Research Council). Report to the ESRC National Longitudinal Strategy Committee.

40. Stritch, J., Pedersen, M., & Taggart, G. (2017). The opportunities and limitations of using Mechanical Turk (MTURK) in public administration and management scholarship. International Public Management Journal 20(3): 489–511.

41. Taeihagh, A. (2017). Crowdsourcing: A new tool for policy-making? Policy Sciences 50(4): 629–647.

42. Van Caneghem, T., Van Campenhout, G. (2012). Quantity and quality of information and SME financial structure. Small Bus. Econ. 39, 341–358.

43. Wegrich, K., & Jann, W. (2006). Chapter 4: Theories of the policy cycle. In: Fischer F, Miller GJ and Sidney MJ (eds) Handbook of Public Policy Analysis. Theory, Politics, and Methods. Boca Raton: CRC Press, pp. 43–62.

44. White, M. (2012). Digital Workplaces Vision and Reality. Business Information Review, 29 (4): 205-214.

45. Williamson, A. (2014). Big data and the implications for government. Legal Information Management 14(4): 253–257.

46. World Bank. (2021). World Development Report 2021: Data for Better Lives. Washington, DC: World Bank.

ENABLING COHERENCE IN MONITORING BY BREAKING INFORMATIONAL SILOS

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Abstract

India has come a fair distance over the last 75 years in its efforts to improve quality of life of its citizens through growth and development. The evidence of impact created and lessons learnt could now be leveraged for enabling coherence to accelerate movement towards collective aspirations and national goals. Multi-sectoral collaboration can help unlock these synergies and solve "wicked problems" that cannot be achieved by isolated capabilities. One approach in achieving this is by inter-linking various data portals/dashboards used in tracking impact of Centre and States schemes. Another method can be where private sector contributes to these efforts by sharing data with the Government as well as provide solutions by utilizing anonymized administrative data and surveys available in public domain. India's ability to break information silos to meet these goals will pave the way to a new phase of equitable, efficient, effective and sustainable resource utilization and could be the key driver of Amrit Kaal.

1. Background

The end goal of any government program or scheme is to improve the quality of life of its citizens. Quality of life (QoL), even though very subjective, includes many domains of an individual's life like education, physical health, mental health, opportunities to work, housing, school, level of resources, among others[21]. Hence, to improve overall QoL, it is important to devise strategies to target these essential domains[22]. Government schemes (or programs) aiming to improve QoL or a particular aspect of it, tend to overlap in terms of their objectives and impact they expect to create as these may be spread across various departments or ministries requiring coordination and collaboration among all of them at different levels. The ideal approach may be for such agencies to work across portfolio boundaries, formally and informally, to achieve a shared goal and an integrated government response to particular issues to improve effectiveness and efficiency. However, the division of work among Ministries/Departments and the traditional ways of working makes this coordination and coherence difficult to achieve. Coherence for efficient allocation of resources to various projects and complementarity in efforts of various stakeholders, both public and private, is key to sustainable development.

The SDG 17 - Partnerships for the goals – emphasizes multi-sectoral collaboration as one of the approaches for achieving coherence. Multi-Sectoral Collaboration (MSC) means multiple stakeholders and sectors intentionally coming together and collaborating in a managed process to achieve shared outcomes and common goals[23]. For example, progress on Goal 14, involving sustainable use of the oceans, seas, and marine resources, will require integrated effort on a range of fronts, from reducing phosphates and agricultural runoff to improving sewerage and wastewater treatment to curtailing plastic waste in the

21 Jenkinson, Crispin. "Quality of life". Encyclopedia Britannica, 6 May. 2020

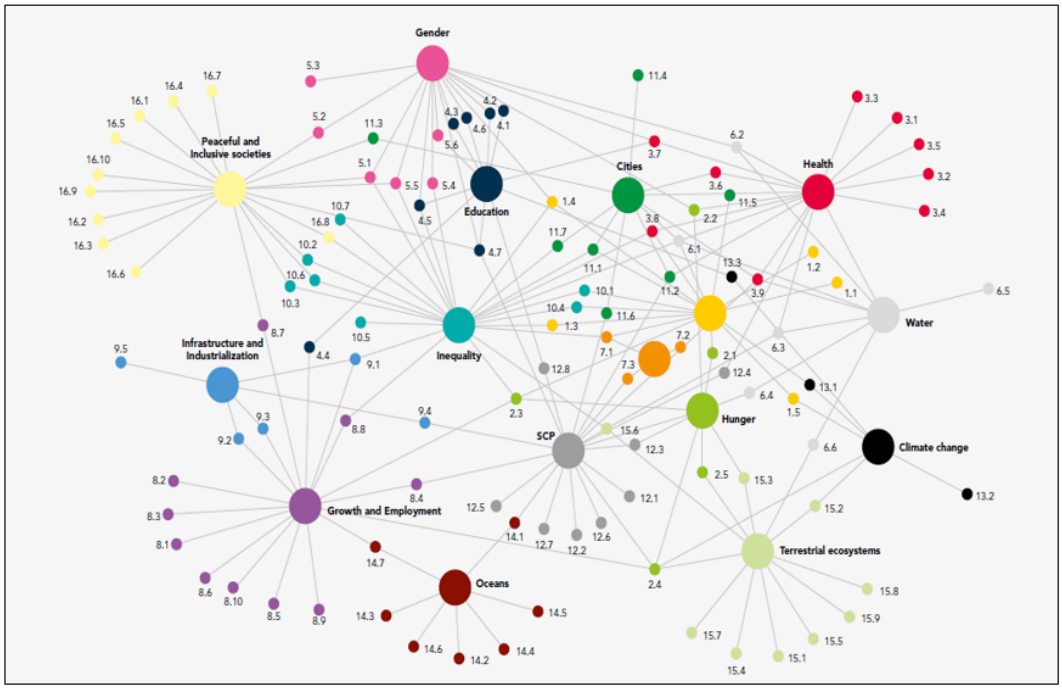
22 https://www.cdc.gov/hrqol/concept.htm

23 Hinton, R., Armstrong, C., Asri, E., Baesel, K., Barnett, S., Blauvelt, C., ... & Kuruvilla, S. (2021). Specific considerations for research on the effectiveness of multisectoral collaboration: methods and lessons from 12 country case studies. Globalization and health, 17(1), 1-11.

maritime environment, to the better management of fish stocks and increased investment in oceanographic research.

Figure 1 shows the network analysis of SDG goals for the achievement of SDG target 3.6 to halve the number of fatalities from road accidents involving coordination between the traffic police, road transport engineers, ambulance services and emergency care providers, as well as educators, automobile manufacturers, and drivers themselves. This figure provides a compelling case for establishing effective collaboration and coordination.

The relevance of MSC is also underlined by the recent addition of a criterion - coherence - to the Organization for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) list of evaluation criteria[24]. Internal coherence addresses the synergies and inter-linkages between various interventions carried out by the same institution/government, as well as the consistency of the intervention with the relevant international norms and standards to which that institution/government adheres. External coherence considers the consistency of the intervention with other actors' interventions in the same context. This includes complementarity, harmonization, coordination with others, and the extent to which the intervention is adding value while avoiding duplication of effort.



