



A Decade of Rural Transformation

Lessons Learnt from the Bihar Rural Livelihoods Project—**JEEViKA**



JEEViKA Bihar Rural Livelihoods Promotion Society



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FOREWORD



JEEViKA's journey of the last decade has coincided with the changing face of Bihar. From its advent as a small-scale project in just 18 blocks, JEEViKA has transformed into a statewide movement touching the lives of more than 8.2 million families. JEEViKA self-help groups have emerged as enabling platforms for better access to financial services including savings, credit and insurance. Rural women of Bihar have emerged as trusted clients of the banking systems, collectively leveraging more than \$550 million of formal credit to date. Improved access to credit and savings has unleashed their entrepreneurial energy, creating new jobs and enhancing incomes. The programme has changed the way thousands of small farmers do agriculture in Bihar by exposing them to better farming practices and helping them gain a bigger piece of the end price.

JEEViKA institutions have also proved to be effective platforms for improved delivery of public services and entitlements. This is reflected in the growing number of government programs where JEEViKA is considered

as a vital implementation partner. The list goes on with JEEViKA women involved in improving primary education in villages through participatory monitoring, providing quality-based pricing for milk producers, collectively purchasing food grains at lower prices for poorest households, affecting behavioural changes toward nutrition and sanitation through regular counselling and many more. Nearly 100,000 women from all parts of the state are flagbearers of the programme, performing diverse roles of facilitators, trainers and motivators.

JEEViKA continues to evolve and innovate while building on its implementation experience. This 'Learning Note Series' is a welcome step toward synthesizing many such experiences. We take it as an opportunity to reflect on this rewarding journey and share its challenges and lessons with the larger development community. I thank The World Bank for this initiative and for being highly supportive partners of the programme. I also invite practitioners, policy makers and innovators to come and work with JEEViKA and the Government of Bihar in its mission of creating a poverty free Bihar.

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One of the biggest contributions of JEEViKA has been the huge positive change in a woman's perceived role in her household and the society around her. Today, a JEEViKA SHG member is considered an equal economic participant in her household. She saves for herself and family

and also makes it possible for the household to access the much needed credit for consumption smoothening and income enhancement. These are only a few of the many significant changes JEEViKA has brought into the lives of more than 8.2 million rural women of Bihar. Initiated by the World Bank in 2006, the journey of JEEViKA has been concurrent to the emergence of rural women as a symbol of grassroots empowerment in Bihar. In addition to the transformation at the household level, higher level federations like Village Organizations (VOs) and Cluster Level Federations (CLFs) have emerged as significant actors in facilitating interaction between rural poor and public systems as well as the market. Hundreds of VOs are running PDS shops in their villages, resulting in better public service delivery. Large producer companies have emerged in multiple districts, focusing on a productive linkage between

village level producers and the market while establishing efficient supply chains. As heard from a SHG member in one of the interactions, "Initially we did not believe that we could achieve so much, now we do not believe we can only achieve this much." The transformation of rural women in Bihar has been a key inspiration to the design of the National Rural Livelihoods Mission, a multi-state project aimed at emulating success of projects like JEEViKA to a wider set of geographies grappling with the common challenge of rural poverty. The SHG members of JEEViKA have shown remarkable resilience in leading their families out of poverty and continue to work as one large collective, working toward the common goal of shared prosperity.

The state of Bihar provides an extremely diverse context which makes JEEViKA's success even more relevant for replication in similar scenarios across the world. This learning note series will help readers trace the path taken by these women and provide valuable insights for practitioners and policy makers alike.

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INTRODUCTION TO JEEVIKA LEARNING NOTE SERIES

The objective of this booklet is to document a decade of journey of the Bihar Rural Livelihoods Project (BRLP) from 2006 to 2016. The project was successfully completed and a follow-on project, Bihar Transformative Development Project (BTDP) commenced in 2016 to expand the BRLP model both vertically and horizontally by building on the immense successes and lessons of BRLP.

This booklet is a joint effort of the Bihar Rural Livelihoods Promotion Society (BRLPS) (locally known as JEEViKA) and the World Bank and aims to share the lessons learnt with development practitioners and colleagues around the world who have the same motivation and goals for rural poverty alleviation and transformation for shared prosperity.

The BRLP started a decade ago in a very challenging environment. At that time, the state's rural poverty ratio was 44.6 percent: the absolute number of people living in poverty was at 36 million out of the total 82 million living in Bihar. Rural Bihar was characterized by weak service delivery, complex political and social fluxes, limited inclusion of the poor into institutions, few economic opportunities, and a frail development infrastructure. Bihar's poverty was concentrated among landless and nearly landless rural households. These two economically vulnerable groups constituted 70 percent of Bihar's rural households. Moreover, an estimated 2.3 million people were impoverished due to high-cost debt from food, health and educational expenses, which together, accounted for 25 to 30 percent of household consumption expenditure. A vast section of the poor had to depend on high-cost credit from informal moneylenders. Poor households were unable to invest in self-employment opportunities; both because of limited access to credit and limited asset and capital formation.

Under these challenging circumstances, the BRLP started a decade ago in six high priority districts, Gaya, Khagaria, Madhubani, Muzaffarpur, Nalanda, and Purina with an aim to provide rural households with innovative, scalable and sustainable models for improved livelihood opportunities. The project mobilized women, from the poorest households, into community institutions, i.e., self-help groups. Through these institutions, rural households could access low-cost credit, leverage services from the formal financial system, and gain information and training on improved livelihoods in the farm and non-farm sectors. The project reasoned that with greater social capital—gained from joining self-help groups—the poor would have a greater say in the quality of services they received. In 2013, JEEViKA started implementation of National Rural Livelihoods Project (NRLP) under the Government of India's mission.

With BRLP and NRLP, JEEViKA has thus far mobilised 8.2 million rural women. The women groups have collectively saved \$65.6 million and leveraged more than \$550 million of formal credit from banks. More than 600,000 small farmers, dairy and poultry producers and entrepreneurs are accessing finance, inputs and services delivered through the community institutions leading to enhanced incomes. The project achievements are further detailed in the note on ICRR findings (Learning Note No. 1).

With the first phase of the project complete, the second phase was launched in July 2016 with World Bank support. The Bihar Transformative Development Project (BTDP), a USD 415 million investment, promotes a similar model of women self-help groups across Bihar. The new project works with 7 million new rural

households to transform and revitalize Bihar's rural areas in five years.

Our motivation for this first series of JEEViKA learning notes is to share the learning and findings from a decade of implementation of the BRLP. Both the JEEViKA and the World Bank team consider that learning from field experiences, successes and failures are very important to feed into the ongoing and future implementation. The booklet will showcase the scale of rural transformation in Bihar and will also focus on implementation approach, challenges, principles for success, lessons learnt and recommendations for similar projects.

The booklet comprises the following ten thematic learning notes.

Note 1. Main Findings of Implementation Completion Review Report—Lessons from a Decade of Implementation of BRLP

Note 2. Addressing Social Exclusion to Improve Livelihoods of Rural Poor in Bihar—Key Social Inclusion Strategies and Outcomes in Bihar Rural Livelihoods Project

Note 3. Gender Equity and Women's Empowerment—Outcomes, Strategies and Lessons from Bihar Rural Livelihoods Project

Note 4. Making Poor Bankable: The JEEViKA Experience of Financial Inclusion

Note 5. Enhancing Agricultural Livelihoods through Community Institutions

Note 6. Uplifting the Livelihoods of Bihar's Vulnerable and Landless through Community Backyard Poultry Enterprises

Note 7. Delivering Value for Small Farmers: Farmer Producer Organizations in JEEViKA

Note 8. Improving Nutrition through Livelihoods

Note 9. Building High-Caliber Human Resources for Large-Scale Poverty Reduction Projects: Lessons from the Bihar Rural Livelihoods Project

Note 10. Management Information System as Decision Support System

Note 11. A Way Forward—Lessons on Moving Forward from the Bihar Rural Livelihoods Project to the Bihar Transformative Development Project

This is the first series of key themes, and we intend to continue to generate and share lessons and knowledge. We hope that you will enjoy reading all the notes, and look forward to your discussion, feedback and comments.

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MAIN FINDINGS OF IMPLEMENTATION COMPLETION REVIEW REPORT

LESSONS FROM A DECADE OF IMPLEMENTATION OF BRLP

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Summary

In October 2016, after a decade of work in rural Bihar—India's third most populous state and one of its poorest—the Bihar Rural Livelihoods Project came to a close. The project began in 2006 with World Bank support to the Government of Bihar. The project was implemented in 102 blocks in six high-poverty districts.

In April 2017, the World Bank published the project's Implementation Completion Report (ICRR),² detailing its impact and end-line survey results, performance and lessons learnt. The project successfully achieved its objectives of social and economic empowerment, and contributed to wider poverty reduction systems.

On its first objective, the social empowerment of poor rural households, the project was highly inclusive and worked with the poorest of households, helping them form community-managed self-help groups and their federations.

On its second objective, the economic empowerment of rural households, the project's self-help groups provided an important platform for financial inclusion. Through the project, self-help groups saved nearly USD 22.5 million and were able to leverage USD 103 million in bank credit. The project's end-line survey showed that 65% of surveyed households had an income greater than 30% of that at baseline.

On its third objective, to contribute to poverty reduction systems within the state and nationally, the project has had a system-wide impact, providing models and mechanisms for scaling up. The project has shown that a community platform managed and led by rural women can succeed in one of India's poorest states, in a context of weak service delivery and fragile government capacity.

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² <http://documents.worldbank.org/curated/en/606701493659325326/India-Bihar-Rural-Livelihoods-Project>

Introduction: Bihar's Context

Bihar is India's third most populous state, with 8 percent of India's total population. It is predominantly rural, with nearly 80% of its population living in rural areas. Also, the majority of the Bihar's poor live in its rural areas. In 2006, when the Bihar Rural Livelihoods Project was jointly launched by the World Bank and the Bihar government, the state's rural poverty ratio was 44.6 percent: the absolute number of people living in poverty was at 36 million out of the total 82 million living in Bihar. Rural Bihar was characterised by weak service delivery, complex political and social dynamics, limited inclusion of the poor into institutions, few economic opportunities, and a frail development infrastructure.

The Bihar Rural Livelihoods Project began its work in this challenging context. At the project's start, Bihar's poverty was predominantly among landless and nearly landless rural households. These two economically vulnerable groups constituted 70 percent of Bihar's rural households. Moreover, an estimated 2.3 million people were impoverished due to high-cost debt from food, health and educational expenses, which together, accounted for 25 to 30 percent of household consumption expenditure. Bihar's poverty was characterised by regional and demographic differences. Northern Bihar had higher levels of poverty than Southern Bihar. Scheduled Caste Hindus and Muslims constituted 25 percent and 15 percent, respectively, of Bihar's poorest landless households. Within rural households, women's social and economic status was particularly harsh.

In 2005, Bihar had serious constraints in the financial services available to the poor. A vast section of the poor had to depend on high-cost credit from informal moneylenders. Poor households were unable to invest in production and self-employment opportunities, both because of limited access to credit and limited asset and capital formation, and often deep long-term indebtedness.

This context—the burden of high-cost debt, divisive caste issues, poor access to basic services, few livelihood opportunities and low social capacities and status, especially of women—constrained the mobilisation of poor households into self-help groups. Without such community institutions, the poor, even less the women, had

no social capital to leverage public services, financial access and better livelihood opportunities.

In 2006, the Bihar government requested the World Bank's assistance for the Bihar Rural Livelihoods Project. The project aimed to provide rural households with innovative, scalable and sustainable models for improved livelihood opportunities. The project was to achieve this objective by mobilising women from the poorest households, into community institutions, i.e., self-help groups. It built on the state's previous poverty alleviation projects, and on models in other Indian states. Through these institutions, rural households could access low-cost credit, leverage services from the formal financial system, and gain information and training on improved livelihoods in the farm and non-farm sectors. The project reasoned that with greater social capital—gained from women joining self-help groups—the poor would have a greater say in the quality of services they received. In turn, they would pressure local government to be more responsible for and accountable to their needs.

The Government of Bihar intended to halve its below-poverty-line population by 2015. To contribute to this objective, the Bihar Rural Livelihoods Project—colloquially known as JEEViKA—was designed and launched. A decade later, the project has gone on to inform many other poverty reduction projects in Bihar and in India. Today, it is an internationally recognised model for women's economic and social empowerment in a context of weak governance and social-and-political change.

The Project's Design

The design of the Bihar Rural Livelihoods Project was informed by its development objective. The project aimed to “enhance the social and economic empowerment of the rural poor in Bihar”: by bringing women from poor rural households into self-help groups; increasing the incomes of rural households; and reducing rural households' dependence on high-cost debt from informal sources.

The project specifically targeted women from poor rural households—each household was represented by one female member—and mobilised them into self-help groups. One self-help group had fifteen to twenty

female members. In one village, twenty to thirty self-help groups were formed. In turn, self-help groups were federated into representative organisations at the village and block levels. In addition to self-help groups, the project also mobilised women into producer organisations. These producer organisations formed around an economic activity—incense stick production or honey production—or a commodity—maize, for example. Community institutions—self-help groups and producer organisations—served as a platform for community investments, leveraging credit from the formal financial sector, and delivering technical assistance to the community at scale. Women would then be able to switch from high-cost debt, build their financial and other household assets and enhance their livelihood activities.

The project targeted women from poor rural households by assessing their existing social vulnerability and the spatial distribution of households. During the project's design, the project team carried out a poverty and social assessment to select target areas for the project. The assessment looked at poverty levels, social vulnerability, potential for improvement in livelihoods and social capital. Six high poverty districts were selected—Gaya, Khagaria, Madhubani, Muzaffarpur, Nalanda, and Purnia—based on concentration of poverty, high Scheduled Caste and Scheduled Tribe populations, adverse status of women (reflected by sex ratio and female literacy levels), and availability of basic infrastructure. The project began in 42 blocks in these six districts. By 2012, the project expanded by another 60 blocks, based on strong performance in the first phase. By 2016, the project was operating in 102 blocks in these six districts, where it ambitiously targeted the mobilisation of 1.5 million rural women into 150,000 self-help groups, in 10,000 village-level federations and 102 block-level federations.

Several design elements distinguished the Bihar Rural Livelihoods Projects:

The project's design drew on lessons and adapted design elements from other successful projects, particularly from poverty reduction projects in Andhra Pradesh. The project drew lessons on building strong local institutions and supporting financial inclusion and livelihood development relevant to poor rural women in Bihar. The lessons that informed the project included:

building a platform or network of self-help groups and federations that built community-managed financial assets, who could also create demand and pressure for improved last-mile services and access to entitlements; and supporting community members to intensify and expand their livelihoods. Of note, the project replicated the Community Resource Person model from Andhra Pradesh, a community peer-to-peer learning model. In the beginning community resource persons from Andhra Pradesh played an active part in the initial mobilisation and capacity building of women in Bihar. Through the Community Resource Person model, women members from self-help groups could rise to become trainers and service providers. The model allowed for a swift expansion of the project's core activities, and allowed rural women to travel to other villages as Community Resource Persons to build the capacity of new self-help groups. Such a swift expansion would have been impossible with government extension workers alone.

During the project's design, studies were undertaken to establish Bihar's local conditions. The project also tested out smaller pilot projects to determine approaches and models appropriate to Bihar's context. Of particular interest was to reach the greatest number of the poor in Bihar's villages. The project responded to this challenge in a number of ways: it engaged Community Resource Persons on a large and systematic scale, and developed producer groups and self-help groups simultaneously, rather than sequentially as was done in other projects. In doing so, the project accelerated its work on social mobilisation and economic empowerment.

Involving political decision makers in the project's design process was crucial. The World Bank ensured that Bihar's policy makers visited Andhra Pradesh, where a similar World Bank project was implemented, and talked to their counterparts there. It was impressed upon the Bihar government to select a strong CEO for the project. Consistent leadership was critical to manage a large and complex poverty reduction project in Bihar's low-capacity environment. Partnerships were built with Bihar's private sector and innovators to provide technical support to the Bihar Rural Livelihoods Projects. Innovations fora were held during the design stage, and while considering scaling up strategies. The Bihar Innovation Forum brought together civil society

organisations, NGOs, community entrepreneurs and the private sector as a platform to exchange innovations and explore partnerships with the project.

The project had a well-designed human resources, monitoring, evaluation and learning system at the level of community institutions and at the level of its various project management units (block, district and state). The human resources system (treated in more detail in Learning Note No. 9, Human Resources and YP policy) was characterised by both strong accountability mechanisms, as well as special attention to building up local technical specialist support. The monitoring, evaluation and learning system was important to track the project's implementation and to make decisions about how to redirect resources and correct course. The monitoring, evaluation and learning system consisted of: (i) input–output monitoring; (ii) independent/third-party evaluation of results/outcomes; and (iii) learning systems based on implementation feedback mechanisms. Throughout the project period, an external process-monitoring agency worked closely with the project team, together with a trained process-monitoring community cadre, to carry out implementation audits of various project activities and provide quarterly feedback on the quality of implementation. While developing, the M&E system sometimes faced challenges on the way; it evolved to provide information for improving performance by a project management which was results oriented; and valued highly evidence and use of data in its operations (see Learning Note No.10 on MIS system development).

Outcomes and Impact

To analyse the project's three main objectives of *social empowerment* and *economic empowerment* of Bihar's poor, and *contribution to poverty reduction systems*, the end of project evaluation carefully structured its analytical framework around its explicit and implicit indicators and targets. Social empowerment was defined as: (a) social inclusion of rural women from poor rural households into self-help groups; (b) development of self-managed community institutions; and (c) gender and other social empowerment, such as changing household roles and collective actions. Economic empowerment was defined as: (a) financial inclusion;

(b) increased income and improved livelihoods; and (c) reduced high-cost debt.

Based on this, in 2016 a stratified survey of 1,350 households was carried out, in addition to drawing on a range of data sources, such as the project's monitoring and information systems and thematic studies to assess the project's achievements. Where relevant, results from previous randomised control trials done on the project target and control households, were used to supplement the stratified end-line survey.

Social Empowerment

(A) Social inclusion of rural poor households

The social mobilization process was highly inclusive. Self-help group members were disproportionately from marginalised groups: nearly all households in the project areas from Other Backward Castes, Scheduled Castes, landless and marginal farming households joined the self-help groups. This was due to the targeting of poorer communities, and interventions favoring and attracting poorer groups to a greater degree. Overall, 1,836,505 rural households were mobilized into 154,626 self-help groups and 10,445 village organisations, considerably exceeding the scaled up targets. Of the total households, 549,875 belonged to Scheduled Castes and 18,844 belonged to Scheduled Tribes, which was a greater proportion than in the surrounding population. As the project progressed, communities themselves made considerable efforts to identify and include the 'left-out poor', vulnerable households, and migrants groups (See Learning Note No. 2, Social Inclusion).

(B) Development of self-managed community institutions

The project facilitated the development of sustainable and independent self-help groups (154,626 in total). The end-line assessment found that on average over 85–100 percent of older SHGs (established from 2007–12), and 54–75 percent of younger SHGs (established from 2013–15) became self-managed and self-reliant, assessed on a rigorous rating based on frequency of transactions, regular attendance, repayment rates and relationship with higher level federations. This was in a context where previously there had been very few SHGs that were composed of poor women.

Federations too showed strong signs of inclusiveness and self-management, important for continuing their work and strengthening self-help groups under them. Village organisations successfully provided financial services, linked to entitlements, with positive balance sheets, important for future sustainability. Similarly, 225 block-level federations supported their member organisations. In addition, the 62,400 Community Resource Persons managed by, and increasingly funded by fees from self-help groups, provided a range of front-line services to the members.

(C) Gender and social empowerment

Women's social inclusion and empowerment was a central focus of the project. It gave a considerable push forward for women's empowerment in Bihar (See Learning Note No. 2, Social Inclusion and No. 3, Gender Empowerment). At the household level, data from earlier controlled studies showed the project was successful on five fronts: (i) improving rural women's literacy; (ii) increasing women's mobility in the community and for livelihoods; (iii) fostering women's voice and agency; (iv) decreasing incidence of domestic violence; and (v) improving women's participation in public institutions and in local government. Access to credit through their self-help groups built women's confidence in engaging with their wider community. Self-help groups were facilitated to include diverse caste groups, reduce conflicts, and increase the strength of social networks. Self-help group leaders were specifically active in identifying marginalised poor. Gender and social issues like caste and exclusion were addressed in self-help groups, and through wider social action women themselves identified and addressed the building of access to entitlements (more following), and championing their rights. Social action, for example, included strong self-help groups' participation in the Bihar's state-wide policy of alcohol prohibition in 2016, largely based on their own negative experience of domestic costs and violence due to alcohol misuse.

Economic Empowerment

(A) Financial inclusion and increased bank linkage

Strong self-help groups provided a platform for financial inclusion, encouraging household savings of USD 22.5 million in community institutions. Further infusion of

catalytic capital, in the form of community investment funds and its subsequent rotation, helped build their capacity and track record, and resulted in active and sustained financial activity by self-help groups and their federations. Along with extensive dialogue between project teams and local banks, self-help groups could then generate successful bank linkages. This resulted in considerable bank credit for households and for livelihood activities. The project team worked closely with the State Level Bankers' Committee to enable a number of policies favourable to self-help groups to be introduced in Bihar. As a result of this capacity built and policy advocacy, the overall bank linkage grew to USD 103 million by mid-2016 in the project areas, with much greater rates of increase than in other parts of the state.

(B) Increased income and improved livelihoods

Based on the analysis of the 2016 end-line survey, 65.1 percent of surveyed households with access to community investment funds had a final income greater than 30 percent of that at baseline. The average price-adjusted income increased from INR 35,968 per year to INR 46,758 per year. These results were based on a before and after comparison of households that became project beneficiaries, but also on evidence of incomes of comparable households without intervention support at end of project, which were closer to the 'before' situation. The income increases of households with land were somewhat greater than for the landless, which could be expected as such households can make faster productivity gains without the burden of high-cost debt. Nevertheless, in the project areas, considerable increase in land leasing and sharecropping by the poor were observed.

The project contributed to substantial income changes in household and group-level livelihoods through various interventions. Findings from the project studies confirmed significant profits and income for 400,000 households from productive and value addition activities. These included backyard poultry (almost 60,000 households), dairy interventions (partly through over 400 dairy cooperatives), productivity enhancement interventions (especially sustainable rice and wheat intensification (SRI/SWI) with over 60% increase in productivity for over 200,000 small farmers), and better prices through marketing by producer

groups, including through access to national digital maize trading platforms.

The project contributed to new microenterprises. A number of livelihood activities—backyard poultry, incense stick manufacturing—successfully targeted the landless (see Learning Note No. 6, Poultry for landless farmers). Moreover, the project facilitated jobs training for over 29,000 rural youth, a majority of whom had been retained with salaries or firm employment, with their salaries often doubling.

(C) Reduced high cost debt and improved well-being

Easy access to well managed self-help groups, credit and bank linkages helped rural households reduce dependency on high-cost debt from moneylenders. Self-help group debt roster analyses showed that 11 percent of total self-help group funds were used by members to repay high-cost debts. The end-line survey showed that less than 2 percent of households had outstanding high-interest loans (with rates higher than 2 percent per month) at the end of the project. This was a decrease from 47 percent among members of older established self-help groups, and down from 33 percent among recently joined members and those in younger self-help groups. Earlier randomized surveys showed a 50 percent decrease in high-cost debt even with short project support periods.

Contributing to reducing debt pressure included also the widespread implementation of the low-cost Food Security and Health Risk Funds through community institutions (accessed by around 1 million members each), which helped members avoid desperate use of high-cost loans for food and health emergencies. Deep financial indebtedness can involve intergenerational debts between lower caste households and traders, and wealthy landowners. A number of field observations confirmed self-help groups' credit had helped to break such binds, reduce threats by moneylenders for repayment and break the social stigma of having to beg for more loans.

The project helped self-help group members get a further range of well-being benefits through initiatives such as access to entitlements, mother and childcare, kitchen

gardens and sanitation. Such benefits are important for long-term household economic growth and resilience. Over 50 percent of eligible households (against 30 percent target) accessed pensions and life insurance schemes with the assistance of the project.

Livelihood improvements, more security and dedicated technical attention contributed to important human development pillars as well. According to the end-line assessment, nearly 86 percent of households increased their food security situation after joining the project, and a small study focused on nutrition found significant dietary diversification for all groups, especially those involved in livestock. Further, due to the women's own focus on sanitation, 82,000 toilets in self-help groups households were constructed under the project.

Contribution to Poverty Reduction Systems

The project has shown that a community platform managed and led by rural women can succeed in one of India's poorest states, in a context of weak service delivery and fragile government capacity (Figure 1). The project's success made a strong case for transforming the Indian government's rural poverty agenda, and led to the National Rural Livelihoods Mission,³ a national-level antipoverty program, also supported by the World Bank. Several key processes for NRLM were directly based on the Bihar experience. With the first phase of the project complete, the second phase has been launched with World Bank support: the Bihar Transformative Development Project,⁴ a USD 415 million investment, will promote a similar model of women self-help groups across Bihar. The new project will work with 7 million new rural households to transform and revitalise Bihar's rural areas in the coming years. It will also consolidate the State's approaches and systems for inclusive growth, integration of food systems and nutrition, and management of programs at the State level.

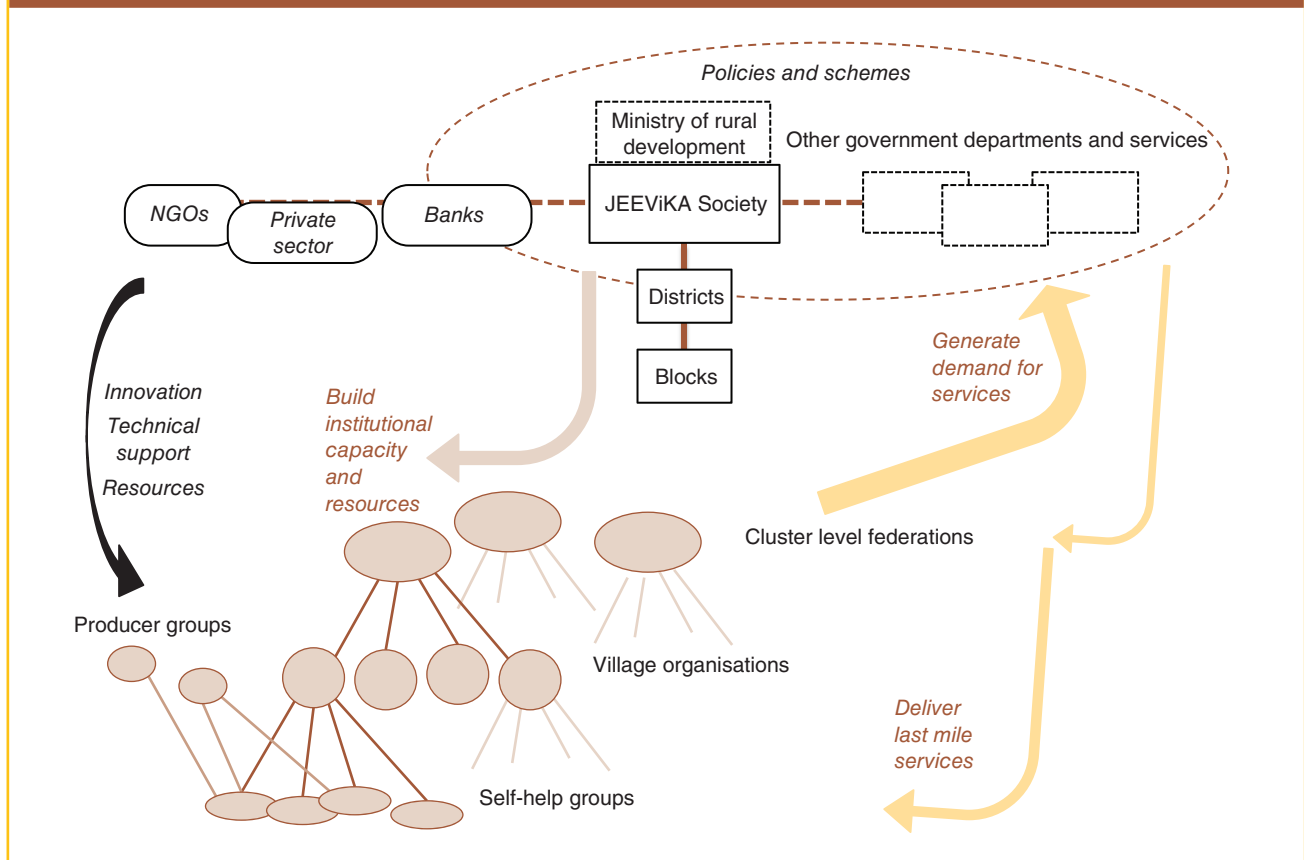
Lessons Learnt

The project provides important lessons, not only for livelihood projects but for program design and implementation more broadly, and in tackling the challenges of program expansion.

³ <http://projects.worldbank.org/P104164/national-rural-livelihoods-project?lang=en>

⁴ <http://projects.worldbank.org/P159576?lang=en>

Figure 1: Community Platform under JEEViKA



Social mobilization and building community institutions were fundamental steps in the project's success.

- Community institutions were able to deliver transformation at scale. They remain important to sustain other poverty reduction programs. Community institutions operating at scale through federations also generate important spin-offs and opportunities. Federations operating at scale look for new opportunities for their members' needs to be fulfilled (such as links to markets, employment, nutrition and sanitation), which further stimulates member inclusion, and results in demands for services to be addressed. This includes heightened interest in monitoring of service delivery, corruption and needs of the most marginal populations.
- Appropriate building of community capacity and ownership requires respecting and nurturing the collective voice of CBOs at all times on an ongoing basis, and building a culture of trust. It means using

the right kind of capacity building processes (peer-to-peer and community videos), which are most appropriate and can be managed by the end-users themselves. Community resource persons enabled the scale-up of most project interventions. Ultimately it also meant ensuring a trustful and respectful attitude between projects and the women and their institutions.

- Reviewing and keeping strategic focus on a continual basis in dialogue with its community stakeholders. With programs operating at scale, there is a need for regular review to refocus the project's strategy on its core elements, to not overburden CBOs or program staff, and to strike a balance between poverty targeting, value chain support, and a range of convergence efforts.

Right approaches to financial and economic linkages for the different groups of rural poor are needed for scaling up and sustaining value addition and supporting rural transformation.

- Addressing the needs of the poorest of the poor may demand more nuanced and targeted approaches, especially for the landless and the most marginalized poor, through an analysis of individual household dynamics, specific opportunities for microenterprises and local employment.
- Supporting diversification and expansion into value addition is vital. This requires a deeper analysis of wider economic transformation and priority opportunities taking place in specific agro-ecological regions and then the identification and setting up of appropriate technical and entrepreneurial program support structures.
- An agriculture-food-systems approach is needed to support dietary diversification, through integration of behavioural with productive and value addition activities, as a key mechanism for delivering major nutrition benefits to different groups of the poor.
- Have a system for developing scalable models through rigorous pilots and codification of knowledge. BRLP designed pilots across all thematic areas, closely mimicking the conditions at scale. This approach reduced associated risks of bigger failures, while the inherent mandate for replicability ensured that the project always developed standardized protocols and clear processes to aid efficient scale-up in the future.
- M&E survey methods should closely follow changes at household and specific livelihood group levels on an ongoing basis, which means better indicators and ongoing measurement of incomes and expenditures. Economic and financial analysis needs to be more integrated into monitoring and evaluation and as an implementation support tool. This ideally coupled with measuring changes in dietary and food systems.

Government buy in and partnership are essential ingredients for learning and scaling up innovative programs.

- This means building high levels of commitment and follow-through from all parties. The project showed how government and Bank commitment were essential to continuity, ensuring strong leadership at the project level, and pursuing both quality results as well as project expansion. This was built through shared understanding, generating trust, ensuring local capacity, and developing the confidence of the community and partners.
- Keep building new approaches through technical partners and convergence. BRLPS used its core strength in social mobilization and financial inclusion and developed strong partnerships for quality and innovative technical assistance with some of the best agencies and NGOs in the country.

Efficient expansion of a project requires adaptive management and strong M&E. The project promoted adaptive learning through innovation support at all levels, reinforced by a strong M&E system with responsive process monitoring. Strengthening the monitoring CBOs at scale and measuring complex economic changes need to evolve with scale-up.

Rigor and transparency in organisational and fiduciary systems at all levels can build capacity, which enables strong support for scaling up rapidly even in a fragile context. It is also an important element to handle the extra pressures from expanding or adding new programs.

- Capacity needs to be built for financial management and procurement systems at all levels, including enhancing community engagement, capacity and trust in the systems. Notwithstanding some weaknesses in financial management, the project established accountability mechanisms, which meant a huge number of CBOs were well positioned to handle very large funds, expand their responsibilities and make efficient use of project investments. As a result BRLPS was designated as a national resource agency for procurement under NRLM.
- Human resources systems must evolve to enable efficient scale-up. BRLPS invested consistently in putting strong and efficient support procedures in place, building local technical support capacity, and gradually devolving responsibilities to block-level staff and to communities.
- Technical support needs to evolve and external specialists used to fill critical gaps. Dedicated support

staff were placed at the district level, although changing and learning new technical roles was recognised as challenging. Young Professionals from leading management institutions were recruited to provide daily analytic support. The project piloted a Resident Consultant model where highly

experienced rural development experts—often with roots in Bihar—were hired to provide overall technical assistance and day to-day operational support to BRLP’s management, with critical inputs to key decision makers.

ADDRESSING SOCIAL EXCLUSION TO IMPROVE LIVELIHOODS OF RURAL POOR IN BIHAR

KEY SOCIAL INCLUSION STRATEGIES AND OUTCOMES IN BIHAR RURAL LIVELIHOODS PROJECT

GEETIKA HORA, PRASHANT KRISHNA, RITESH KUMAR SINGH, AND AJIT RANJAN¹

How did the Bihar Rural Livelihoods Project, known as JEEViKA, fare in mobilizing the socially excluded groups of Bihar? What were its key strategies? What adjustments were required to respond to needs and concerns of the ultra poor within its core model? What more can be done? JEEViKA has a compelling and important experience on how to address social exclusion in the context of livelihood interventions. While the initial focus was to address exclusion issues, as these interfered with achievement of livelihood outcomes, gradually it has emerged as a worthy goal in itself, pushing the project to go beyond its defined objectives, interventions and implementation models.

1. The Poorest and Excluded Communities in Bihar

Bihar presents a complex political, social and economic context for development interventions, such as JEEViKA, which have ambitious goals and targets. With 34.4 percent of the total households living below the poverty line, the challenge is to work with some of the poorest people in India. Bihar lies in the Gangetic plain area of India which is not only nationally, but globally one of the deeply entrenched poverty and hunger hotspots. The situation is exacerbated with strong caste and religious inequalities, leaving some individuals and groups poorer than others.

In India, the caste system, though abolished by law, has led to an official recognition by the Government of discriminated caste groups and a general caste category that comprises groups considered as upper castes. In rural India, caste identities are still important and influence habitation, choice of occupation, marriage, and access to social, political and economic resources and opportunities. The key categories of Scheduled Castes (SCs) (also called dalits), Scheduled Tribes (ST), Other Backward Classes (OBCs) and Extreme Backward Castes (EBCs). Poverty mostly correlates with caste categories, and we find that amongst the ST, 59.3 percent and amongst SCs, 51.7 percent live below the poverty line. Data indicates that compared to other caste groups, the

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“We don’t own even our homestead land. So the poverty we experience is very different. We are completely without any land or assets.”

—Musahar women, Gaya district

SCs and STs are poorer by 10% and 15% point respectively. Amongst the SCs, the Census identified some dalit subcastes as *Mahadalits*, which were destitute and ultra poor. The main caste groups are *Musahars*, *Dushads* and *Raghuvanshis* and together they comprise some of the poorest groups of the State.

The *Musahars* have been one of the most marginalized communities among the SCs. They are landless and have not been able to avail of the benefits of modern education, technology and institutions. The Mahadalit Mission, constituted by the Government of Bihar, in its study found evidence of high poverty, food insecurity and chronic undernutrition among Musahars, often bordering on starvation. The sex ratio was low (923 females per 1,000 males), lower than the State rate, at 935. Even their literacy rates are lower than the other Scheduled Caste groups.

Bihar has had large-scale migration to other states of the country. Amongst the migrants, brick kiln labourers

form a large portion of workers in the informal sector. The workers, who are usually from the poorest sections of the society, and in the case of Bihar, mostly from the Musahar community, are recruited against a loan by a labour contractor or employer, which they have to repay by working for them.

