

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

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### 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

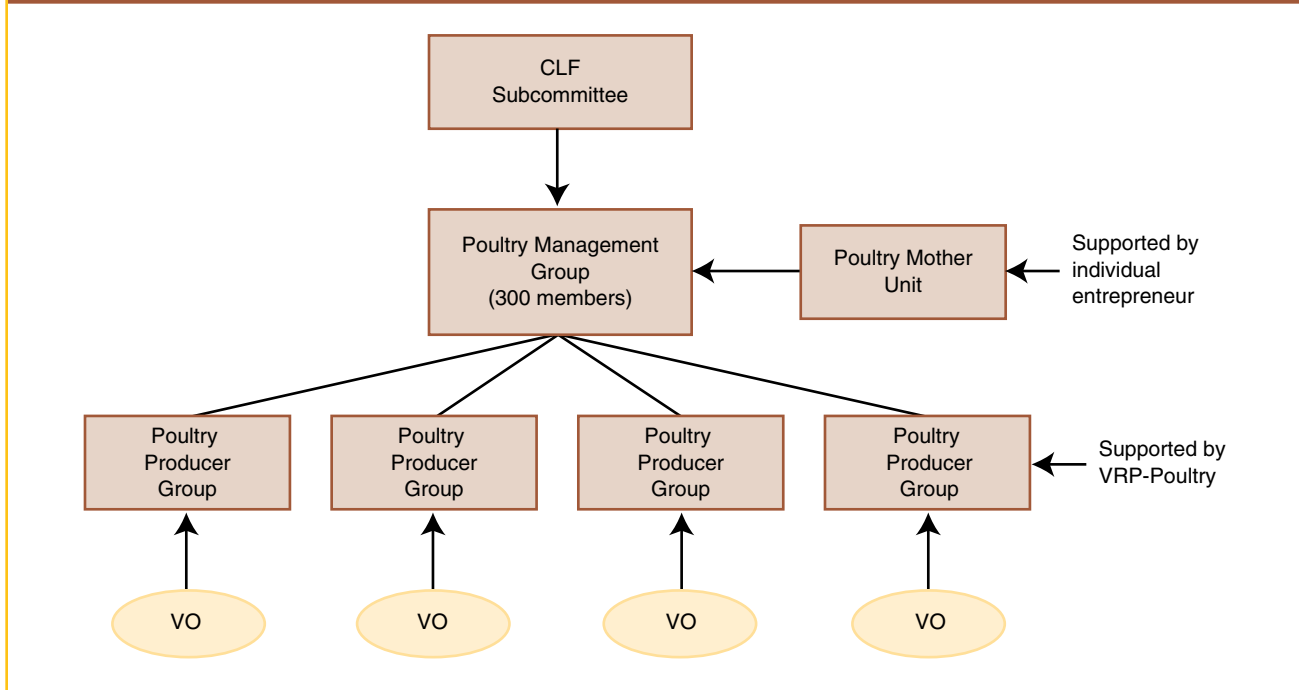
services to households. Participating households gain the benefits of a collective enterprise. Households can sell eggs and poultry meat to the community-managed enterprise or individually in the local market.

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,<sup>2</sup> 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.

<sup>2</sup> 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**

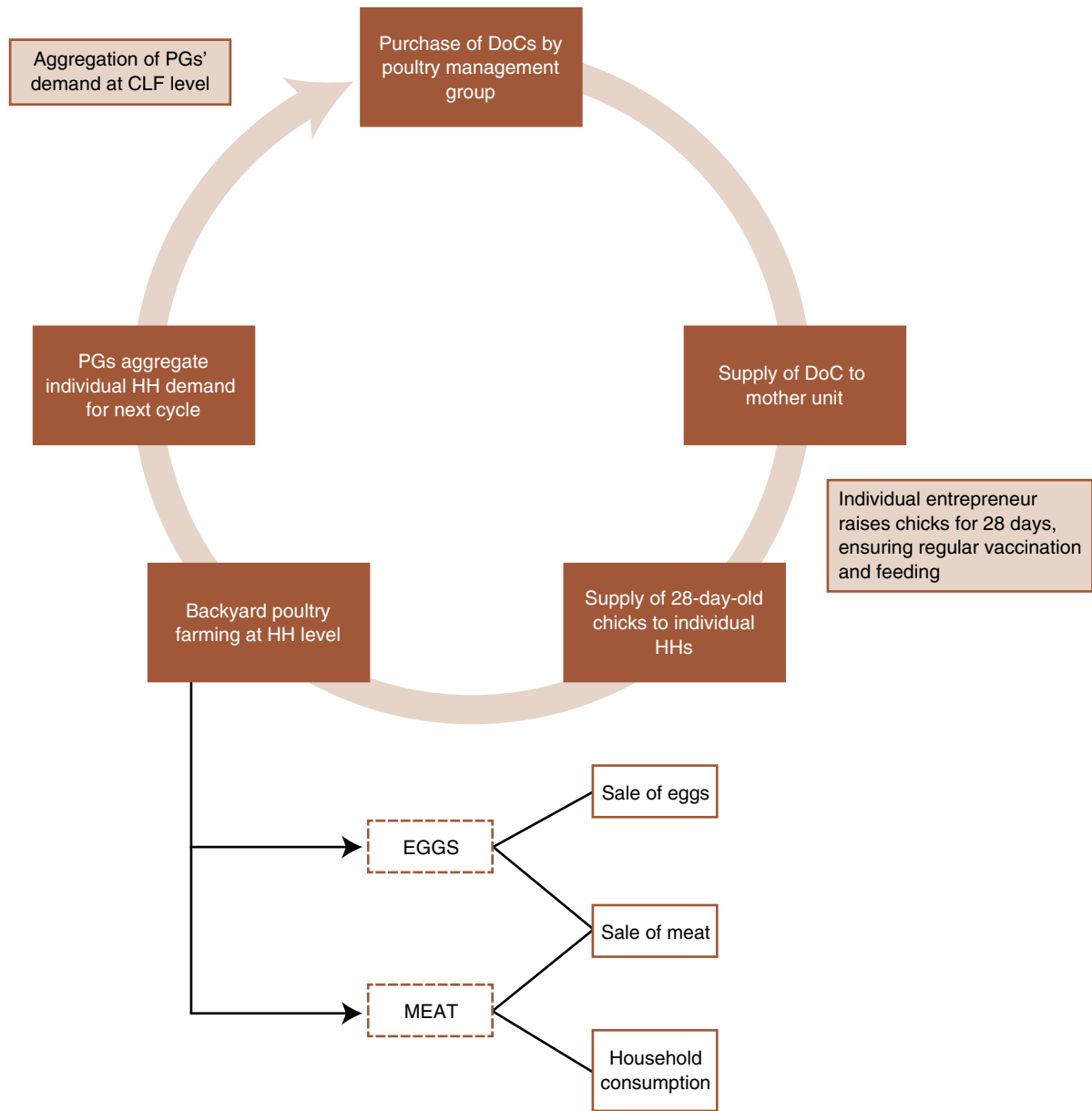


- Poultry Producer Groups (PG):** Some communities went on to start producer organizations, bringing together poultry farmers under one community organization. Producer organizations allow poultry farmers to procure raw materials in bulk thus reducing costs due to aggregation.

### 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.<sup>3</sup> 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.

<sup>3</sup> 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.