Source: *Network Analysis of SDG Goals (Source: World Bank Report, 2018)*

The need for breaking informational silos between ministries and departments has also been identified in the existing literature. The absence of effective coordination mechanisms can lead to suboptimal decisions made on the basis of inaccurate, biased, or incomplete information. It generates avoidable waste and duplication of effort among agencies. Poor coordination can create additional compliance burdens on citizens by forcing them to invest time, effort, and energy fulfilling similar requirements with different government

24 OECD library, accessed on 16th June 2021

agencies because of a lack of inter-agency information sharing. Additionally, it may lead to delays in the decision-making process, poor and ineffective service delivery, and sometimes results in failure of the program resulting in huge costs to the government and citizens

The coordination and complementarity between the Centre and the States, under the Indian federal system could be much more effective, efficient and sustainable if the focus on benefits for the citizen for a better quality of life could be directed with a clear, objective, reliable set of measures and indicators that can be utilized to monitor efforts of the local, state and central governments progressively in close to real time.

2. Coherence in Monitoring

Any project's lifecycle can be broadly categorized into 4 stages: Planning, Implementation and Monitoring, and Evaluation. Monitoring assesses the progress made against the outputs and outcomes identified to achieve the stated objectives of the project and is helpful in bringing up any bottlenecks or unintended consequences occurring when implementing the project along with identifying if the progress and development achieved are sustainable or not.

Studies have shown that a project, which was perceived to be successful but fails to translate into changes envisaged, continues to be scaled up because a sound monitoring system to assess the progress, was not in place. In case a robust monitoring system was present, it could have saved valuable resources[25]. On the other hand, Murlidharan et al (2017) showed that improved top-down administration monitoring may have a substantial impact on improving outcomes such as a reduction in unauthorized teachers' absence. Thus, having a sound monitoring mechanism in place, is crucial to ensure success of any project.

Some of the tools which is being used by Ministries/Departments to monitor key performance indicators (KPIs) for decision-making purposes are Management Information Systems (MIS) and dashboards. However, these MIS systems and dashboards often don't talk to each other and work in silos even though many of these KPIs overlap with each other. Chapter 1 of Volume 1 of India's Economic Survey of 2018-19 recognizes that data maintained by Government is dispersed across registries maintained by various Ministries and that a better experience can be delivered by bringing these datasets together. It highlights that doing so, will also help in reducing targeting error in welfare schemes using an example of an individual who is affluent enough to buy a car but is able to avail Below Poverty Line (BPL) welfare schemes, though unwarranted.

Considering the amount of data generated by the Government both at the Central and State levels, sharing this data efficiently across boundaries is one of the low-hanging fruits and can significantly improve governance. The background note on draft version of the India Data Accessibility and Use policy, released recently by Ministry of Electronics and Information Technology (MeitY) resonates with us.

25 https://www.nber.org/system/files/working_papers/w28129/w28129.pdf

> With increasing digitization and engagement, the volume of data is also increasing exponentially, providing opportunities for better governance, service delivery and innovation in sectors critical for societal transformation

Physical silos might be harder to break but virtual integration by breaking information silos is much more achievable, and the necessary first step.

3. Multi-sectoral Collaboration

Importance of breaking down silos using data and technology is well understood by Ministries and Departments in India, which has resulted into several multi-sectoral collaboration initiatives. India-WRIS, for example, hosts data and information on the country's surface and groundwater resources as well as on water quality. This 'Single Window' updates data in real time based on the information received by various stakeholders like States/ UTs and can be accessed by anyone in a standardized national GIS framework[26]. It allows users to search, access, visualize, understand and analyze comprehensive water data for assessment, monitoring, planning and development of water resources.

The 2030 SDG agenda sets the stage to accelerate adoption of modern approaches for private sector engagement and reevaluate the traditional public-private partnership. Indian government also identifies the importance of private players' technical expertise for effective implementation of new schemes and initiatives involving data. One such example is of Google Earth Outreach's Application Programming Interface (API) that provides nonprofits and the public sector with geospatial data and analytic tools for analysis as well as to help developers generate new tools and insights. This is used by organizations such as *Ashoka Trust for Research in Ecology and the Environment* to provide information related to forests to stakeholders including policymakers to protect tigers and elephants in forest reservations in India.

Source: *Sustainable Development Goals: Goal 17*

While a beginning has been made, there is an urgent need to enhance coherence in the life cycle of projects and interventions, especially at monitoring stage by unlocking synergies which will lead to improved service-delivery.

26 http://nhp.mowr.gov.in/Homenew/ComponentB.aspx

3.1 Using APIs to strengthen Intergovernmental Data Sharing

Strengthening intergovernmental data sharing is one of the foundational stones to bring internal coherence in monitoring. One of the mechanisms to achieve this is by improving the interoperability of MIS and dashboards by enabling Application Programming Interface (API) integration across such systems. API is any mechanism that allows a system or service to access data or functionality provided by another system or service API integration This will help in leveraging data collected, processed, and analyzed by various Ministries/ Departments resulting in a faster and more efficient decision-making process. A case in point is PM Gati Shakti – National Master Plan for Multi-Modal Connectivity, a digital platform that brings 16 Ministries together for integrated planning and coordinating infrastructure connectivity projects. The data exchange among all mode operators will be brought on the Unified Logistics Interface Platform (ULIP), designed for API and will be helpful in implementing and monitoring the project.

The "Policy on Open Application Programming Interfaces (APIs) for Government of India" brought out in 2015 by Ministry of Electronics and Information Technology (MeitY) encourages the formal use of Open APIs in Government Organizations to provide right information to the right user at the right time. This policy defines open API as the API which has been exposed to enable other systems to interact with that system and wherever possible, may be free of charge and without restrictions for reuse and modifications. To assist Ministries/Departments in developing, implementing and consuming APIs, MeitY released guidelines in 2020. Further, to fillip efforts in implementing the policy, a platform which acts as an API marketplace as well as a directory was initiated in 2020. *API Setu* aims to bring all APIs under one roof for various stakeholders including government departments. The platform currently provides access to about 973 APIs for various services such as Driving License, Vehicle Registration, PAN etc.

Moreover, these API linkages can significantly bring down the number of times a citizen has to login into different portals when engaging with government services. One such example is UMANG (Unified Mobile Application for New-age Governance), which is a single platform for all Indian citizens to access pan India e-gov services ranging from Central to Local Government bodies. As of January 2022, 1,417 government services are available on the app ranging from Transport to Public Grievances to Education. Additionally, it provides seamless integration with customer-centric services such as *Aadhaar* and *DigiLocker*. Such initiatives reduce duplication of data and wastage of efforts and resources.

Draft of India Data Accessibility and Use Policy also talks about the integration of all data portals/dashboards of Ministries/Departments through APIs.

3.2 Data collaboratives: Collaboration of Government and Private Sector to exchange data

Data Collaboratives or data-driven partnerships are defined as cross-sector (and public/ private) collaboration initiatives aimed at data collection, sharing or processing for

the purpose of addressing a social change[27]. Many studies reports, while traditionally governments have used Public Private Partnerships (PPP) to build hard and tangible infrastructure such as roads, institutions, they are now increasingly moving towards PPPs for soft issues such as education. Klievink and Bram (2018) notes that bringing together different goals and technical know-how of various partners helps in addressing some of the 'wicked' problems such as climate change. For example, *The Data for Children Collaborative* is a joint partnership between UNICEF, the Scottish Government and the University of Edinburgh's Data Driven Innovation Programme. The initiative provides a platform to draw on the strengths of each partner to solve problems using data and aims to enable improvement in outcomes for every child.