Cutting across the above caste distinctions, the landless as a category constitutes an important marginalised group in Bihar. The concentration of families facing near to absolute landlessness is highest amongst the SCs (53.5%) followed by the STs at 47.98%. According to a survey conducted by Department of Revenue and Land Reforms, Government of Bihar as many as 210,437 *Mahadalit* families have been identified as families not even owning homestead land.

2. Key Strategies for Social Inclusion

There was continuous focus on social inclusion in the routine planning, implementation and monitoring cycle of the project. On the one hand the project evolved institutional mechanisms to integrate social inclusion in each of the project interventions and strategies and on the other, community institutions were encouraged to promote empowerment-based approaches to mobilise and include poorest communities.

2.1 Initiating SHG Formation from Hamlets of Scheduled Caste and Scheduled Tribes

JEEViKA took advantage of settlement of hamlets based on caste groups (caste-based tolas), which is prevalent in rural Bihar, and structured its approach to mobilization accordingly. It was mandatory for both project staff and community resource persons to first target the poorest household living in the outskirts/fringes of the villages. It was also compulsory for all field staff to stay in the villages for developing good rapport and trust of community.

2.2 Targeting of the Poorest and Poor Communities

While recognizing SC, ST, EBC and OBC households as the poor groups, during the course of implementation, JEEViKA refined its focus on three main beneficiary groups according to their assets, income,

consumption and well-being. This categorization was also useful in informing the interventions relevant for each of the categories. These groups are:

- Landless and those engaged in seasonal agricultural work and manual labourers. Households from Scheduled Castes, Scheduled Tribes, women headed households, etc., formed the bulk of this poorest segment;
- Small and marginal farmers, rural artisans/weavers and those self-employed in the urban informal sector as hawkers, vendors and workers in household microenterprises. This group largely comprised the poor but not the poorest;
- Small and medium farmers engaged in surplus paddy and wheat, cotton, groundnut; and others engaged in dairying, poultry, fishery, etc. Among non-farm activities, this segment included those in villages and slums; engaged in processing or manufacturing activity, running provision stores, repair workshops, teashops, and various service enterprises.

This facilitated a continuous reflection on interventions being offered. For instance, landless households required different inputs than small and marginal farmers.

2.3 Evolving Institutional Mechanisms for Social Inclusion

Despite the prioritization of poorest hamlets during mobilization, analysis of process monitoring data suggested certain households, from poorest pockets were getting left out. The project realized the need for institutional responses were likely to have uniform and sustained results. Some of these mechanisms were:

1. *Transfer of responsibility for social mobilization to Village Organisations.* This was important as it allowed for innovative and community-based approaches to mobilize poorest households. Focused capacity development of VO subcommittees on mobilizing the left out poor, creating supportive mechanisms such as a cadre of internal CRPs and community mobilizers (CM) to handle tasks such as preparation and regular updating of the list of left-out households (extremely poor and vulnerable) who were excluded from SHGs.
2. *Scoping Community Resource Persons (CRPs).* In 2011, the project introduced exclusive scoping CRPs, who were trained in social mapping and participatory identification of poor households as part of CRPs team to ensure right targeting of rural poor households. These CRPs worked closely with VOs to identify left-out households and initiate home visits and counseling to ensure these households are brought into the SHGs, or mobilized into separate SHGs.
3. *Extending monetary incentives to the CRPs, CMs and VRP for inclusion of SC/ST households.* This allowed for greater focus on targeted household visits, understanding situations and challenges of these households and ensuring their participation in all activities of the project such as trainings, exposure visits and convergence efforts.
4. *Fixing of social inclusion as one of the seven 'quality indicators' for VO's performance assessment.* This helped VOs evolve specific strategies, such as working closely with CRPs as well as Social Action Committees, to identify and contact the left-out households. Discussions with VOs show that initially the reluctance of some households was accepted as their choice or 'erroneous judgment' and therefore not an issue about which something can be done. However, gradually with increased orientation on social inclusion, they realized that it is important to understand their reasons for not joining, and then through home visits and counseling explore options, such as flexible norms, to promote their inclusion in SHGs.

2.4 Social Mobilisation by Village Organisations

In 2008, process monitoring was undertaken to identify the numbers and reasons for left-out households so as to make any corrective measures in the mobilisation approach. This process highlighted that 15–20% of the rural poor are yet to be mobilised. Many of these were extremely poor and vulnerable, migrant and households with irregular incomes and savings, etc. Based on the findings, a systematic strategy for identifying and mobilizing left-out households through a focused campaign by involving Village Organisations was initiated across all operational blocks. The concerted efforts by VOs have resulted in higher coverage

of left-out households in the SHG fold. 499 Village Organisations were involved in the mobilisation drive and altogether 9,980 households were mobilised.

2.5 Effective and Timely Use of Project Monitoring and MIS Data to Track Excluded Households

At critical junctures, the project has paused and reflected on the data on inclusion in coverage and made mid-course corrections. This is the real power and use of data. The process monitoring reports in the year 2008–09, identified that nearly 15–20% of the rural poor were yet to be mobilized. Again in 2013, process monitoring conducted in selected three districts also made some key findings on these left-out households. Many of these were extremely poor and vulnerable households, migrant households and those households with irregular incomes and savings, etc. This use of data has been key in evolving institutional mechanisms to tackle exclusion.

3. Social Inclusion Outcomes

Social inclusion can be defined as the process of improving the terms for individuals and groups to take part in society. This process entails improving the ability, opportunity, and dignity of people who have been disadvantaged on the basis of their identity for such engagement. In India, social exclusion has roots in

historical divisions along lines of caste, tribe and gender. The exclusion faced by SCs has its roots in untouchability whereas amongst the tribal people, the exclusion has emerged from their geographical isolation. The result is that they are unable to enjoy benefits of development as compared to the other groups. Though overall poverty amongst these groups has fallen, there continues to be a wide gap between the SC and ST groups and the rest of the population on key development parameters.

The social inclusion outcomes of JEEViKA need to be viewed within the context of livelihood interventions, with a focus on addressing social exclusion issues that impacted achievement of livelihood outcomes. However, mobilising the poorest and excluded communities was an important commitment in the project design and has led to some important achievements.

3.1 Increased Mobilisation of the Poor and Poorest of the Poor into Strong Community Institutions

Overall, 1,836,505 rural households have been mobilized in 154,626 SHGs and 10,445 VOs. Of these 549,875 are Scheduled Caste and 18,844 are Scheduled Tribe households, 884,675 are OBC, 221,420 are minorities and 161,805 are general households (Table 1). In BRLP districts, the SCs represent 12 to 33% of the total population, while in SHGs the participation of SC households varies from 26 to 67%.

Table 1: Coverage of SC/ST Households in SHGs under JEEViKA

District	Total Rural HH	Total SC & ST HH (Rural)	% of SC & ST in Total Rural HH	Total SHG HH	Total SC & ST HHs in SHG	% of SC & ST HHs in SHG
Gaya	596,534	214,285	35.9	343,489	132,975	38.7
Madhubani	866,808	117,523	13.6	301,355	80,168	26.6
Muzaffarpur	854,979	141,648	16.6	381,818	134,319	35.2
Nalanda	400,962	95,793	23.9	285,001	93,889	32.9
Purnia	580,237	96,914	16.7	352,648	84,329	23.9
Khagaria	312,002	48,039	15.4	172,194	42,925	24.9
Total	3,611,522	714,202	19.8	1,836,505	568,605	31.0

Inclusion % of rural SC & ST HH in SHG is 80% and 69.9% respectively [Source: BRLPS MIS & Census 2011.]

On an average more than 80% of all SC households in the districts have been brought under the fold of SHGs, which clearly reflects the pro-poor universal mobilisation and saturation in terms of coverage of poor households.

3.2 Socially Inclusive Functioning of Institutions

Systematic implementation of capacity building initiatives and strong and sustained focus on social inclusion has helped the project in successfully achieving its development objective of building “self-managed and self-reliant” and inclusive community institutions. Inclusion of the poorest and left-out households and village saturation was promoted as one of the seven quality indicators for VO performance assessment. Analysis of data from over 2000 SHGs shows that there is strong representation of SC/ST and minorities in leadership positions at the VOs and CLFs. Data trends from MIS also indicate high levels of inclusion in CBO leadership (Table 2).

3.3 Expanding Livelihood Opportunities for Various Categories of Poor Households

The project’s livelihoods interventions were spread across multiple sectors including farm, non-farm and off-farm, to ensure that such livelihood interventions are able to include all three categories of poor that (subsection 3.2) it identified during the mobilisation phase.

- *Agricultural interventions with small and marginal farmers.* 471,000 SHG households were linked with agriculture interventions related to System for Rice Intensification (SRI) which is a process of paddy cultivation which enhances the production through maximising different agronomic practices (257,111 households). Of the farmers adopting the SRI methodologies, 25 percent of the farmers are from SC and ST categories and 65 percent from other backward castes.
- *Off-farm interventions to include poor families and small farmholders.* For targeting the poorer households with smaller farms and less dependence on agriculture, the project promoted dairy and backyard poultry as viable livelihood options. The project reached out to 61,700 households under the dairy intervention. The project also reached out to more than 59,000 SHG households under its backyard poultry intervention. The SC, ST and minority households account for nearly 50 percent of all households covered under the intervention. Inclusion of marginalized section of the society into the fold of Dairy Cooperative Services (DCS) is 21% (SC 17%, Mahadalit 4%). The overall participation of SC and ST in poultry intervention is 30 percent.² Around 17 percent of the SHG members

Table 2: Percentage of SC and ST Leadership in CBOs

District	SC	ST	Minority	Other	Total Office Bearer	% of SC/ST & Minority in Leadership
Muzaffarpur	7,391	283	2,387	16,265	26,326	38.22
Nalanda	14,718	161	629	33,598	49,106	31.58
Purnia	6,117	1,800	5,027	17,865	30,809	42.01
Madhubani	9,216	271	4,013	32,011	45,511	29.66
Khagaria	2,914	48	799	12,613	16,374	22.97
Gaya	19,513	88	1,940	23,511	45,052	47.81

² Source MPPR (Poultry Intervention) July 2016—out of the total 59,149 HHs covered in the intervention, 14,644 HHs (30%) were from SC & ST categories.

linked with poultry intervention also belong to the minority community.

- *Non-farm interventions for poorest and landless communities.* The project reached to nearly 32,000 SHG households dependent on non-farm livelihoods through value chain interventions in specific non-farm commodities such as incense, beekeeping, and handicraft (jute, carpet) aimed at increasing the market share of SHG members involved in these activities. These households tend to be small holders and poorer. About 68% of participants in the non-farm interventions belonged to the poorest of the poor (POP) households with higher representation in incense stick making (85%), Jute rope making (57%) and bee keeping (34%) which did not depend on having productive land, as important for generating employment, and is of the biggest demands of the landless.

3.4 Reducing Vulnerabilities for Overall Well-being

Under its social development component, the project promoted some important vulnerability reduction measures. These are important as they allowed for more effective use and benefit from the livelihood interventions of the project.

- *Increased access to entitlements and social security.* Focusing on leveraging public resources for reducing vulnerability, the project has facilitated access to various entitlements and social security schemes helping more than 500,000 SHG members to have better access to social security pension and welfare schemes like the Mahatama Gandhi National Rural Employment Guarantee Act (MGNREGA) which guarantees 100 days of employment to rural poor and the Rashtriya Swasth Bima Yojana (RSBY), a health insurance scheme. The project has also reached out to more than 400,000 SHG members with individual life insurance schemes under the Aam Aadmi Bima Yojana and helped in efficient claim settlement of more than 98 percent of cases. End of project random household surveys showed that of the eligible households, 67.3 percent households were able to access respective entitlement for pension; 72 percent for widow pension

support; 40 percent for job cards and 60 percent for RSBY cards. Cluster Facilitation Teams (CFTs) were formed in 25 blocks to increase awareness on and demand for work under MGNREGA. In a pilot, the focus was to increase women's participation in MGNREGA. As a result, women's participation increased in planning processes. Under MGNREGA works, women participation in blocks where CFT was placed increased to 48% from a state average of 41% in the FY2015–16.

- *Addressing food insecurity and health risks.* To address the vulnerability arising from scarcity of food availability during the lean seasons, a Food Security Fund (FSF) was provided to more than 973,770 households that were members of 99,714 SHGs under 7,790 VOs. The fund facilitated collective procurement of food grains at bulk prices, and its distribution among the food insecure households as interest free loans. The intervention had significant impacts for the poorest sections of society who struggle with food scarcity in lean seasons. Independent impact evaluations have reported reduced incidence of reported hunger and increased consumption of food grains for the poorest quintiles. Health Risk Fund was another specialized financial product at VO to finance health related credit needs and has been implemented in 8,142 VOs. It has helped in mitigating health shocks for 1,017,750 households from among the poorest SHG members.
- *Improved knowledge and behaviours on health and nutrition.* The project implemented a Behaviour Change Communication (BCC) intervention that aimed to improve prevalent awareness and household practices related with health, nutrition and sanitation in partnership with the Bill and Melinda Gates Foundation (BMGF) and Project Concern International (PCI). Another related intervention (*Gram Varta*) promoted participatory learning and informed action around nutrition and sanitation issues. These interventions have resulted in improvements in demand for better sanitation facilities, identification of malnutrition cases and subsequent linkage of such children to local Integrated Child Development Scheme (ICDS) centres.

4. Experience of Promoting Inclusion of Two of the Poorest Groups: Scheduled Tribes and Brick-Kiln Workers

This section highlights JEEViKA's experience with two of the most vulnerable and poor communities of Bihar, the STs and an occupational group, brick-kiln workers, primarily belonging to the Musahar community. The experiences of working with these two communities are varied but also have commonalities.

Scheduled Tribes

Bihar has nearly 1.34 million people belonging to Scheduled Tribes, with more than 94 percent of them living in rural areas. The Government of Bihar has notified a total of 29 Scheduled Tribes in the state. *Santhal, Oraon* and *Kharwar* form the majority of tribes in rural Bihar. *Gonds, Munda* and *Tharu* are the other two major tribal groups in Bihar. Primitive Tribal Groups (PTGs) are extremely low in number with only about 3,500 households and are scattered across the state with specific PTG pockets existing in East Champaran, Darbhanga, Muzaffarpur, Saran and Bhagalpur. Under JEEViKA, the highest ST population was in Purnia, with two blocks, Dhamdaha and Banmankhi, having the highest number of ST households. Oraon is the most populous tribe among the major tribes in Purnia District, followed by Santhal, Munda, Lohra, Kharwar, etc.

A Tribal Development Plan (TDP) outlining some of the key priorities and strategies for inclusion of the tribal population was prepared. Some of these were sensitization of staff and community cadre on development issues of tribals, partnerships with technical service providers and organizations that have experience of working with tribal people, exploring cultural skills for alternative livelihoods, skill development and livelihood opportunities for tribal youth, and convergence with government programs to enhance benefits for tribals.

Most strategies included in the TDP were implemented as part of overall project implementation in Purnia, as well as other pockets. Of the total 1,836,505 mobilized households under the project, 18,844 are ST households. Of these, 16,494 households are from the district

of Purnia. The inclusion of STs on other project interventions also remained high. Around 113 STs are members of the Producer Company in Purnia and 1,119 are in Producer Groups. Poultry intervention has engaged around 881 ST households. One of the major concerns of food insecurity amongst tribals has been addressed as more than 7,321 ST households have availed the food security fund. The Health Risk Fund has been availed by 237 households. The project also focused on six predominantly ST villages for the Child Nutrition Centres. An important indicator of inclusion of STs is that 217 VOs in Purnia have STs in leadership positions.

Some of the key strategies to mobilize the tribal community in Purina were:

1. Engagement of tribal CRPs and CMs who could communicate in the local language ('*angika*'). This proved critical in reaching out to and communicating with the local tribal community and overcoming the language barrier, which can be an important deterrent to engaging the tribal community.
2. Use of folk and cultural media for communication on key components of the project.
3. Regular rotation of CRPs from neighboring tribal blocks by increasing honorariums to cover all tribal households.
4. Restoring tribal art. BRLP had partnered with an external agency called Banglanatak.com to pilot a livelihood intervention focused on restoring tribal culture. Under this, cultural troupes were identified and organized to perform tribal music and dance performances across and outside the state. To uplift the livelihood scope of the rural folk artists, national- and state-level festivals were organized to boost the promotion and marketability of cultural art forms. The intervention was initiated in Purnia but was replicated in other districts with tribal and non-tribal communities in Gaya, Nalanda and Madhubani.

Brick-Kiln Workers

Bihar is known for its large-scale out migration. The case of brick-kiln workers, mostly belonging to the *Musahar* community, exposed the project to experience



“Our tribal women do not have restrictions on mobility and work freely outside the house, especially in forests. However, forest-based livelihoods do not fetch us enough incomes. When I learnt about the poultry intervention, I chose it immediately. It has helped me increase my income and now my husband has stopped migrating for long periods.”

—ST woman, Purnia

working with the ultra poor. The *Musahar* are engaged in agricultural labour and are typically dependent on daily wages. Brick-kilns provide them with what they considered a more favourable option with assured earnings for around six to seven months a year, which is given upfront as an advance payment. These advance payments ended up being traps of bondage, but the negative aspects were realized much later. The kilns start production operations every October and continue up to the pre-monsoon season the next year. The workers get tied to brick kilns as soon as they accept advance wages from their agents. Bringing these households was not seen as a priority by the project as they had tendency of being absent from the villages, which made it difficult for them to participate in SHGs and meetings. However, the project has found compelling examples of successful efforts to mobilise these households as well as retain their membership. The lessons from the Gaya district are encouraging. A qualitative field assessment covering six VOs of the district was undertaken to understand the strategy and early results.

Situation assessment of benefits and negative impacts of working at brick-kilns. This required an understanding on the incomes of these households, terms of employment, benefits for workers and their family members as well as the negative impacts such as on health of workers, children’s education and other forms of exploitation. For many VO members, it was an eye opener to understand how ultra poor put in hard physical labour to meet the basic needs of their families. An excellent

Brick-kiln worker households: Why should they join JEEViKA?

What do they lose?

- Immediate and easy access to money
- No explanation for purpose of loan
- Repayment of loan through labour
- Assured labour for 6–7 months
- Food and medical facilities for entire family

What do they gain?

- Group identity
- Structured loans for livelihood enhancement
- Improved skills, knowledge for improved livelihood/productivity
- Access to other benefits and entitlements
- Health awareness and services
- Funds for food security
- Children’s education can continue without long breaks

analysis of what brick-kiln workers would lose or gain from joining SHGs has evolved due to the efforts of the VOs.

In a short study across six VOs of the Khizarsarai Block of the Gaya district, it was found that almost 24% of the SHG members migrate to other states such as Uttar Pradesh, Punjab, and Rajasthan to work in brick-kilns. In the FGD with the members, it was further reiterated that with a limited option of livelihood in the area, they used to migrate outside the state. The average earning per HHs is between Rs 5,000 to Rs 12,000 per month for the duration they work. This amount of money speaks for itself, but there are negative impacts which at times nullify this monetary benefit.

Household visits and intensive counseling. An understanding of the situation allowed for targeted counseling for the community to present an objective assessment of the benefits that the SHG model would allow. The key negative impacts on health of women and children, as well as long breaks in education of children were highlighted. Moreover, the trap of bonded labour in the form of advance payments has also been highlighted. The results of counseling have been encouraging, as large numbers of these households have been mobilized and have been able to retain membership for over a year.

Adjusting core SHG norms to accommodate their needs. This was the most challenging aspect, as it meant changing the 'Panchasutra' framework that guides SHG functioning. Members were allowed to leave their savings in lump sum with other members to deposit weekly on their behalf. However, it was interesting to note that these members always attended meetings once they came back. In some cases, these members made special visits every two months to make their payments themselves and repay their loans according to determined instalments and timelines. Though this has led to some practical challenges for the project teams, such as poor attendance registers and proxy attendance, the payments are being sent regularly. Also, for CRPs and VRPs, there is no sense of how the loans are impacting these households. Yet, since these are early changes, the project with its future interventions can evolve a mechanism to track these households.

Emerging changes and outcomes. As a result of the above efforts, there are some promising changes. These

changes are currently not being tracked, so there is no quantifiable data.

Firstly, it has built the project's faith and trust amongst the brick-kiln workers and they are able to see its relevance to their economic realities. Secondly, some very early signs of women pulling out from brick-kilns to explore other livelihood options are being seen. In these

"We were encouraged by the testimonies of JEEViKA didis and so decided to join the SHGs. We are seeing some benefits already. My personal aim is to stop working at the brick-kilns. When we come back to the villages, our health is so fragile that it takes a month to recuperate. We want to start economic activities here and need help for that."



households the men folk have continued their work at the kilns as a complete pullout would mean a drastic dip in their earnings. Thirdly and perhaps the biggest change this allows is that children can stay in the village and there will be no break in their education. This trend is on the rise and can be capitalized by the new project.

5. Key Challenges to Social Inclusion

There are been significant challenges, some that were effectively addressed and some that require more nuanced reflection and re-strategising.

5.1 Some Groups Continue to Be Left Out

In spite of all the efforts of the project to reach the poorest, there is a chance of some groups getting left out. Partly, this is also because of self-exclusion as the ultra poor feel constrained by negligible assets and resources and do not see direct benefits from livelihood interventions. Moreover, the structure of institutions of poor envisaged may not meet the needs of most poor and excluded groups. SHG 'norms' of weekly savings and meetings are difficult to adhere to. The SHG model which relies on saving, group lending, regular meeting and financial discipline may not suit the needs of ultra poor who do not have enough for even two square meals let alone saving, or other specifically vulnerable groups such as people with disabilities and migrants. Though the project has started making some adjustments, as highlighted in the case of brick-kiln workers, this change is not uniform and needs state and policy guidance for district, block and field staff.

5.2 Social Mobilization of the Excluded Groups Does Not Automatically Translate into Equitable Benefits

Focus on mobilization of excluded and poorest groups is a critical first step toward social inclusion but may not be enough to ensure they are able to benefit from interventions and project funds equitably. These poorest groups have fewer, and in some cases, no assets and take loans to meet their consumption needs, but do not see the value for bigger loans. Field observations reveal many members from the poorest households who have taken only one-time small sized loans. In some cases, there were some serious setbacks. Just one example

amongst quite a few: field teams found a Musahar woman who took a loan to buy two goats and in less than three months both goats died. She now has to repay the loan without having benefited from it. This reveals how critical it is to ensure that once they enter the institutions, poorest members are able to access all key funds and benefit from such loans in a more sustainable manner.

5.3 Community Institutions Can Start Emulating the Functioning of Dominant Public and Private Institutions

It is erroneous to assume that all community institutions established through the project will work harmoniously and facilitate inclusion of the poorest households. Though rare, there are some instances where strong and dynamic leaders of VOs and CLFs have remained presidents for prolonged periods, and are reluctant to give new members a chance. They are popular and get re-elected but this has led to favouritism in the community: visits to only those villages where there is support and conversely neglect of those where there is some resistance have also been noticed. As already discussed, there is also the problem of better-off members taking larger loans and in some cases requesting poorer members to not seek loans. This points to the need to ensure strict practice of leadership rotation and a more careful tracking of all who have taken loans and if there are only a few regular loan seekers.

5.4 Working with Ultra Poor Brings on Many More Practical Challenges for the Project

While an overall emphasis on evolving and adopting innovative measures to include ultra poor is important and desirable, it brings forth practical challenges for project teams, which it is inadequately prepared to handle. Ongoing trainings, field demonstrations and cross-visits for these members are difficult to organize and reschedule. Moreover, monitoring visits sometimes are not so helpful as certain hamlets are empty and members are unavailable for direct feedback and inputs. Within the category of ultra poor, individual cases of destitution also emerge, such as of single and deserted women, widows and old persons with no families. The project does not define strategies to work with these specific cases and there is need for more knowledge and

exposure on how to work with such cases. For interventions of sanitation, the project has faced difficulties with Musahar households who have no land for construction of toilets. This is an area that requires a lot more innovative thinking and advocacy with the government.

6. Deepening the Approach to Social Inclusion

Building on its lessons and good practices, JEEViKA needs to increase the focus to work out some internal mechanisms to plan and monitor the progress on social inclusion.

6.1 Mapping of Pockets of Poverty at the District and Block Levels

Currently, districts track the social mobilisation data, disaggregated by caste and social criteria and this is collated at the state level. Another way to use these data is to track more effectively the left-out population data and use it upfront in project meetings and reporting to allow for greater attention and actions. Another idea is to use district and block level maps to highlight the pockets of poverty and left-out populations. This can be done through use of existing secondary data from Census and SECC. An important lesson from projects such as in AP is to consolidate data regularly and track the progress. Currently, the disaggregation of data for various components does not translate into a clear picture on how project interventions are impacting the poorest of the poor/SC/ST communities. It is done only at critical evaluation junctures. The focus should be on integrating this into the current MIS and review systems.

6.2 Identifying Those Who Are Still Unable to Fully Benefit from Interventions

The MIS collects important data on loan uptake, utilization and repayment. However, a focused identification and analysis of members who have taken just one or two loans for consumption and are yet to move towards productive use of loans will be important. Field assessments show several such households who have taken small one-time loans and therefore do not show any significant change in their livelihood outcomes or income outcomes. Project staff suggest that earlier initiation of these households into well-planned livelihood interventions is required. Livelihood teams need to

work in tandem with Institution Building and Capacity Building teams, for improved microplanning and targeted interventions for landless and the ultra poor.

6.3 Spending More Time and Resources on Tribal Development Planning

The project team believes that there is need for increased understanding and exposure to working with tribal people. The neighbouring state of Jharkhand and other states such as Orissa and Chhattisgarh are likely to have important experiences on tribal development and empowerment. A focused learning on these state experiences will be useful and an important priority for future interventions.

6.4 A Separate Ultra Poor Strategy

The core model of JEEViKA has been effective in mobilising the poorest women in rural Bihar. Yet, project's ongoing data showed that 5 percent of ultra poor households get left out. This is more because they are unable to fully adhere to the 'Panchsutra' norms of the SHGs. Where VOs have made such adjustments or evolved strategies for their inclusion, positive results have been seen. One specific example is that of mobilisation of brick-kiln workers. However, this was not uniformly done and pockets of such left-out poor still exist. Although, JEEViKa has only just started a more targeted and nuanced version to work with the ultra poor, there are some important lessons and insights.

- *Initial push through community donations and encouragement to attend meetings with no expectations to save or join.* Gaya and Nalanda, where focused FGDs were undertaken to understand how the poorest members have been mobilized and impacted, brought out compelling cases of single, deserted women, widows with children, and women in deep indebtedness who have been brought into the SHG fold. It was not possible for such members to begin regular savings and nor were they in a position to take loans. It was through community donations, mostly in terms of grains and food items, so they have some money in hand to start savings.
- *Normative adjustments to allow sustained membership.* In the case of brick-kiln workers and other seasonal migrants, adjustments to existing models and institutional norms are required. Where there

has been flexibility allowed for members to save at longer intervals than regular members, the participation of these households has increased.

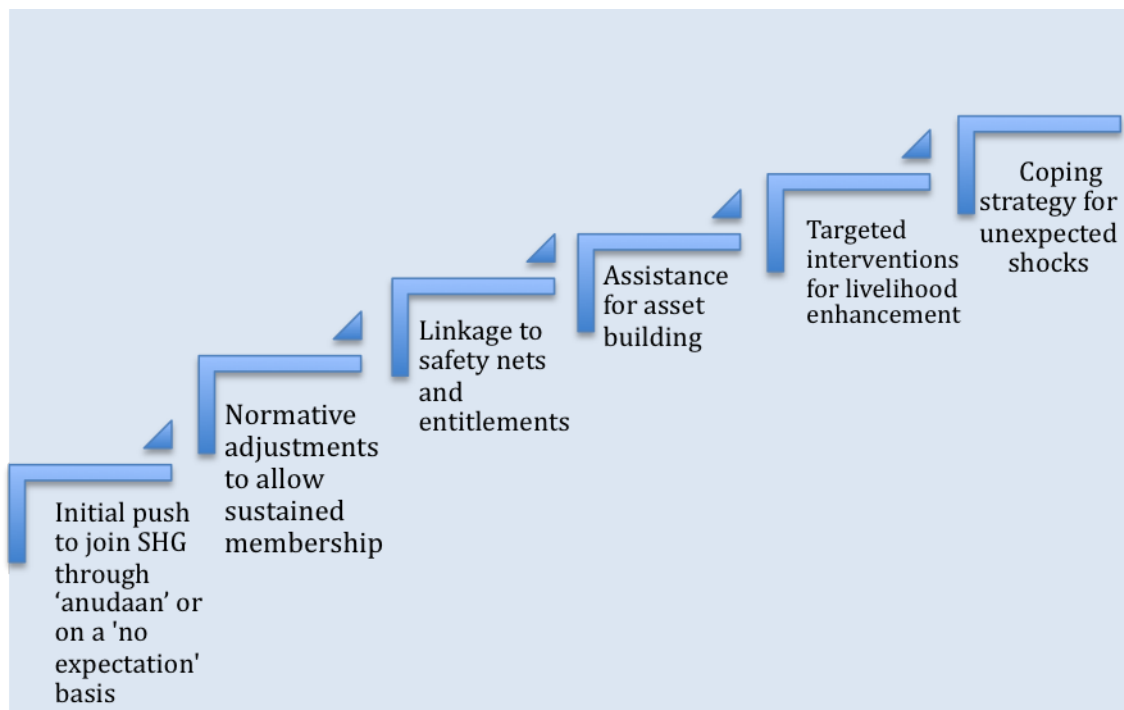
- *Linkage to key safety nets and entitlements.* This component is currently offered for all households, but is critical for SC and ST communities. For example, MGNREGA for the assetless poor and daily wage earners is more important than other landowning households. The project's experience has indicated that some of the vulnerability reduction measures, such as provisions of health risk funds and food security funds have had a greater positive impact on the SC and ST communities.
- *Assistance for asset building.* If specific funds are targeted to ultra poor to build their assets simultaneously with assistance on livelihood enhancement, this major disadvantage can be addressed. This is not an easy decision and has practical difficulties as to getting community consensus identifying those few households that qualify as ultra poor and on giving loans for creation of assets that can be interest free or given as grants.

- *Targeted interventions for livelihood enhancement.* Non-farm activities that can focus per se on the landless and ultra poor, also face challenges of sustainability, economic returns and a sustained market base. However, this is where future interventions will need to focus on in order to deepen the focus on the ultra poor.
- *Coping strategies for unexpected shocks.* Health and economic shocks can push back the ultra poor into deeper traps of poverty and debt. During micro-planning for ultra poor households, this dimension needs to be thought through. Though more a matter of counseling, promoting savings for times of crises rather than any exclusive fund or intervention, is critical as the project intends to focus on improving its impact on the ultra poor.

6.5 Learning from Other Models of Social Inclusion, Especially Working with Ultra Poor

The new priorities of increasing economic benefits for the rural poor through establishment of producer groups and organisations provide more reason for

Steps Graduating Ultra Poor out of Extreme Poverty



JEEViKA to continue to ensure that the poorest of the poor do not get left out. Focus on sanitation, for instance, will also require specific targeted interventions.

The lessons from the Poorest of Poor (PoP) Strategy of the Andhra Pradesh Rural Poverty Reduction Programme are relevant for JEEViKA. The PoP strategy had a strong focus on comprehensive identification and data collation on the most poor of poor households, numbers of these households, as well as some of the social and economic poverty characteristics. This has helped in establishment of a strong database for the project against which to measure progress. In addition, a specific fund for PoP households as well as a dedicated cadre of activists for intensive handholding have been effective strategies.

BRAC—Bangladesh’s NGO—has a well known groundbreaking ultra poor programme, which includes asset grants or soft loans, skill development, tailor-made health care facilities, and ensuring social security through community mobilisation. The Bandhan organisation’s hardcore poor project also offers strong lessons. The program’s components include—direct asset transfers, inoculation of savings habits and integration into microfinance groups.³ After identification of the hardcore poor through participatory exercises, half of the potential beneficiaries are randomly selected to receive assets. Rather than transferring cash, Bandhan purchases and distributes assets such as livestock and inventory to

beneficiaries. The grants are also used to finance other inputs, such as fodder and sheds for livestock. Following selection, Bandhan staff meet with beneficiaries to select the livelihood option best suited to the household and then provide information and training on topics related to the household’s enterprise (such as proper care for livestock) as well broader social and health issues. Additionally, beneficiaries are required to save Rs 10 (approximately US\$0.25) per week at these meetings. Initially, Bandhan disburses a weekly “subsistence allowance” of Rs 90 at these meetings. The allowance is given for 13 to 40 weeks, depending on the particular enterprise selected by the households. Approximately 18 months after receipt of the asset, the beneficiaries are “graduated” to microfinance and become eligible for regular microfinance loans provided by Bandhan.

In conclusion, JEEViKA has evolved some key institutional mechanisms to address social inclusion which are worth deepening and replicating in its future interventions under Bihar Transformative Development Project and the National Rural Livelihoods Mission. The significant social inclusion outcomes are also the result of an evident weakening of caste and feudal structures reflected through greater social cohesion and solidarity that cannot go unnoticed across the state during field visits. This is no mean achievement in one of the most feudal states of the country.

³ https://www.povertyactionlab.org/sites/default/files/publications/110%20November%202011_0.pdf

GENDER EQUITY AND WOMEN'S EMPOWERMENT

OUTCOMES, STRATEGIES AND LESSONS
FROM BIHAR RURAL LIVELIHOODS PROJECT

GEETIKA HORA AND ARCHANA TIWARI¹

Does a program working exclusively with women also have to justify its impact on gender and women's empowerment outcomes? What constitutes women's empowerment focus in a livelihood program context? How do social empowerment and political empowerment enable economic empowerment of women? This note uses findings from qualitative assessments on key empowerment outcomes and elaborates by using women's testimonies on the changes they have experienced and the remaining challenges that need to be addressed.

The Bihar Rural Livelihoods Project (BRLP), popularly known as JEEViKA in Bihar, has had a transformative impact on women's lives. It was launched in 2006 to reach 4,000 villages in 42 blocks in six high poverty districts (Gaya, Khagaria, Madhubani, Muzaffarpur, Nalanda and Purnia) benefiting 590,000 households. The main objective was to 'enhance social and economic empowerment of the rural poor in Bihar'. In 2012 it received additional financing and was expanded to 60 blocks to reach a total of 102 blocks in these six districts and to mobilize 1.5 million rural women from poor households into more than 150,000 Self-Help Groups (SHGs) and 10,000 village organisations (VOs). This large-scale mobilisation of over 1.8 million women has given a big push to women's empowerment.

1. Status of Women in Bihar

Bihar is one of the poorest and most patriarchal parts of India, placing women at a significant disadvantage, affecting their overall status and well-being, while also

denying them the opportunity to fully contribute to the development of their communities. This is reflected in a skewed sex ratio of 935, a less than favorable literacy rate of 51.5 percent amongst women, and only 9 percent are participating formally in economic activity, the lowest for any state and also way below the male labor force participation rate of 79 percent for men in the State. The role of gender discrimination becomes clear when we compare the data with those of men. The 2011 Census survey recorded male literacy at 71.2 percent and female literacy at 51.5 percent, recording a gender disparity of 19.7 percentage points. According to the National Family Health Survey IV, 53.1% of women are anemic and 22.9% women are underweight.

According to National Family Health Survey 4, the violence against women continues to be high in Bihar. It highlights that the women who have ever been married and have ever experienced spousal violence are 43.7 percent in rural areas. Due to the physical, mental and economic costs of gender-based violence, its impact is

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“As women from the poorest households in our village, we face poverty and discrimination quite severely. We work very hard, yet we never get the respect men do. We are even paid lower wages than them. This breaks our confidence, but we have to keep going against all odds for the sake of our children.”

—SHG members, Gaya.

felt on women’s work participation, health and overall well-being, and therefore begs greater attention than it receives from development programs that work with women.

Each of the indicators highlighted above are more severe for women from Scheduled Castes, Scheduled Tribes and the Muslim community. The state of Bihar has created a ‘*Mahadalit*’ category to include the weakest and most vulnerable groups amongst the already poor Scheduled Castes. Women belonging to the *Mahadalit* community are the most vulnerable and have poorer

health indicators than their counterparts from other caste groups.

However, there have been some important shifts, such as in literacy rates, reduced maternal mortality and improved agency due to participation in development programs. Some changes have occurred due to necessity, such as increased role of women in agriculture, often described as feminization of agriculture. The high rate of migration of men from Bihar over the last five decades has resulted in women taking on more of the responsibility for family farms. The Institute for Human Development survey found that 70 percent of all women engaged in cultivation are from households with migration. These shifts have presented JEEViKA an opportunity to support the voice and agency of the poorest women from the state.

2. Understanding Gender Equity and Women’s Empowerment in JEEViKA

Defining Gender Equity and Women’s Empowerment

The World Bank has identified empowerment as one of the key constituent elements of poverty reduction, and as a primary development assistance goal. The promotion of women’s empowerment as a development goal is based on a dual argument: that social justice is an important aspect of human welfare and is intrinsically worth pursuing; and that women’s empowerment is a means to other ends. Empowerment is the expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives. Women, by having the least control over assets and having been denied the opportunity to realize their capabilities to their fullest potential, have several constraints to overcome to achieve empowerment.

Projects often use the terms “women’s empowerment,” “gender equity” and “gender equality” to describe the impact of interventions on women. These are separate, but closely related concepts. In a policy research report by the World Bank (2001), the term “gender equality” was defined in terms of equality under the law, equality of opportunity, and equality of voice. Gender equity “recognizes that women and men have different needs,

preferences, and interests and that equality of outcomes may necessitate different treatment of men and women.” While gender equality becomes a larger goal, requiring much more advocacy work with policy makers, gender equity and women’s empowerment, while relying on equality as a principle, has received more attention.

Key Efforts and Initiatives under JEEViKA to strengthen Women’s Empowerment

As will be discussed more below, the whole project has been premised on targeting poorer women, building their institutions, financial systems and assets; strengthening livelihoods important to women; and enhancing their social capacities and engagement with the wider society and institutions. Lessons from JEEViKA contribute significantly to the growing reflection on practical interventions and strategies in livelihood programs that help empower women. Findings from some of the studies and qualitative assessments² show that the social and gender impacts complement and can even outweigh the targeted economic impacts that are intended. Findings also point out that by giving economically and socially disadvantaged women access to a well-defined network of people and new systems of ‘knowledge’, it helped break down long-standing normative restrictions and significantly shifted gender boundaries in these villages.

Having said that it should be noted that the project also reflected and implemented some more specific key activities on gender related aspects, noting challenges for deeper gender sensitive approaches, important even where a whole project is focused on women:

1. Gender trainings for project staff were held during orientation and annually at the state level. Selected staff from state and district levels have gone through half-day or daylong sessions on basic gender concepts and specific issues such as violence against women. These trainings have had mixed impacts—some staff have ensured a greater attention to action by Village Organisations on gender issues, whereas others have felt that these trainings have not been very useful and do not equip them with ‘how to’
2. The project hired two gender consultants who would focus on gender training and resolution of gender issues at the project and community levels on a full-time basis. This, according to project staff, has been a very successful strategy. These gender consultants moved from district to district to provide gender training to staff as well as identify gender issues at the community level. This was done both to understand what particular gender issues women face as well as identify if VOs are evolving effective strategies to address these. The specific tasks undertaken have been trainings for district and field staff, and identification and resolution of gender issues and complaints of project staff on gender harassment and sexual harassment in consultation with the JEEViKA gender and grievance committee.
3. JEEViKA joined with UN Women and initiated a pilot on Gender Sensitization, in collaboration with the latter’s technical-resource agency ANANDI. The pilot covered 47 Village Organisations (VO) in Bihar. A total of 9 Master Trainers from Mahila Samakhyā, a women’s organisation, and 18 Community Resource Persons (CRPs) were selected for the same. The tools for training were innovative and linked key gender issues women face in society and how it affects their participation in livelihood programs and how various components of JEEViKA can be strengthened once women are more aware of their rights. Under the pilot, a total of 450 training sessions were conducted for 6,610 women from 661 Self-Help Groups (SHGs) in 3 blocks across 2 districts of the state. A set of five key participatory tools were used for discussion, debate and strategizing (see box on following page). The effort resulted in positive outcomes and striking effects could be seen, as community institutions are becoming more gender-responsive. Perhaps the most significant change is the feeling

² Majumdar, Shruti, Rao Vijendra, and Sanyal, Paromita: How JEEViKA, a CDD project in Bihar, India was able to change cultural norms and empower women: A policy note.

Five Participatory Tools for Gender Related Discussions and Strategising

- *Kamal* (a common name for a boy) and *Kamli* (name for a girl) to explain social construction of gender;
- *Mahila Kisan ki Pehchaan* (A woman farmer's identity) to make women accept themselves as farmers and not only the male members of their families;
- *Mera Haq Mere Pehchaan Patra* (My rights, my various entitlement/identity cards) to help women become aware of the government's entitlements for rural poor women;
- *Kiska Pala Bhari* (Who is doing more work) to look at gender division of labour and finally;
- *Dana Kothi Khali Kyun* (Why is my grain box empty) to look at poverty and restrictions on how women's roles in economic activity outside the house and therefore their control over money and resources, deepens poverty.

of entitlement over services, rather than being at the mercy of their families, community and government. Such intense training requires nevertheless further rollout for scaling up.

3. Key Gender and Empowerment Outcomes

This note organizes the key findings around three dimensions of empowerment—social, economic and political. This may be a somewhat simplified approach, but it captures the key changes observed through JEEViKA's work on women's empowerment and creates a strong link between each of these dimensions reinforcing each other.

3.1 Social Empowerment

Social empowerment is understood as the process of developing a sense of autonomy and self-confidence, and acting individually and collectively to change social relationships and the institutions that exclude poor people and keep them in poverty. Thus in this section the attempt is to highlight changes that are seen in the social and gender norms that have an important bearing on women's lives. These include changes in self-esteem and wider social capacity of women, changes women have seen in social norms such as mobility, decision making at the household level and also collective action at the community level. Such changes are evident at the personal, household and community levels.

Improved identity and influence. Through their participation in BRLP, SHG women have gained a voice

in their communities. Creation of an identity beyond the gender roles has been empowering. The feeling of belonging to a women's development program has also increased their influence, or agency. Amongst the women members, the impact is most evident on the Community Resource Persons (CRPs), a cadre created from the community to mobilise women into SHGs and implement and oversee other strategies of the project. Around 40,000 women from the community work as CRPs. Tasked with mobilization, mentoring and hand-holding responsibilities, the CRPs have emerged as a strong workforce from amongst the rural poor. They are engaged in work of other Government departments and programs as they are seen as a professional cadre capable of mobilizing and delivering specialized services to rural poor women at scale. Traveling to other states for SHG formation under National Rural Livelihoods Mission is a source of economic and social empowerment. Interactions and focus group discussions with CRPs show the tremendous potential for leadership amongst the poorest rural women with little facilitation and support by the project.

Improved mobility. The retrospective impact evaluation study to understand the socioeconomic effects of JEEViKA done earlier in the project showed increased women's mobility as a key indicator of women's empowerment. There is evidence of expansion of mobility of women not only for meeting needs and interests of the family, such as visits to health centres for sick children, but also for attending Panchayat meetings. The assessment found that 5 percent more women in treatment villages than in control villages went to health centres,

3 percent more women visited neighbors and relatives and 5 percent more women in treatment villages than in control villages attended local Panchayat meetings.

“If you want to empower a woman, expand her mobility to as far as you can from her village. When she comes back from trainings and exposure visits, you will see she will never be the same again. It widens their horizon and the impact is well beyond just physical mobility.”

—Archana Tiwari, State Program Manager, Social Development

Greater participation in household decision making.

Earlier assessments showed SHG women also experienced greater participation in household-level decision making, particularly women from indebted households. Eight percent more women from indebted households in treatment villages were more likely to participate in household level decisions. Five percent more women in treatment villages were likely to participate in decisions about livelihood activities and nine-and-a-half percent on decisions about education. Seven-and-a-half percent more women were likely to speak up about self-employment and three and a half percent more women were likely to discuss health expenditure. Twenty-three percent more women in treatment villages took part in decisions on credit access. These women were also more likely to express their political views within their households. Observations from end of project evaluations indicated further expanded roles in households and socially.

Emergence of strong social networks and support systems for women. Through their participation in BRLP, SHG women have developed social networks of their own both within their communities and beyond—this is significant social capital, particularly for economically and socially disadvantaged women. JEEViKA cultivated new cultural competencies and capabilities that defied the traditional conventions of gender, as well as more formal federated institutions. Combined, they give economically and socially disadvantaged women access to a well-defined network of people (women cutting across caste and religious boundaries, and both within and outside the village), new leadership roles and access to new systems of ‘knowledge’ with which they can challenge old generationally transmitted cultural systems

that are more concerned with preserving boundaries rather than disrupting them.

This has been the most critical in cases of single, deserted and widowed women. These women normally face hostility, scorn and ridicule as they are seen as having no male protection or backing. These networks have been critical in helping them with the necessary support mechanisms.

Greater courage and ability to deal with domestic violence.

In VO and SHG meetings, women were able to raise domestic concerns alongside financial and economic ones. Domestic violence was an issue on which SHG members organized and acted together. As per the 2015 study, after only a few intervention years, the likelihood of domestic violence in treatment villages reduced by three percentage points. In addition, women SHG members were 15 percent more likely to organize together on issues of domestic violence than their counterparts who were not part of the BRLP. Among indebted households, 6.4 to 7.8% more women from project villages claimed that they would act if a woman was beaten up in her village in 2011. Around 5% would act by themselves and 13% said that they would act in sync with other women.

Discussions with women show that VOs have evolved their own strategies to help women who face violence. In places where women had undergone gender training through the gender pilot, there was even more response. Some important strategies involved a three-member team constituted by the VO to visit the women affected by domestic violence, promote counseling for the husband and the family and monitor visits to check if there was improvement in the women’s situation. An important precaution was to choose a team that did not belong to the same hamlet, as women from the same hamlet are likely to be awkward and reluctant to let immediate neighbours know family matters. There are various forms and manifestations of gender-based violence. Women highlighted other commonly found examples such as women who have been deserted by their husbands, or continuously are threatened by desertion and divorce, or widows who are harassed by their in-laws over property, as also requiring support and assistance. These are more difficult to trace compared to physical domestic violence which in severe cases can be identified. It is easier to confront the culprits in these cases.



“My husband died and left me and my only child, my daughter, in large debt. My in-laws distanced themselves from me and my own parental family was too poor to support us. I worked hard to educate my daughter, but it is only when due to persistent efforts by JEEViKA didis I joined the SHG did my life change. JEEViKA became my support system and the women members my family. I still don’t own my homestead land, but I have now taken a loan to rent a shop. This was unthinkable few years ago. I can say with confidence for us widows and deserted women, JEEViKA is life-changing. From the brink of suicide to a life with a purpose, my story is nothing short of a miracle.

—Babli devi, Gaya

In other highlighted examples, the very first challenge is identification, then making women aware of questioning acts they themselves may not identify as violence.

Collective action on alcoholism and other social issues.

There is strong evidence of collective action against social issues such as alcoholism, child marriage, dowry and poor attention to both boy and girl child education. The issue of alcoholism received the strongest attention from women. In the context of rural households, there is a close relation between alcoholism and poverty, indebtedness and violence against women and children.

JEEViKA has been committed to supporting women-led anti-alcoholism campaigns at the community level. This included motivating women engaged in making country liquor to adopt other livelihood activities, prohibiting drunk men from entering their houses, especially as this triggered violence, and routine campaigns highlighting the financial and emotional costs of alcoholism. The SHG women formed wider collectives and acted as a pressure group for the State to make a policy decision to ban consumption of alcohol in the State, a case that got international publicity. Sensing victory, the VO and SHGs played a critical role in preparing to protect poor households and women members engaged in the liquor business, while at same time contributing to the objective of the alcohol ban. The activities included: preparing the list of households involved in the liquor business, discussion with the households offering them options for alternative livelihoods, and submission of the list to VO leaders and the Social Action Committee, and further to CLF leaders. In 2015, the Government of Bihar made a bold decision and announced the decision to ban liquor in the entire state. From prevention and campaign oriented work, the activities of the VO and SHGs shifted to vigilance and reporting on violations to the law. Further, the list of affected households was submitted by CLFs to local police in charge and to district administrations; women’s groups provided support to addicted persons through hospitalization or admission into de-addiction centers and contributions to ensure the ban is upheld.

3.2 Economic Empowerment

Economic empowerment is one of the most powerful dimensions of women’s empowerment. Women who are economically empowered are able to negotiate better

social and economic outcomes for themselves, their families, and local and national economies. Under economic empowerment, the project's efforts to increase women's access to credit, create livelihood opportunities to increase their incomes and to promote employment in the formal sector are included. There is some evidence of women's control over their incomes and access to and control of family resources. There is emerging data to show that women invest extra income in their children's education and on health issues.

Women's contribution to increased household incomes and reduced debts. Through a range of livelihood interventions under JEEViKA, women have been able to improve the economic situation of their families. The SHGs and federations and their members built up vast savings, own loan funds and built up their capital, as well as accessed significant bank loans in the State. This financial capital helped accelerate their income earning capacity. Not only this but the project facilitated access to key entitlements and safety nets such as pensions and life insurance. The end of project impact assessment survey showed that 65 percent of surveyed households that accessed the project's Community Investment Fund had a final income greater than 30 percent of that at baseline, increasing from an average income of Rs 35,968 per year, to Rs 46,758 per year. Women undertook various livelihood activities such as backyard poultry (almost 60,000 households) and dairy interventions (partly through over 400 dairy cooperatives), and as a result of their group efforts, productivity enhancement interventions, especially Systematic Rice Intensification and Systematic Wheat Intensification (with over 60% increase in productivity for over 200,000 small farmers). There was also considerable land leasing and sharecropping, and new micro-enterprises.

In addition, women were also able to use loans taken for reducing the debts of their households, given their easy access to SHG/VO credit and bank linkages, reducing dependency on high-cost debt from money-lenders. The SHG debt roster analyses showed that 11 percent of total SHG funds were used by members to repay such high-cost debts. Reducing debt pressure also included the

widespread implementation of the low cost Food Security Fund and Health Risk Fund through community institutions (accessed by around 1 million members each, which helped members avoid desperate use of high-cost loans for food and health emergencies). The women's direct role in financial inclusion changed their household situation, which was often noted by their husbands as well, and their standing in the household. Their aspirations for the empowerment and opportunities of their daughters has increased.

Women's ownership over assets and property. Women's land and asset ownership is associated with their economic participation, household bargaining power and management of household income. Lack of property is one of the key reasons women may be living in violent and abusive relationships as most women abused by an intimate partner are also economically dependent upon that same partner. Property ownership also opens women's access to financial institutions such as banks. There is encouraging evidence on this, especially for the cadre of CRPs who have an avenue for increased regular earnings, especially when they travel to other states for SHG mobilization. In a short qualitative study with 40 CRPs in the oldest block, Damdaha in Purnea, it was found that 20 of them had invested their earnings in purchasing land and assets in their name. This was a huge shift from the previous practice of seeking loans essentially for the male members to invest and use for purchase of property or take land on lease under their names.

Women's entry into farmer producer companies. To graduate women's income-generating activities from survival level into strong and viable businesses, women need access to the full range of credit, banking and financial services and facilities, essential to fully develop their productive assets, their land and their businesses. With support from technical partners, JEEViKA formed four women farmer producer companies (WFPCs) working on agriculture value chains: in Maize (Purina), Seed production (Khagaria), Vegetables (Nalanda and Muzaffarpur). More than 6,000 SHG members³ were mobilized by the project to become the shareholders in these WFPCs. These producer companies are owned and

³ Total 6,360 SHG members were mobilized as Shareholders of WFPCs—2,601 in Purnia, 760 in Khagaria, 1,057 in Nalanda and 1,942 in Muzaffarpur.

managed by women farmers who have been provided training and technical support for productivity enhancement, aggregation and primary processing, resource management and business planning, and accessing commodity markets. The producer company in Purnea district has achieved a turnover of nearly Rs 1.5 crores and a net profit of nearly Rs 11 lakhs annually, with an average 20 percent higher return to the farmers. Similar approaches are being scaled up across multiple commodities including vegetables and fruits in many other districts.

3.3 Political Empowerment

Women's empowerment in the political sphere is critical for their advancement. It upholds women's rights to self-representation and self-determination and therefore changing the nature of politics which has been male

Samina Khatun from Muzzafarpur, explaining her confidence to come out of poverty and contest for Panchayat elections says it is only because of her sisters from JEEViKA. She has won twice and both times has been elected as a ward member. When asked if she would like to be a Sarpanch, she says now she wants to encourage and groom younger women from her community.



dominated. In India, and particularly Bihar women's presence has been very poor in national, regional and state politics. However, the local governance structure, called the Panchayati Raj, provides tremendous potential for women's participation and representation. There is 33 percent reservation of women at all levels of the local governance institutions and in Bihar this is 50 percent. However, the truth of women's numbers hides the actual practice of women being proxy candidates with real power and decisions being taken by men. However, there is a gradual but steady shift from mere participation, to women under JEEViKA now influencing the agenda of the local governance institutions as well as holding them accountable. Another aspect highlighted here is SHG women holding accountable institutions that provide key services and entitlements, as a strong proof of the women's growing political presence and voice.

Women's participation in and influence over local governance. The women members of the VOs and SHGs have emerged as an important political constituency in the state. The percentage of women voting has been increasing over the years. In general elections held for the country (to elect their national government), the voting percentage increased by 12%, from 44% total turnout in 2009 to 56% in year 2014. The recent local government elections, for the Panchayat Raj Institutions (PRI), in 2016 saw a large number of SHG members participate in and win elections. Out of the 1,860 women who contested for the position of *Gram Mukhiya*, the financial head of the Panchayat (village council), 222 women were elected. For the position of *Sarpanch*, the Panchayat president, 1,372 had filed their candidacy and 420 won. This is a huge victory and a loud statement on women's informed entry into the local political scene.

While some women were occupying these positions before due to the mandatory reserved seats for women, what changed as a result of JEEViKA was the type of candidates, the campaigning issues and strategies and the focus on key development issues. Thus from offering bribes, the focus of the candidates was on transparency, oversight over key public services, linking of entitlements to rightful beneficiaries, and regular conduct of gram sabhas (village council meetings). Examples of women convening special meetings to identify

candidates, encouraging and mentoring these candidates, evolving a campaigning strategy and going from village to village conducting speeches and rallies are proof of the solidarity that is now beyond a psychological enabling factor, to a more strategic factor that can transform politics.

Holding institutions accountable. Women encounter specific problems when dealing with public services that make it especially difficult for them to hold service providers or authorities accountable. These problems concern women's access to services, the extent to which women are visible and esteemed, and providers' knowledge of and conduct toward women. Successful service delivery for poor people, and especially poor women, can only emerge from institutional relationships in which actors are accountable to each other; whether by the empowerment of poor people, or by the social inclusion of poor people by service providers. According to the World Bank's World Development Report, 'successful services for poor people emerge from institutional relationships in which the actors are accountable to each other'.

Membership into SHGs has fostered women's collective action at the village level and deepened their participation in public institutions. Earlier assessments showed, for example, women from BRLP villages were found to be more likely to work with other women in their village in responding to problems with local schools (7 percent more), and Public Distribution System (8 percent more), than control villages. A large number of SHG women from Village Organisations have taken on the responsibility of running public distribution system (PDS) shops for subsidized grains and essentials—they have ensured transparent and efficient supply of PDS services, where previously there was unfair and often corrupt practices (see more below).

School Monitoring by Community Members. In June 2016, Government of Bihar, under the direction of the Chief Minister, announced that all Government run schools (up to class 8 standard) were to be monitored by a Social Action Committee (SAC) of Village Organisations. The main reason for making this decision was on the fact that, as per the education department report, almost 95% of children have enrolled in schools on paper but in fact only 55–60% are going

to school on a regular basis. The committee members would have to monitor on six activities as actual opening and closing times of schools, attendance of posted and working teachers, admission of students and their attendance, daily routine classes as per time table, sanitation and cleanliness of schools and midday meals for students. Training cum orientation programs were scheduled in all blocks covering around 31,000 VOs and SAC members. To date around 40,000 schools are being monitored through the 35,000 VO's SACs and a total of 1,00,000 visits have been done. More than 80,000 forms/reports have been submitted to Block and District Education officers in each district and more than 3,000 administrative actions have been taken like suspensions, terminations, salary deductions, transfers and also police complaints in some cases. Though the school monitoring by SAC members has resulted in positive effects such as increase in teachers and student's attendance, for the regularity in school midday meals, however, the community members have faced several difficulties. Women have faced resistance and hostility from school principals in the form of rude and abusive language, non-entry in school by closing doors, using influence and pressure from local people to threaten if women complained, offering of bribes, etc. The community members have not stepped back, but rather have taken action collectively by reporting complaints to relevant government authorities. This type of social audit work has not only resulted in empowerment but also allows women to play a key role in addressing key development challenges of their communities.

Ensuring transparency and efficient functioning of the Public Distribution System. Essential food commodities are provided to ensure food security of the poorest sections of the society under the Public Distribution System (PDS). The PDS functions through a network of Fair Price Shops for distributing ration items to ration cardholders. The focus of VOs with regards to the PDS has been two-fold: to ensure transparency and effective functioning of the system through its fair-price ration shops, and to demonstrate community models to make the system more responsive to food security issues of the households. With increased awareness and knowledge women have been monitoring the opening of the shops on time, availability of supplies, sale of commodities at uniform price and reporting incidents of corruption

and malpractices to the concerned authorities. Care is taken to ensure opening of Fair Price Shops at locations which are convenient for ration cardholders.

JEEViKA at present is running a welfare scheme through its 102 Fair-Price Shops (FPS) spread across six districts of Bihar. JEEViKA, through its community institutions has been actively involved in running the operations of Public Distribution System via their VO fair price shops to try to improve the service-delivery mechanism of the system. The PDS related activity created an avenue for community-based enterprise. In order to make it an accessible and sustainable system for the community, it was ensured that all the beneficiaries should have timely access to food grains through these community-led PDSs. Encouraged from positive outcomes of the initial 102 Village Organisations other Village Organisations have also decided to get a license issued. So far, 839 Village Organisations have applied for PDS licenses in different blocks of 15 districts of Bihar.

Influence over State Policy. Recognizing the success of these women-led institutions, the Government of Bihar has made it their central strategy for partnering with and leveraging these women's institutions in tackling Bihar's rural poverty, as noted above. The Government laid down policy to support women-managed PDS shops, and SHG women's participation in School Management Committees, which review the quality of education in government schools. In response to SHGs, women's widespread and vocal community campaigns against alcoholism, liquor abuse, and the negative effects of such behavior on women in households, the Government also put in place a ban on liquor consumption and sale in the State and introduced a new Excise Policy in 2015. The Government of Bihar's emerging priorities prominently include women's socioeconomic empowerment, improved access to health, nutrition and sanitation services, and skill development and job placement for youth.

4. Key Challenges

Despite the unprecedented advances on women's empowerment in the State by the project, there are still challenges on a number of fronts and levels.

Difficulty to establish women's use of and control over loans, incomes and assets. An important household challenge highlighted by the CRPs and staff is that of difficulty in establishing to what extent women exercise decisions to seek loans, decide the actual loan amount and then finally its use. Though there is encouraging data on an increased role of women's decision making on livelihood matters at the household level, this is not uniform. Field anecdotes and observations show that where women have undergone gender sensitization and have undergone exposure visits, they are more likely to be assertive and influence these decisions. In these cases, the loan use is better, as is the repayment. Where women have taken loans under pressure from their families, there are often concerns and irregularities between purpose for which the loan was sought and its actual use. Moreover, there is also less evidence as to how many of these loans actually are used for women-centric livelihood activities or for creating assets and property under women's names. There is some encouraging emerging findings, but due to lack of a methodology or indicators to gather relevant data, the project cannot be certain of impact on women's ownership of land and assets. For staff and community, this is the most critical gender indicator and challenge for the project.

Backlash to women's voice and agency. The newfound confidence and assertion women experience resistance and hostility from traditional power structures in the community and those outside it. While there are also considerable positive responses by husbands and other community members, often women's empowerment is seen as threatening the very core of the feudal and patriarchal system of the state. In focus group discussion undertaken to understand positive outcomes and challenges to women's empowerment, several instances of backlash emerged. A nexus between old generation men and service providers from various institutions seems to operate to threaten and weaken efforts by women to question and challenge wrongdoings and injustices. Holding service providers to account in the PDS, health, and school systems has made women unpopular. Women have raised voice against corruption and malpractices and this has not gone down too well. From the project point of view, there is no system of supporting women during these times. VOs have acted with strong solidarity and courage but this has not been an easy process.



“We face backlash for raising our voice and being assertive. The first attack men use is to malign a woman and call her characterless. Their families are told their women are now out of control and will hijack property and assets. If everything fails, they resort to attacking their children. We had a case of a woman who’s son was falsely accused of theft. The whole issue is that of power.”

—Lakshmi, Gender Community Resource Person,
Muzzafarpur.

Women look forward to learning how to confront the powerful, how to negotiate, and how to win allies.

There is no specific strategy to working with the poorest, most vulnerable women. The project field cadre and the VOs often felt poorly equipped to provide targeted and customized assistance to the most vulnerable women. Single women, widows, deserted women and landless women have peculiar needs and therefore may require a more intensive handholding approach. JEEViKA is keen to explore an ultra poor strategy. This strategy will need to incorporate the needs of these vulnerable women. For instance, a widow who is being threatened by her husband’s family to give up her share of property to other male members from the family, also requires some legal advice on how to safeguard her and her children’s rights. Perhaps a more routine project dilemma is that a landless and assetless woman may not be able to use loans productively without a targeted livelihood intervention.

Certain gender norms and traditional practices are extremely difficult to change. The women admit to facing difficulties and failures to address deep-seated practices such as dowry. The poor borrow a lot of money to be able to arrange for dowries and spend on marriage rituals. This pushes them into indebtedness and yet, without a dowry they cannot ensure their daughter will be treated with dignity and is secure from any violence. The other practice is that of insensitive treatment of widows. A woman without a man is seen as weak and is targeted by her marital and parental families. She is seen as a burden and no one is willing to offer her any moral and psychological support.

5. Lessons and Recommendations

The impact on women’s empowerment through JEEViKA has been compelling. As the Bihar Transformative Development Project will expand its outreach from 150,000 SHGs to 450,000, covering 5 million households, there is scope to enhance the impact on some of the most difficult areas, such as women’s increased control over incomes, women-centric livelihood opportunities and ownership over assets and property.

1. *Strong organisational strategy on gender is required.* To ensure priority is attached to gender equity and women’s empowerment, a comprehensive gender strategy needs to be evolved through a consultative

process with staff, community and other civil society partners. The key components of this strategy should include gender sensitization for project staff across state, district and block levels, inclusion of responsibilities on gender and women's empowerment in job descriptions of staff, select gender/women's empowerment indicators and a mechanism for review and evaluation.

2. *A robust and responsive model at the community level on gender.* A clear strategy and indicators for community institutions will also be useful, as well as setting some guidelines for enabling community institutions to act on gender issues, especially gender-based violence. Learning from other livelihood programs and other organisations such as Pradan and Udyogini will be insightful. Both these organisations, in ensuring increased entrepreneurship of women, have created mechanisms at the community level to help address gender issues, including violence, to remove key barriers to their economic empowerment. Given that health and nutrition will be important components of the project, organisations such as Population Foundation of India also offer lessons on use of social media and communication strategies that help change attitudes on gender issues and women's health issues.
3. *Monitoring and learning on women's empowerment and gender indicators.* Measuring women's empowerment is important because it provides a regular reminder of its importance to staff and programs. Engaging program staff, program beneficiaries, and communities more broadly on questions of empowerment raises awareness on these issues and thereby helps to encourage more nuanced strategies to promote change. Reflection on JEEViKA's experience shows two specific areas where women's control can be tracked: i) women's control over loans to strengthen their own livelihood activity and how many loans are used to support livelihood activities of women and ii) whether women's ownership over land and other assets increases.

4. *Partnerships and alliances.* JEEViKA has had rich and relevant experience of working with partner organisations and technical resource organisations. In strengthening its gender and women's empowerment agenda, it will benefit greatly from gender-focused partnerships for some specific identified areas.

- Models and strategies to address gender-based violence.
- Increasing women's economic efficiency and enterprise through leadership training, business development and management skills.
- Advocacy and working with government on women's land rights.
- Increasing political voice and influence through greater capacity building on governance issues of elected representatives.
- Encouraging productive employment and decent work conditions for young women through partnership with the corporate sector.

In conclusion, JEEViKA responded with great attention and commitment to the need for women's empowerment. There is every possibility for deepening this impact and need of innovative thinking, pooling of expertise and resources, both technical and financial, to create responsive models for women from 5 million households. As women are learning to raise their voice to seek their rights and entitlements, they are also shifting the unequal power relations in their households and communities. This has not happened without its fair share of backlash and struggles. Today, women have new aspirations for themselves and their daughters. They dream of the day when they don't have to worry about their daughter's safety and when they can see their daughters in well paying jobs, traveling around the country bringing about a change in other poor women's lives. *"They must carry forward the work of JEEViKA,"* says a woman with a young daughter. JEEViKA needs to stand with its women members; without them there is no JEEViKA.

MAKING THE POOR BANKABLE:

THE JEEViKA EXPERIENCE OF FINANCIAL INCLUSION

VINAY KUMAR VUTUKURU,¹ PARAMVEER SINGH,²
MUKESH CHANDRA SHARAN³

“In a highly constrained environment for financial services, the JEEViKA program has delivered transformational outcomes, bringing millions of poor rural women into mainstream banking system. By building on the platform of community institutions, JEEViKA has facilitated easier access to credit, insurance and a range of financial services for nearly 7 million households in Bihar. While doing so, the project has been able to affect systemic changes in the state’s banking ecosystem and has established the identity of rural women as responsible and trusted clients of financial institutions. Vital lessons on last mile financial inclusion have emerged from the JEEViKA experience.”

Financial Inclusion in Bihar: A Constrained Beginning

Access to basic financial services is a vital ingredient to reducing poverty and boosting prosperity. However, in states like Bihar in India, this is an extremely challenging proposition.

With 104 million people, Bihar accounts for 8.6 percent of India’s population. However, only 4.8% of the nation’s commercial bank branches are operating in the state.⁴ The state’s credit-deposit ratio of 32.8 is the second lowest among all major states and is way less than the national average of 79.⁵ In 2015, the number of bank branches per 100,000 people stood at 6.20 as compared to the national average of 13.5.⁶

Number of Bank Branches per 100,000 People

Ghana	7.2
Botswana	7.9
Bangladesh	8.4
Angola	11.7
India	13.5
Bihar	6.2

A weak banking architecture was just one of the many challenges faced by JEEViKA at the time of its inception in 2006. The effects of the constrained banking

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⁴ Economic Survey of Bihar 2016–17.

⁵ Reserve Bank of India, Branch Banking Statistics 2014–15.

⁶ Figure for Bihar calculated from above mentioned data sources, Data for India and Rest of the countries—The World Bank.



'A Familiar Sight'—A local bank branch manager attending a JEEViKA Self-Help Group Meeting. Since 2007, JEEViKA has undertaken training and exposure programs for more than a thousand bank branch officials.

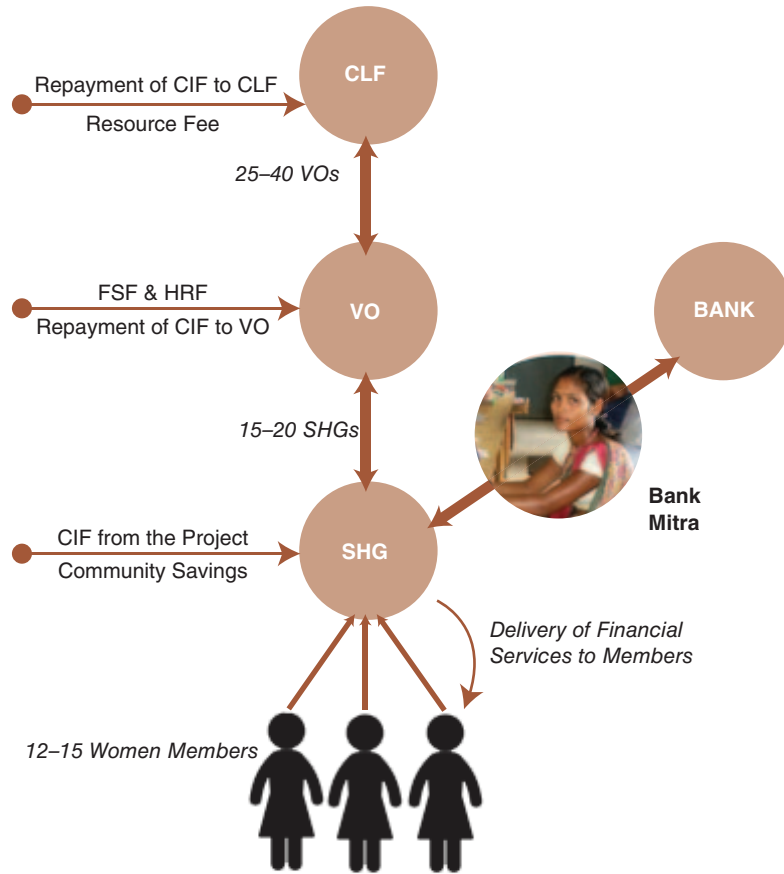
sector were the most telling on the poorest sections of the rural areas. The unbanked poor households had no formal credit history or collaterals to access loans from banks. In absence of formal avenues for credit, the poorest sections were forced into debts taken from informal sources like local moneylenders charging exorbitantly high interest rates. Health shocks and low levels of food security were critical situations where poorest households were at their most vulnerable toward falling into debt traps. Low levels of credit access also limited the ability of poor households to make productive investments towards income generating activities, thus resigning them into low income–low productivity cycles.

JEEViKA—Community Institutions for Financial Inclusion

JEEViKA, a World Bank supported program of the Government of Bihar is aimed at socioeconomic empowerment of rural households. The program was initiated in 2006 under the Bihar Rural Livelihoods Project (BRLP)

in 6 districts and 42 blocks of Bihar. Since then, the program has been scaled up to all 38 districts of Bihar, replicating the lessons of BRLP in the entire state. JEEViKA has thus far mobilised nearly 8.2 million rural women into more than 689,000 Self-Help Groups and their federations. These community institutions have emerged as the most effective platforms for linking the poorest to the formal banking system.

The program adopted the innovative approach of group-based financial access where local bank branches could reach a large client base by servicing a much smaller set of community institutions. At the village level, 12–15 rural women come together to form a Self-Help Group (SHG). These groups are oriented to meet regularly and undertake financial savings and lend internally from the group's common fund or corpus. The program provides small catalytic funding in form of a Community Investment Fund (CIF), initially to stimulate financial intermediation and build credit history of members. Locally identified resource persons called Community



Mobilizers (CMs) facilitate the SHG meetings and maintain books of records. With a proven credit history and a small corpus generated by way of savings and interest, the SHGs are able to leverage larger credit amounts from banks.

Within the village, 10–15 SHGs are federated into Village Organizations (VOs). The VOs act as an important interface between the local bank branch and the member groups and facilitate ongoing credit linkage through a Bank-Linkage Committee. The committee undertakes due monitoring of loans accessed by group members and follows up on timely repayments. The majority of the project funds like CIF get consolidated from SHGs at the VO level, which the federation revolves and redistributes based on demand raised from community members. This fuels a virtuous cycle of ongoing reinvestment into income generating activities thereby enhancing incomes at the household level. Specialized financial products are also introduced at the VO level for members to access funds at differential interest rates for costly activities like purchase of food grains in a lean season or emergency health related expenses. 25–40

VOs are further federated into larger Cluster Level Federations (CLFs). These federations act as large-scale financial intermediation platforms addressing a wide variety of financial needs of the community. CLFs monitor the overall financial health of member institutions and acts as vital touchpoints for banks to reach out to the community.

The community institutions also serve as enabling platforms for rural households to access a range of financial services including insurance and financing for producer organizations. Community Mobilisers undertake regular financial literacy and credit counselling with SHG members, orienting them on sound financial practices as well as new modes of financial transactions like digital and mobile banking.