Often, these problems are too complex to be solved by one societal actor and their magnitude is too big to estimate cause-effect relations. This method of external coherence not only helps the public bodies to use data from private sector for better policy interventions but also helps private players to foster innovation, entrepreneurship and ensure future progress of an economy. For example, government can benefit from data from commercial satellites to develop better climate prediction models and on the other hand, private sector players can benefit from healthcare-related data received from the government which helps them strategize their research and development in a profitable direction.

These data collaboratives have been useful in enhancing monitoring systems in times of crisis too. When Nepal was hit by a magnitude 7.8 earthquake in 2015 affecting approximately 8 million people, changes in mobility patterns identified by SIM card movements were used to identify areas where food and other essentials were needed. SIM card movement data was provided by mobile network providers to a non-profit organization for analysis. It undertook a comprehensive analysis of post-earthquake population movement trends and shared the same with the humanitarian community, such as UN's World Food Programme, in less than two weeks after the earthquake which further helped in targeting the people who were affected the most[28].

Another example demonstrating how data collaborative can be helpful comes from Indonesia. Global Fishing Watch (GFW), a non-profit organization founded in 2015 through collaboration between 3 partners: *Oceana*, an international ocean conservation organization; *SkyTruth*, a technology firm that uses satellite imagery and data; and *Google*, with an objective of advancing ocean governance by creating and publicly sharing map visualizations, data and analysis tools to enable scientific research and drive transformation. They partnered with Indonesian government to help them repress illegal fishing activity. This collaboration resulted into insights and actions leading to decrease in foreign fishing in its waters by 90% and total fishing by 25%[29].

27 Ruijer, E. (2021). Designing and implementing data collaboratives: A governance perspective. Government Information Quarterly, 38(4), 101612.

28 https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/flowminder_nepal_population_estimates_as_of_01-may-2015.pdf.

29 https://sustainability.google/progress/projects/fishing-watch-impact/

Considering the shift towards creating a 'data-driven economy', the policymakers in India also need to explore and experiment with these new methods of partnerships in the form of data collaboratives for better coherence in monitoring. However, government has started taking steps in the right direction by launching India Urban Data Exchange (IUDX) platform.

3.2.1 IUDX: Unleashing the Power of Data for Public Good

Ministry of Housing and Urban Affairs (MoHUA) launched IUDX platform, an open-source software platform that serves as a seamless interface for data providers and data users, including ULBs, to share, request, and access datasets related to cities, urban governance, and urban service delivery. It is developed in partnership between the Smart Cities Mission and the Indian Institute of Science (IISc), Bengaluru. It can be a helpful asset for effective monitoring as it ensures data aggregation and standardization by collecting data from different silos and presenting them in a single compatible form. It also provides a standardized model by allowing data generated in different forms to be translated into a common format that can be understood easily. Effective utilization of the IUDX platform will be beneficial for improving quality of life in urban cities through the power of new data-driven services. Additionally, the public and private sector players can also leverage this ecosystem to create innovative solutions from IUDX-obtained data.

Box 1: Use cases of IUDX: Pune Smart City – Improving City Safety and Night Travel

Pune has created a phone-based app, where people will be able to plan trips while taking safety considerations into account and avoiding unsafe areas/streets. Citizens, public transport, and law enforcement agencies are the intended customers of this application, where the safety index for the streets/places will be identified based on a variety of road safety parameters. For this the datasets will be collected in the form of location wise reported crime data, surveillance camera feeds, street light locations/ status, number of people on the street, and crowdsourced 'feeling' data. Some of the features of the project are:

- Safety index computed using an algorithm based on various data sources such as street light status, crowds, gender diversity, etc
- Incorporation of Safety Index into IUDX for use in navigation and other services
- Real time updates of safety index based on IUDX data
- Use of analytics on IUDX data to derive safety parameters
- Integration with navigational apps or tourist guides

Source: *India Urban Data Exchange (IUDX) Booklet*

4. Way forward

When we look at the monitoring systems and frameworks of the Centre and states, prima facie it can be said that, substantial efforts and resources are being put into it at various levels. It is the quality, effectiveness, relevance, coherence and timeliness of these efforts that could be significantly improved upon for sustainable results and quick course corrections as per needs.

Over the past few years, India has transitioned to become a data-driven economy and realized the potential of data as a limitless resource that can fuel innovation and growth. We have seen valuable use-cases of data being able to support effective last mile delivery but it is also important to understand that these initiatives and interventions cannot take place in silos. There is a need to adopt multi-sectoral collaboration to break down the existing barriers using data and technology.

As highlighted by UN e-Governance Survey, key blocks to achieve coherence are the Whole-of-Government approach and policy integration which will help transgress sectoral barriers. In this context, a working group on National Enterprise Architecture by the Ministry of Electronics and IT developed an India Enterprise Architecture (IndEA) framework. The framework envisions to treat Government as One Government, wherein everything is functionally inter-related and can facilitate a boundary-less information flow for delivery of services efficiently. Adoption of this framework can lead to Whole-of-Government Architecture for India, Ministries, and States.

Multi-sectoral collaboration through APIs adoption will be essential to strengthen Intergovernmental data sharing going forward. India has already taken a step towards this by issuing "Policy on Open Application Programming Interfaces (APIs)". Benefits of this can only be accrued through timely adoption of this policy and its guidelines by concerned stakeholders. Government's role here is to raise awareness and build capacities to assimilate the significance of such internal coherence in monitoring.

In addition, to support the Open Data initiative of the government under the provisions of the National Data Sharing and Accessibility Policy (NDSAP), a platform was developed - Open Government Data (OGD) - to be used by Ministries/Departments and their organizations to publish datasets, documents, services, tools and applications collected by them for public use. It intends to increase transparency in the functioning of Government and open avenues for many more innovative uses of Government Data to give different perspectives. Enforcing guidelines of NDSAP and developing mechanisms to ensure timely update of data will strengthen the ecosystem for open data sharing in India and will reduce duplication of data and wastage of resources for monitoring purposes. Opening data to citizens and private sector, through the platform, will help in unlocking untapped potential to collect and share data for efficient service delivery.

Indian policymakers can also benefit by reviewing guidelines and recommendations released by international development organizations. For example, OECD has released Recommendation on Enhancing Access to and Sharing of Data (EASD) which is the first internationally agreed-upon set of principles and policy guidance on how governments can maximize the cross-sectoral benefits of all types of data – personal, non-personal, open, proprietary, public and private – while protecting the rights of individuals and organizations. The Recommendation intends to help governments develop coherent data governance policies and frameworks to unlock the potential benefits of data across and within sectors, countries, organizations, and communities. In similar lines, Draft of India Data Accessibility and Use Policy aims to enhance access, Quality and use of data in line with the current and emerging technology needs and recognizes that Increased sharing of data amongst public and private sectors optimizes digital welfare delivery and increases administrative efficiency, enabling citizen-centric services.