Interventions and Innovations

Over a decade, JEEViKA has been able to achieve a series of firsts in the area of Financial Inclusion in Bihar. The programme has worked on addressing key constraints on both the supply- and demand-side of financial

service delivery. Some of the key programmatic interventions and innovations that have been instrumental in JEEViKA's success are outlined ahead:

- **Building collective capacities:** The program focused on developing a strong community led facilitation architecture on ground with locally identified resource persons working as Community Mobilisers and Bookkeepers. Also, the federations were made responsible for monitoring the health of their constituent groups and interacting with formal financial institutions.
- **Bank Mitra—A familiar helping hand:** JEEViKA introduced SHG members as *Bank Mitras*—Community members placed within bank branches to facilitate transactions and act as interfaces between the bank and institutions. It was a major milestone for the programme where informal, non-bank employees were allowed to support community institutions while being stationed within the branch offices. For hitherto unbanked community members, many of whom steps into a bank branch

for the first time ever, the *Bank Mitras* serve as vital confidence boosters. More than 2,000 Bank Mitras are currently working with local bank branches in Bihar supporting thousands of groups to effectively engage with their lending partners while ensuring a healthy loan portfolio for the banks.

- **Specialized financial products at VO level:** The programme proactively analysed credit consumption patterns of SHG members and responded by introducing specialized financial products at the VO level. Food Security Fund (FSF) was introduced at the VO level to finance collective procurement of food grains for rural households facing food shortages in lean seasons. Similarly, Health Risk Fund (HRF) was introduced for members to borrow at lower interest rates for health-related emergencies. Both these funds enabled the project in reducing vulnerability of the poorest sections while ensuring availability of funds for productive investments.
- **Strong financial management systems:** For strong financial management at the community level, uniform Books of Records were introduced at all levels. This enabled the project in standardizing performance measurement systems while ensuring desired rigour in financial management. The concept of micro-planning—an asset and credit assessment tool for groups was introduced. Micro plans were accepted as standard documents as part of credit applications submitted by community institutions. Also, the project instituted large-scale annual audits of the federations, i.e., VOs and CLFs to further strengthen financial management.
- **Formal partnerships with banks:** JEEViKA became the first state programme to enter into formal partnerships with most of the commercial banks in the state by way of Memorandums of Understanding (MoUs). These MoUs helped the program in gaining desired buy-in from the banking sector and strengthened the SHG-bank linkage.
- **Consistent engagement with the supply side:** The programme continuously engaged with the banking system at all levels. JEEViKA became the formal member of the State Level Banker's Committee (SLBC) in Bihar, the apex decision making body for banking within the state. The programme also facilitated capacity building of local bank branch

Key Interventions & Innovations in JEEViKA

COMMUNITY LED FACILITATION ARCHITECTURE



- More than 2000 community Bank Mitra, facilitating transactions, loan disbursements and repayments
- Bank Linkage Committee in every village
- Community Mobilizers to facilitate SHGs
- Resource Persons for Insurance and Financial Literacy

STRONG FINANCIAL MANAGEMENT SYSTEMS



- Standard Books of Records across the project
- Strong emphasis on participatory credit planning
- Large scale audit of Village Organizations

CONSISTENT ENGAGEMENT WITH SUPPLY SIDE



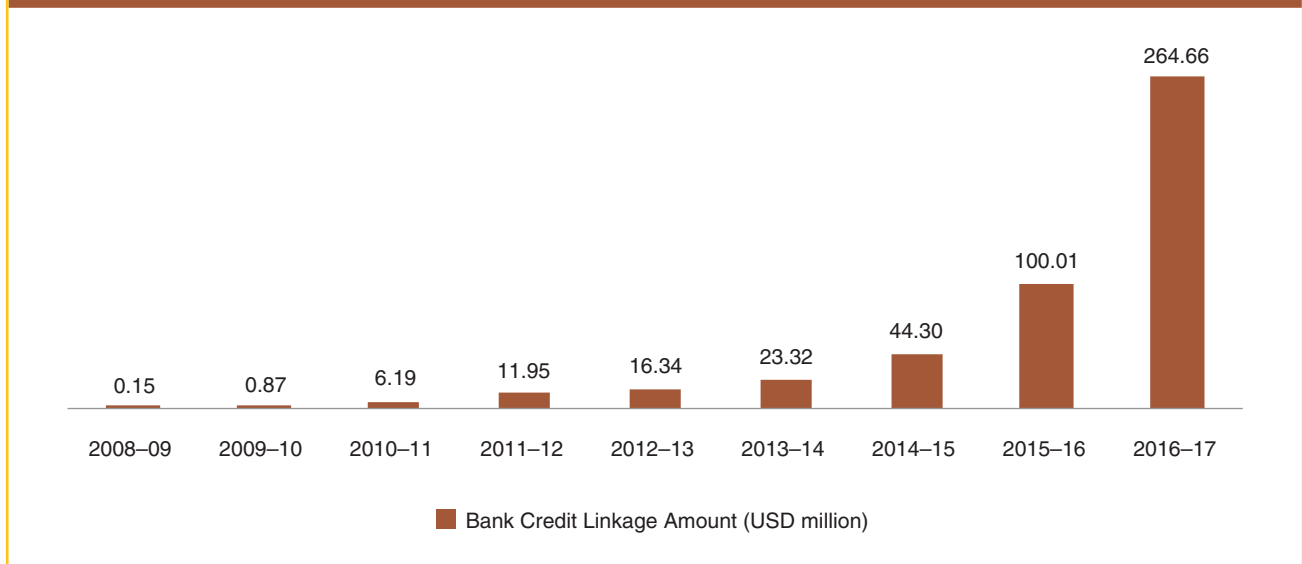
- Training and Orientation of bankers
- Formal MoUs with major banks
- Active participation in SLBC
- First loan limit raised to minimum \$ 1200

GOING BEYOND CREDIT



- 800,000 women enrolled under insurance
- Digital Finance Pilots ongoing
- e-Book Keeping initiated in 300 VOs, to be scaled up

Figure 1: Growth in Bank Credit Linkage



managers and key stakeholders by exposing them to best practising SHGs and federations within the state and outside as well.

Key Outcomes

- **Massive outreach:** JEEViKA has mobilised more than 8.2 million rural households into more than 689,000 Self-Help Groups further federated into nearly 40,000 VOs and 550 CLFs. This large institutional platform has enabled the poorest sections of rural Bihar to collectively access banking services. Presently, 3,672 rural bank branches are engaged actively in financing SHGs. These bank branches have amplified their reach in terms of households by engaging with communities as a group. Taking into account the prevailing average of 16,100 people per bank branch, the banks have been able to reach 12 percent of their client base by servicing only 1.1 percent of corresponding bank accounts.
- **Boosting access to credit:** SHG-bank linkage in the state has undergone an inspiring transformation over the last decade. Under the programme, the community institutions have leveraged credit to the tune of \$511 million from banks while generating another \$64 million in community savings. Starting from an extremely low base of less than \$1 million in 2009, the community institutions have emerged as vital stakeholders for banks, leveraging \$264 million in 2016-17 alone (Figure 1). Significant investments made into building systems and processes under BRLP have enabled the programme to replicate the lessons on a larger scale. In the last 2 years, the programme has shown a 100 percent annual growth in credit linkage.
- **Wide coverage under insurance:** JEEViKA has facilitated coverage of more than 860,000 SHG members under the government sponsored Aam Aadmi Bima Yojana, an individual insurance scheme insuring the women members against death and disability. The participation rate under the program has grown significantly and members are also able to avail a complementary scholarship programme for families with children studying in secondary and higher classes. The insurance program clearly highlights the effectiveness of institutional platforms in building convergence with such government programs. JEEViKA SHG members constitute 98 percent of all beneficiaries covered under the scheme in the state.
- **The leveraging effect of JEEViKA:** JEEViKA institutions have been successful in going against the trend by leveraging high amounts of credit against lower investments. Against an estimated direct project investment of \$308 million in the form of a CIF, the community institutions have leveraged \$575 million in bank credit and community



savings. This puts the leveraging ratio of the project at 1.87 implying that for every \$1 invested in the project, the community institutions have been able to generate an additional investment of \$1.87. This is a complete reversal from the state's overall credit-deposit ratio where for every \$1 invested by rural communities, only \$0.32 is being leveraged as credit. Furthermore, the project investment along with community savings form a significant corpus fund for community institutions that will allow them to leverage more formal credit on an ongoing basis.

Impacts of JEEViKA Financial Inclusion Initiatives

While the programme is still ongoing across the state of Bihar, evaluations carried out for the completed Bihar Rural Livelihoods Project have shown significant impacts.

- **Reducing high-cost debts:** One of the most significant impacts of the program has been a significant reduction in high-cost debts among member households. A majority of SHG members have

reported reduction in outstanding debts from high-cost sources such as local moneylenders, underlining the importance of linkage with formal finance.

- **Boosting productive investments and household incomes:** Assessments carried out as part of BRLP's Implementation Completion Report (ICR) indicate that more than 60 percent of loans taken by members were for productive investments in varied activities including agriculture, dairy and enterprises. Also, nearly 65 percent of member households reported enhanced incomes by as much as 30 percent.
- **Systemic impacts:** The programme has been able to affect wide reaching systemic impacts. As a key member of the State Level Banking Committee (SLBC), the programme has consistently worked towards changes in policy. Apart from having the *Bank Mitra* policy ratified at the state level, JEEViKA was also able to inspire gradual policy changes that fixed the first dose of credit to SHGs at a minimum of INR 75,000 (Approx. USD 1,200). This was a key departure from the earlier policy of credit amounts based on existing funds with the SHGs and reflected the growing confidence of the banking sector towards community institutions.

Lessons Learnt and Issues for Wider Replicability

The JEEViKA experience of promoting Financial Inclusion with community institutions as enabling

platforms holds valuable lessons for decision makers and practitioners. Firstly, the approach of promoting collective access to finance can help in overcoming challenges like a weak banking infrastructure. In the case of JEEViKA, the programme in initial years and subsequently the community institutions took charge of undertaking necessary due diligence and system strengthening that allowed the banks to provide credit without incurring very high transaction costs. Secondly, initial investments in establishing standardized processes and protocols around financial inclusion is critical for replicating success. JEEViKA adopted a standardized model of building member capacities on key principles of savings, thrift and responsible borrowing. Further, the programme invested in developing a community level facilitation architecture that supported the institutions while interacting with the supply-side stakeholders. This has paid rich dividends in newly entered geographies as the programme could implement the proven template much more efficiently. Thirdly, it is critical to go beyond credit and facilitate provision of an entire bouquet of financial services. Under the JEEViKA program, the community members have been exposed to not only credit but an entire range of services including insurance, remittances and individual banking. An increasing number of SHG members are moving toward direct linkage with the banks, which is ultimately the goal of financial inclusion, i.e., making every community member capable and confident in accessing all the financial services available for access.

ENHANCING AGRICULTURAL LIVELIHOODS THROUGH COMMUNITY INSTITUTIONS IN BIHAR, INDIA

DEBARAJ BEHERA, ARVIND KUMAR CHAUDHARY, VINAY KUMAR VUTUKURU, ABHISHEK GUPTA, SITARAMACHANDRA MACHIRAJU, AND PARMESH SHAH¹

Context

Bihar is the third most populous state in India with over 100 million inhabitants. The state's economy is dominated by agriculture: it constitutes 19.2 percent of state's GDP² and employs nearly 75 percent of the labor force. 92.8 percent of the farmers in Bihar are small and marginal (small holders), which is much higher than the all India average of 83.5 percent.³ Furthermore, Bihar's agriculture productivity is one of the lowest in India. Low agriculture productivity is a multidimensional problem and following factors can partly explain some of its causes:

- First, **poor households don't have sufficient 'voice' and lack collective bargaining power** to improve their access to credit, better inputs and public services.
- Second, **smallholders can't invest in higher quality inputs due to poor access to credit**. The Credit-Deposit (CD) ratio⁴ of Bihar is just 34 percent, far

below the national average of 75 percent, and much lower than the CD ratio of other states.

- **Unavailability of good quality seeds is the third biggest constraint faced by the small and marginal farmers in Bihar**. These problems have resulted in only 33 percent of smallholders using improved seeds compared to an all India average of 43.9 percent.⁵
- Fourth, **the extension facilities are not customized for smallholders**.
- Frequent floods and droughts in Bihar have worsened the problem and makes farming a risky livelihood for farmers.

Currently, programs that have not customized and adopted technologies for smallholders, have met with limited success. These interventions have neither addressed the root of the problem nor the intergenerational nature of landlessness and poverty.

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² (Government of Bihar—Finance Department 2007–08) (Government of Bihar—Finance Department 2010–2011), (Government of Bihar—Finance Department 2011–2012), (Government of Bihar—Finance Department 2009–2010).

³ (National Commission for Enterprises in the Unorganized Sector, December 2009).

⁴ CD ratio is an indicator of outreach of institutional credit in states.

⁵ (National Commission for Enterprises in the Unorganized Sector, December 2009).

Implementation Strategy: Key Innovations

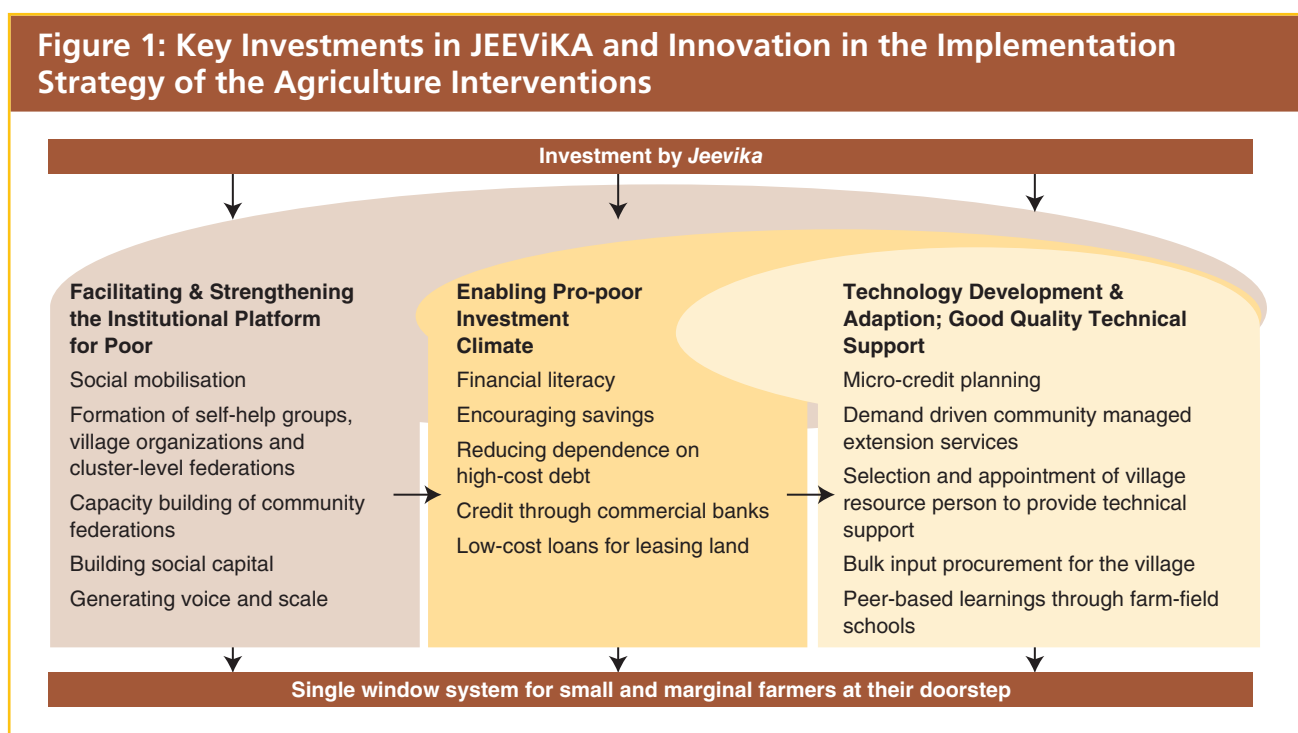
Bihar Rural Livelihoods Promotion Society (BRLPS), an autonomous society supported by the Government of Bihar and the World Bank, has been working with community institutions since 2007. BRLPS is the implementing agency of Bihar Livelihoods Project, popularly called 'JEEViKA'.⁶ Key investments of the project include: building and strengthening institutions of the poor and generating social capital; developing financial services for the poor; promoting and diversifying livelihoods; and improving last mile delivery of public services.

A number of innovative livelihood initiatives for small and marginal farmers have been piloted and scaled up under 'JEEViKA'. The primary agriculture intervention⁷ was implemented through these community institutions and the following innovations in the

implementation strategy were crucial to the success of its scale-up:

- 'JEEViKA' facilitated the creation of an '**Institutional Platform**', which is owned and supervised by communities.
- The institutional platform with support from the project staff enabled a '**pro-poor investment climate**' in state, which lowered the cost of credit
- Community professionals, technical agencies and JEEViKA staff also helped smallholders customise and **adopt the new methodologies** for small landholdings.
- A **single window system for small and marginal farmers** at their doorstep built on the social infrastructure was facilitated by the project

Figure 1 provides the process at a glance, as well as the key investments by the project.



⁶ Bihar Rural Livelihoods Project or JEEViKA is a statewide community-driven poverty reduction project jointly funded by the World Bank and the Government of Bihar.

⁷ The agriculture interventions in JEEViKA are popularly called System of Crop Intensification (SCI). However, the exact adoption of SRI and SCI practice amongst the farmers has not been rigorously evaluated.

Institutional Platform of Poor

Since 2007, *JEEViKA* has supported the formation of three tiers of institutions. It has mobilised 8.2 million rural women into 689,000 self-help groups (SHGs)⁸ in 534 blocks and 38 districts. The affinity-based SHGs have been federated into nearly 40,000 village organizations (VOs) at the village level, and 550 cluster level federations (CLFs) at the sub-block level.

Pro-poor Investment Climate

Institution building was accompanied with the creation of an ecosystem of social capital-based financing, which enabled the formation of a **favorable investment climate for the poor**. The project established a Community Investment Fund⁹ (CIF), which was managed by Community-based Organizations (CBOs).¹⁰ *JEEViKA* also facilitated strategic partnerships with commercial banks and insurance companies.

Since 2007, these communities have accumulated US\$80.83 million savings (voluntary and compulsory). The total cumulative credit flow from commercial banks to these groups was US\$511 million till Dec 2012. The communities have revolved these funds for inter-loaning purposes.

Agriculture Technologies and Practices

'*JEEViKA*' has introduced several livelihood interventions in the last five years based on the demands of the communities. Most communities were keen to productively use credit and enhance their agricultural income. The project also recognized that enhancement of agriculture income can significantly impact poverty incidence in the state and improve food security.

The project has promoted a package of well-known scientifically proven agricultural technology¹¹ since 2007. It was chosen for two primary reasons. First, it is not capital intensive but focuses on intensification of knowledge, skill and management. Second, it has successfully demonstrated improved yields for small and marginal farmers in the past. After the success of initial pilot in rice, it was scaled up for wheat, green gram seed, rapeseed and vegetables. Another initiative called Zero Budget Natural Farming is also being piloted in Bihar. Figure 2 has the comparison of various agricultural interventions.

The set of practices promoted by *JEEViKA* are not a high-cost technology intensive solution but a mix of scientifically proven methods, indigenous knowledge, and better management of soil, water, plant and nutrients. The core principle of this methodology is to ensure adequate development of roots to enable greater access to nutrients in the soil. The project emphasizes nurturing the growth of a *larger and a more robust* root system¹² through early establishment and sufficient spacing for roots to grow. The new practices adopted by *JEEViKA* farmers are different from the 'traditional' practices (or current methods in the non-*JEEViKA* land/households) in the following ways.¹³

- **Seed treatment:** The seed rate¹⁴ in the new method is a fraction of the seed rate in conventional farming, e.g., seed rate for rice is 90 percent¹⁵ lower than earlier.
- **Nursery preparation:**¹⁶ The nursery bed created for sowing the treated seeds in the new method is much smaller than the conventional method. The area of the bed usually depends on the spacing to be maintained in the main field, and the preparation

⁸ A typical self-help group comprises 10–15 women from the poorest of the poor, and the poor. The members meet at least once a week, collect savings and maintain books of accounts. Representatives from several groups are further federated into village organisations.

⁹ The Community Investment Fund is sanctioned as a grant or revolving fund to the village organisations for undertaking livelihood interventions. The first disbursement is given as a grant to the VO, but the subsequent payouts are given as credit and SHG members are responsible for repayment.

¹⁰ CBOs refer to self-help groups and higher level federations.

¹¹ This methodology is popularly called System of Crop Intensification in the state.

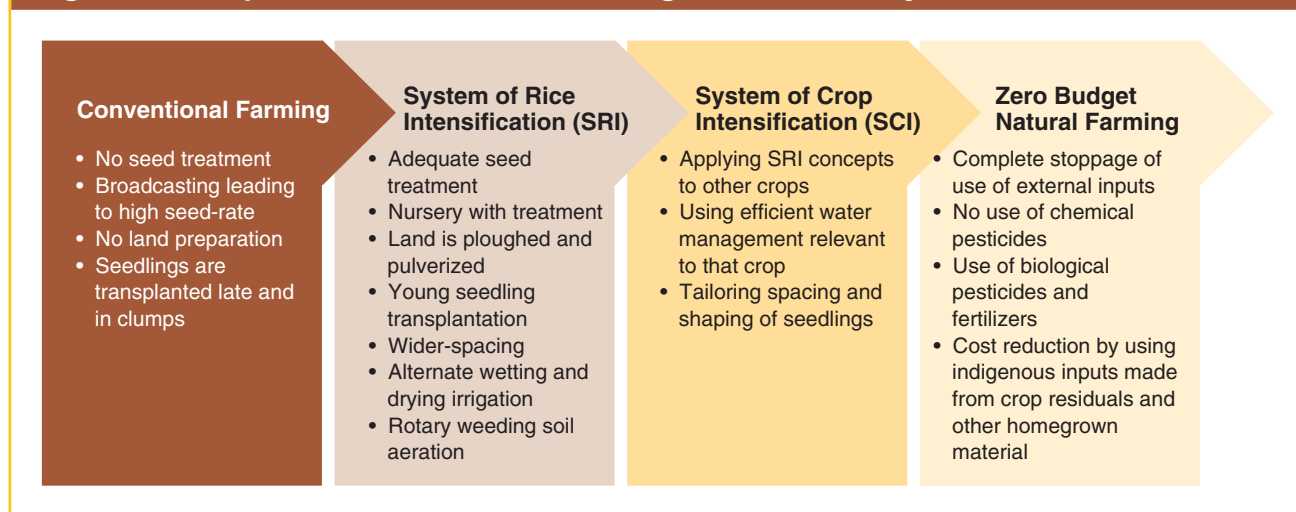
¹² This is also recommended in System of Rice Intensification (SRI).

¹³ (Cornell University n.d.), (SDTT-SRI Secretariat n.d.), (Bihar Rural Livelihoods Promotion Society n.d.).

¹⁴ Quantity of seed needed to plough 1 acre of land.

¹⁵ Anecdotal evidence suggests that seed replacement rate under the *JEEViKA* method is 2 kgs per acre versus 25 kg per acre under the traditional method.

¹⁶ Only relevant for transplanted crops.

Figure 2: Comparison of Various Technologies Promoted by JEEViKA¹⁷

is different for each crop, as individual seeds need customized intensive treatment.

- Land preparation:** In the new JEEViKA method, land is ploughed well so that the soil is pulverized for easy root growth, and appropriate soil moisture should be maintained by adequate irrigation.
- Transplantation:**¹⁸ Under the new methodology, seedlings from the nursery that are transplanted into the field are younger compared to the conventional method.
- Wider spacing in a uniform manner:** Currently, farmers are not transplanting in a uniform manner, which limits the growth of the plant.
- Efficient water management:** The optimal water management for the new method is alternate drying and wetting, which minimizes the water requirement for that crop.
- Rotary weeding and soil aeration:** The field is not hoed in the conventional farming method, but in the new methodology the land is weeded at regular intervals.

Table 1: JEEViKA Promoted New Methodology Comparison for Rice

	Conventional Method	New Method for Rice
Seed treatment	None	Treated with salt solution & fungicide
Seed rate (kg/acre)	20–25	2
Nursery area (sq ft/acre)	4,350	325
Seedling age for transplantation	21–35	8–14
Spacing	No Spacing	25 cm * (25 cm in square shape)
Weeding/hoeing	No Weeding	3 times

¹⁷ ZBNF is still in the pilot stage.

¹⁸ This is only relevant for crops that are transplanted.

- **Use of organic fertilizers:** Under the new method, there is an emphasis on the usage of organic fertilizers like farm yard manure and vermi compost to sustain the high fertility of the soil, which follows the principle—‘feed the soil, and soil will feed the plants.’

Single Window System at the Doorstep of Small and Marginal Farmers

The most innovative aspect of JEEViKA’s implementation has been the creation a single window system for small and marginal farmers at their doorstep, which provided all services within 2 kilometers of the farmer’s house, building a single window system. Figure 3 explains the key elements of the single window system.

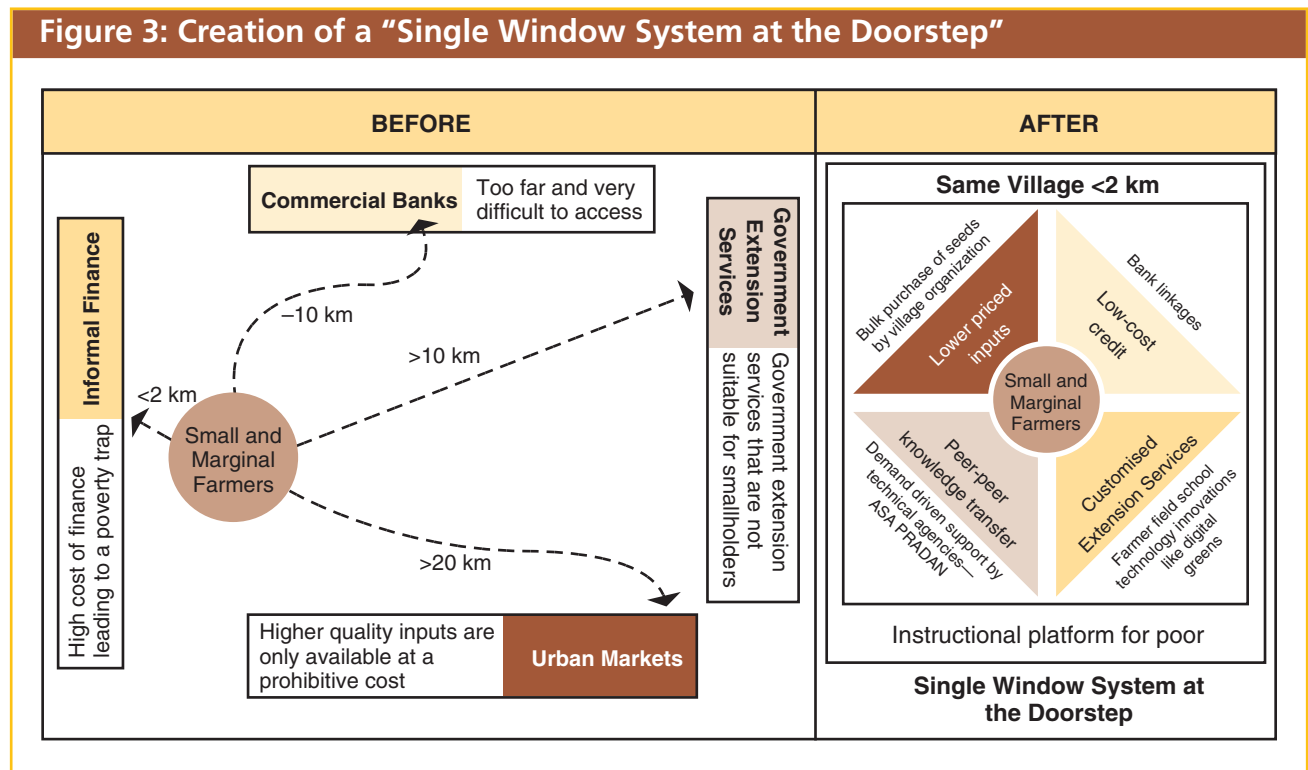
Implementation of various interventions through community-based organization led to the creation of

a single window system. Figure 4 provides a sequence of implementation steps through community organizations at a glance.

Agriculture interventions are implemented based on the expressed demand of the village organization (VO), after which a village resource person (VRP) is hired to assist with the implementation.

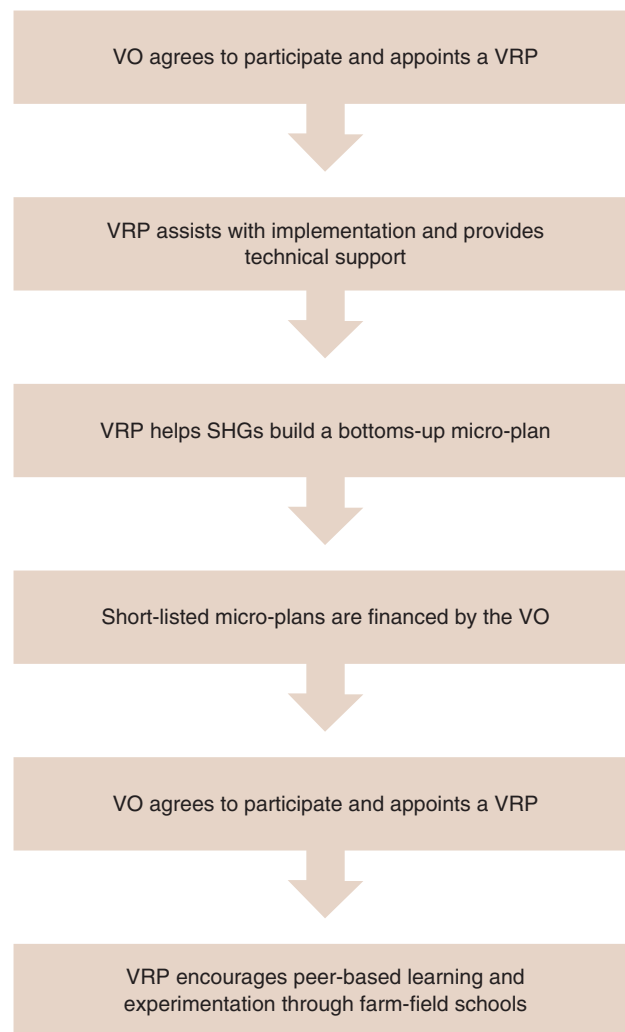
The role of VRP is critical for the successful adoption of the new improved agriculture methodologies amongst communities as it builds technical capacity in the village.¹⁹

Self-help groups (SHGs) mobilize the farmers and help in formulation of a village level micro-plan based on farmers’ requirements. The micro-plan consists of the following: list of farmers interested in the new techniques, consolidated list of all the input requirements and a request for land leasing on loan basis as per the need.



¹⁹ The VRP is mostly from the same village and is usually a farmer or an unemployed youth. Preference is given to households that have been mobilized by the project, as they can convince and motivate small and marginal farmers to adopt this intervention faster. The selected VRP immediately undergoes a three-day residential training given by the technical agency and two additional trainings are given during the crop cycle. The project and technical agency staff provide technical support to the VRPs on a weekly basis.

Figure 4: Sequence of Implementation through Community-based Organizations in Jeevika



VO is responsible for the financing of the micro-plans and procurement of inputs in an efficient manner.

VO has also facilitated **significant savings by aggregating procurement** at the village level.

Farmer field schools (FFSs) facilitate the transfer of peer learning and act as a platform for experimentation. The VRP is entrusted with the responsibility of identifying plots in the village that have successfully implemented the new techniques. These plots become

a local platform for demonstration of best practices and training.

The project partnered with several technical agencies, which were selected by a unique selection method of Bihar Innovation Forum. These agencies²⁰ had prior experience in implementing similar interventions at large scale. **The partner agencies have been crucial in helping the project build up the capacities** of the project staff, village organizations and the community paraprofessionals associated with the intervention.

²⁰ Professional Assistance for Development Action and Advance for Social Advancement and Advance for Social Advancement (ASA) are the national resource organizations that provided technical assistance for initiating the model in Bihar.

Key Benefits and Impacts

The agriculture interventions of *JEEViKA* were piloted in 2007 but have scaled up rapidly in Bihar. The communities adopted these new technologies rapidly because farmers witnessed a visible improvement in plant and grain growth, and a significant improvement in yields. The productivity increase was achieved at minimal cost, which has resulted in an income increase leading to wide-ranging systemic impact and policy changes. For household level impacts, this note will use data from a survey conducted in 2012 for rice and wheat cultivation. Most respondents of that survey undertook the various interventions encouraged by *JEEViKA* only on a small portion of their land and continued to use 'traditional' methods on the rest of the land parcel. This provided an opportunity to build a counterfactual example to the program intervention within the same households with the 'traditional' farming land parcel serving as the control plot to the *JEEViKA* plot or the whole 'single window system' approach. The methodology of the analysis and limitations of the results are presented in the Annex. The following analysis summarizes the impact on yields, profitability and return on key inputs.

Improved Yields

The single window system approach promoted by *JEEViKA* has helped farmers increase yields significantly for rice and wheat. On average, *JEEViKA* plot of the farmer had a 0.83²¹ tonnes per hectare (or 55 percent) higher yield for rice and 0.84 tonnes per hectare²² (or 75 percent) higher yield for wheat after one year of participation, when compared to the rest of their landholdings that has been cultivated using the traditional method.²³ Table 2 has the crop-wise comparison of productivity increase under SCI.

Table 2: Crop-Wise Productivity Increases²⁴

	Rice	Wheat
Yield-traditional (tonnes/acre)	1.51	1.12
Yield- <i>JEEViKA</i> (tonnes/acre)	2.34	1.95
Increase in yield (tonnes/acre)	0.83***	0.84***
t-value	77.64	93.28
% increase (average)	55	75

Field monitors and project staff have also observed similar results²⁵ for vegetables, pulses and oilseeds cultivation under *JEEViKA*.

Increased Household Income

The participant farmers have also witnessed an increase in net income. Overall, *JEEViKA* plot of the farmers were more profitable after one year of participation in the program, when compared to the rest of their landholdings that has been cultivated using the traditional methods. Table 3 provides detailed statistics for profitability indicators. The results are more pronounced for wheat, with almost a 28% net increase in profit margin (or increased profitability of ~US\$112 per acre). Similar results have also been observed by field monitors and project staff for vegetables, pulses and oilseeds cultivation under *JEEViKA*.

These results are even more interesting because the input and cultivation costs are actually higher under *JEEViKA* (see Table A.2 for more details), but the profit margins have still improved. Based on field observations, anecdotal evidence and process monitoring, the

²¹ Statistically significant at 99%.

²² Statistically significant at 99%.

²³ Other studies (Krishnagopal 2011, Sinha 2009) commissioned by the project have showed similar results; however, they have not been included in the analysis due to methodological issues. A detailed randomized trial of this intervention is under way to get more robust results.

²⁴ Significance levels: *, 10 percent, **, 5 percent, ***, 1 percent. These results are somewhat similar to a detailed 13 state agricultural study conducted under the IWMI-Tata Water Policy program showed a similar increase of productivity for farmers that adopted System of Rice Intensification (Palanisami, Karunakaran and Amarsinghe February, 2013). Although the study hasn't included Bihar but Madhya Pradesh, which has a similar landholding pattern, witnessed a 68% increase in productivity for rice amongst full adopters of SRI.

²⁵ The data available for those commodities is rigorous enough to support those conclusions.

Table 3: Crop-Wise Profitability Comparison of JEEViKA with the Traditional Method²⁶

	Traditional	Jeevika	Difference	t-value
Rice				
Income to cost ratio	1.68	1.77	0.09***	3.96
Profit (INR per acre)	INR 2,950 (-US\$46 ²⁷)	INR 7,695 (-US\$120)	INR 4,746*** (-US\$74)	37.15
Profit margin	13.36	32.17	18.81***	23.93
Wheat				
Income to cost ratio	1.48	1.80	0.32***	14.07
Profit (INR per acre)	INR 1,513 (-US\$24)	INR 8,690 (-US\$136)	INR 7,176*** (-US\$112)	39.73
Profit margin	9.49	37.71	28.22***	19.55

authors believe that three primary factors have contributed to this increase in profitability: First, farmers have adopted better technologies and higher quality inputs (especially seed) that has impacted the yields. Second, higher costs have been offset by improved access²⁸ to subsidized input, which are offered under various government programs. Third, improving access to finance has lowered the cost of credit improving profitability.

Policy Impact

Based on the success of BRLPS, the Department of Agriculture of the Government of Bihar has scaled up JEEViKA's agriculture intervention across all districts in Bihar for rice and wheat. The department aims to cover 20 percent of the rice and 15 percent of the wheat areas in the state by the end of 2012. Several of the VRPs promoted by the project were used as resource persons (Prennushi and Gupta 2014) during this process of scaling up. The agriculture department is also keen to leverage the institutional architecture created by the project for expanding irrigation coverage and scaling up cultivation of vegetables and other horticulture

crops amongst the smallholders. In the latest economic survey, the Bihar government has also acknowledged the successful increase in rice productivity due to the adoption of new technologies.²⁹ The production of rice in Bihar increased to 8.2 million tonnes in 2011–12 compared to 3.1 million tonnes in the previous year.

Lessons Learnt and Issues for Wider Applicability

Building strong community institutions and investing in human capital are necessary preconditions before any livelihood interventions are implemented through community institutions.

Strong institutions need to be accompanied by lowering the cost of credit.

The community managed extension system is critical for a large-scale agricultural intervention.

External technical support agencies played a crucial role in the success of agriculture interventions in Bihar. These agencies brought down the cost of

²⁶ Significance levels: *, 10 percent, **, 5 percent, ***, 1 percent.

²⁷ US\$1 = INR 64.

²⁸ Social accountability measures of the program might have contributed to improved access to public service delivery, similar to what happened in other states (Prennushi and Gupta 2014). There is a rigorous randomized trial under way to test these assumptions.

²⁹ As mentioned earlier, these methodologies are popularly called SCI. (Government of Bihar—Finance Department 2012–13).



implementation from INR 2,000³⁰ (US\$ 31) per farmer to INR 700 (US\$11).

The project built monitoring systems and provided incentives such that the **landless were included in the interventions**.

Challenges

The new methodology is not effective in extreme climatic conditions such as floods and droughts. Further research on its interface with climate variations like droughts and floods needs to be conducted. Similarly, greater experimentation and adaptation needs to be carried out to transfer the new methodology to even more crops. The current agriculture research

community has not adequately invested in improving the new methodologies or SCI. Thus, the existing research on this methodology is scant and not enough evidence has been built on the productivity gains that SCI has already achieved.

The results on the ground need to be backed up by robust impact evaluation to get a buy-in from the wider academic and technical community.

Projects would need to identify professionals and technical service providers that could provide vital technical backstopping to the VRPs for scaling up. It would also need to adopt innovative technologies faster (e.g., Digital Green) to ensure cost-effective dissemination of knowledge.

³⁰ These are total costs; for project investments see the earlier sections. These are estimated initially by JEEViKA and might be different in a different context.



Way Forward

Horizontal integration: The project will focus on increasing the adoption rate of the new methodology for several other crops to achieve wider scale in Bihar.

Vertical integration: Horizontal integration will be accompanied with vertical integration amongst the current participants. Partial adopters will be encouraged to move to full adoption.

Move up the agri-value chain. The project will facilitate setting up more producer organizations to enable farmers to gradually move up the agri-value chain.

Self-sustainability: As farmers move up the value chain and earn higher incomes, the extension system can become self sustainable. Communities can self finance

this extension and the government can gradually withdraw financial support.

Annex

The data for this note comes from a panel survey conducted in 2012³¹ on a sample of about 6,242 farmers for the rice interventions (5,684 participants and 558 nonparticipants) and 2,699 for wheat (participants only). The survey questionnaire had eight sections that covered various agriculture related input and output indicators. No information was collected on the demographics of the households, consumption levels, asset ownership, plot characteristics and income.

The original survey design was unable to build a valid and robust counterfactual example, as the treatment

³¹ The survey was conducted by the Samaj Vikas Development Support Organisation.

assignment was not random. An ex-post analysis of building a valid counterfactual at the household level using propensity score matching was also not possible as no information was collected on household characteristics. A difference-in-difference analysis was also not possible as no baseline was conducted. However, most participant respondents undertook the various interventions encouraged by JEEViKA only on a small portion of their land and continued to use 'traditional' methods on the rest of the land parcel. We exploit this to build a counterfactual example to the program intervention within the same households with the traditional farming land parcel serving as the counterfactual example to the plot being used under the JEEViKA interventions. Thus, after dropping the control group, outliers³² and some problematic values,³³ we are left with 4,198 households for rice, and 1,958 households for wheat, which have been used for the following analysis. Overall, we believe that the data are of reasonably good quality, although there is some rounding off to nearest integers³⁴ in the productivity figure.

Limitations of the Data

The results in this note have the following limitations due to the weak methodology of the data collection:

- The limitations of the survey design and statistical methodology do not provide an appropriate basis for assessing conclusive rigorous impacts. Foremost, the issue of self selection at the household level remains. There are also no controls or baseline figures to correct for this bias. Thus, these findings should be treated as 'work-in progress results', and as the rigorous evaluations are completed in the next few years, we would be able to provide more conclusive evidence.
- These reported outputs can only assess the overall impact of the 'single window system' approach. Unfortunately, this study cannot disentangle the effects of improved agriculture technology and improved access to low-cost credit.
- As no data were collected on household demographics, we can say very little about the external validity of this data. These results only provide treatment effects of the intervention on a very small sample of JEEViKA participants. Whether these results can be generalized to even the rest of JEEViKA participants is also questionable.
- We also cannot rule out plot-level selection bias. It is possible that the participant farmers could have selected a more productive part of their landholdings for piloting the JEEViKA interventions, and some of these effects could be because of more productive land. Unfortunately, we neither have plot-level characteristics nor baseline values to control for those biases. We carry out a number of sensitivity analyses to test for these biases. First, we categorize households according to their level of adoption (measured by the proportion of land under cultivation in the JEEViKA method). We find that the yield impacts are positively correlated with the adoption rate, which is consistent with the findings from the field. Second, we get similar results for the same analysis on the profitability indicators. These tests give us the confidence that JEEViKA intervention has contributed to the increase in various impact indicators.
- During the time of the survey, this intervention was only at a pilot stage, with only 30% of the land parcel being used for the JEEViKA method. Hence, this study cannot estimate the impact on profitability if all the farmers had a 100% adoption rate. But as profitability increase is positively correlated with adoption rate (as reported earlier), we are confident that a higher adoption rate of JEEViKA's methodology could lead to consistent improvement in profitability.
- When this study was done JEEViKA was still gradually expanding and the complete saturation of all the villages in the state is still not complete. This study only tries to assess the effects of the model on agricultural income in 2012.

³² 1% outliers were dropped based on traditional yield and SRI yield.

³³ The survey agency asked for recall value for most households, and in some cases, participant households reported output values for different years for the treatment and control plots. Those values were discarded.

³⁴ As the production data was collected per khatta (1 acre comprises of ~32 khattas), the rounding off is actually at second decimal points.

Descriptive Statistics

Table A.1 provides a snapshot of the available characteristics of all the households. On an average, the participants are mostly from lower castes, which is predictable given *JEEViKA*'s focus on poor and poorest households. Almost all households are marginal farmers and have reported approximately 31 percent of land under *JEEViKA* cultivation.

Table A.1: Descriptive Statistics of Participant Farmers

	Rice Farmers	Wheat Farmers
No. of households	4,198	1,958
Caste (%)		
Backward Caste	4.93	4.21
Extremely Backward Caste	3.43	2.21
<i>Mahadalit</i>	0.26	0.25
Other Backward Caste	59.12	58.58
Scheduled Caste	23.68	26.73
Scheduled Tribe	6.91	5.97
Others	1.67	2.06
Marginal farmers (%)	98.93	99.35
Details of land under cultivation		
Average land under cultivation (acres)	0.482	0.456
Average land under traditional cultivation (acres)	0.353	0.349
Average land under <i>JEEViKA</i> cultivation (acres)	0.129	0.107
Percentage of land under <i>JEEViKA</i>	31.91	30.78

The survey also asked respondents about their expenditure on inputs such as seed, water, labor, etc. Table A.2 summarises the input expenditure and ratio for these categories. On an average, the total expenditure for farmers adopting *JEEViKA* recommended practices has increased by approximately 50 percent for rice and 70 percent for wheat. A notable exception seems to be expenditure on seed amongst rice farmers, where it has actually reduced, which could have been due to the large subsidy offered by the Government of Bihar on rice seeds.³⁵

Results

For the impact analysis of yields and profits in the main section, two sample t-tests have been conducted, comparing the outputs from the *JEEViKA* plot and traditional method plot; and significance levels have been reported in the main section itself. As the description of plot characteristics was collected, no additional analysis was possible. In Figure A.1 we report on two graphs—distribution curves of the net profit margin for rice and wheat—and find two interesting observations. First, there is clear upward shift of the profit margin for the plots under *JEEViKA* interventions indicating that the impacts have been quite wide-spread. Second, the left tail of the curve (lower end of the profitability) for the *JEEViKA* plots has almost vanished, suggesting that the interventions under the project are actually enabling farmers to transition away from subsistence farming³⁶ to more profitable farming. These results could also provide early indications of the success of *JEEViKA*'s focus on including the poor and poorest.

In addition to the output analyses, we have also made an attempt to assess the exact cause of this increase in yields.³⁷ Are these results just the cumulative effect of improved inputs or have the farmers actually moved to a new production function? For this analysis, we looked at the marginal effects of each input on difference in yields, control for districts, year of cultivation and blocks using a fixed effects model (results reported in Table A.3). We report three findings: First, the coefficients of inputs such as seed and water are significant

³⁵ Visit the website of the Agriculture Department of the Government of Bihar for more details: <http://krishi.bih.nic.in/>

³⁶ We assume that low net profit margin is a good proxy for subsistence farming.

³⁷ Similar tests were also run on profit and profit margin but the results have not been reported, as they were very similar.

Table A.2: Costs Comparison of JEEViKA with the Traditional Approach

Expenditure Category	Rice			Wheat		
	Traditional- [INR/acre]	JEEViKA [INR/acre]	Ratio (JEEViKA/ Traditional)	Traditional [INR/acre]	JEEViKA [INR/acre]	Ratio (JEEViKA/ Traditional)
Seed	INR 713 (US\$11)	INR 164 (US\$3)	0.4	INR 952 (US\$15)	INR 541 (US\$8)	1.5
Water	INR 2,336 (US\$37)	INR 2,944 (US\$46)	2.0	INR 3,319 (US\$52)	INR 3,068 (US\$48)	1.2
Power	INR 61 (US\$1)	INR 89 (US\$1)	2.1	INR 60 (US\$1)	INR 63 (US\$1)	1.9
Equipment	INR 2,315 (US\$36)	INR 2,604 (US\$41)	1.5	INR 1,601 (US\$25)	INR 2,695 (US\$42)	3.5
Fertilizer	INR 2,450 (US\$28)	INR 3,047 (US\$48)	2.0	INR 1,954 (US\$31)	INR 3,204 (US\$50)	3.3
Pesticide	INR 414 (US\$6)	INR 498 (US\$8)	1.5	INR 668 (US\$10)	INR 483 (US\$8)	1.6
Labor	INR 2,744 (US\$43)	INR 3,359 (US\$52)	2.2	INR 1,937 (US\$30)	INR 2,788 (US\$44)	3.3
Other expenditure	INR 153 (US\$2)	INR 208 (US\$3)	2.2	INR 176 (US\$3)	INR 230 (US\$4)	2.4
Total expenditure	INR 11,186 (US\$175)	INR 12,915 (US\$202)	1.5	INR 10,667 (US\$167)	INR 13,072 (US\$204)	1.7

Figure A.1: Kernel Density Plots of the Profit Margin Distribution of Traditional and JEEViKA Method for Rice and Wheat

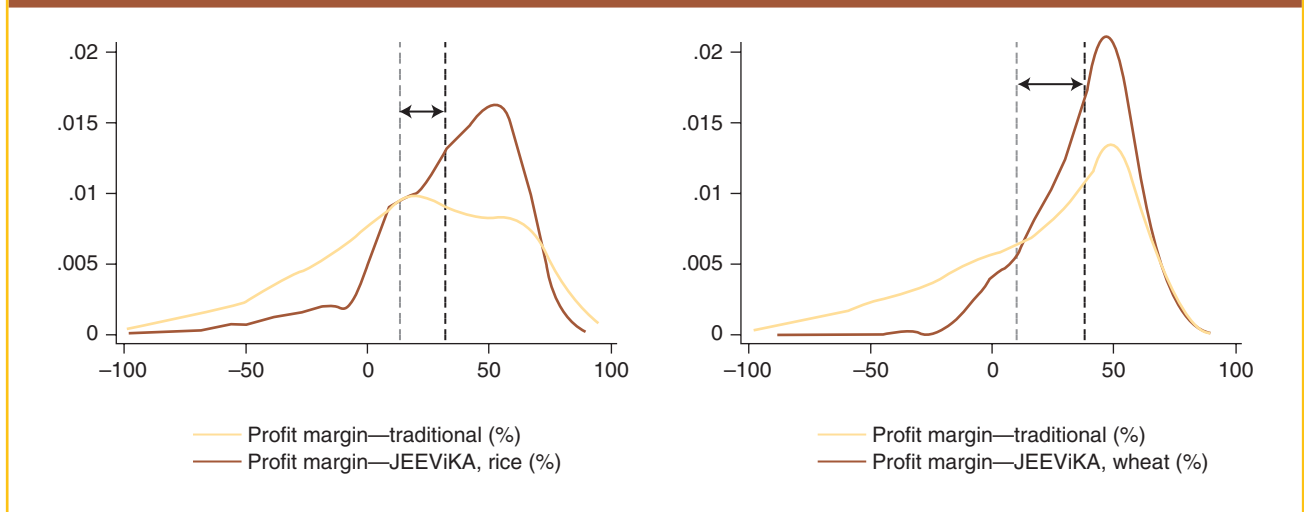


Table A.3: Summary Statistics from the Regressions

	Difference in yield— rice—(JEEViKA vs. traditional)— tonnes/acre	Difference in yield— wheat (JEEViKA vs. traditional)— tonnes/acre
Difference in seed exp. (JEEViKA vs. Traditional)—INR/acre	0.00006*** (0.00002)	-0.00003*** (0.00001)
Difference in water exp. (JEEViKA vs. Traditional)—INR/acre	0.00004*** (0.00001)	0.00002*** (0.00000)
Difference in equipment exp. (JEEViKA vs. Traditional)—INR/acre	0.00001* (0.00001)	0.00001 (0.00001)
Difference in fertilizer exp. (JEEViKA vs. Traditional)—INR/acre	0.00000 (0.00001)	0.00003*** (0.00001)
Difference in labor exp. (JEEViKA vs. Traditional)—INR/acre	0.00001* (0.00000)	-0.00001 (0.00001)
Constant	-0.48880 (0.69630)	1.12699*** (0.33355)
Observations	4,198	1,994
R-squared	0.02741	0.04415
Number of blocks	30	30

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

for both rice and wheat, which means that some of the increase in yields is due to improved inputs. Second, the coefficients for labor provide mixed results, which is puzzling because the JEEViKA method is quite labor intensive. Similarly, the coefficient for fertilizer is higher for wheat, which is again surprising because the project promotes reduced use of fertilizer. Lastly, we look at the constant terms for rice and wheat, which could be a reflection of the average effect of the new technology (as we have controlled for most inputs); however we get

mixed results from rice (not significant) and wheat (significant at the 1% level). Thus, we cannot say anything conclusive about the exact reasons behind this increase in yields. Both possibilities exist: farmers could have shifted to a new technology (i.e., different production functions) or just transitioned from a low input-low output part of the curve to a high input-high output part of the same production curve. More detailed analysis is needed in JEEViKA to investigate this particular aspect.



References

- Bihar Rural Livelihoods Promotion Society. “SRI Manual.” *Bihar Rural Livelihoods Promotion Society*. http://brlp.in/admin/Files/SRI_Manual_Hindi.pdf (accessed Nov 15, 2012a).
- . “SWI—Manual.” *Bihar Rural Livelihoods Promotion Society*. http://brlp.in/admin/Files/SWI_Manual_Hindi.pdf (accessed Nov 15, 2012b).
- Cornell University. *System of Rice Intensification (SRI)*. <http://sri.ciifad.cornell.edu/> (accessed November 15, 2012).
- Government of Bihar—Finance Department. *Economic Survey*. Patna: Government of Bihar, 2007–08.
- Government of Bihar—Finance Department. *Economic Survey*. Patna: Government of Bihar, 2009–2010.
- Government of Bihar—Finance Department. *Economic Survey*. Patna: Government of Bihar, 2010–2011.
- Government of Bihar—Finance Department. *Economic Survey*. Patna: Government of Bihar, 2011–2012.
- Government of Bihar—Finance Department. *Economic Survey*. Patna: Government of Bihar, 2012–13.
- Krishnagopal, G. V. “Assesment of SRI in Bihar.” 2011.
- National Commission for Enterprises in the Unorganized Sector. *A special program for Marginal and Small Farmers*. National Commission for Enterprises in the Unorganized Sector, December 2009.
- Palanisami, K., K. R. Karunakaran, and Upali A. Amarsinghe. “Doing Different Things or Doing It Differently? Rice Intensification Practices in 13 States of India.” *Economic and Political Weekly*, Feb., 2013: 51–58.
- Prennushi, Giovanna, and Abhishek Gupta. “Women’s empowerment and socio-economic outcomes: impacts of the Andhra Pradesh rural poverty reduction

program.” *World Bank Policy Research Working Paper*, no. 6841 (2014).

SDTT-SRI Secretariat. *System of Rice Intensification (SRI) Programme*. <http://sdtt-sri.org/> (accessed Nov. 15, 2012).

Sinha, Manu. “Performance Review of System of Wheat Intensification Program.” 2009.

UPLIFTING THE LIVELIHOODS OF BIHAR'S VULNERABLE AND LANDLESS THROUGH COMMUNITY BACKYARD POULTRY ENTERPRISES

MRINALINI PENUMAKA, DR. RAKESH KUMAR SINGH, AND PRATYUSH GAURAV¹

Executive Summary

The Bihar Rural Livelihoods Project aims to improve livelihood opportunities for and boost the incomes of Bihar's poorest households. At its start, the project focused its efforts on agri-based livelihood activities such as System of Rice Intensification. However, the majority of rural households who were landless or had small land holdings could not benefit from such agriculture-based interventions. Backyard poultry emerged as an important intervention to raise landless households' incomes. The backyard poultry intervention was especially suited to the needs of landless households as it required low-level inputs and low-skill investment from households. There was a strong market logic for the intervention as Bihar was largely dependent on other states for the supply of eggs and poultry meat.

The project was able to leverage resources from the Bihar government's Integrated Poultry Development Scheme to promote the activity among landless households and marginal farmers.

The project developed a unique enterprise and community-managed backyard poultry model. Cluster-level

federations—federated bodies of self-help groups—manage community backyard poultry enterprises through their Poultry Management Group. The Poultry Management Group hires local entrepreneurs to run village-level mother units. At mother units, one-day-old chicks are reared for three to four weeks. The chicks are then supplied to households in batches where they are reared for eggs and meat. Dedicated community professionals, known as Village Resource Persons, support households in ensuring proper feeding and vaccinations for chicks. They also facilitate linkages with the local market. To participate in backyard poultry, households have to contribute membership fees, sharing costs, and salary costs of Village Resource Persons.

By the end of the project, 180,000 households were involved in the intervention across Bihar's 38 districts. Nearly 30 percent of households were from Scheduled Caste and Schedule Tribe communities. On average, participating households increased their monthly income by 3,500 INR to 4,000 INR from selling chicks and eggs. Poultry farmers improved their nutritional status, reaching five to six food groups required for a healthy diet.

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In summary, the poultry intervention had four notable successes. The project

1. directly targeted and addressed the needs of nearly 180,000 households, with a focus on vulnerable and landless households;
2. increased monthly household income by 3,500 INR to 4,000 INR;
3. provided households with intensive and ongoing technical support through a partnership with the Department of Animal and Fisheries Resources, Government of Bihar; and
4. supported the expansion of the intervention from one district to Bihar's 38 districts through a strong network of Village Resource Persons.

Introduction

The Bihar Rural Livelihoods Promotion Society, or “JEEViKA” as it is called in Bihar, aims to support poor households into income-boosting livelihoods. When the project began in 2007, it focused its efforts largely on agriculture-based activities such as System of Rice Intensification and System of Wheat Intensification. However, for a majority of rural households who were landless or had small land holdings, rearing poultry and livestock was a better fit. For one, backyard poultry required low-level inputs and low-skill investment from households. Furthermore, there was high demand for eggs and meat in Bihar, which was largely met through supplies from other states. For landless and vulnerable households, there was an opportunity at hand to serve the local demand for eggs and poultry meat.

In 2012, JEEViKA's backyard poultry project began as a pilot with 19,000 households in Purnea district. Today, nearly 180,000 households across Bihar's 38 districts are part of the intervention. There is growing recognition among development practitioners on the role of backyard poultry in enhancing poor households' incomes. Evidence to support the role of a family's involvement in poultry and improvement is nutritional security. In the context of a poor and vulnerable household, Kurolier birds—a hybrid breed—serve as an important asset. They are easy to monetise. They also serve as a source of food when ultra-poor families experience extreme and destabilizing financial shocks.

Improving Household Livelihoods through a Community-Managed Poultry Enterprise

JEEViKA's backyard poultry intervention was based on two principles. First, the intervention ran as community-managed enterprise, with a functioning and profitable poultry business. This required participating households to have a "stake": they contributed membership fees, sharing costs, and salary costs of Village Resource Persons (who served as community veterinarians). Second, JEEViKA worked in close collaboration with the Bihar government's Department of Animal and Fisheries Resources. JEEViKA set out to improve the efficiency and effectiveness of pre-existing poultry programs through better targeting of households and a strong cadre of community resource persons.

At the community level, the intervention is managed by cluster-level federations—federated bodies of self-help groups—through their Poultry Management Group. **The Poultry Management Group's** members are leaders from other poultry producer groups. The main responsibility of the Poultry Management Group is to coordinate the activity, procure raw materials, hire an **entrepreneur** to run a central mother unit, and finally, to sell eggs and meat to institutional buyers. The **mother unit** provides participating households with day-old chicks and necessary medication, feed, and support services. **Village Resource Persons** distribute chicks and provide ongoing veterinarian

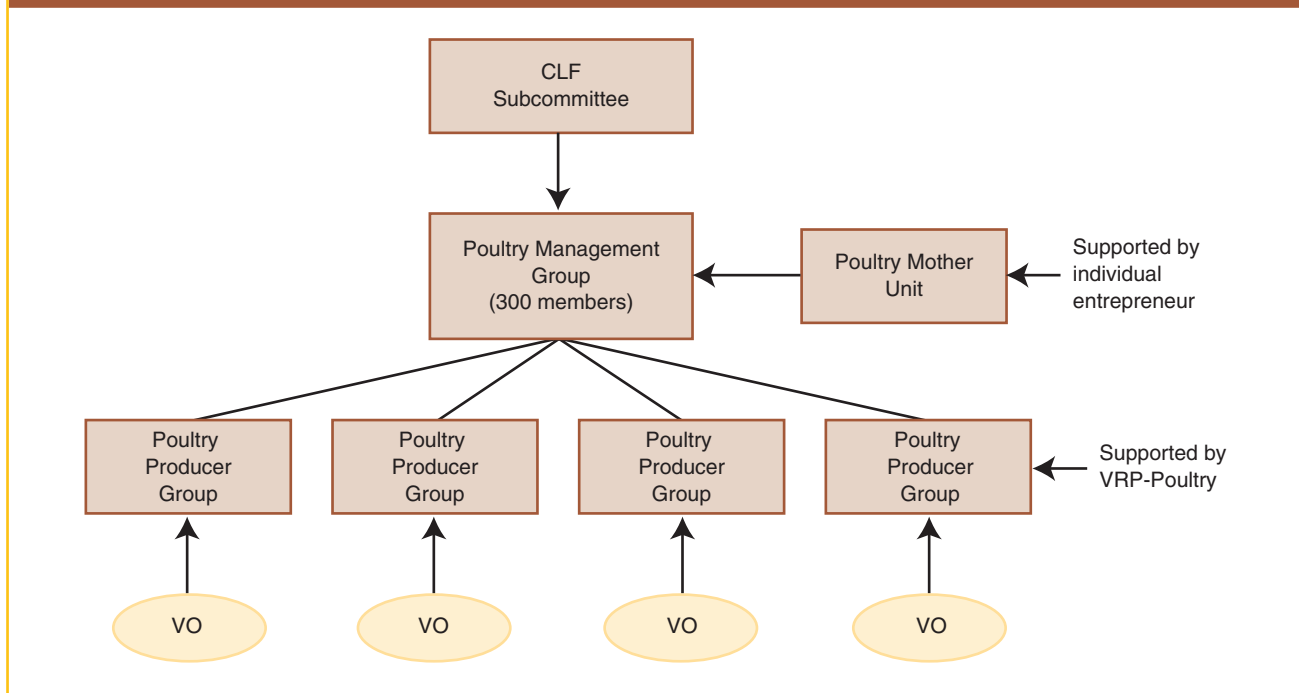
services to households. Participating households gain the benefits of a collective enterprise. Households can sell eggs and poultry meat to the community-managed enterprise or individually in the local market.

The roles of each stakeholder are as follows:

- **Poultry Management Group** is a subcommittee of a cluster-level federation (CLF) (a federated body of self-help groups). The Poultry Management Group manages the operations, finances and logistics of the backyard poultry business for a cluster of villages. Its members are leaders of participating poultry producer organizations.
- **Entrepreneur:** An entrepreneur is hired by Poultry Management Group to manage the mother unit. It is his/her responsibility to rear chicks,² complete their vaccination schedule and provide support services to participating households. The entrepreneur is paid based on the quality and quantity of services she provides to the community and for the number of chicks she sells to participating households. She is incentivized to deliver high-quality services to the community.
- **Poultry Mother Unit:** The mother unit is the main supply-chain management center. At a mother unit, day-old chicks are reared till they are four weeks old. After chicks are vaccinated—which is based on a strict, predetermined schedule—they are sold to member households. The mother unit is run as a business by the Poultry Management Group. In addition, the mother unit serves as the marketing channel to sell eggs and poultry meat to institutional buyers. Thus, the mother unit provides participating households with high-quality chicks, incentivizes households to buy chicks and to work towards better returns to the community.
- **Village Resource Persons (for Poultry):** Dedicated community professionals supported these households in ensuring proper feeding and vaccinations for chicks. They also facilitated linkages with the local market. Village Resource Persons have also supported the project in expanding the intervention to new districts in Bihar.

² The mother unit works with dual purpose birds that are disease resistant and produce 150–180 eggs in a year. These hybrid Kurolier birds grow at a faster rate than local birds.

Figure 1: Institutional Arrangement for Backyard Poultry

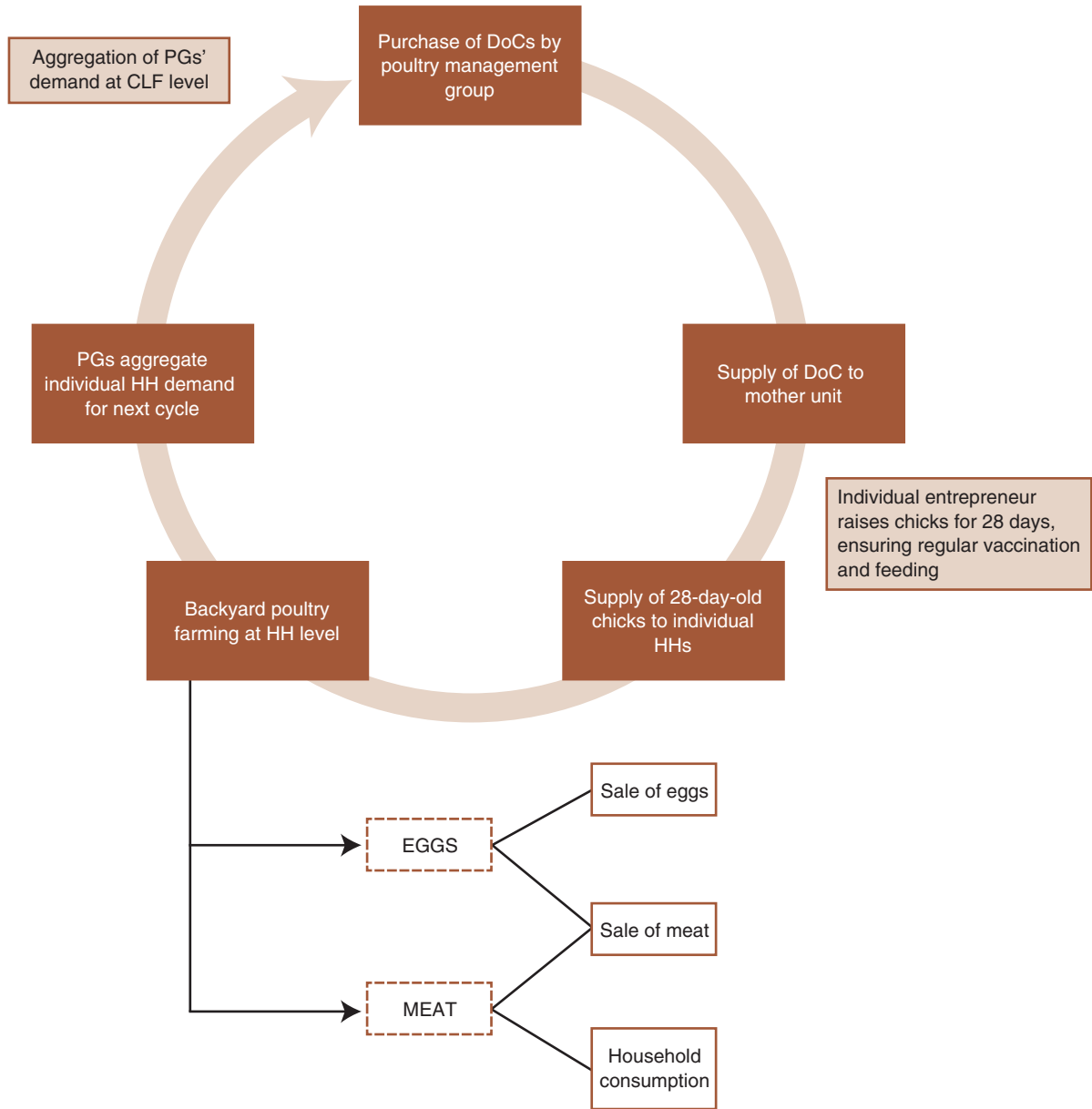


- Poultry Producer Groups (PG):** Some communities went on to start producer organizations, bringing together poultry farmers under one community organization. Producer organizations allow poultry farmers to procure raw materials in bulk thus reducing costs due to aggregation.

Business Cycles of a Community-Managed Poultry Enterprise

A clear business process was laid out for the Poultry Management Group, mother unit, entrepreneur and household to follow. It is the responsibility of the Poultry Management Group to purchase day-old chicks (DoCs), vaccines, feed, and medicines for the mother unit from the market. The group ensures that day-old chicks are vaccinated against disease. The group hires an entrepreneur to run and manage the mother unit. It is at the mother unit that chicks are vaccinated and reared till they are four weeks, i.e., 28 days old. After this period, chicks are delivered to those households linked to the mother unit, normally in batches of three to six. Participating households are allocated chicks based on their performance: whether they have the facilities in their homes to properly feed and house the chicks, for instance.

Participating households rear female chicks for one-and-a-half years. From their female birds, they get eggs, which they sell or eat. Male chicks are sold after two months (once they reach a body weight of 1.5 to 2 kilograms). Members adopt standard rearing practices for their chicks: four mandatory vaccinations, administration of de-worming medicine; and clear and well-ventilated nesting units. A Village Resource Person, dedicated to backyard poultry, provides households additional support in rearing chicks. She also assists block-level veterinarians on visits. After five to six months of rearing hens, a family can expect 150 to 180 eggs in the following year. Once households are ready to sell their eggs, their Village Resource Person goes house to house, collecting eggs for the mother unit to aggregate and sell. An individual family may also sell their eggs in the local market. The next cycle of procuring day-old chicks is initiated after a demand-assessment. Based on the number of participating households in the next cycle, the Poultry Management Group starts the cycle of procurement. Thus, the intervention's business process is followed by community, cycle after cycle.



Convergence with Bihar Government's Livestock Program

From the start, JEEViKA worked in partnership with the Department of Animal and Fishery Resources to implement the Bihar government's Integrated Poultry Development Scheme. Alongside technical support—on selecting quality inputs, ensuring proper feed, good health and vaccination for chicks—provided by the government departments JEEViKA designed a clear institutional architecture by which the community

continued to support participating households and a distinct business process for the activity. Through a tested community-business model and a cadre of Village Resource Persons, JEEViKA was able to significantly expand the reach and effectiveness of the government's preexisting livestock programs. In particular, JEEViKA's Village Resource Persons were able to deliver services to the last mile, reaching interior villages and supporting many of the most economically vulnerable households.

Challenges Addressed during Implementation

Two main challenges emerged during JEEViKA's implementation of the backyard poultry intervention. Each challenge holds a lesson: The first, on the effectiveness of private sector partnerships to address market constraints faced by rural households; and the second, on the choice preferences that emerge and become skewed because of government poultry subsidies.

Partnerships with Private Sector

The poultry sector in Bihar was largely unorganized and controlled by middlemen. To address this challenge at the start of the project, JEEViKA partnered with Kegg Farms Private Limited, one of India's oldest poultry organizations, known for pioneering genetically bred poultry. Kegg Farms supplied the community's Poultry Management Group with Kurolier birds. In doing so, rural households were able to provide a differentiated product to the market: high-quality eggs and poultry meat to the market. Kegg Farms put in place district and block officers who provided direct support to the community's poultry producer groups. Since 2012, several other private sector players have partnered with JEEViKA to provide good-quality day-old chicks.

Government Subsidies and Choice Dynamics of Participating Households

A subsidy introduced by the Bihar government has skewed choice dynamics for participating households. The Bihar government subsidizes the cost and supply of chicks under its program. Households can receive 150 chicks at INR 10. After that, each chick costs INR 25, which is the real market cost of day-old chicks. Studies conducted by JEEViKA show that participating households are quite price sensitive. Many more landless and marginal farming households participate in the program when chicks are sold under the government's subsidy at INR 10. However, when chicks are sold at INR 25 to new members, fewer members participate. This finding suggests that though participating households gain a stable income from backyard poultry over a year, their *initial inhibition* to take up the activity is

especially price sensitive. Older members, who have seen the returns and rewards of backyard poultry, state they are willing to pay the market price for day-old chicks. New members, however, prefer to buy chicks at INR 10—the price to which the Bihar government subsidises day-old chicks.

Impact of Backyard Poultry on Livelihoods

JEEViKA's backyard poultry intervention has four notable achievements: (a) the scale of its operations across Bihar's 38 districts; (b) the income boost it has brought to Bihar's poorest and most economically vulnerable households; (c) the effectiveness of targeting the landless and the most marginalized beneficiaries; and (d) improvements to household nutritional diversity.

- **Scale:** From 2012, the intervention has expanded from one district to 38 districts in the state. 180,000 households are involved in the intervention across Bihar's 38 districts.
- **Increase in incomes:** On average, participating households increased their monthly income by 3,500 INR to 4,000 INR from selling chicks and eggs.³ With the additional income from poultry, rural households have been able to invest in other areas: education, health, and family savings. The project also helped generate employment opportunities for Village Resource Persons. Over 400 Village Resource Persons were trained to provide veterinarian services to their community. These women earned INR 2,500 per month for their services.
- **Targeting the most marginalized:** The intervention included the most marginalized sections of rural Bihar, many who were landless and would not have benefited from agriculture-based livelihoods. Nearly 30 percent of households were from Scheduled Caste and Scheduled Tribe communities. The project's end-line survey identified backyard poultry as the key livelihood activity for Scheduled Caste and Scheduled Tribe households. The intervention was exemplary for including the most marginalised sections of rural Bihar: Mahadalits and Scheduled Castes.

³ Implementation Completion Review—Bihar Rural Livelihoods Project, World Bank, April 2017.



- Nutritional benefits for households:** Through the intervention, poultry farmers improved their nutritional status, reaching five to six food groups required for a healthy diet. Studies on nutritional diversity and links to particular productive and income generating activities, showed that there is a *key link* between productive and income generating activities and improvements in nutritional status for landless households. This makes a strong case for further addressing the livelihood needs of landless households.