Overall, there is a lack of a coherent, integrated cascade despite the fact that each layer does make efforts at monitoring and measuring progress in its own way. There is a strong case for turning this around to give the country common data sources to have a meaningful conversation that leads to coherent efforts from all stakeholders to accelerate the movement towards its collective aspirations for its people. As Economic Survey 2018-19 highlights, 'data of the people, by the people, for the people must therefore become the mantra for the government'. How well the partners in development and growth are able to do it would be a key driver of India's Amrit Kaal becoming a reality in the period ahead.

References

1. Deploying the whole of government: How to structure successful multi-agency international programs. Accessed at https://www2.deloitte.com/content/dam/Deloitte/us/Documents/public-sector/us-public-sector-deploying-the-whole.pdf on 28th February, 2022.
2. De Brí, F., Commissioners, I. R., & Bannister, F. (2010, June). Whole-of-government: Beyond Silos and Toward 'Wicked Problems'. In Proceedings of the 10th European Conference on E-Government: National Centre for Taxation Studies, University of Limerick, Ireland (pp. 17-18).
3. Scott, I., & Gong, T. (2021). Coordinating government silos: challenges and opportunities. Global Public Policy and Governance, 1(1), 20-38.
4. United Nations E-Government Survey, Chapter-3, Taking a whole-of-government approach (2012). Accessed at https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2012-Survey/Chapter-3-Taking-a-whole-of-government-approach.pdf on 28th February, 2022.
5. World Bank Group. (2018). Improving Public Sector Performance: Through Innovation and Inter-Agency Coordination. World Bank.
6. Jenkinson, Crispin. "quality of life". Encyclopedia Britannica, 6 May. 2020, https://www.britannica.com/topic/quality-of-life. Accessed 28th February, 2022.
7. India Enterpise Architecture (IndEA). (n.d.). Ministry of Electronics & Information Technology. Retrieved 28th February, 2022, from https://www.meity.gov.in/india-enterpise-architecture-indea
8. Economic Survey 2018-19, Chapter 4, Volume 1, July 2019, https://www.indiabudget.gov.in/budget2019-20/economicsurvey/doc/echapter.pdf.
9. Data governance: Enhancing access to and sharing of data. (n.d.). Organisation for Economic Co-Operation and Development. Retrieved February 28, 2022, from https://www.oecd.org/digital/enhanced-data-access.htm
10. Transparency unleashed: How Global Fishing Watch is transforming fishery management. (n.d.). Google Sustainability. Retrieved February 28, 2022, from https://sustainability.google/progress/projects/fishing-watch-impact/
11. Ruijer, E. (2021). Designing and implementing data collaboratives: A governance perspective. Government Information Quarterly, 38(4), 101612.
12. Klievink, B., Voort, V. D., & Veeneman, A.. (n.d.). Creating Value through Data, 397.
13. Muralidharan, K., Das, J., Holla, A., & Mohpal, A. (2017). The fiscal cost of weak governance: Evidence from teacher absence in India. Journal of public economics, 145, 116-135.

14. Policy on Open Application Programming Interfaces (APIs) for Government of India, Ministry of Electronics & Information Technology. Retrieved 28th February, 2022, from https://www.meity.gov.in/writereaddata/files/Policy%20for%20API%20for%20GoI.pdf

15. Implementation guidelines for Open API policy for e-Governance, Ministry of Electronics & Information Technology. Retrieved 28th February, 2022, from http://egovstandards.gov.in/sites/default/files/Implementation%20Guidelines%20for%20Open%20API%20Policy%20for%20e-Governance%20%20%28National%20Data%20Highway%29%20V1.0_0.pdf

16. Draft Policy on India Data Accessibility and Use Policy, Ministry of Electronics & Information Technology. Retrieved 28th February, 2022, from https://www.meity.gov.in/writereaddata/files/Draft%20India%20Data%20Accessibility%20and%20Use%20Policy_0.pdf

17. Hinton, R., Armstrong, C., Asri, E., Baesel, K., Barnett, S., Blauvelt, C., ... & Kuruvilla, S. (2021). Specific considerations for research on the effectiveness of multisectoral collaboration: methods and lessons from 12 country case studies. Globalization and health, 17(1), 1-11.

18. Health-Related Quality of Life. (n.d.). Centers for Disease Control and Prevention. Retrieved February 28, 2022, from https://www.cdc.gov/hrqol/index.htm.

IMPROVING STATES' CAPACITIES FOR RESPONSIVE SOCIAL PROTECTION SYSTEMS

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Abstract

Social protection systems are designed by nations to help vulnerable and marginalized sections of the population overcome abject poverty and better cope with the risks associated with essential survival. Within social protection systems, nationally owned policies and programmes help people meet basic needs, mitigate the immediate impact of shocks and support a basic level of income for people living in poverty or prevent them from falling into poverty. Social protection can also have long term goals, such as cutting short generational life cycles of poverty, inclusive growth and sustainable development.

India fits uniquely into the paradigm of social protection, by offering a myriad of schemes for service delivery across the values of assistance, insurance and labour market programmes amounting to 2.4% of the GDP. The current coverage of social protection programmes in India is in need of substantive improvement given the informality of work, and the impact of the Covid-19 pandemic, which has likely pushed many into the fold of poverty. States in India are at different levels of institutional preparedness to embark on the challenge of designing and implementing effective systems for social protection. They also operate within different contexts, demographics, institutional challenges, fiscal space and systems of implementation. With less than a decade to go before the 2030 deadline of SDG 1.3 which provides for the implementation of nationally appropriate social protection systems and measures, including floors, to achieve substantial coverage of the poor, the social protection space in India is poised for a fundamental transformation from a set of fragmented schemes to an integrated system –State Governments will be key to this story.

Therefore, the relevance of building State Capacity for designing, implementing, and financing social protection is paramount. The following essay identifies key enablers of social protection for States which include a strong policy environment, institutions and human resources to implement policies and institutional mandates, essential fiscal space, strong and dynamic integrated data systems with forward and reverse linkages across departments to help identify beneficiaries, design outreach efforts, monitor and evaluate progress. In addition to the same, States' responsiveness to shocks such as disasters and pandemics, is essential to the sustainability of social protection systems.

Keywords: Social Protection, Welfare, Human Development, State Capacity

Table 1: Framework to Assess and Improve States' Capacities for Integrated and Responsive Social Protection Systems

S No	Theme	Component
1	Policy Environment	Presence of a Social protection (SP) policy framework to ensure there is coherence across programmes and levels of government
		Presence of Legal framework (s)
2	Institutions	Presence of institutions to deliver, monitor and assess progress on social protection (fragmented across Ministries/Departments or integrated)
3	Human Resources	Presence of dedicated cadre for implementation of SP or manpower for implementation of SP
		Presence of incentive mechanism to promote delivery of SP

S No	Theme	Component
4	Data Systems for M&E	Presence of IT systems/data governance architecture for SP
		Maturity of data systems (extent of digitisation of scheme data, periodicity and use by consumer departments for targeting)
5	Fiscal Space	Presence of fiscal space and resources budgeted towards SP
6	Responsiveness to Disasters	Shock responsiveness: Presence of a plan for immediate response/ coverage in the aftermath of a pandemic or disaster to the most vulnerable
7	Current Coverage of Government to Citizen (G2C) services	Percentage population covered by at least one social protection benefit
		Percentage of population that is Multidimensionally Poor (As per National Multidimensional poverty baseline report)
		Percentage of functional Common Service Centres in States
		Progress on Digital India Mission in States

1. Introduction

Social protection systems are designed by nations to help vulnerable and marginalized sections of the population overcome abject poverty and to better cope with the risks associated with essential survival. Within social protection systems, nationally owned policies and programmes help people meet basic needs, mitigate the immediate impact of shocks and support a basic level of income for people living in poverty or to prevent them from falling into poverty. Social protection can also have long term goals, such as cutting short generational life cycles of poverty, inclusive growth and sustainable development.

Social protection can be non-contributory for the poorest of the poor needing essential social assistance in the form of food distribution, free education, public works programmes such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), etc. It can also attend to sections of society which can afford to contribute to insurance in the field of pensions, health, crops etc and labour market programmes such as skill development trainings and others.

Integrated social protection systems aim to reduce multidimensional poverty and other vulnerabilities and are inextricably linked to Sustainable Development Goal 1, Ending poverty in all its forms everywhere and SDG 3.1 which provides for the implementation of nationally appropriate social protection systems and measures, including floors, to achieve substantial coverage of the poor. (United Nations, 2019)

Integrated social protection systems can be defined across four key domains:

a. Overall policy coherence and a shared vision along with financing mechanisms,

b. Programmatic coordination and harmonisation at all levels,

c. Integrated administrative tools such as registries, payment mechanisms, grievance redressal and;

d. Evidence to help chart policy design including poverty and vulnerability analysis and evaluations (UNICEF 2019)

Several countries in Europe and Central Asia are reported to be moving towards social protection systemic approaches that integrate spending on child and family-related cash benefits with social care and support services "through integration of databases, and the establishment of "single window" service centres, and integrated Case Management" (UNICEF 2016, page viii).

2. The Indian Context

India fits uniquely into the paradigm of social protection, by offering a myriad of schemes for service delivery across the values of assistance, insurance and labour market programmes amounting to 2.4% of the GDP. The current coverage of social protection programmes in India is in need of substantive improvement given the informality of work, wherein more than 90% of the workforce is engaged in the informal economy and the impact of the Covid-19 pandemic, which has pushed many back into the fold of poverty. (ILO, 2020)

States in India are at different levels of institutional preparedness to embark on the challenge of designing and implementing effective systems for social protection. They also operate within different contexts, demographics, institutional challenges, fiscal space and systems of implementation.

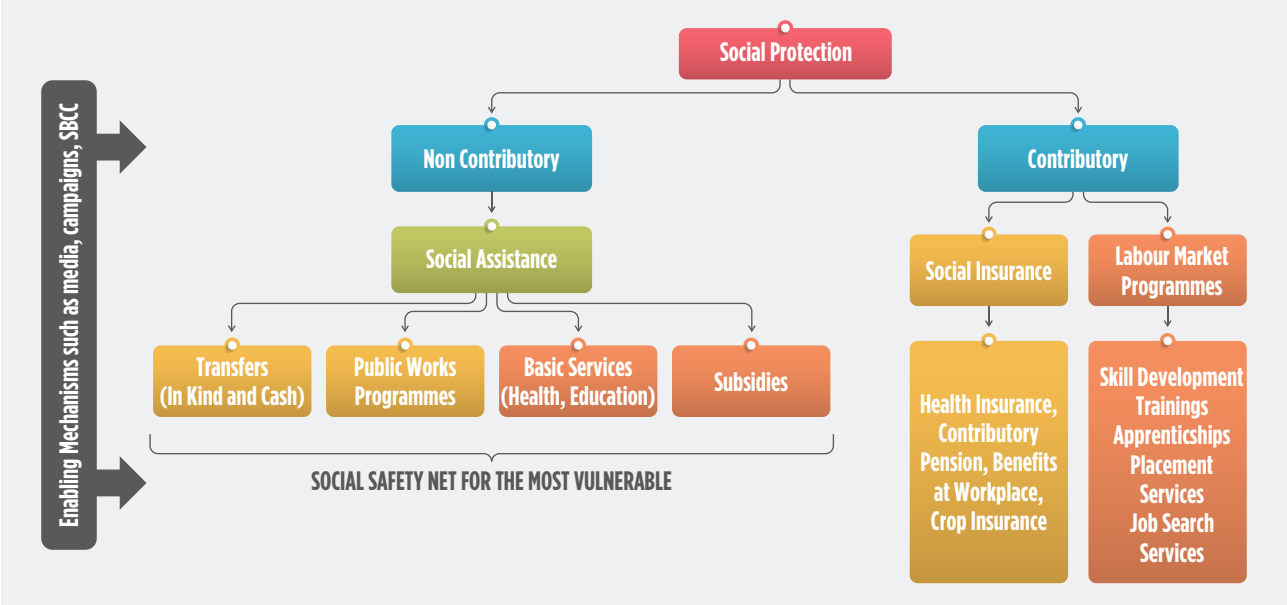

Figure 1: *Normative Framework for Social Protection in India. Source: Based on (GSRDC, 2020) Adapted to the Indian Context and Visualised by Author.*

For example, the greatest burden of Multidimensional Poverty as a proportion of the population is borne by Bihar at 51.9%, followed by Jharkhand at 42.2%, Uttar Pradesh at 37.8%, while states like Kerala have very low burdens at 0.7%, Sikkim at 3.8% and Tamil Nadu at 4.9% of the population. Expenditures by States on the social sector also vary significantly, with social sector expenditure as a proportion of State GDP the highest in North Eastern States of Manipur at 29.9%, Meghalaya at 22.8% and Arunachal Pradesh at 22.4%, and the lowest in Gujarat at 5%, Karnataka at 5.5% and Punjab at 5.9% in 2020-21. (Details in Figures 2 and 3)

Similarly, fiscal deficit as a proportion of the State GDP is an important marker of the availability of fiscal space for increasing the coverage of social protection programs. This varies significantly, with seven States having a deficit greater than 4% of State GDP. These include Manipur, Meghalaya, Nagaland, Himachal Pradesh, Andhra Pradesh, Madhya Pradesh and Goa in 2020-21.

Digital infrastructure to extend social protection systems to all beneficiaries through dynamic registries is also key to this exercise. However, capacities vary across states significantly. In some States, while more than 90% of Gram Panchayats have internet connections including Kerala, Haryana, Karnataka and Rajasthan, others have less than or equal to 10% of Gram Panchayats with internet connections (nine States/UTs). These include Manipur, Himachal Pradesh, Nagaland, Andhra Pradesh, Jammu and Kashmir, Mizoram, Sikkim, Arunachal Pradesh, Andaman and Nicobar Islands(BharatNet 2018). In an assessment of e-governance facilities provided by States, Haryana, Telangana, Rajasthan, Punjab ranked as the best states (out of 18) in providing online services in Social Welfare (including health and agriculture) in a National E-governance assessment of States in 2019. (DARPG, 2019)

Therefore, a one size fits all approach to India's social protection architecture would not succeed without understanding the contextual needs of states, and involving them as integral stakeholders in the journey of crafting safety nets. A necessary prerequisite to this involvement is an assessment of where States stand using a framework of essential enablers of social protection. This is outlined in the next section.