Lessons Learnt

In summary, three factors contributed to the success of the poultry intervention: (a) directly targeting and addressing the needs of landless households; (b) providing households with intensive and ongoing technical support from the Bihar Rural Livelihoods Project and the Department of Animal and Fisheries Resources;

and (c) supporting the formation of producer organizations to take responsibility for bulk procurement of raw materials and aggregation.

Although the intervention was successful and effective, it posed several challenges.

Bihar backyard poultry intervention holds important lessons for the development community. A core strategy of the backyard poultry intervention was to partner with government departments. In doing so, an implementation model emerged that provided households low start-up costs and a low-risk investment. The success of the intervention suggests that partnerships across government departments, rather than replicating activities, can more effectively deliver government programs. Given the project's strong network of women self-help groups, the network of community institutions was an asset in implementation of the backyard poultry model.

DELIVERING VALUE FOR SMALL FARMERS: FARMER PRODUCER ORGANIZATIONS IN JEEVIKA

THE BIHAR RURAL LIVELIHOODS PROJECT

VINAY KUMAR VUTUKURU, PARAMVEER SINGH, AND MANOJ KUMAR¹

Farmer Producer Organizations (FPOs) promoted by JEEViKA have emerged as promising economic platforms in tackling the challenges of small farmer agriculture. In the face of rising input costs and lowering margins, these FPOs are delivering value by leveraging economies of scale, improved inputs and technologies at lower costs and bringing the small farmer to larger markets hitherto out of their reach. Most importantly, the FPOs, by their ever-increasing scale, are changing the rules of engagement in agriculture markets through producer centric approaches and fair business practices.

Why FPOs

India's agriculture is a small farm driven activity. Nowhere is this truer than in Bihar where 91% of all landholdings are below 1 acre. The state's average operational holding size of 0.39 hectare (ha) is one of the lowest in the country. For economically disadvantaged groups like Scheduled Castes (SCs), the figure is even lower at 0.3 ha. Such low farm size limits the investment capacity of the farmer, restricting access to quality inputs, technology and credit needed to operate on a desired level of profitability. Most small farmers do not have access to the consumer market and are forced to sell their produce to local intermediaries reducing their margins even further. Resultantly, the farming business, especially for small and marginal landholders, is fast becoming unviable.

Travails of a Small Farmer

- Small plot size
- Lack of quality inputs
- No access to timely credit
- Low holding capacity
- Low bargaining power in the market
- Exploitative market practices



JEEViKA, a Government of Bihar's initiative for poverty alleviation was initiated in 2006 with support from the World Bank. The programme, aimed at diversifying and enhancing household level incomes in rural Bihar through promotion of women Self-help Groups and their federations was originally spread over six districts of Bihar. Over the last 10 years, the programme

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has expanded to the entire state, mobilizing more than 8.2 million rural women into community institutions. To tackle the challenges faced by small farmers, JEEViKA has adopted a twin-pronged strategy. Firstly, large scale capacity building of farmers around improved farming practices and productivity enhancement interventions is undertaken. This is driven primarily by a robust community led extension mechanism where more than 4,200 Village Resource Persons (VRPs) provide regular training support to farmers at the village level. Secondly, JEEViKA is promoting development of economic clusters around specific commodities/activities by way of mobilising farmers/producers into informal Producer Groups (PGs) at the village level. These PGs are then further federated into Farmer Producer Companies (FPCs) on a needful basis. The producer organizations allow more streamlined delivery of inputs and services to a set of farmers engaged in production and marketing of specific commodities.

In 2016, Women Producer Companies promoted under JEEViKA achieved combined turnover of INR 85.4 million (USD 1.3 million) while delivering 15–20% higher return for member farmers. The recently launched Bihar Transformative Development Project (BTDP) is supporting JEEViKA to mobilize nearly 500,000 farmers/producers into FPOs around specific agriculture commodities: dairy, poultry, goatery as well as arts and crafts.

The Institutional Model

The approach of collectivizing farmers into Producer Groups was first initiated as part of BRLP in 2014. The objective was to develop business centric institutions that will continue to have organic links with the community institution architecture of SHGs and federations but will focus more on creating value chains for small farmers and producers by enabling direct market linkage.

At the village level, Producer Groups are formed by mobilising anywhere between 20–100 small farmers depending upon the commodity in focus. These PGs serve as effective platforms for collective orientation and capacity building of producers while facilitating backward linkages through parent producer companies. The small farmers are oriented on benefits of aggregation and quality control. Production planning is undertaken at the start of every season to aggregate demand for inputs as well as to assess potential procurement volume. Village level PGs are equipped with requisite basic infrastructure and quality control tools to serve as primary aggregation hubs. VRPs serve as the interface between PGs and the FPCs and deliver services like training, weighing, quality assessment and daily price communication.

Farmer Producer Companies are larger, registered business entities comprised of shareholder members ranging from a few hundred to many thousands. These FPCs undertake the responsibility of large-scale aggregation under standard procurement procedures and fair business practices including fair weighing, quality based pricing and on-time cashless payments. With lesser intermediaries as opposed to traditional market systems, small farmers are able to command better prices for their produce. These FPCs also enable

JEEViKA Producer Groups—A Vast Network of Farmers/Producers

JEEViKA has so far mobilised more than 270,000 small farmers/producers into Producer Groups around Agriculture, Dairy, Poultry and Non-Farm activities. These PGs have emerged as the key platforms for collective training, aggregation and market linkage for a variety of products. Several leading industry players including ITC, Dabur, Samriddhi Agro and Big Bazaar have linked into this vast network of farmers/producers, and four large Farmer Producer Companies have emerged under the project.

Commodity/Activity	Producer Groups	Total Membership
Farm/agriculture	1,178	70,650
Dairy	291	27,200
Poultry	588	1,78,000
Non-farm (agarbatti, bee-keeping, arts and crafts)	363	16,766

crucial backward linkages by aggregating input demand and doing bulk purchases to deliver quality inputs at competitive prices to members. Many of these FPCs are undertaking short-term storage of produce in accredited warehouses to gain lean season price advantage and are using technological solutions including trading on online commodity platforms like National Commodity Exchange (NCDEX) to reach out to multiple markets simultaneously.

JEEViKA Farmer Producer Companies—Leading the Way

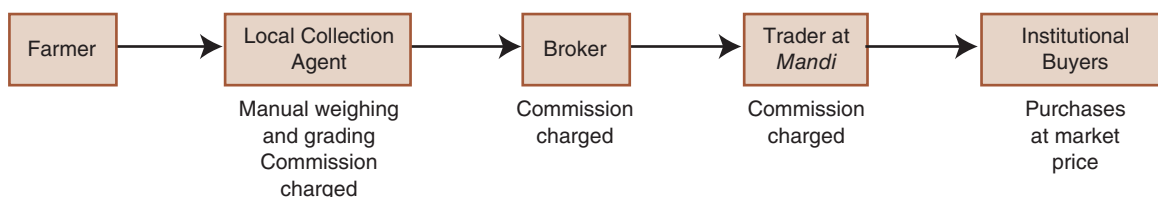
Four FPCs have been promoted under JEEViKA so far. All of them have been successful to varying degrees in achieving higher price realization for their member farmers. Depending upon the commodity, these FPCs have adopted slightly different business models. However, a number of common elements have emerged as

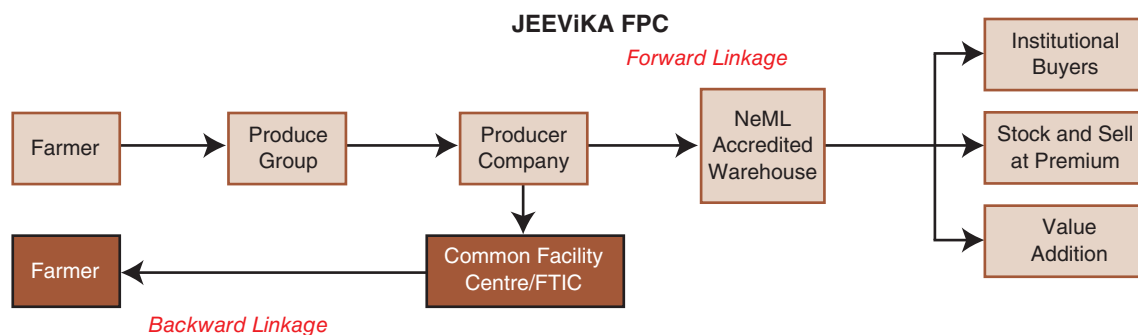
guiding principles for all these companies, viz., collective aggregation and marketing of produce, strong focus on quality control and emphasis on reaching multiple markets to diversify and minimize risk. Each of the FPCs have important lessons for promoting profitable value chains for small farmers.

1. *Aranyak Agri Producer Company Ltd., (AAPCL), Purnea*

AAPCL, Purnea has been a major success story highlighting the inherent potential of FPCs in delivering value for smallholder farmers. Operating in Purnea and Katihar districts, a region known for winter season maize in India, the company has established a farmer centric maize aggregation and marketing model delivering constantly higher price realization for member farmers while turning in higher profits with every passing year.

TRADITIONAL PROCESS





Under the prevailing market systems, small farmers lost out owing to unfair procurement practices by the local collection agent. Apart from manual weighing practices where substantial amounts of produce (5–10 ≈kg/quintal) was siphoned off, multiple layers of intermediaries kept the village level prices much lower than those at the bigger markets.

AAPCL disrupted the traditional system of maize marketing with village level PGs acting as aggregation and quality control hubs for harvested maize.

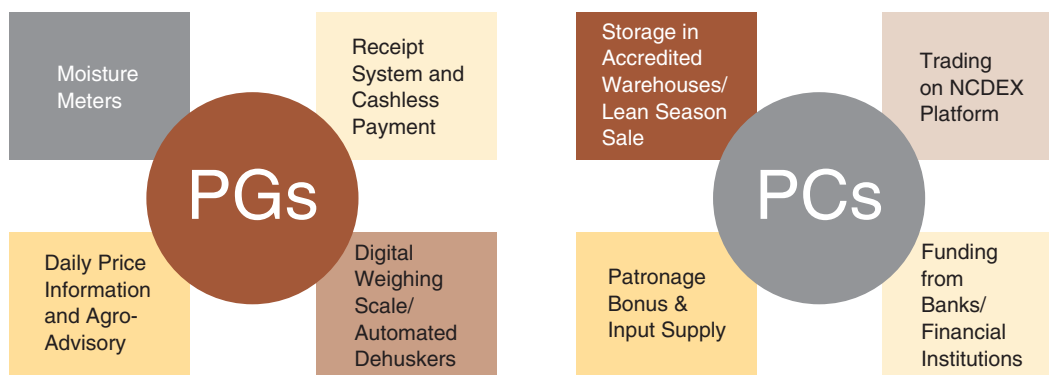
The PC, owned and managed by SHG members has linked with online commodity trading platforms like NCDEX for spot and future trading and has also established linkages with accredited warehouses for storage. The SHG members have benefited through higher price realization owing to direct marketing by PC, on time electronic payments, fair weighing practices and off-season sale at higher prices. Apart from providing 15–20% higher prices to farmers, the PC has made profits to the tune of INR 6.3 million in its first 2 years of active operation. From the pilot procurement of 1,014 MT in 2015, the PC ramped up its operations and has reached more than 10,000 MTs during the procurement season of May 2017, benefiting nearly 6,000 farmers. The intervention clearly indicates that provided the right technical assistance and handholding support, rural communities, especially small farmer's organizations, can emerge as credible market players for specific commodities and value chains.

WFPC	Turnover (in USD)		
	2014–15	2015–16	2016–17
Aranyak Agri Producer Company Ltd.	203,125	729,687	2,109,375*

*Estimated

AAPCL has been able to achieve a series of firsts in agriculture marketing in the state. Apart from being the first woman farmer producer company to register under the NCDEX and the NeML platform, the company was the first to introduce moisture meters at the Producer Groups (PGs) to ensure high quality in procurement. The company has distributed patronage bonuses to the extent of 70% of the profits from year-1 and introduced a host of innovative solutions including mobile-based agro-advisory and price information and warehouse receipts for loans against produce. The company is also licensed to market fertilizers and has facilitated supply of 155 MT of fertilizers to more than 200 members.

The company has leveraged institutional credit to the tune of USD 780,000 from formal financial institutions like State Bank of India and Friends of Women's World Banking (FWWB).



2. *JEEViKA Women Agri Producers Company Ltd. (JWAPCL), Khagaria*

Working on the lines of AAPCL, the producer company in Khagaria initiated aggregation and marketing of maize in 2016. In the first year of operation, the company undertook procurement of more than 1,000 MT of maize, generating revenues to the tune of USD 220,300. During its formative years, the company was engaged in production of certified seeds for paddy and wheat. In 2017, the company plans to ramp up procurement to 3,000 MT.

WFPC	Turnover (in USD)	
	2015–16	2016–17
JEEViKA Women Agri Producer Company Ltd.	220,312	625,000*

*Estimated

3. *Samarpan JEEViKA Mahila Kisan Producer Company Ltd., Muzaffarpur*

Samarpan is a multi-commodity producer company engaged in aggregation and marketing of a wide variety of commodities including wheat, vegetables and litchi.

The producer company is the first in the state of Bihar to register under the fresh platform of NeML (NCDEX E Markets Ltd.) for the fruits segment. The company markets fresh fruits and vegetables around the year to institutional buyers.

The company is in a unique position to leverage on popularity of *Shahi Litchi* of Bihar and is gearing up for marketing of 100 MT of fresh litchi fruit in the upcoming harvest of May 2017. The model was first piloted in FY 2015–16 where the company marketed 6 MT of litchi, primarily through the NeML platform and could supply fresh fruit to institutional buyers across India.

The company enters pre-harvest contracts with women farmers engaged in litchi production and undertakes packaging and transportation of the litchi fruits via air cargo, supplying to buyers all around the country. However, as opposed to traditional market systems where producers used to lose out due to fixed contract pricing, the women FPC is sharing additional profits with farmers in instances of production going above the projected estimates. This is leading to a more equitable risk-shared reward system between litchi farmers and the FPC. Many of the company members express pride of being business owners as opposed to contract farmers under the traditional market systems.



WFPC	Turnover (in USD)	
	2015–16	2016–17
Samarpan JEEViKA Mahila Agri Kisan Producer Company Ltd.	320,300	703,130*

*Estimated

4. *Sahyog Women JEEViKA Agri Producer Company Ltd., Nalanda.*

Sahyog is a multi-commodity based producer company primarily engaged in aggregation and marketing of vegetables, largely potato. Post the initial pilot in 2015 where the company procured 413 MT of potatoes from nearly 250 members, the company has ramped up operations procuring 1,230 MT of potato in 2016. The company has tied up with local cold storage points for short-term storage of potatoes. The company is also engaged in

promotion of kitchen gardening among member farmers and has an ongoing enterprise around packaged seed kits for distribution amongst SHG members.

In the coming year, the company plans to undertake large-scale potato seed production to enable availability of quality inputs to its member farmers who are otherwise dependent on seeds procured from other parts of the country. This is expected to not only reduce input costs but also prevent critical delays in sowing.

WFPC	Turnover (in USD)	
	2016–17	2017–18
Sahyog Women JEEViKA Agro Producer Company Ltd.	70,300	171,900*

*Estimated

Advantage JEEViKA

JEEViKA enjoys a distinct set of advantages in promotion of viable FPOs across Bihar.

- **Massive Outreach:** The project's massive outreach of 8.2 million rural households places it in a unique position to work with small farmers across varied regions within Bihar. In most cases, Producer Group members are also members of SHGs promoted by JEEViKA in their village.
- **Easy Access to Credit and Training:** These SHGs and their federations allow members to access easy credit for a variety of livelihoods. This results in a unique plug and play model where farmers are accessing training, technology and market linkage support from their PGs while utilizing credit support from the SHGs.
- **Community-Based Extension System:** JEEViKA has developed a massive community-based extension system where nearly 4,200 trained workers are functioning as Village Resource Persons (VRPs) providing regular training and capacity building support to SHG and PG members in lieu of nominal service charges. These VRPs utilize latest tools like video-based trainings and demonstrations and monitor post-training adoption of best practices.

- **Technical Partners:** JEEViKA is working in collaboration with renowned technical partners like TechnoServe and Access Development Services in development of FPOs. These technical partners bring global expertise and best practices to the FPO promotion process.

Going Ahead—JEEViKA's Vision for Value Chain Clusters

Bihar Transformative Development Project (BTDP) is a World Bank supported project of the Government of Bihar to be implemented as part of the JEEViKA programme. The project, with an outlay of USD 420 million, has a specific component on developing farm-based value chains around specific commodities, viz., maize, vegetables, etc. At least 15 Producer Companies (PCs) focusing on providing end-to-end services in the value chain will be developed. In addition to agriculture, the project will also make significant investment in developing producer centric value chains in dairy, poultry and goaterly, covering an estimated 500,000 farmers/producers.

Based on production analysis, JEEViKA's intensive presence and overall potential for value creation, 8 zones consisting of 16 districts have been identified for promoting Farmer Producer Organizations around specific commodities. While large-scale FPOs are to be formed in these zones, the operational area for these FPOs is expected to cover the entire state of Bihar.

It is estimated that the overall potential for revenue generation in these eight zones is close to USD\$1.7 billion.

Proposed Eight Zones for FPO Promotion under JEEViKA and Overall Potential for Value Creation

Clustering of Districts into FPC Zones

Key 8 Zones with Target Produces (the basis of geographical proximity of districts and revenue in priority crops)

	Eight Proposed Zones	Revenue (crs)	Key Crops
1	Vaishali + Saran	1,649	Potato
2	Nalanda* + Patna	1,607	Potato & Lentil
3	Darbhanga + Samastipur	1,580	Mango
4	Sitamarhi + Muzaffarpur*	1,530	Mango, Litchi & Veg
5	E. Champaran + W. Champaran	1,445	Potato
6	Purnea* + Katihar	1,140	Maize
7	Khagaria* + Bhagalpur	1,119	Maize
8	Madhepura + Saharsa	997	Maize

Note: Existing FPC's (*) will grow to span 2 districts. New FPC's will span 1–2 districts with 2 assumed for now. Impact for each zone calculated for all 6 priority crops.

Lessons Learnt and Issues for Wider Replicability

The JEEViKA experience of promoting FPOs as enabling institutions toward creating pro-poor value chains holds valuable lessons for decision makers and practitioners looking to replicate the model. Firstly, initial handholding support in form of high-quality technical assistance and on-ground extension is critical for developing successful FPOs. It is important to recognize the fact that in initial years, such institutions are not only trying to settle into a business environment but are also competing with prevailing market forces. This requires substantial handholding which was available to these FPOs in the form of project functionaries and technical partners. Secondly, pre-existing social capital strengthens the overall ecosystem for FPOs. In the case of JEEViKA, the presence of SHGs and higher

federations ensured that there was already a cohesive social base available. Also, the community members were adept at handling regular financial transactions due to similar exposure as part of their SHGs. Thirdly, it is crucial to develop a business case that inspires confidence from the formal financial sector. JEEViKA FPCs were able to leverage substantial resources from the formal financial sector as early as the second year of their operations. This was possible due to professional accounting systems and a strong orientation toward achieving sustainability from the start. Lastly, it is important to use simple and innovative technological solutions to tackle issues of traditional market systems. Solutions like daily pricing information to members via mobile phones and utilisation of online trading platforms to reach out to new markets proved to be significant in achieving the desired results.

IMPROVING NUTRITION THROUGH LIVELIHOODS

ANNA-LISA NOACK, PADMA BUGGINENI, APOLENARIUS PURTY,
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Introduction

Sustainable livelihoods and nutrition are two concepts that have been extensively explored theoretically and practically in development, and while they are inextricably reinforcing, linkages remain nebulous and require further research and analysis. With nutrition at the helm of the global development agenda, India's national flagship project, the National Rural Livelihoods Mission (NRLM), is committed to strengthening the impact of its program on nutrition. The program is a solid framework for improving the nutrition situation as a result of its scope (it has mobilised over 311 million households into self-help groups), multi-scalar nature, and cross-sectoral focus. This note seeks to offer qualitative evidence, derived from structured observations and semi-structured discussions, on the ways that one of India's States, Bihar, has managed to integrate nutrition into its Rural Livelihoods Program and explore some of the unintended impacts of this program on nutrition. Lessons distilled from this experience will help refine the implementation of the next generation project, which will expand its outreach to 5 million households, and can also offer possible insights for further uptake in livelihood programs across the region. While this note does not claim to cover all the possible linkages, the aim is to highlight some key impact pathways, open a space for discussion and identify key areas for further exploration, particularly given NRLM's ongoing commitment of improving nutrition.

What Does a Livelihoods Program Have in Common with a Nutrition Program?

The core of a sustainable livelihoods program is very similar to that of an integrated nutrition program. Both act at multiple levels (at an individual level and in an effort to shape the enabling environment) and are anchored in the understanding that behaviors are not solely driven by individual choices but also social norms and values, accessible institutions, available and accessible goods and services.

Livelihoods are more than just about income generation just like food security and nutrition is more than simply improving access and intake of calories. It is now widely accepted that neither thematic is anchored within a single discipline and that many sectors can and must play a role in tackling their underlying vulnerabilities and causes. Here food security is conceptualized as an underlying cause of malnutrition; livelihoods are considered to be a determining factor for good health and nutrition, and conversely, nutrition a condition for economic, physical and social well-being. As such, livelihoods programs can help tackle the same underlying causes of malnutrition, if the context is well understood and revisited throughout the program cycle, as the drivers and outcomes can shift.

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Another likeness is that livelihoods development requires a close look at household-level assets, resources and intra-household decision making. As such, the unit of analysis (individuals and households) is close to that which is necessary to understand the nutrition situation (individual level). Similarly, such programs are largely focused on the poor and poorest, and as such, are likely to also target the food insecure and most at risk of not having the means to improve their nutrition situation, even when information is available. This is paramount for the mitigation of potentially negative or exclusionary effects of large-scale productivity and income generation programs.

Combining capacity development or behavior change communication (BCC) with the means to realize recommendations (to, e.g., diversify the diet, prepare appropriate complementary foods, and consume sufficient quantities of nutrients during pregnancy, by way of asset accumulation and improved entitlements) is the key reason that a livelihood program has exceptional scope for improving nutrition.

Nutrition Context of India and Bihar

The past two decades in India have seen significant improvements in household incomes, agricultural productivity and child survival. Child undernutrition rates have been declining and yet, 38.4% of India's children still suffer from stunting, 31 from wasting, 58.4% of children age 6–59 months and 53.1% of women are anemic, and 22.9% women are underweight (NFHS IV, India data).

Bihar, with a population of approximately 104 million, is India's most densely populated state. Approximately 89% of Bihar's population lives in rural areas and is engaged in the agriculture sector. Agriculture in Bihar is much more dominated by small farms with fragmented landholdings than in India as a whole. Nearly 70% of households are landless and nearly landless. In terms of the nutritional status of children, Bihar is lagging behind the national averages as well as trends in all indicators.

In 2011, Bihar had a score of 0.303 on the inequality adjusted Human Development Index, ranking it 16th out of India's 19 largest states.² Bihar has made considerable improvement in the last decade on several human development indicators. While the latest NFHS IV (2015–16) data for Bihar highlight the reduction of IMR (40/1,000) and MMR (167), high levels of malnutrition still prevail in the state. Approximately 50 percent of children aged five and under are stunted and 21 percent of children aged five and under are wasted. More than 44 percent of children aged five and under are reported to be underweight. Seventy-three percent of households in Bihar do not have access to proper sanitation facilities at the household-level. Access to safe drinking water and sanitation is another indicator of the health status of a population. Provision of safe drinking water (calculated in terms of availability of a tubewell, handpump or tap) reduces the occurrence of a number of diseases and, at the same time, ensures effective absorption of food, ultimately leading to improved nutrition.

Nutrition and India's Rural Livelihoods Mission

Since 2011, the Ministry of Rural Development (MoRD) of the Government of India has been managing the National Rural Livelihood Mission (NRLM, also called *Aajeevika*), a flagship rural poverty reduction program based on the development of mostly women self-help groups (SHGs). The NRLM seeks to break the cycle of poverty by improving household access to entitlements such as bank loans, health services and food subsidies, improving agriculture production and household economic livelihoods activities, and strengthening capacities. This mission has been implemented by each state in a different manner but is based on the core principles of institution building, capacity strengthening, and improving access to financial services, following a demand-driven and participatory approach.

Lucrative and stable livelihoods are necessary for access to diverse foods; at the same time, good health and nutrition are a condition for inclusive livelihood

² *Inequality adjusted Human Development Index for Indian States 2011; United Nations Development Program.*

development. Recognizing this link, 11 out of 17 states have piloted a series of activities targeted particularly at women and children who fall into the 1,000-day window of opportunity (from conception to 2 years of age) to break the cycle of malnutrition. Andhra Pradesh (now Andhra Pradesh and Telangana) and Bihar have championed these efforts. Activities range from kitchen gardens, child day-care programs to nutrition centers that provide meals and nutrition education for lactating and pregnant women. Recognizing the successes of State Rural Livelihoods Missions (SRLM) in integrating nutrition in their livelihoods programs, the NRLM is now looking to fully integrate health, nutrition, and sanitation in its operations in 17 states based on the readiness of the state. Given its approach and coverage, the NRLM lends itself as an effective platform for improved nutrition-sensitive livelihoods across India to tackle the underlying causes of the soaring rates of malnutrition.

Nutrition and Bihar's Livelihoods Program

While the JEEViKA project has made significant progress through promoting livelihoods, Bihar still faces a set of development challenges that require sustained, intensive, and long-term support. The emerging priorities of the Government of Bihar (GoB) include social and economic empowerment of women, and improved access to human development services including health, nutrition and sanitation. This study aims to offer some concrete recommendations on how to shape the current livelihoods program in a manner to set the state on track to reporting positive trends on these priorities.

BTDP or *JEEViKA* now has the dual objective of improving livelihoods *and* nutrition with time. These two reinforcing objectives are the result of nearly a decade of World Bank experience in supporting livelihoods development in Bihar. In contrast, the BRLP was not initially designed with the intent to reduce malnutrition, the objective having been to enhance social and economic empowerment of the rural poor in Bihar. This has established a strong foundation as access and preparation of food as well as care practices and labor-burden are very much determined by intra-household decision making. But with the realization that most households were incurring debts due to health expenses, the project

was shaped and reshaped during implementation to first improve the quality of health and nutrition services provided and then introduce a plethora of complementary pilots several years later to instigate changes in behaviors particularly related to Water, Sanitation and Hygiene (WASH). Today, both supply and demand-side interventions are introduced through a convergence approach from the very beginning, starting with social mobilisation (including of the nutritionally vulnerable), identification of community-level nutrition needs and wants, and women's empowerment for intra-household decision making. For the sake of clarity, three main areas have been deciphered as related to nutrition in both projects, as further expanded upon in the current generation project:

- **Convergence with Government entitlements:** improving quality and reach of available agriculture extension, health, and financial services;
- **Nutrition education:** to (i) increase demand for quality entitlements and (ii) improve nutrition-related practices (diet, care, and health/WASH); and
- **Direct livelihoods interventions:** kitchen garden, poultry, dairy cattle rearing, and Food Security (credit) Line/Fund (FSF) to smooth out lean seasons (agriculture production and remittances).

In order to deliver these services at the household level, JEEViKA has established a network of persons that are integral to the process of social mobilization and capacity development. These include:

- **Community Resource Persons (CRPs):** responsible for community mobilization and shaping of Self-help Groups (SGHs), advocating for participation and of paramount importance for effective outreach and participation.
- **Community Mobilizers (CMs):** trained through the project and responsible for health and nutrition-related awareness raising.
- **Village Resource Persons (VRPs):** serve as complementary agriculture extension officers as the Department of Agriculture only has officers positioned down to the district level. These persons are trained and can relay information to and from Department officers, improving coverage of services.

- AHRP (Animal Husbandry Resource Person): same as above but responsible to provide information on cattle rearing, training and supporting to conduct health camps once in a quarter. They are also trained by the project.
- PRP (Poultry Resource Person): responsible to train the SHG women on poultry raising, support to manage poultry mother units including vaccination to the chicks.

The following table breaks down the 3 areas of intervention by key activities at individual and structural levels.

Given that these activities are phased and targeted at different levels, it is important to identify the impact pathways through which these activities are intended to improve nutrition. The strength of a livelihood program lies in the fact that nearly all commonly referred agriculture nutrition pathways are stimulated. The Bihar Livelihoods program, as illustrated below, works through a

Activities to promote nutrition in JEEViKA

Core Pillars/ Livelihood-nutrition Linkages	Activities at Individual Level, Producer-Consumer	At Structural Level, Institutions
Livelihood/agriculture interventions	<ul style="list-style-type: none"> • Kitchen garden (provision of seeds and capacity development) • Food Security Fund • Agriculture productivity and value chain development • Poultry • Dairy • Goat/small ruminant • Small enterprises including incense stick making 	<ul style="list-style-type: none"> • Veterinary services • Agriculture extension—promote diverse/underutilized/nutrient-rich foods • PPP/cooperatives • Market infrastructure and information
Behavior change communication	Training, graphics, videos, messages on: <ul style="list-style-type: none"> • Dietary practices • Health/WASH practices • Care practices 	<ul style="list-style-type: none"> • Construction of latrines • Review and ensure coherence of BCC material/technical content and medium
Access to entitlements/services	Increase awareness of, demand for, and community surveillance of (good quality) government services	Improve quality: <ul style="list-style-type: none"> • Anganwadi/ICDS • PDS • Mid-day meal • Primary health center • Health insurance

series of impact pathways for improved dietary diversity. These are based on the general understanding of the situation in Bihar characterized by insufficient livelihood assets, poorly targeted and low-quality entitlements, and lack of understanding of the benefits of dietary diversity. The same could be mapped out for WASH/health and care practices, which should be further explored in subsequent studies.

Building on this table of impact pathways, the diagram on page 83 was developed to illustrate the complementarity of these activities at different levels, highlighting synergies between livelihood and nutrition interventions. Individual care, health and dietary practices are conditions for good nutrition, shaped by (i) the enabling environment (institutions and entitlements) and (ii) household-level assets, social norms and capabilities.

Impact Pathways in JEEViKA for Improved Dietary Diversity

Impact Pathway	Nutrition-sensitive Livelihood Activities	Outcome
Agriculture production	Kitchen garden Improve agriculture productivity Poultry Dairy Goat/small ruminant	Increased availability of diverse food basket, and access throughout the year at homestead and in local market
Income	Agriculture productivity and market access/value chain development Handicrafts Beekeeping	Improved purchasing power for secure access throughout the year and improve quality of food basket
Women's empowerment	Financial resources/decision making Labor and time	Intra-household distribution and proper consumption as well as care practices
Awareness, skills, and knowledge	BCC through various channels	Improved dietary diversity, complementary feeding, exclusive breastfeeding, sanitation
Market environment	Value chain improvement by linking farmers with markets and improving market infrastructure including processing, storage/handling and food safety	Access to quality, nutrient-rich and safe foods throughout the year
Social protection/entitlements	Food security fund ICDS/Anganwadi Public Distribution System (PDS)	Access to staple foods for poor HH and during lean season



Conversely, individuals can request an improvement in the quality of, e.g., health services available or learn to make better use of the resources available, which usually requires some capacity development and behavior change communication (BCC). BCC is key to any nutrition-sensitive livelihoods program, based on a thorough understanding of people's norms and values, what motivates and hinders them to change their dietary habits, the information to which they are receptive, and the skills needed to act on nutrition messages. For behavior change to really take place, an individual will likely need to hear the message on multiple occasions from different sources and perspectives through varying channels. This model can be realized in Bihar as these messages are reiterated through veterinary services, agriculture extension, community mobilizers, etc.

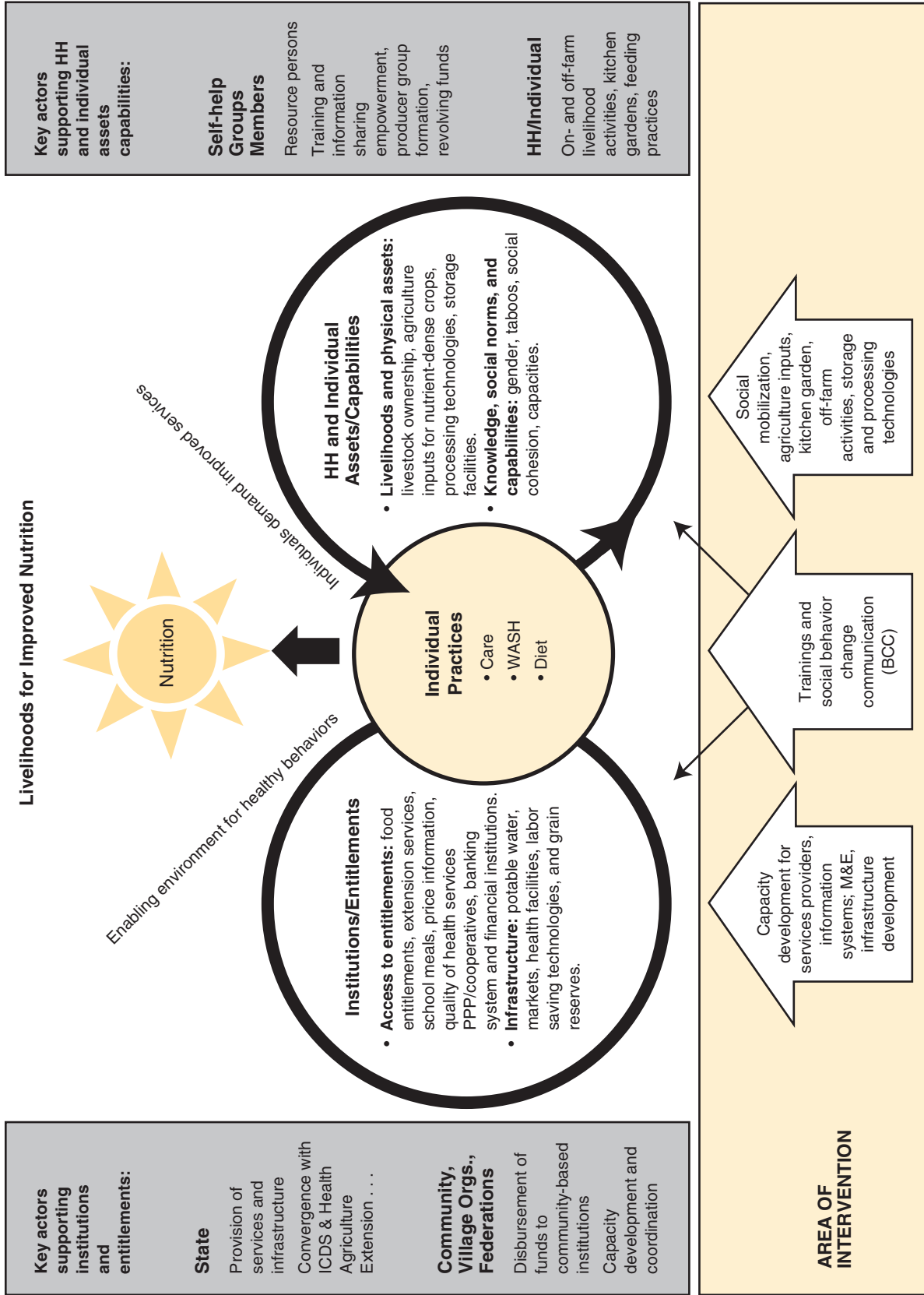
The key supporting actors are identified in the two columns on the sides. A project can help to further strengthen these pillars of livelihood-nutrition linkages by working with these institutions and actors. The

ultimate goal is improved nutrition, addressing specific issues and gaps as identified in the baseline.

This diagram illustrates the need for a set of complementary demand and supply-side support mechanisms, offering individuals a sustainable means to realize the recommended dietary, care, and WASH practices. Given the magnitude and multifaceted nutrition challenge in Bihar, it is important to recognize that no single activity can serve as a panacea. This is a key principle in JEEViKA and a key reason for this study, as visualized on the following page.

Purpose of Study

The current status of malnutrition in Bihar is well known, and elsewhere studies have shown a positive impact of unconditional cash transfers complemented by behavior change communication for improved nutrition. However, little evidence has been generated on the effectiveness of integrated livelihood



This diagram was developed based on the JEEViKA framework

interventions, looking at the complementarity of a series of pathways, for nutrition. Therefore, many assumptions prevail, particularly the direct impact of increased productivity and income for reducing rates of malnutrition. Instead, evidence is needed to identify effective modalities, scale, and links with other programs and activities that could best address the underlying causes of malnutrition.