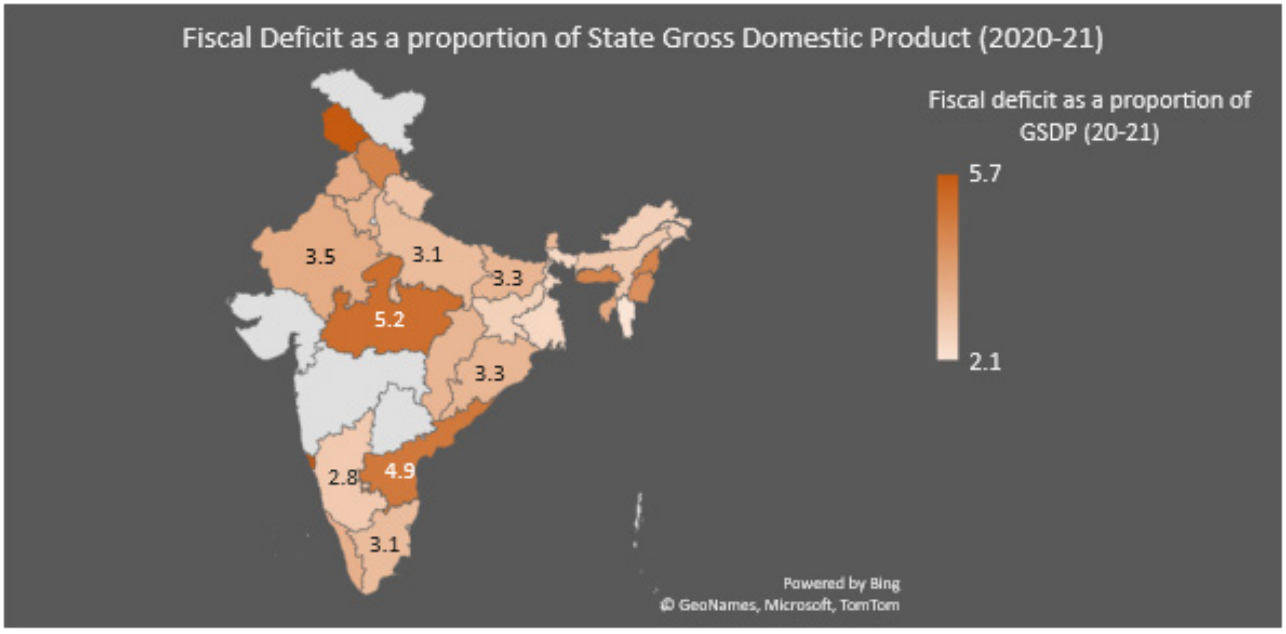

Figure 2: *Fiscal Deficit as a proportion of State Gross Domestic Product.*

Data *source: (RBI, 2021). Visualization by Author*

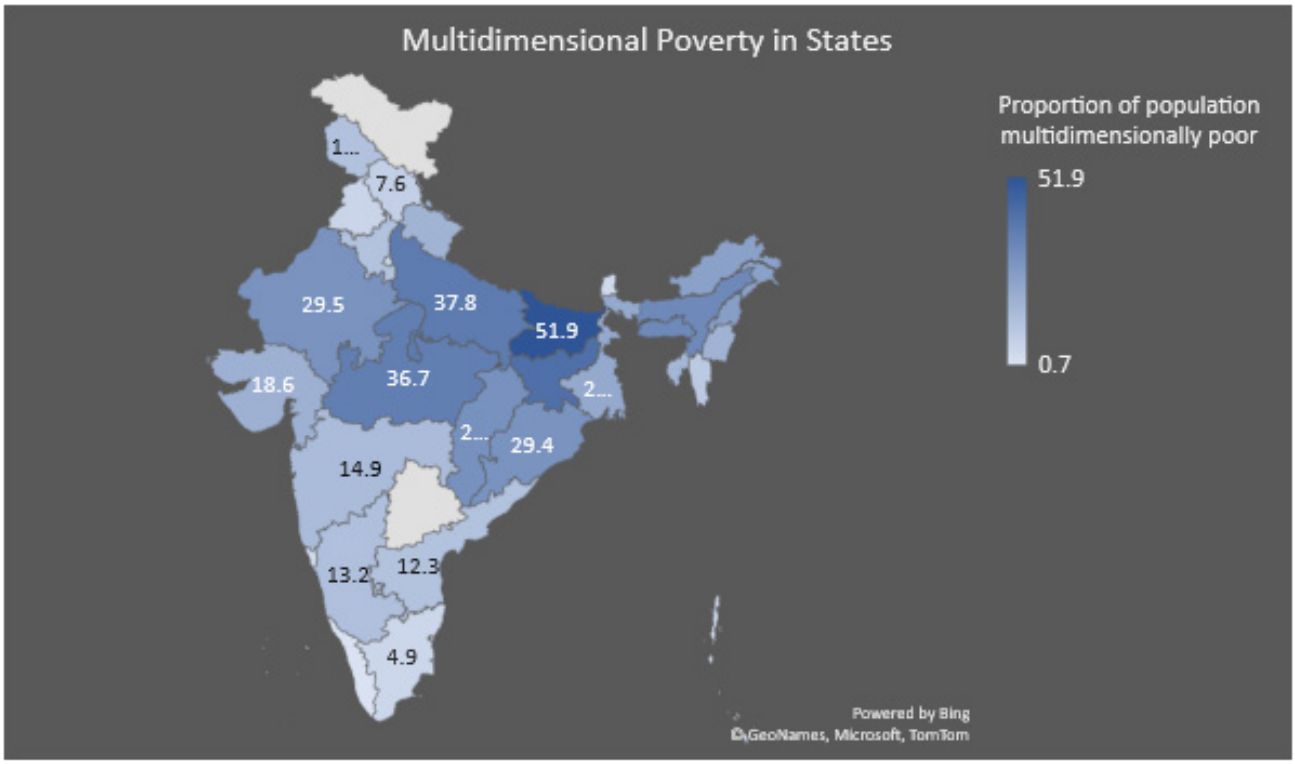

Figure 3: *Multidimensional Poverty in States.*

Data *Source: NITI Aayog MPI Baseline Report, NFHS-5. Visualisation by Author.*

Several gaps exist in social protection systems in different states. On the supply side, these include inefficient government machinery to reach out to intended beneficiaries, presence of parallel data systems and a lack of a unified repository of data leading to duplication of efforts by different departments to collect and manage data. On the demand side, lack of awareness among eligible citizens on availing benefits, lack of real time information to effectively administer benefits, especially in response to sudden shocks. On the basis of existing literature from around the world, and in developing country contexts in particular, there are few key enablers of social protection against which states capacities may be assessed with the intention of assessing the status quo and setting systems in place for improvement.