This rapid assessment was undertaken as part of the Implementation Completion Report of the World Bank-funded Bihar Rural Livelihoods Program (BRLP) during the beginning phases of its successor project—the Bihar Transformative Development Project (BTDP). The **objective** of this rapid qualitative assessment was to take stock of the existing livelihood and nutrition-related interventions introduced in the BRLP (even those that were not intentionally designed with this objective) and see how they are linked and could be further strengthened to meet the common objective of both livelihood improvement and reducing malnutrition. A series of pathways and activities for nutrition have been identified as part of this new

phase of *JEEViKA* (BTDP), building on the institutional framework developed over the past decade. However, this still requires a better understanding of which activities have had (any) major positive ‘spill-over’ effects on improving the nutrition situation, why, and for whom.

Methodology

This study focused primarily on **dietary diversity as an intermediary impact indicator for nutrition**, not discounting the importance of care and health practices, including WASH, or food security for that matter. FAO recommends dietary diversity is one of the proxies of micronutrient adequacy, a key determinant of diet quality. The new Minimum Dietary Diversity Score for Women (MDD-W) indicator is “a dichotomous indicator of whether or not women 15–49 years of age have consumed at least five out of ten defined food groups during the previous day and night. The proportion of women 15–49 years of age who reach this minimum threshold of dietary diversity (i.e., five or more food groups) can be used as a proxy indicator, which is one



important dimension of diet quality.”³ Indicators for women and children dietary diversity (including Minimum Dietary Diversity Score for Women, MDD-W) have been included in the logical framework of the BTDP, and so it is important for the JEEViKA team to identify concrete and effective means for improving the variety on the food plate, tackling constraints faced at household levels.

This report is based on a **participatory qualitative rapid assessment** in Bihar. **Methods** utilized included interviews with technical project managers, World Bank advisors, implementing partners, and semi-structured focus group discussions with project beneficiaries. In order to understand the linkages between livelihoods and nutrition, one focus group discussion was facilitated with Community Resource Persons (CRPs) to triangulate the findings gathered from four focus group discussions which were facilitated in two districts (Gaya and Nalanda). Group discussions were organized with members of SHGs based on asset classification: land, landless, cattle, and poultry ownership. This classification was selected based on previous studies showing the importance of this asset base for several development indicators. Each group was composed of 8–14 participants and often a mix of land/landless as well as castes (Scheduled Castes (SC) or Other Backward Castes (OBC)). These internal differences helped to triangulate some of the assumed impact pathways. In short, the groups were characterized by the following criteria:

- Land owners (1 or more acre) who can presumably cultivate sufficient quantities of food to also keep some for home consumption;
- Own dairy cow or buffalo (landless or with land);
- Landless (or less than 1 acre) who own some small livestock including poultry and goats;
- Landless (do not own any land or productive assets).

Findings from these discussions, including recommendations for the BTDP, are summarized below.

Livelihoods Associated with Dietary Diversity

Interviews and Focus Group discussions highlighted several possible determining factors for improving dietary diversity. These findings were triangulated with District-level Livelihoods Managers as well as Community Resource Persons. Land and livestock ownership, potentially associated with level of caste (Scheduled versus Other Backward), were clearly the most determining factors based on the testimonials of group participants. Those with land seem to be more responsive to (or capable of) taking up livelihood activities designed to improve the nutrition situation (largely through agriculture productivity and income pathways), whereas landless households may require a different package of interventions to improve both off-farm income and access to quality safety nets.

All households upon joining SHGs, regardless of landholdings, seem to have started at a low dietary diversity score of 2–3 food groups per day (according to respondents explaining pre-program conditions in the absence of a rigorous baseline). Those who are landless seem to have experienced little improvement. For those with the most assets, change was reported to have improved from 3 to 5–6 food groups today. This is further broken down by livelihood groups below.

- **Landless:** Due to a lack of land, these women and their households depend on local markets where they regularly purchase seasonably available vegetables and occasionally fruits (most fruits are gathered from neighboring plots). Their husbands have all migrated to cities as wage laborers, leaving the women in the village to rely on infrequent remittances, insufficient to purchase a varied food basket. Fish, meat and eggs are each consumed twice per month. During festivals and when guests visit, meat is also prepared. Milk is purchased irregularly and used by adults only for tea and given pure to children once per day until 2 years of age. The Food

³ <https://www.fantaproject.org/monitoring-and-evaluation/minimum-dietary-diversity-women-indicator-mddw>

Security Fund (FSF) offers an opportunity to access bulk items at a lower market price and as repayment can take place anytime within three months, therefore, this reduces the pressure to repay immediately. Today, households still consume an average of 2–3 food groups per day: rice/potato/wheat-based product and a vegetable accompanied by an occasional bowl of dhal. As such, while change was reported as told through stories of empowerment and improved physical mobility for women, dietary diversity and care practices have not changed much. It appears that an improvement in financial and physical assets (particularly through off-farm opportunities) accompanied by nutrition education could substantially support this group through CRPs and CMs.

- **Landholders cultivating crops:** with the support of FSF, many households purchase rice and pulses from the market and directly harvest 2 types of vegetables for daily consumption from their own fields. These households consume about 3–4 food groups each day, including dhal at every meal. Eggs, meat and fish are consumed twice per month and dairy daily by those who own cattle (yogurt, paneer, ghee). These households seemingly have the means to purchase a balanced food basket, but largely consume what is available on the land rather than seeking other foods to diversify the food plate. Most of their husbands are wage laborers residing in the area. Their dietary diversity seems to have improved but nutrition education

could support households to grow and purchase more nutrient-dense foods.

- **Dairy cow owners (with and without land):** All dairy owners, including the landless, consume milk on a regular basis and have a kitchen garden (which some grow in containers or within the compound), though the landless only grow 2–3 varieties of vegetables at a time. Those with land consume an average of 4–5 food groups per day including rice, pulses, milk, 2 types of vegetables plus meat and eggs 4–5 times per month. The landless households only consume 3–4 food groups per day, mostly rice or wheat, vegetables, dairy and often dhal. All the husbands are wage laborers in the vicinity. Those with dairy and land seem to be faring better and interested in diversifying their off-farm livelihoods activities.
- **Poultry and dairy cow owners (with and without land):** Poultry appears to be one of the most lucrative businesses where an egg can fetch a price of 10–25 rupees at the market, though there is now a risk of flooding the market as the word spreads. This has increased household earnings significantly. Those with land cultivate rice, wheat, pulses, mustard vegetables, and spices. They do not sell the produce immediately but rather check market prices to sell the products when prices are most advantageous. All households also have a kitchen garden though those with land have more variety. The husbands work as agriculture wage laborers in addition to supporting the cultivation of crops on their own land.

These households seem to consume a minimum of 5–6 food groups: grains, pulses, leafy vegetables, another vegetable, milk in addition to eggs at least once per week as well as meat (mostly poultry and other small livestock) once per week. They consume more eggs in the winter, but all members of the family consume eggs regularly, including children, during pregnancy, and lactation. Participants also commonly consume papaya, guava, and banana when they are available in the village. When they go to the market, they purchase apples and pomegranate. Those with landholdings fell on the higher side of the number of food groups consumed but since all had a kitchen garden, all households have access to some vegetables. Many of these households are also engaged in other off-farm activities.

“There was no hope to get even a single rupee, and we could not send our children to school; now everything is happening here because of our small savings. Being part of SHG turned our lives around. We began with saving money and now engaged in incense stick making which is a core livelihood for us. The income earned from our work is spent on giving good food to our children, sending them to a good school and paying their tuition fees,” recounts Babita Devi, SHG leader in Gaya. *“We have realized that self help is the best form of help, and we believe that through Jeevika, we have rediscovered our potential.”*

Noor is a CRP and joined SHG in 2008. She was confined to her house, living in abject poverty with four children. The income earned by her husband was not sufficient to meet the family's needs. It was then she heard about SHG and decided to join but her husband and other relatives didn't allow her. However, she has joined the SHG secretly and started saving a portion of the money given to her to purchase groceries.

Her frequent absence (as she attended weekly meetings) was noticed by the family members and her husband had beaten her for not listening to him and kept her under lock and key. She cried, and fought with the family members but didn't give up the idea of being a SHG member. Finally, her husband had listened to her and allowed her to attend weekly meetings and save regularly.

In her words, "I have taken loan and supported my husband to expand his tailoring shop which gave good income. I repaid the loan and taken higher amount of loan and opened another shop. Now, my son and younger daughter work in the shop. After joining SHG, I have got my two daughters married."

Noor's determination didn't stop with her family. She mobilized her neighbours to join SHGs. She also actively participates in promoting healthy behaviors by mobilizing pregnant women and children to Anganwadi Centers, and informs them to eat varieties of fruits, vegetables, eggs and Chikki (Sweet snack prepared with peanuts and Jaggery). Noor represented Jeevika in many state level meetings including the one on 'Anti Alcoholism' to support the State initiated total prohibition.

Interviews and discussions indicated that with an increase in asset ownership, dietary diversity increased by at least one food group (i.e., land plus livestock ownership seemed to result in the highest dietary diversity score, meeting the threshold of five out of ten food groups). The integration of nutrition education in extension services, convergence with health and child care entitlements, and improvement of loans for nutrient-dense foods (particularly small livestock and cultivation of diverse crops in kitchen gardens) seems to have great potential. As such, nutrition needs to be considered throughout the project. However, these are the key findings of a rapid analysis and require further analysis. A food consumption survey and Knowledge, Attitudes and Practices (KAP) assessment should also be administered to validate these preliminary findings.

However, there are likely many other intermediary factors that should be further explored: (1) One such issue is labor migration. Men from households that own land or livestock seem to stay closer to their home and take up wage-labor during the off-season or on the side as they participate in the cultivation/rearing of foods. (2) There does not seem to be any difference in the number of food groups consumed by caste but religion may play an important role through the gender impact pathway, which also requires exploration. (3) Furthermore, the

quality of government services including targeting of the Food Security Fund, diversity of foods procured and distributed through Anganwadi/child care centers where women receive dry rations, Mid-Day Meal program, and the Public Distribution System (PDS) requires further review. (4) With regards to individual practices and nutrition awareness, landless groups and those with just access to land but no livestock seemed to have the least awareness of the benefits of diverse diets and recommended complementary feeding practices. The list of taboo foods to consume during pregnancy and lactation also seemed to be longest among the landless groups. This lack of awareness is likely because most nutrition messages were imparted through livestock and only minimally through agriculture extension services, building strong links for those receiving these services but likely neglecting those without access. It is clear that all groups require extensive BCC as changes in daily habits and practices take time and often question social values.

One last aspect that should not be overlooked is food (in)security. Most communities appear to have achieved a minimum level of food security either through income earned, on-farm production, or access to the FSF benefits during times of need. JEEViKA seems to have increased household food security according to members and so such an integrated approach should

be maintained to consider both sufficient quantity and quality of foods consumed. However, while a food security lens is essential, the position of the authors is that this is one of the drivers of malnutrition; without understanding availability, access and utilization of diverse healthy foods throughout the year, it is not possible to sustainably improve the nutrition situation in the state.

Conclusions: Leveraging Livelihood-nutrition Linkages

Overall, *JEEViKA* interventions seem to have instigated several powerful (albeit originally unintended) impact pathways for improving dietary diversity and the current BTDP hopes to expand this cadre of entry-points by strengthening on-farm production of diverse foods, off-farm income generating activities, comprehensive behavior change communication, and better convergence with other sectors. This will help build a more comprehensive package of interventions that will likely help tackle bottlenecks of improving both livelihoods and nutrition.

The scope of impact of a livelihoods program is epitomized by the fact that all 10 key recommendations for improving the impact of agriculture programs and investments on nutrition, as recommended by FAO, can be addressed; while the BRLP did not originally intend to work through all of these, the current BTDP seeks to address all of these including:⁴

1. Incorporate explicit nutrition objectives and indicators into the design;
2. Assess the context at the local level, to design appropriate activities to address the types and causes of malnutrition;
3. Target the vulnerable and improve equity;
4. Collaborate and coordinate with other sectors;
5. Maintain or improve the natural resource base;
6. Empower women;
7. Facilitate production diversification and increase production of nutrient-dense crops and small-scale livestock/fisheries;

8. Improve processing, storage and preservation;
9. Expand markets and market access for vulnerable groups, particularly for marketing of nutritious foods; and
10. Incorporate nutrition promotion and education.

As the BTDP will expand its outreach from 150,000 SHGs to 450,000, covering 5 million households, project teams have taken the opportunity to include nutrition considerations from the very beginning of the project. This is in line with a nutrition-sensitive project cycle approach where nutrition should be carefully considered during (i) **design** (assessment of drivers of malnutrition disaggregated by livelihoods group and gender followed by a rigorous baseline) and defined **objectives** (spelling out what nutrition issues will be addressed) (ii) **implementation** (convergence of stakeholders and institutions on the demand and supply side); and (iii) **monitoring and evaluation** (to capture effective causal pathways and assess what has and has not worked).

In closing, from a theoretical perspective, a nutrition-sensitive livelihood program seems to have a high chance of effectively addressing the underlying causes of malnutrition by strengthening a series of impact pathways that encourage individuals to take up long-term sustainable dietary, care and health practices that will support their health, growth, and well-being. However, what is important now is to understand what kinds of packages of interventions can support which cadres of the population. Rigorous logical frameworks including intermediary nutrition indicators need to be included in project implementation, to help draw comparisons and draw lessons. Assessments, including monitoring and evaluation, should help with the constant adaptation of the project from design through final evaluation to pick-up nuances of impact pathways. All ongoing and future livelihood programs could be strengthened through this approach and help build a solid evidence base to improve sustainable and equitable livelihoods development for well-being and good health.

⁴ <http://www.fao.org/3/a-i4922e.pdf>

BUILDING HIGH-CALIBRE HUMAN RESOURCES FOR LARGE-SCALE POVERTY REDUCTION PROJECTS

LESSONS FROM THE BIHAR RURAL LIVELIHOODS PROJECT

MRINALINI PENUMAKA, ANAND SHANKAR, MAHUA ROY CHOUDHURY, AND MIO TAKADA¹

Introduction

The successful performance of the Bihar Rural Livelihoods Project (BRLP) depended on a number of key approaches. These included an outstanding relationship of trust and respect with rural communities of very poor women and their self-help groups; a results-oriented management; and a willingness to innovate, learn, and monitor the project's direction. More importantly, to manage a large-scale poverty reduction project, the project required a modern human resources system with appropriate staff incentives and organisational development.

From the outset, the project has developed a modern human resources system that included recruitment, induction and performance management processes as the BRLP considered that having competent staff was critical in the project's successful rollout and implementation. As highlighted in the Implementation Completion Review Report, one of the key factors for the project's success is JEEViKA's dedicated and professional human resource structure for managing

performance and livelihoods promotion. This short note summarizes the project's approach to strategically nurture and strengthen its in-house capacity to address various demands and needs for the communities.

Robust HR Strategy

The project developed a comprehensive human resources manual that clearly laid down the processes for recruitment, induction, performance management and other key aspects of the human resources system. As the project scaled up, certain components were added or revised and new policies were made to make the human resource development systems more robust and responsive to the growth and expansion of the project. The manual was revised more than 15 times during the project period and this again demonstrated the intent of the project to develop a modern human resources system. *Performance appraisal system* was revised in 2014–15 to deal with the new scale of the project. The project has completed the performance appraisal of all the employees till 2015–16.

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Competitive Package

The project also developed compensation/salary packages that attracted some of the best professionals at the state, district and block levels. The compensation package was revised thrice during the project. This shows the proactivity of the organization to respond to market signals with the objective of attracting the best talent pool. Other benefits such as laptop allowances/advances, revision of health insurance benefits and two-wheeler easy loan facilities were also added from time to time. Special provisions were introduced for the differently able and compensation for loss of pay periods during accidents was incorporated.

Transparent Recruitment System

Nearly 1,100 professionals at the state, district and block levels were recruited through a professional management agency who independently reviewed the

qualification, skills and background of the candidates in a rigorous manner. The project paid attention to the quality of the induction program.

Young Professionals Program. The Young Professionals Program launched in 2011 to draw young talent from premiere technical and management institutes in India. The YPs who were recruited and inducted included both experienced (2–3 years) as well as fresh pass-outs from various premiere academic institutes from across the country. Young professionals were to bring in new ideas and fresh perspectives to the organisation. Over time, the organisation would develop them into professional managers for both technical disciplines and general management positions. To date, the project team recruited and hired 300 young professionals with training in rural management, sociology, finance, agriculture and forestry. These young professionals were recruited from several national institutions in India, such as Institute of Rural Management, Indian Institute of Forest



Management, Xavier Institute of Social Service, KIIT School of Rural Management, Xavier Institute of Management, Bhubaneswar, and Tata Institute of Social Sciences.

Resident Consultant Model. With the support from the World Bank, the Bihar Rural Livelihoods Promotion Society hired a consultant with deep technical expertise development studies and rural livelihood programs to provide technical assistance and day-to-day operational support. The technical assistance included: support in designing and scaling up new livelihood and entitlements interventions; development of concept notes of pilots, piloting interventions, developing guidelines and operational manuals; diagnostics to tackle implementation issues; analysis of data backed by evidence gathered from field visits to identify constraints faced in the implementation; development of solutions through discussions with CEO and thematic heads; and enabling an authorising environment for the project in the state. In addition, the Resident Consultant undertook periodic and regular formal and informal interactions with senior government officials, members of the executive

committee of the project and other stakeholders such as leading development economists in the state to build an authorising environment for the project in Bihar.

Community Paraprofessionals. A cadre of community paraprofessionals supported the Block Project Implementation Unit. These included community activists, bookkeepers, community resource persons, para veterinarians, job resource persons, and health activists by the projects through investment in their knowledge and skills. They provided services to self-help groups and were paid directly by self-help groups over a period of time.

Conclusion

JEEViKA considered competent staff and their talents as an integral part of the project's implementation strategy from its establishment. It consistently aimed at (i) having in place strong CEOs and ensuring their continuity, leading to consistency in implementation decisions; (ii) making special efforts to recruit highly experienced consultants; (iii) placing resident consultant advisors

“Poor cannot be serviced “poorly.” They deserve to get professional assistance from the best talents.”

*Arvind Kumar Chaudhary, Former CEO of JEEViKA
presently Secretary for Rural Development*

and young professionals to build local capacity and provide technical support within the project team; and (iv) developing comprehensive human resources policies and procedures to attract and retain competent staff while building the capacity.

MANAGEMENT INFORMATION SYSTEM AS DECISION SUPPORT SYSTEM

UPAMANYU DATTA, AJIT RANJAN, SAMRAT K GHOSH, AND PRABHAT RANJAN¹

Introduction

JEEViKA, or the Bihar Rural Livelihoods Project (www.brlp.in), is one of the flagship poverty reduction projects of the World Bank group in South Asia. Implemented by an autonomous body of the Government of Bihar, this project reaches out to about 1.8 million (and counting) in India's poorest state. One of the core concepts of the project is that interventions are sustainable and efficient when implementation is shared with the beneficiaries. The project works by building a network of federated institutions of rural women, which then manage and channel various benefits such as credit, livelihood options, entitlements, safety nets, etc. Arranged progressively in order of funding, responsibilities and number of women reached, these institutions are **Self Help Groups (SHGs)** with 10–15 women), **Village Organisations (VOs)** with 10–15 SHGs) & **Cluster Level Federations (CLFs)** with 30–45 VOs).

Large scale projects based on the strategy of institutional mobilization and delivery of benefits are complicated by design. Objective and on-time reporting that can be validated against secondary sources should be the foundation of monitoring in such projects (Kusek & Rist, 2004). However, the mandate of monitoring systems in these projects must be to inform users about progress and quality control issues, so that the source of bottlenecks can be identified and actions can be taken (Mansuri & Rao, 2013). For a project like JEEViKA, it is critical to build financial management capacity at members' and community institutions for them to be

accountable for project data and funds flow. JEEViKA developed its Management Information System (MIS) to support managers (including community institutional leaders) in decision making in the project implementation and supervision. This note describes the learning from JEEViKA's experience in utilising MIS as "Decision Support System."

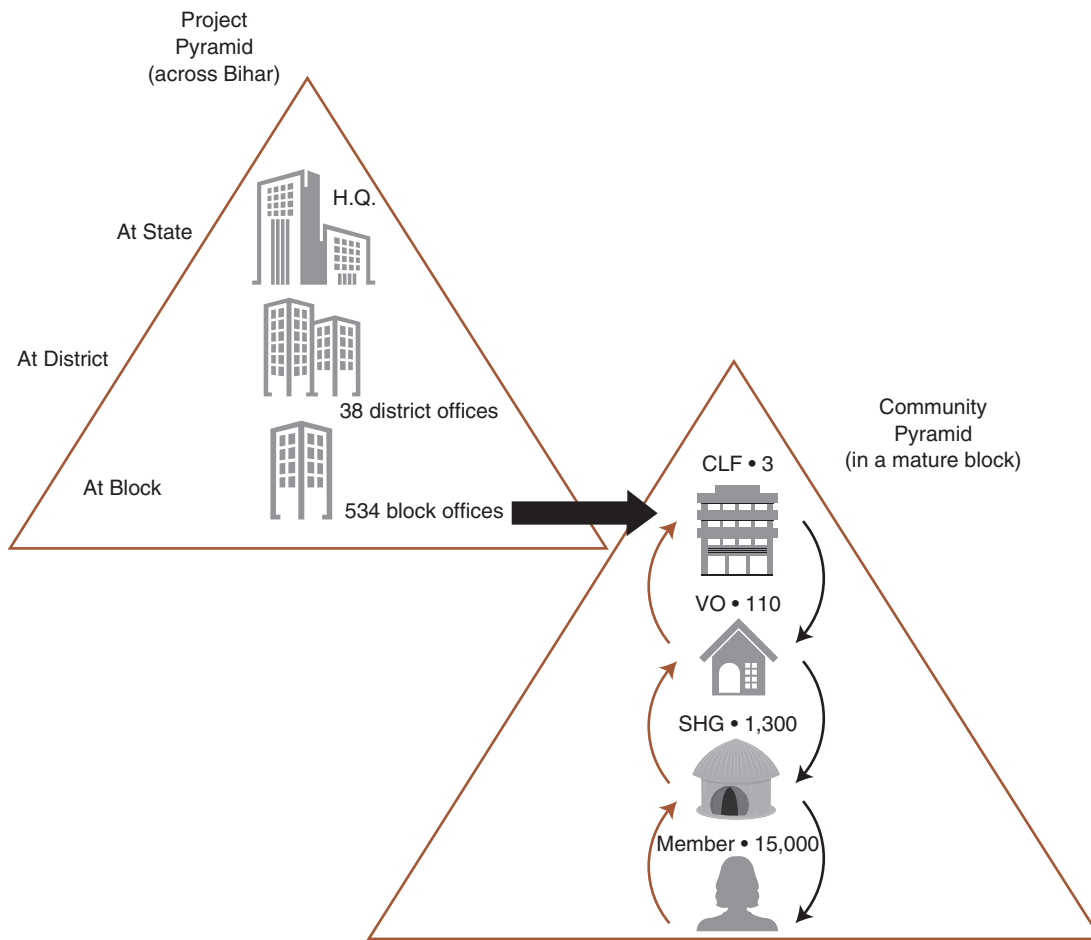
JEEViKa's Institutional Hierarchy

The following graphic demonstrates how one can broadly categorise JEEViKA into two hierarchical pyramids, along with the relationship between the two.

One of the most universal benefits of JEEViKA is ICF (Initial Capitalisation Fund), which is a pot of money that the project provides for every SHG after it attains maturity in 4 to 6 months. It is a key mechanism for building financial assets, but also for community institutions and their members to learn about managing finances, and building a credit track record. Members of the SHG take turns to borrow out of the ICF pot for a variety of reasons, such as consumption smoothening, debt reduction and productive investments. In a mature block, this pot for every SHG is housed at the CLF; when a member requests a loan, it is forwarded to the CLF via her SHG and the relevant VO. The CLF in turn opens up a fresh credit line with the VO, which repeats the process with the SHG. Finally the SHG provides the money to the member, who has to repay as per an agreed schedule with a 2% monthly interest payment. This interest payment is divided among the

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Project & Institutional Hierarchy and Fund Flows of Initial Capitalisation Fund (ICF—black arrows, fund and credit injection, brown arrows repayments in mature blocks)



institutions and constitutes the primary source of institutional income. Once the member starts repaying, the ICF pot gets recharged and is used to sanction fresh loans. This cycle is captured in the above graphic.

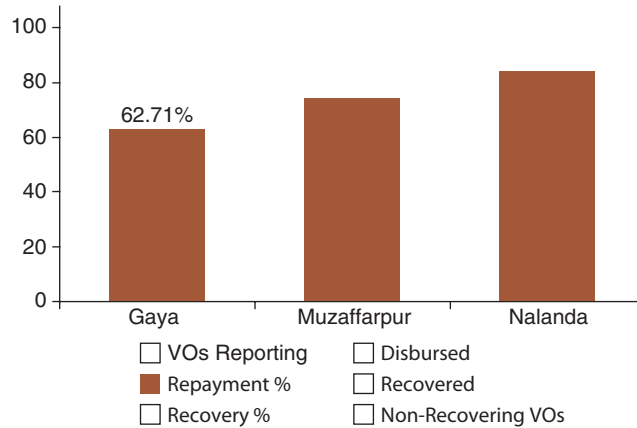
Clearly, the benefits of ICF will be realised universally if the fund is rotated repeatedly through the system. Members will be able to avail multiple credit infusions, while SHGs & VOs would prove their credit-worthiness to formal credit institutions, such as rural commercial banks and microfinance institutions, for further funding. To do this, every level, or 'valve', in this credit pipeline should know amounts disbursed, repaid and outstanding from every downstream valve; and be able to take corrective actions when the flow is not moving.

The growth and sustainability of the assets are critically dependent on continuing loans and repayments. At any moment in a mature block, about 1 million USD of ICF are flowing through 3 CLFs, 100 odd VOs, about 1,300 SHGs and 15,000 members. How does management, as defined by project staff, and importantly, the women in charge of CLFs and VOs and their communities' financial resources, understand the broad performance of ICF and identify bottlenecks?

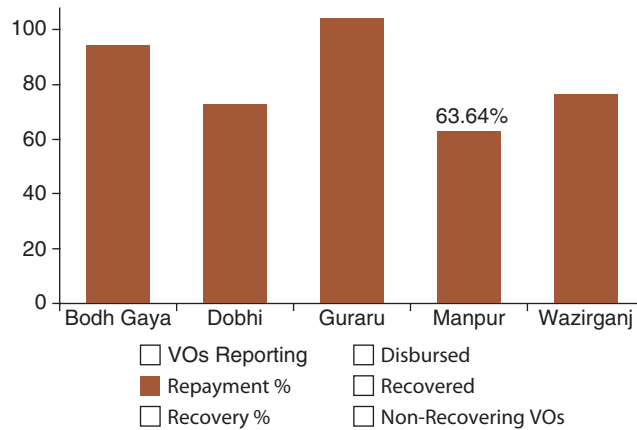
JEEViKA Decision Support System—Managing a Million USD

Development of Management Information Systems (MIS) are usually an important requirement of any large investment project. The MIS is used as one of the information sources to track the progress of a project.

Identification of Priority Districts: Bird's-eye View at State Level



Identification of Priority Blocks: Bird's-eye View at District Level



For example, numbers reported in MIS are often used to inform Completion Reports. A key challenge that has been noted from experience of MIS development is the need for ownership and utility. Thus, MIS could and should also be used as a day-to-day management tool, provided it is nimble enough to meet such 'requests for information' from all levels. The discussion that follows will consider JEEViKA's Decision Support System (DSS), which is the project MIS which evolved and is now in use, to understand how it aids managers (including community institutional leaders) in decision making. It will show how the DSS is used to spot issues in repayment of ICF loans. It can be useful to start by putting oneself in the shoes of *JEEViKA's state*

level manager, and understand which districts are falling behind when it comes to repayment of ICF loans.

Clearly, repayment is a problem in Gaya. Next, from the perspective of the *District Project Manager of Gaya*, it is important to look for the blocks that are affecting the district's performance.

Block Project Managers of Manpur are next tasked with identifying CLFs and VOs that are affected by low repayments from downstream SHGs. Once identified, they can prioritize critical institutions (for example, with a repayment percentage below 80%) and work with them jointly to improve outcomes.

Identification of Priority VO: Escalation Reports Zoom into CLFs & VOs

Block	CLF	VO	VO DoF	VO Disbursed	VO Recovered	VO Repayment
Manpur	Aanchal	Vikash 27/05/2011	27-05-2011	760,000	562,250	78.86%
Manpur	Bharat 21/02/2013	Sangam	25-05-2011	850,000	651,252	76.62%
Manpur	Aanchal	Nandani	20-02-2013	333,000	254,300	76.37%
Manpur	Aanchal	Suraj 29/06/2011	29-06-2011	400,000	301,200	75.3%
Manpur	Aadarsh	Prakash 26/12/2011	26-12-2011	500,000	373,020	75.21%
Manpur	Aadarsh	Suraj	22-03-2013	540,000	281,214	74.59%
Manpur	Aadarsh	Bharat 21/01/2012	21-01-2012	620,000	444,860	71.75%
Manpur	Aadarsh	Shanti	31-07-2012	540,000	375,695	71.15%
Manpur	Bharat 21/02/2013	Ujala 30/06/2010	30-06-2010	728,000	511,600	70.27%
Manpur	Aadarsh	Shakti 21/03/2013	21-03-2013	340,000	226,371	69.87%

It makes sense if this report can be of direct use to CLF and VO managers, since it delegates the responsibility of corrective actions to the people who are

directly affected by the problem. Next, the managers CLF have to trace the source of poor repayments to the SHG.

Problem Solving at Grassroots: Hindi Escalation Reports for Spot Review during CLF Meetings

सी एल एफ	वओ	वओ - गठन तिथि	समूह	समूह - अन्तमि वापसी तिथि	समूह - उधार	समूह - वापसी	समूह - वापसी गति
आँचल	कल्याणी	13-10-2012	राधा	02-11-2015	50,000	1,800	3.67
आँचल	राधा	26-05-2014	शारदा	01-05-2016	50,000	1,100	3.67
आँचल	कल्याणी	13-10-2012	बादल	01-08-2016	50,000	3,500	7.14
आँचल	राधा	26-05-2014	ऊँ	01-10-2016	50,000	2,300	7.67
आँचल	वरिठ	19-02-2013	शीतल	01-09-2016	50,000	4,600	10.22
आँचल	कल्याणी	13-10-2012	चमेली	01-10-2016	50,000	6,500	13.27
आँचल	राधा	26-05-2014	कसक	02-01-2017	50,000	7,100	23.67
आँचल	राधा	26-05-2014	उमा	01-10-2016	50,000	8,300	27.67
आँचल	वरिठ	19-02-2013	वकिाश	02-01-2017	50,000	14,000	31.11

The 1st, 2nd and 4th columns identify CLF, VO and SHG, while the 5th column provides the last date on which the SHG repaid ICF to the VO. The last 3 columns detail the amount borrowed, repaid and repayment rate respectively.

Empowered members of the VO's repayment committee can now visit the identified SHGs and understand which members are not repaying and their reasons for not doing so.

The menu of options available to the CLF and VO's management to increase repayments is beyond the scope of this document. But hopefully the above example conveys the ease with which users can zoom into the source and scale of issues, for example, low repayments on a particular fund. As of today, this DSS can identify the scale and source of quality issues on a variety of outcomes such as institutional formation and federation, fund delivery, disbursements and repayments, cadre payments, dormancy of institutions, financing of institutional subprojects (such as VO managed Fair Price Shops, Nutrition Care Centers, Toilet Construction), etc. In a large and multi-intervention project like JEEViKA, a strong MIS is not just a funder's requirement, but a management necessity at multiple levels.

Evolution of the JEEViKA DSS

We now consider the key elements that led to the evolution of the JEEViKA DSS to respond to users' needs. As we shall see, allowing for evolution is an important factor for developing a useful system. A good MIS is a useful MIS. An MIS is useful if it:

- Contains relevant, accurate, up-to-date data
- Can convert the data into concise information that is actionable
- Is nimble with respect to users' needs, which will change over time

Need for relevant, accurate, up to date data: Projects that operate in contexts that are rich in enabling infrastructure (stable electricity and connectivity, availability of hardware and skilled manpower) will always have an advantage in rolling out an MIS. Unfortunately, such enabling infrastructure may not be easily available in contexts where IFI funded projects are operational. Worse, its often beyond a project's control to change the quality of this infrastructure. Projects need to work on '2nd best' options to ensure that data collection is relatively up to date, given infrastructure constraints.

JEEViKA is not immune to such infrastructure bottlenecks, with poor connectivity being the norm in rural areas. After a first early unsuccessful attempt, and given the sheer scale of operations, JEEViKA decided to forfeit the digitisation of transactions between an SHG and its members, and focus on digitising transactions between VO and its SHGs, and a CLF and its VOs. Since transactions between SHGs and its members happen weekly, updating the data of a mature block on a monthly basis would require entering over 5,000 SHG level transactions, each of which would cost an hour. Shifting the focus to VOs and CLFs (which meet once a month) would require monthly entry of 3 CLF level transactions and 110 VO level transactions, each still costing an hour. As long as the data could link the institutions together, one could still identify strengths and weaknesses at SHG levels; and tracing the weak members in a weak SHG is then a matter of visiting the field and talking to the identified SHG.

This brings us to a more fundamental point. To succeed, this required that VO level transactions could reliably link to SHGs, and CLF level transactions could link to VOs. This would need a standard, universal mapping of members and institutions, and of institutions and transactions. Without standard mapping, a uniform software cannot be designed to properly digitise the connections between the community pyramid. If the mapping isn't universal, then not all project areas could be served by the software. This mapping was provided by the institutional **Books of Records (BoR)**, a standard set of paper-based records, mainly financial, which contained relevant information for the institution, the entities federated to it, and the details of every transaction between downstream and upstream entities, typical of federated SHGs in India. Thus the VO BoR would contain details on the particular VO, including its account details, federated SHGs, its parent CLF, training dates, cadre details and transactions with SHGs and CLF. As long as all VOs in JEEViKA had the same BoR, an MIS software could be designed to universally capture all relevant data from the BoRs and provide an accurate picture across the project.

There is another benefit in using such standard sources. Digitisation may cause errors, and some personnel may



report incorrect data on purpose. If the source of MIS data is nonstandard, it is hard to validate the quality of data that gets into the system. When the source is a standard paper trail, any and all data are verifiable from the ground. This creates a big dis-incentive in intentional false reporting, while allowing for autocorrection for several types of unintentional errors. For example, for every month, institutional transactions report an opening and closing balance. The closing balance for one month is the opening balance for the next month. Unintentional errors that cause a mismatch between the BoR and the digitised data are thus found out in the next month, when the opening balance of the BoR is compared to that calculated by the software.

With this in mind, JEEViKA mandated that interventions with standardised BoRs would be developed first as digitised modules. Interventions without such standard paper trails needed to develop, test, and deploy

their own BoR before a digitisation module was built around that intervention. This *modular development approach* was a decision with important longer term significance, as it forced staff across a variety of interventions to think through the pieces of data that are relevant to their operation, balance it with the time needed to collect each piece, and create a standard record which would become the mainstay of the digitisation module for that intervention.

Translation of data into actionable information created buy-in: Capturing data regularly with accuracy is not a good investment if the data are not used to their potential. Most projects use MIS data to report on progress, upwards to higher levels, in a fairly dry manner. JEEViKA's approach was to squeeze the data to identify problems. First, this needs a *culture of collective responsibility and action* at different hierarchical levels. Otherwise any quality issues will be cause for finger pointing and downward delegation!

To a large extent, the culture of collective responsibility was always present in JEEViKA due to its institutional approach in delivering benefits. During development of DSS generated reports, JEEViKA staff decided to collect requirements from a variety of levels, including beneficiaries who were responsible in managing CLFs (and by extension, VOs and SHGs). The process involved asking future users (especially at district, block and CLF levels) three broad questions:

1. What would you like to know from the computer?
2. What would you do with the information?
3. Who should support you if the task is too hard for you?