3. Enablers of Social Protection Systems

3.1 Policy and Legal Provisions

Policies with the objective and mandate of bringing the vulnerable into the fold of social protection are integral to the success of this ambitious agenda. The countries of Bulgaria, Kosovo, Kyrgyztan and Montenegro have a well-integrated policy environment for social protection as there is clarity in overall responsibility and leadership of social protection and there is often a lead ministry to spearhead social policy development and implementation accompanied by decentralisation in local/sub national contexts (UNICEF 2020).

The most successful and sustainable experiences of social protection systems are those which are grounded in legal instruments which, in a human rights approach, give the beneficiaries legal prerogative to invoke rights. A core aspect of a human rights approach

to social protection is a national legal framework, supported by a strategy and plan of action. For in order to enjoy the true success of a social protection system, the beneficiaries should be able to identify actors who bear responsibilities. Therefore, legal mechanisms set the stage for the states' accountability to deliver as per their mandate. (Nyst, 2012)

While several schemes have been in force for decades, governments across the world have not succeeded in reaching all which are most in need of protection. Subsuming scheme delivery within a legal mandate is a step in the right direction, but it is not enough to guarantee responsive delivery. In itself, the need for legal provisions should not be a showstopper to schemes in the domain of social protection, and may also come after piloting and implementing social protection initiatives in real time.

In India, an important policy tool orchestrated at the National Level to this effect is the Digital India Mission Wherein Common Service Kendras are identified as points of contact between the state and the beneficiary, wherein enrolment, dissemination, financial benefits converge across key schemes pertaining to identification, health, agriculture, education, financial inclusion, and others. States are the vehicles of implementation of this ambitious idea.

Other policy tools relevant to social protection in India include missions and schemes pertaining to Health, Education, Agriculture, Digital Literacy, Direct Benefit Transfers among others. As such, at this stage there is no overarching scheme or policy for an integrated social protection system at the National Level. Several States have successfully scaled up pilots to promote integrated social protection systems which can serve as a model for other states. For example, Haryana's Parivar Pehchan Patra programme identifies beneficiaries for potential inclusion in a plethora of essential schemes. It has been supplemented by the Haryana Parivar Pehchan Patra Act of 2021 to ensure the sustainability of the exercise, along with delineating the roles and responsibilities of stakeholders. Similarly, Rajasthan's Jan Aadhar programme for onboarding beneficiaries to multiple welfare schemes through a unique identity was accompanied with the Rajasthan Jan Aadhar Authority Act 2020.

3.2 Institutions & Human Resources

In the last five decades, institutions have been integral to the delivery, design and implementation of social safety nets. In the 20th Century, the prevalence of social protection systems was largely in a few European countries. Today, systems for social protection have significantly expanded (WB, 2018) and a majority of countries have social protection programmes covered by law. (ILO, 2020)

Institutions are linked to development, and define the mandate, capacity and objectives of social protection programmes. While designing any social protection system, it is integral to identify suitable institutional arrangements and the best ways in which to achieve operational efficiency. (ADB, 2003)

Since social protection has traditionally seen fragmented schemes across ministries and departments which have subsequently coalesced into national systems for integrated delivery, the development of institutional mechanisms to coordinate amongst all stakeholders would be an important next step. This integrated machinery of planning would include

government, especially in areas which are traditionally not served by the private sector, civil society and the private sector to achieve pro-poor sustainable growth.

By developing the basic software for growth, that of human resources, social protection can make the hardware of growth more productive via equitable outcomes, strengthened relationships and resilience. (OECD, 2019) Where policy commitment is complemented by human capacity development and augmentation to deliver programmes, it can accelerate the achievement of wellbeing and the standard of living of children and families.

There are four main elements at play in the creation of an effective interface administration of social protection, they include (UNICEF 2020)

a. Workforce arrangements which provide services, and clarity on their roles and responsibilities (avoiding gaps and duplications)
b. Existence and typology of integrated front office services
c. Existence and typology of back- office services
d. Social work coordinating service provision using case management

In India, institutional mechanisms and human resource provisions underlie each scheme pertaining to social assistance, insurance and labour market provision. However, in the absence of a national social protection policy or mission, there is significant potential for coordination among identified institutions and departments under a shared vision to maximise efficiency in delivery and cut duplications and costs. As is the case for legislation, several states have kickstarted institutional pathways to ensure coordination for social protection, some examples include Haryana's Parivar Pehchan Patra wherein a three-tier Data Governance structure has been established with a Steering Committee (chaired by Additional Chief Secretary to Government), Executive Committee (chaired by Additional Chief Secretary, DPAR eGovernance) at the State level and a Working Group at the level of each department.

Going forward, to assess readiness for social protection systems at the state level, it would be important to know if there is a clear mandate of institutions to deliver social protection, either at the sector or scheme level, or as a whole of government approach. Additionally, it would be important to assess the presence of institutions with defined approaches to M&E for social protection (whether fragmented or integrated)

3.3 Data Systems for M&E

Many countries have made provisions for various social benefits and services to meet the diverse needs of their populations across different sectors. The objective of implementing any social program is to deliver goods, services or financial aid to people deemed eligible. However, in reality, a lot of potential eligible beneficiaries get left out of the process due to old and fragmented data systems maintained by departments for different schemes.

Social Registries support the first phase of the delivery chain of outreach. They serve as information systems to support intake, registration, and determination of potential eligibility

for one or more social programs and subsequent outreach. They are therefore integral to avoid duplication, and maximize the outreach of schemes to improve the standard of living of citizens across the country, in a manner that is cognizant of the rights to privacy and consent of all. Several countries have adopted integrated social protection systems within their fold, with robust data architecture systems to optimize last mile delivery, including Kenya, Pakistan, Brazil, Chile, Estonia and others. Data systems which are able to capture beneficiary coverage at the scheme and department level in real time, and are amenable to updates through forward and backward linkages are essential to realistic estimates for planning and design of programmes.

In the Indian Context, understanding the readiness of States to implement this ambitious agenda would include understand if there are IT systems or a data governance architecture to enable Government to Citizen (G2C) delivery. Some States in India have already created integrated registries to identify beneficiaries for automatic enrolment, and to implement the principle of "ask only once" to reduce the burden of a beneficiary in accessing essential scheme benefits. These include experiences from Karnataka's Kutumba programme, Haryana's Parivar Pehchan Patra, Rajasthan's Jan Aadhar programme and Madhya Pradesh's Samagra programme.

Table 2: Social Protection Systems across the world.

Sl. No	Country/Program	Data Source + Updation	Population Coverage	Interoperability with other databases	No. of programs
1	Chile Social Registry created in 1979, revamped in 2016	On demand (through municipalities and online) + administrative datasets	72%	High - Linked to civil registry, social insurance database, data from 43 state agencies and 345 municipalities	80
2	Turkey's Integrated Social Assistance System created in 2009 and finalized in 2015	On demand registration through municipalities, with home visits when needed, combined with data integration from existing administrative databases	45%	High- Linked to 22 public institutions though 111 websites	17
3	Pakistan National Socio-Economic Registry created in 2001	National Census Surveys	85%	Medium- Authentication with NADRA National ID Database	70

Sl. No	Country/Program	Data Source + Updation	Population Coverage	Interoperability with other databases	No. of programs
4	Brazil Cadastro Unico created in 2001	On demand (through municipalities with home visits) + occasional census surveys. Data is updated every 2 years	43%	Low- Limited data sharing and cross checks	30 (within bolsa familia)
5	Philippines Listahanan Registry created in 2008	National Census Surveys in 2007,2009,2015 - piloting on demand	60%	Low - not yet interoperable with other systems	60
6	Kenya Single Registry created in 2016	Data collection approach varies by program, linked to Census. Data is updated at program level and overall.	8%	Medium - Authentication with IPRS population registry	5 cash transfer programs

Source: *(Government of Australia , 2017)*

3.4 Fiscal Space

Fiscal space is generally the 'room in a government's budget that allows it to earmark resources for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy' (Heller, 2005) and "the financing that is available to government as a result of concrete policy actions for enhancing resource mobilization" (Roy, 2007) Today, at a time of fragile global recovery in the wake of the pandemic, the need to create fiscal space for social protection has never been greater. Even as no one country's experience will be the same as another's, a one size fits all approach to the creation of fiscal space cannot be applied to state governments.

Some states may have room to borrow more, while others may want to restructure their debt. The priorities will also change depending on demographic needs. For example, ageing states such as Karnataka and Kerala may want to create greater fiscal space for old-age pensions, while states with emerging populations of working age such as Uttar Pradesh may want to create greater space for labour market programmes.

In a study of 187 countries to assess how fiscal space may be created, it was observed that Costa Rica and Thailand had reallocated military expenditures for universal health, Indonesia and Ghana are using fuel subsidies to develop social protection programmes. Bolivia, Zambia and Mongolia are financing universal old age pensions and child benefits from taxes on mining and gas. High taxes on Tobacco have funded social protection programmes in Algeria, Mauritius and Panama. (ILO, UNWomen, World Bank, 2017)

The following recommendations applicable to even the poorest contexts emerged for the creation of fiscal space:

- Reallocating public expenditures
- Increasing tax revenues
- Expanding contributory revenues
- Lobbying for aid and transfers
- Eliminating illicit financial flows
- Using fiscal and foreign exchange reserves
- Managing debt: borrowing or restructuring existing debt
- Adopting a more accommodative macroeconomic framework

In addition to encouraging adequate tax collection, there is merit in systems in which individuals co-finance services, contributing individually or through community-based arrangements. This is the case for social insurance, micro and area-based schemes, social funds, and selected labor market and child protection programs. However, most programs, particularly those targeted to lower income groups, require a degree of public support. Financing from charitable or aid organizations is discontinuous and does not allow sustainable social protection programs. Such financing may help to fill the gaps on a temporary basis only. In social insurance programs, accumulated savings/contributions can be invested in financial markets. Diversification of income sources is desirable to spread risks and ensure the overall sustainability of the program (ADB, 2003).

3.5 Responsiveness to Disasters

Social protection is a core part of the efforts to mitigate the impact of COVID-19, facilitate speedy recovery and strengthen the resilience of poor and vulnerable people. Countries across the globe are already mobilising significant resources for social protection responses.

Preventing income insecurity and poverty are essential to survival within the mandate of a strong social protection system. However, in response to disasters or health emergencies, systems may be set in place to enable automatic disbursements in the form of cash or in-kind (food) assistance to ensure that the most vulnerable are able to survive. States should aim to increase their capacity to respond to shocks and also build long term resilience. (FAO, 2020)

4. Conclusion

In conclusion, the key enablers of social protection include a strong policy environment, accompanying institutions, human resources within institutions to implement policies and institutional mandates, essential fiscal space to implement policies, strong and dynamic integrated data systems with forward and reverse linkages across departments to help identify beneficiaries, design outreach efforts, monitor and evaluate progress and impact. In addition to the same - responsiveness to shocks such as disasters and pandemics, is

essential to the sustainability of social protection systems. Incorporating the learnings from social protection outreach during the Covid-19 pandemic.

Given the diversity of needs, capacities and implementation mechanisms across the States of India, it is necessary to enable state flexibility within a national vision or policy for coordination to enable the development of integrated social protection system to improve last mile delivery and the standard of living. States, based on where they stand with respect to the framework proposed will be at different levels of readiness to implement this ambitious agenda in order to do justice to the vision of Sustainable Development Goal 1, leaving no one behind.

Understanding different levels of readiness would serve as an essential first step to handholding, capacity building, and knowledge sharing to foster a spirit of cooperative and competitive federalism to craft India's social protection architecture. With less than a decade left to achieve substantial coverage of the poor within nationally appropriate social protection systems (Sustainable Development Goal 3.1), the time to act is now.

References

1. ADB. (2003). *Social Protection Framework https://www.adb.org/sites/default/files/institutional-document/32100/social-protection.pdf.*
2. DARPG. (2019). *National E Governance Service Delivery Assessment https://nesda.gov.in/publicsite/NeSDA_2019_Final_Report.pdf.*
3. FAO. (2020). *Developing Shock Responsive Social Protection Systems https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_383871.pdf.*
4. Government of Australia. (2017). *Data and Information Management for Social Protection https://www.dfat.gov.au/sites/default/files/integrating-data-information-management-social-protection-s1.pdf.*
5. GSRDC. (2020). *Social Protection Topic Guide https://gsdrc.org/topic-guides/social-protection/types-of-social-protection/.*
6. Heller. (2005). *Understanding Fiscal Space https://www.imf.org/external/pubs/ft/pdp/2005/pdp04.pdf.*
7. ILO. (2020). *World Social Protection Report https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_817572.pdf.*
8. ILO, UNWomen, World Bank. (2017). *Fiscal Space for Social Protection and SDGs https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_383871.pdf.*
9. Nations, U. (2015). *Sustainable Development Goals.* UN.
10. NITI. (2021). *National Multidimensional Poverty Index.* Retrieved from *https://www.niti.gov.in/sites/default/files/2021-11/National_MPI_India-11242021.pdf*

11. Nyst, S. a. (2012). *The Human Rights Approach to Social Protection https://www.ohchr.org/documents/issues/epoverty/humanrightsapproachtosocialprotection.pdf.*

12. OECD. (2019). *Implementing Social Protection Strategies https://www.oecd.org/dev/inclusivesocietiesanddevelopment/Lessons_learned_Implementing_social_protection_strategies.pdf.*

13. Organisation, I. L. (2020). *Covid 19 and the world of work https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_740877.pdf.*

14. RBI. (2021). *Statistics on States of India https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20States.*

15. Roy. (2007). *Fiscal Space for What? https://www.undp.org/content/dam/aplaws/publication/en/publications/poverty-reduction/poverty-website/fiscal-space-for-what/FiscalSpaceforWhat.pdf.*

16. UNICEF. (2016). *Promising practices in Social Protection for children in Europe and Central Asia.*

17. UNICEF. (2020). *Integrated Social Protection Systems: A review of different approaches in UNICEF Europe and Central Asia Region.* UNICEF.

18. WB. (2018). *State of Safety Nets.*

19. WB. (2021). *Economic Effects of COVID-19: Rapid surveys of rural households in India.* Retrieved from https://pubdocs.worldbank.org/en/645971613651626018/Economic-Effects-of-COVID19-Rapid-Rural-Surveys.pdf

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