In an interesting trend, the lower one down the hierarchy, the more 'actionable' was the information requirement. For example, the District Project Manager might say that he needed to know the percentage of 6-month-old SHGs that were federated to VOs. The Block Project Manager would like to know the percentage of 6-month-old SHGs NOT federated to VOs. The more experienced block managers, as well as the CLF, wanted to know the name of SHGs that were not federated into a VO, although they were more than 6 months old. Personnel tasked with implementation require pinpoint actionable information that eases their day-to-day activities. When JEEViKA started to collect information requirements, it provided an opportunity for these requests to be reflected in the design of the dashboard and reports. In the example of ICF repayment, this design philosophy is reflected in the provision of charts for district and block prioritization, and escalation reports that flag the source of the problem along with its intensity to the CLF, block and district managers.

This approach had a more subtle implication. When users at all levels noticed that their requirements were reflected in the DSS dashboards, their buy-in toward using the reports was greater. This in turn encouraged them to ask for more information, which in turn 'squeezed' the data for more analytical reports. Finally, it created a sense of collective responsibility. If several SHGs under a CLF did not receive ICF, it activated the CLF to inquire about the specific bottlenecks. Once identified, the CLF reached out to separate block level personnel to conduct relevant SHG trainings, and/or

establish bank accounts for the SHGs, and/or conduct appraisal meetings for loan requirements. This provided valuable on-the-job training for community members and staff in detecting a problem via the DSS, setting targets and jointly troubleshooting issues at every source.

Responsiveness to changing to users' needs: A common aspect of large rural development projects is their adaptability and evolution over time, both in the implementation of existing interventions and adoptions of new policies. Clearly, the project MIS also needs to evolve in response. Unfortunately this is a major challenge to the implementation of a useful MIS.

In a usual MIS development process, a project hires a technical agency to design the appropriate modules, database, reports and trainings to deploy the MIS. If the project thinks through its data collection strategies (source of data, frequency of collection) and information requirements (dashboard design at every level), it can present a well-structured contract to the technical agency, clear in its terms and deliverables. Irrespective of the proficiency of the agency, however, the project's needs may change as soon as the MIS is deployed. This will be particularly applicable for projects that are developing an MIS for the first time, as well as projects that ask for more and more information from their existing MIS. In both cases, contractual obligations will create a bottleneck in providing these new requirements. The clearer the contract is in deliverables and a timeline, the worse might be the bottleneck. This creates this paradox; the greater the demand for information, the worse might be the relationship between a project and the technical agency developing the MIS, especially when the initial contract is less open ended!

Addressing this issue needs an honest understanding of the roles, strengths and weaknesses of a project and the technical agency in the development of an MIS. A technical agency is proficient in taking the specifications from a project, and developing the IT environment that best suits the project's needs, given the enabling infrastructure. Thus, the technical agency is best suited in creating digitisation modules which mimic the BoR on a computer screen, applications that could store information even without connectivity, servers that house continuously expanding databases, etc. The external agency is NOT suited in

identifying the project's requirements and providing appropriate information, in the form of reports and dashboards. Such outputs are specific to the operations of the project, and it is irrational to expect that a technical agency would have the domain knowledge of the context and technical content of the project, and also have the flexibility to quickly appreciate a project's needs and provide different packets of information as and when required. This needs to be done by the project in-house, with staff who are technically competent in leveraging the database and creating the reports as per user specifications. Such staff possess the domain knowledge for project operations; as long as their technical skills allow them to access and mine the database developed by the agency, development of reports and dashboards can be a continuous process without being bottlenecked by contractual terms.

At full project flow a large and experienced technical IT support agency was hired by JEEViKA to develop the DSS. Both JEEViKA and the agency faced a massive challenge in developing and deploying the various modules; a huge amount of data on existing beneficiaries and institutions was out on the field and needed to be digitised. Skilled manpower to collect, collate and digitise the information was not readily available. Connectivity was slow in most parts of Bihar, while the supply of electricity was uncertain. The agency was also tasked with the development of a multitude of reports. Within a few days of the rollout of digitisation modules, a trend of 'empty' SHGs was noticed (see box on page 9). Had it persisted over the long run, the rollout of the DSS could have been a failure. JEEViKA staff, with support from the World Bank Social Observatory (in the Development Research Group) were able to build information packages to track and troubleshoot this trend. This gradually increased the awareness and confidence of staff to fashion user friendly reports and dashboards as needed, by leveraging and improving in-house capabilities.

Lessons and Recommendations

Strike a realistic balance between ambitions and constraints: Projects often fall into the trap of trying to replicate the success of other similar projects, without accounting for the context which enabled the success. This happens often during MIS development, and is

complicated by the fact that such projects are usually needed in places which suffer from a lack of enabling infrastructure, with shortcomings or constraints in skilled manpower, good hardware, competent technical agencies and reasonable security situations and field access. Projects need to carefully allocate scarce resources in order to find the most value for their money. For example, it might be sensible to use limited skilled manpower to collect data less often, but on a regular basis, by having a team do quarterly field data collection. While not optimal it may still provide reliable regular data.

Before collecting more data, squeeze available data:

A knee-jerk reaction to unavailability of information is to collect more data. Projects should invest time in understanding existing sources of data and rationalise the pieces of data that it should digitise. For example, when an SHG is formed, it is natural that its members furnish several details such as address, telephone numbers, education, age, etc. If member level information is not needed for day-to-day information, then spending resources on digitising all details is less cost effective than say, digitising her name and her contact number. Unnecessary digitisation, especially at the lower levels of the community pyramid increases investments exponentially, without creating commensurate benefits. A member's progress is correlated to her SHG's performance, thus tracking that may be a much more efficient alternative.

Set a trail milestones for validating the system:

A useful MIS can separate good from bad performance, whether we are talking about beneficiaries, institutions, community cadre or staff. The incentive to corrupt the data is therefore always present. However, the risks of getting caught are increased if the MIS is built on trail transaction milestones which indicate collection of required data. For example, creating an SHG on paper might yield a short-term boost in numbers. But in 6 months that SHG is supposed to be federated into a VO. If the transactional data does not pick up financial interactions between the VO and the SHG, then 6 months down the line questions will be asked. Such validations become part and parcel of an MIS organically when it is built on standard records that are readily available in the field to beneficiaries, institutions and staff.

Box 1: Digitisation of Data Experience

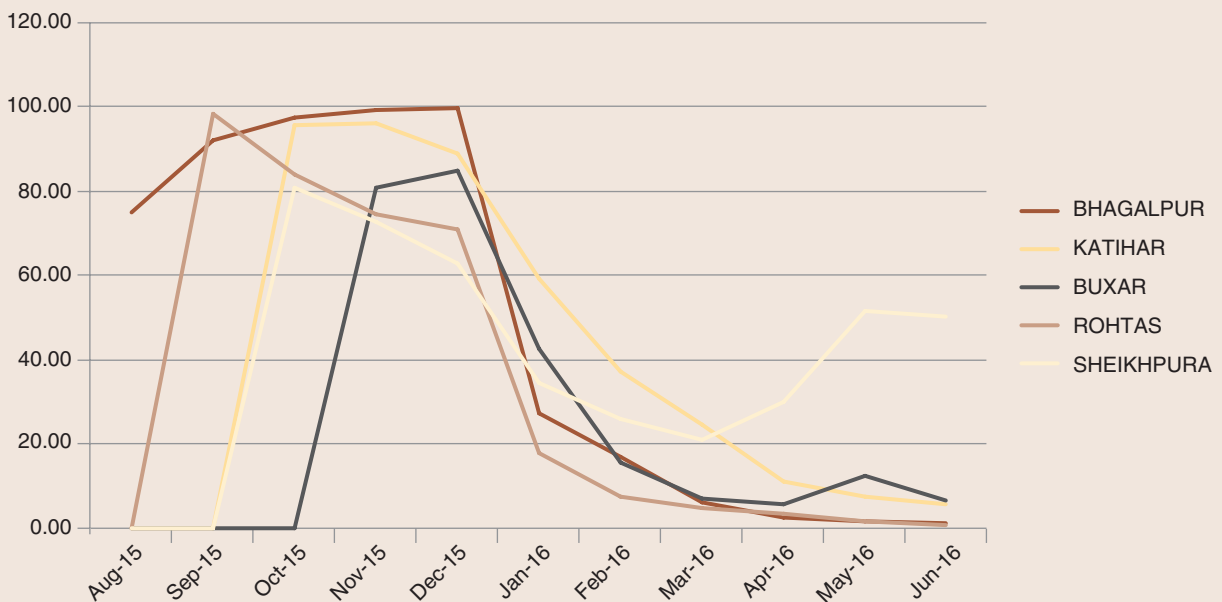
During the initial days of rolling out the application, JEEViKA had to digitise a mountain of data out in the field, scribbled down on the Books of Records. Priority was assigned toward updating all financial transactions. Since the digitisation of a beneficiary is time consuming, data entry operators found it convenient to ignore member digitisation at that time. Soon, staff at HQ found that according to the MIS, an average JEEViKA SHG had 5/6 members!

The technical IT agency was approached to create a report to flag empty SHGs (SHG without members) on a regular basis, but the agency was already busy with creating the original basket of reports. Although they provided a large list of such SHGs, staff needed to filter and sort the list to identify the SHGs that were in their geographical areas. Further, such a list was needed regularly, since fresh 'Empty SHGs' were being created.

This led to the first attempt of report creation by internal staff in JEEViKA, with support from the Social Observatory. Concurrently, JEEViKA management started a monthly e-mail routine, where ALL district and block project managers were intimated that a problem had been spotted by the MIS and appropriate troubleshooting reports have been designed. Going forward, all progress on this problem (or the lack of it) made by every district would be common knowledge. A sample of the first e-mail from 3rd January 2016:

“Patna (with over 11,000 SHGs digitised) has less than 1% empty SHGs. This is the best, in all of Bihar . . . At the other end of this spectrum, Bhagalpur has 2 members in 276 SHGs (?!?!?) and out of 5,279 SHGs in Katihar, 89% is empty . . . [and] make up the . . . bottom performers in this category.”

Within 6 months, all the bottom performers turned it around, as shown by this graph.



In every district, the first SHGs were digitised properly; when the pressure of digitisation intensified, quality suffered, thus rapidly creating empty SHGs. This explains the initial spike in every district, before the reports and appropriate actions were combined to reduce the problem.

Develop project ability to ask questions and find answers from the database, not from the IT technical agency:

Technical agencies should be pushed to build a package of solutions (such as lightweight modules supported by mobiles, digitisation options in the absence of internet, comprehensive databases, storage servers, etc.) given the availability of enabling infrastructure. Project should build up relevant skills of M&E staff so that they can access and analyse the database created by the agency. Various software like R, Python, STATA, SPSS, etc., allow intricate analyses of massive databases built on platforms such as ACCESS, SQL, ORACLE, SAP, etc. Internalising such skills allows staff to build and iterate reports at will, creating a continuous ‘dialogue’ with the MIS without being bottlenecked by contractual constraints with agencies.

Foster utilization of information before universal rollout:

It is not necessary that information be used and acted upon only after data across all institutions and interventions are digitised. Digitisation often suffers because stakeholders view MIS as a burden, a donor prescribed mandate instead of a management tool. This problem is further magnified when MIS development does not account for inputs from all levels of the project, and slow entry of masses of data. Firstly, a participatory development of MIS modules and how they fit their needs and use will go a long way in getting buy-in from a variety of stakeholders. Secondly, a useful approach is that when a significant chunk of data is digitised, say even in one part of the project area, focus is shifted on using the information produced from the available data

(provided it has been through a validation process). This ensures management is familiarised in using the MIS as a tool, and helps motivate them by realising the information gaps created by incomplete rollout. Thirdly create incentives for completion of data gathering. For example, if a CLF with 35 VOs is provided repayment reports from 20 VOs, it should automatically ask for such reports from the remaining 15 VOs. If the cadre responsible is not delivering the required reports for the 15 VOs the CLF can pinpoint the problem and even suspend cadre honorariums.

MIS rollout and MIS usage are not consecutive activities, but two parts of a virtuous cycle. If they are not implemented in conjunction, the entire agenda of building a useful MIS will be seen as a long drawn out process, with little direct benefit. And without a useful MIS, management at every level of such projects will be handicapped by lack of information leading to inefficient service delivery and weak institutions.

References and Data Sources

Kusek, Jody Zall, & Rist, Ray C. 2004. “A handbook for development practitioners: ten steps to a results-based monitoring and evaluation system.” Washington, DC: World Bank.

Mansuri, Ghazala, & Rao, Vijayendra. 2013. *Localizing Development: Does Participation Work?* Policy Research Report. Washington, DC: World Bank.

Project Website: www.brplp.in

A WAY FORWARD

LESSONS ON MOVING FORWARD FROM THE BIHAR RURAL LIVELIHOODS PROJECT TO THE BIHAR TRANSFORMATIVE DEVELOPMENT PROJECT

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Introduction

The learning notes part of this collection reflects lessons from a decade of JEEViKA's work in Bihar. In the last chapter of this collection, we look ahead—at how these lessons have informed the design of the second phase of the project: the Bihar Transformative Development Project. In June 2016, the Government of Bihar and the World Bank launched JEEViKA's second phase. This new project builds on the strides made by its predecessor, the Bihar Rural Livelihoods Project. It expands its work from 6 districts and 179 blocks to include 7 million poor households in an additional 32 districts and 300 blocks of the state. The second phase will work with these 7 million households to diversify and enhance their incomes and improve their access to nutrition and sanitation services. JEEViKA now works in 38 districts and 534 blocks of the state.² By 2022, it is expected that 12 million poor households—one out of every two rural households in Bihar—will be part of JEEViKA.

Since its launch, the project has made notable progress: rural women from 7.5 million poor households—many from marginalised Scheduled Caste, Scheduled Tribe, Extremely Backward Caste and Other Backward Caste communities—have been mobilised into self-help groups. Through the project, these women and their households will be empowered to access financial

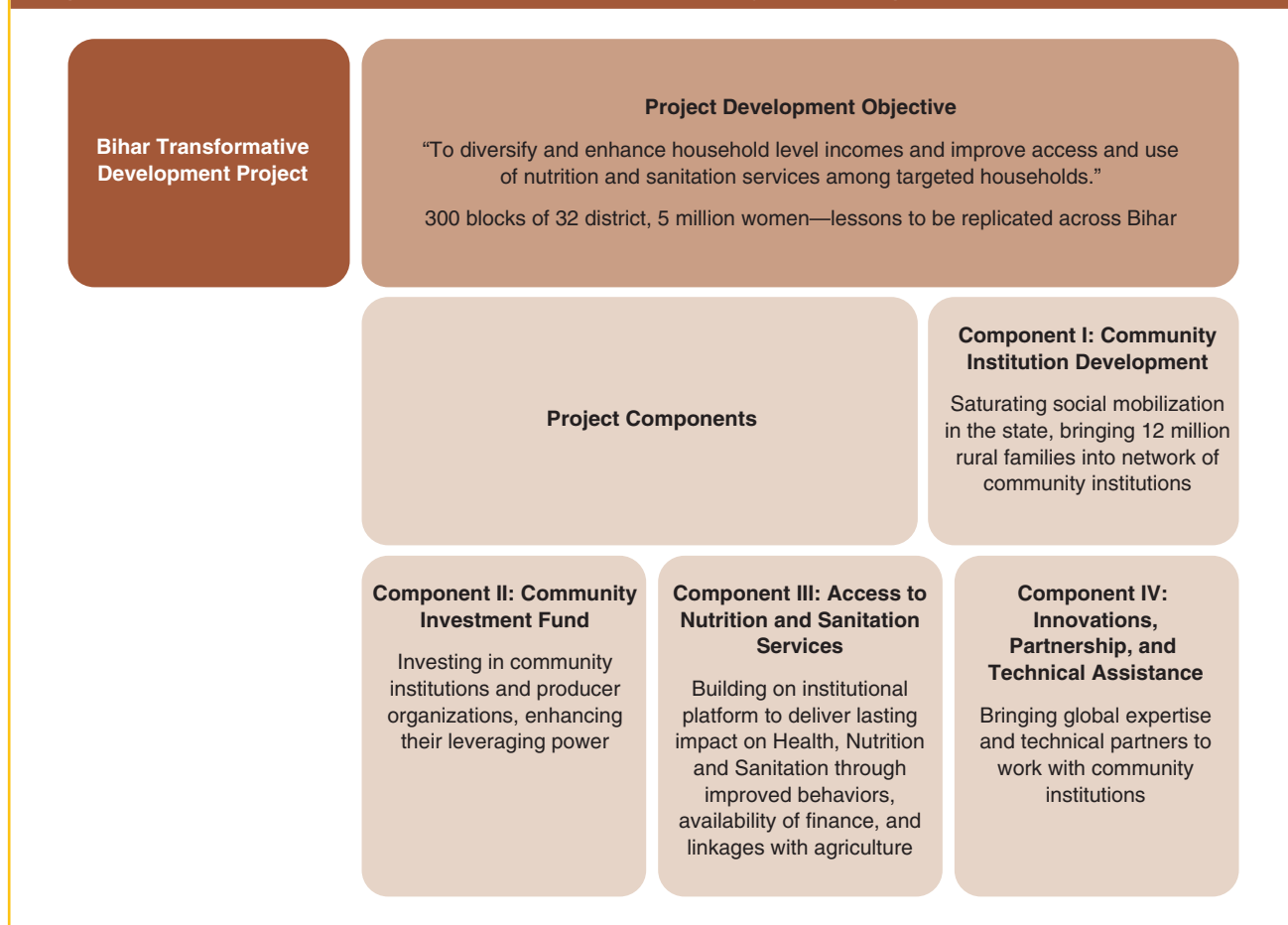
services, value chains in agriculture, livestock and non-farm sectors, and nutrition and sanitation services. Many of these interventions were successfully piloted through the Bihar Rural Livelihoods Project. Lessons from the first phase of the project have informed the design of financial inclusion, agricultural productivity, and nutrition interventions in the second phase. The Bihar Transformative Development Project also marks a new generation of World Bank investments in rural transformation: the new project makes focused investments in value chain interventions—by promoting producer organisations in the farm and off-farm sectors; and in rural enterprise and skill development.

Two challenges remain, however, in expanding the project's reach and operations from 6 districts to 32 new districts. First, how does the project ensure that the most marginalised of the rural poor are mobilised into self-help groups *and* that their community institutions remain inclusive and participatory? This is a challenge for many large-scale poverty reduction programs: to maintain high-quality implementation as a program expands in geography and in the number of target households it works with. Second, how can the project leverage community institutions to enhance household incomes and improve household human development outcomes? A decade of working in Bihar has provided us with lessons from the ground on what works and

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² In addition to the Bihar Transformative Development Project, JEEViKA is also the nodal agency that implements the Government of India's National Rural Livelihoods Mission. Through both these projects, JEEViKA has been able to establish a presence throughout Bihar's districts.

Figure 1: Bihar Transformative Development Project: Design and Components



why. In this chapter, we describe lessons from the Bihar Rural Livelihoods Project applied by JEEViKA and the World Bank in designing the project’s second phase. These include lessons on how best to mobilise rural women into community institutions, how to expand value chains in interventions in the farm and nonfarm sectors, the delivery of digital financial services while maintaining quality in implementation, and how to translate efforts at enhancing incomes and access into improved nutrition and sanitation outcomes.

Building Social Capital: Scaling Up with Quality

Under the Bihar Transformative Development Project, Bihar aims to develop strong and sustainable women-only self-help groups and producer organisations focused on economic activities in the farm and nonfarm sectors. The Bihar Rural Livelihoods Project (BRLP) holds lessons on how to identify, select and, mobilise women

from poor rural households into self-managed community institutions. By 2022, Bihar will have 12 million rural households who will belong to one million self-help groups. Ensuring high-quality implementation as the project expands into new geographies, while maintaining the inclusiveness of community institutions, is a challenge the project aims to address by (i) phasing the mobilisation of self-help groups and their subsequent clustering; (ii) mobilising producer organisations once the groups mature for economic activities; and (iii) mobilizing Community Resource Persons (CRPs) who had been nurtured under the BRLP to ensure the social inclusion with quality and to provide technical support to the households.

Enabling an Ecosystem for Financial Inclusion

As the Bihar Transformative Development Project expands its work on financial inclusion, Bihar will need

Figure 2: Lessons from 10 Years of the JEEViKA Journey


to expand its annual credit linkage to self-help groups from US\$263 million per annum to US\$1.5 billion per annum. Over the next five years, community institutions are expected to leverage US\$3 billion in credit from formal financial institutions. Thus far, the project has seen more than 100 percent year-on-year growth in credit linkage. Such an expansion places immense pressure on rural banks, which are unable to meet these credit requirements and do not have branches that can serve rural households in interior rural areas. Currently, these rural households still remain underserved by the formal banking system.

Under the new project, financial inclusion efforts will include (a) providing community institutions with financing that will allow them to access larger investments from commercial banks and other financial institutions for economic activities; and (b) providing producer

organisations financing for value chain interventions—for input services, value addition, and market linkage—in the farm and off-farm sector.

Digital Financial Services

Digital financial services—which include branchless banking, biometric-based transactions and mobile wallets—will play a central role in improving poor households' access to financial services. Four digital finance initiatives will play a foundational role in expanding household access to financial services.

- *Doorstep Banking Services:* Doorstep banking services to self-help group members will be crucial given the very low density of bank branches in rural Bihar.

- *Piloting and Protocol Development:* Partnerships with agencies like M-PESA, Airtel payments bank, and Paytm will help establish protocols to expand digital financial services.
- *Digitising an Enterprise Ecosystem:* The Bihar Rural Transformative Development Project will link enterprises run by self-help group women with digital transaction options, creating thousands of new service points in rural areas.

Value Chain Development

To promote value chain development, there is a need to develop women-led producer organisations with access to credit, input services, and markets. Under the Bihar Transformative Development Project, value chain initiatives in the farm and nonfarm sectors will include (a) productivity enhancement activities, including the delivery of community-based extension services and promotion of modern technologies; (b) value chain initiatives in the farm sector; and (c) a strong end-to-end value chain approach across nonfarm subsectors like rural creative industries, rural home-based industries, rural retail, rural hospitality, rural services, and rural transportation. Producer organisations will serve as the institutional platform through which the above interventions will be implemented. Financial support will be provided to producer organisations for community-level productive assets, small equipment, working capital, training and capacity building activities, and extension activities.

In the farm sector, value chain initiatives will focus on specific commodity clusters—commercial crops like maize, vegetables, and livestock (dairy, poultry, and goatery). As part of these initiatives, producer organisations will serve as institutional platforms through which a range of interventions across the value chain will be implemented—access to good quality inputs, provision of weather-based agro advisory, market information, access to finance including insurance, extension services, pricing norms, grading and sorting, storage and warehousing, and access to markets. Nearly 15 producer companies and 1,500 producer groups mobilised from 150,000 self-help group households will be part of farm-based activities. In the livestock sector, producer

organisations will support regular and periodic animal health awareness camps, ensuring regular vaccination camps, doorstep deworming services, promoting the use of artificial insemination in dairy and goat rearing, and the promotion of collective input purchase and collective marketing. Ten producer companies and 1,500 producer groups mobilised from 350,000 households will be part of livestock activities. The new project will work with the Bihar government's pre-existing agriculture programs, including agriculture initiatives under the Bihar Kosi Basin Development Project.

In the nonfarm sector, interventions will focus on six nonfarm subsectors: rural creative industries, rural home-based industries, rural retail, rural hospitality, rural services, and rural transportation. All nonfarm interventions will be guided by a strong end-to-end value chain approach. Project interventions will be supported through a network of business incubators (sector-specific centers of excellence located in academic institutions) and business resource centres at the block level to provide business planning and support services to producer organisations and microenterprises. Nearly 100,000 poor rural households will be covered under the intervention. The project will prioritise the inclusion of the poorest of households—from the lowest 40 percent of the population, many of who are landless—in its nonfarm value chain interventions.

Enterprise and Skill Development

In the project's second phase, 200,000 youth from self-help group communities will be identified and linked to skill development programs, jobs, and entrepreneurship opportunities. In the next five years, the project will scale up its skill development initiatives. The objective is to support youth as they move into self-employment or wage employment. Interventions include (a) providing youth with pre- and post-training support; (b) enabling increased access to and enhanced employment outcomes for government programs such as the Government of India's Pradhan Mantri Kaushal Vikas Yojana and the Deen Dayal Upadhyay Grameen Kaushalya Yojana, and Bihar government's Bihar Skill Development Mission; and (c) training youth in skills relevant to value chain activities already promoted through the project.

Figure 3: Value Chain Development under the Bihar Transformative Development Project

Agriculture	Livestock	Nonfarm
<ul style="list-style-type: none"> • 500,000 farmers will be mobilized into farmer producer organizations (FPOs) and provided linkages across the value chain • Input supply: Access to best quality seeds, fertilizers, and other inputs at best prices. • Extension services at doorstep: Village Resource Persons (community managed extension workers) equipped with information, communication, and technology will provide training and mobile agro advisory services. • Access to financing for FPOs: Enabling access to credit for the FPOs has been critical, including warehouse receipt-based financing over the next 5 years. • Postharvest management practices: Digital moisture meters, digital weighing scales, grading and sorting, ensuring “quality” consciousness among farmers. • Market linkages: Larger volumes enabling farmers to reach out to larger markets, online trading via commodity platforms. 	<ul style="list-style-type: none"> • Dairy: Value chain approach including delivery of veterinary services at the doorstep, animal management practices, and modern milk collection and processing facilities scaled up to 500,000 households. • Backyard poultry: Will build on existing work in partnership with technical service providers and scale up to nearly 300,000 households. • Goat rearing: To be scaled up to 500,000 households. Breed improvement, delivery of veterinary services at the doorstep, and animal management practices. 	<ul style="list-style-type: none"> • Development of producer organizations: Mobilize producers into POs to enable better quality inputs at lower prices and other benefits of economies of scale. • Design and technology support: Tie up with technical agencies like the National Institute of Design and Fashion Technology. • Access to financing: Enabling access to financing for increasing the size. • Market linkages: Existing tie-up with private sector organizations like Dabur and ITC. • Online marketing platforms: Existing tie-up with Amazon and other online platforms to be scaled up further.

Layering Nutrition and Sanitation

The challenge with the previous phase of the project was that improvements in household incomes did not translate into better nutrition outcomes, even though some direct nutrition interventions were piloted. Nutrition was also not seen as an explicit objective of the project and hence progress was not systematically tracked or measured. For this reason, limited efforts were made to leverage and collaborate with ongoing government nutrition programs to ensure complementarity of efforts which could have the potential of maximising impact. Learning from this, the Bihar Transformative Development Project clearly defined the improvement of women and households’ access to and use of nutrition, sanitation, and hygiene services as one of its

project development objectives. It outlined a strategy that focused on community and household level behavior change, given that JEEViKA’s strength was its large network of women self-help groups with direct access to about 7 million households. Furthermore, given the relevance of sanitation on nutrition outcomes, it explicitly included mobilisation for improved sanitation within this strategy and focused on strengthening the linkage of these households with existing government nutrition and sanitation programs.

The project adopts a “*layered behavior change communication approach*” by working with both households and community institutions. At the household level, the focus is on targeted prioritised outreach by JEEViKA’s community professionals to inform, support, and



motivate households to adopt nutrition and sanitation practices beneficial for their families, especially their children. At the community level, the focus is on facilitation of self-help group and community meetings and using participatory learning and action methods and audiovisual tools to impact health and sanitation practices. This approach will be implemented in 300 blocks.

In 100 of these blocks, intense focus will be placed on ensuring a convergence of additional nutrition sensitive interventions being undertaken through other project components. These include direct livelihoods interventions: kitchen garden, poultry, dairy cattle rearing, and food security (credit) to address issues of food security and diet diversity especially during lean seasons. In total, 4.5 million households will participate in the project's nutrition and sanitation initiatives.

On nutrition, behavior change communication to women and households will focus on behaviors in the critical 1,000-day period (from pregnancy to 2 years of age), covering issues such as early registration of pregnancy, antenatal and postnatal checkups, identification of high-risk pregnancies, maternal nutrition, birth spacing, institutional delivery, birth registration, early initiation and exclusive breastfeeding, infant and young child feeding practices, and immunisation. Given the livelihood focus of the project, special emphasis will be placed on communication and counselling around diet diversity, including food demonstrations using

Figure 4: Pathways to Improved Health and Nutrition under the Bihar Transformative Development Project

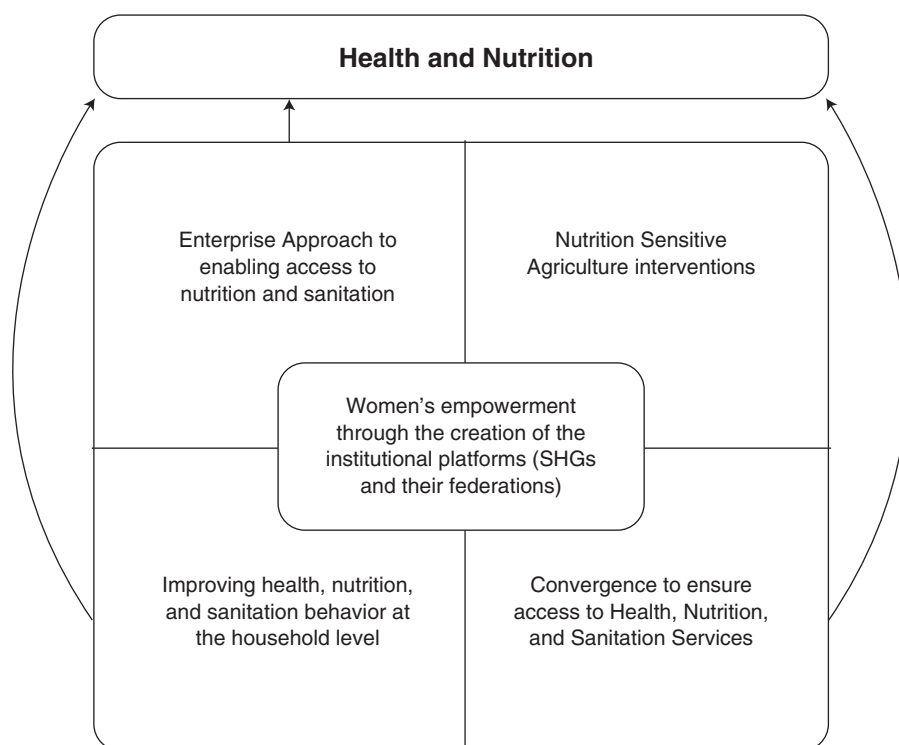
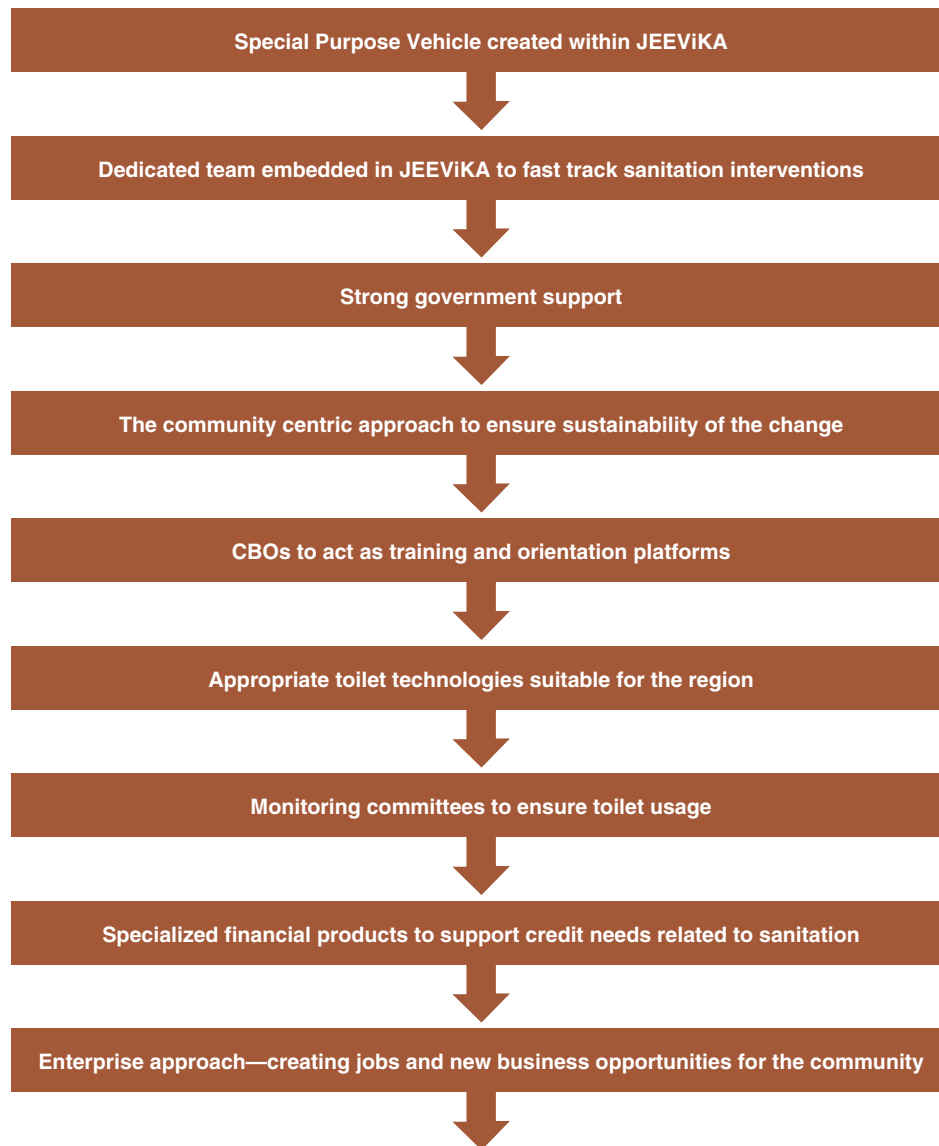


Figure 5: Approach for Improved Sanitation Services under the Bihar Transformative Development Project



locally grown foods (for example, from kitchen gardens) for improving the quality of food consumed in the household.

Behavior change communication to women and households on sanitation will focus on stopping the practice of open defecation by households, hygiene practices during birth, baby care, menstrual hygiene, hand washing and cooking hygiene at home, water purification and storage practices by the target households, and solid waste management.

Crowding in High-Quality Technical Assistance to Bihar

Providing high-quality technical assistance to Bihar is a central objective of the World Bank team. Given the new project's additional focus on health and sanitation, the World Bank team is co-led by Task Team Leaders from the Bank's Global Practice in Health, Nutrition, and Population and the Global Practice for Food and Agriculture. The Task Team includes specialists with a background in financial management and financial

Figure 6: Partnerships under the Bihar Transformative Development Project

Value Chain Development	Health, Nutrition, and Sanitation	Digital Finance
<ul style="list-style-type: none"> • Technoserve: Maize, potato, vegetables, and pulses • Agha Khan Foundation: Livestock • National Dairy Services: Dairy • Syngenta Foundation: Agri entrepreneurship 	<ul style="list-style-type: none"> • Bill and Melinda Gates Foundation • PCI • DFID • UNICEF • Gain international 	<ul style="list-style-type: none"> • DFID • Paytm • M-PESA • Airtel Payments Bank

services to strengthen technical assistance on digital financial services provided to the Bihar government. As the World Bank and Bihar team look toward the next phase, we will focus on improved processing monitoring, the use of mobile applications and tablet-based applications to collect field-level data, and on instituting rigorous long-term impact evaluations.

In addition, given the World Bank's role as a convener of knowledge, the World Bank team has formed partnerships with a number of technical agencies and development partners. Partnerships with the Bill and Melinda Gates Foundation has provided Bihar with a US\$2 million grant, giving the project access to a World Bank's resident consultant for ongoing implementation support and consultants with sectoral expertise in health, financial inclusion, and enterprise development. World Bank trust funds have also been mobilised to provide strong technical assistance to JEEViKA to support quality implementation. With strong partnerships in place

with a range of technical support agencies, banks, and development agencies, JEEViKA will be able to successfully expand its work to new parts of Bihar.

Conclusion

The learning notes in this collection capture some of the many ways in which the remarkable Bihar Rural Livelihoods Project has brought about visible and transformative change in Bihar. There remain challenges ahead for the project's second phase. But the lessons learnt by JEEViKA from a decade of work have helped both the Bihar government and the World Bank to bring high-quality technical support to Bihar's rural communities. In the coming decade, JEEViKA will continue its work with rural communities to improve their livelihoods and human development outcomes in nutrition and sanitation, and to help transform their lives—drawing on global expertise and working in partnership with government, technical agencies, and the private sector.

Acknowledgments

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JEEVIKA Bihar Rural Livelihoods Promotion Society



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