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# Inside




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# Poultry Rearing as an Income-generating Activity in Kesla: An Impact Assessment Study

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***An excerpt from an in-depth study of the success, the limitations and the challenges of KPS, an organization that promotes poultry rearing as an alternative livelihood, for the poorest of the poor, who have so far been migrating and working as labour for survival***

Kesla, one of the poorest blocks in Madhya Pradesh, has been one of the earliest intervention areas of PRADAN. Rain-fed agriculture and a limited assets base of the tribal population have made the area an endemic food-insecure zone. Limited opportunities for livelihoods generation and income generation have made migration the main income generating activity. PRADAN made interventions with various livelihood themes, to promote food security and the well-being of poor communities living in and around Kesla. Among all these initiatives, poultry rearing has emerged as the single most important activity in this area; this is now being managed independently by Kesla Poultry Samiti (KPS).

KPS has emerged as a model of a people-owned and people-centric organization, the likes of which civil society organizations in the country have continuously tried to promote and establish. At present, KPS has more than 600 owner producers, who have an assured source of stable income. This stable income has led to many positive changes in the life of the poor tribal women in these villages. Although many of these gains are in their early stages of consolidation, the changes in the hitherto-deprived households due to poultry are very visible.

This study primarily aims at neviewing the impact of poultry rearing as an income generating source on the lives of the members of KPS and tries to capture the changes in various areas of their life. Of 250 households, a sample of 30 households that are engaged in poultry rearing for last five years, were selected for the purpose of this study. This study also analyzes the present poultry outlook in the country, the organizational structure of KPS, the opportunities for and handicaps of the poor, to participate and reap gains from poultry.

*This study primarily aims at reviewing the impact of poultry rearing as an income generating source on the lives of the members of KPS and tries to capture the changes in the various areas of their life.*

## METHODOLOGY

### Key Features of the Impact Assessment Study

The guiding principles for information collection, assessment and analysis for this study were based upon certain premises detailed below. These principles had a major impact on the nature and quality of findings explained later in the study.

1. The evaluation design was participatory in nature and was based on the feedback received by the evaluator on his field visits. The methodology and sampling were determined after discussions with National Resource Centre for Rural Livelihoods and senior PRADAN functionaries.
2. Both quantitative and qualitative measures were used to capture the impact. It was thought that quantitative methods alone cannot capture the richness of information and may result in the omission of many subtle and important changes. It was also thought that, at the same time, the study must have a quantitative information base and data set to supplement the findings generated through qualitative measures.
3. The study also actively involved the assessment of information at the point of its generation. This ensured that the learning from the participants is shared with them and the inclusion of their critical inputs is made possible, to make the findings more refined.
4. The livelihood systems of the poor are dependent upon a large number of variables. The traditional risk-hedging mechanisms orient poor to diversify their livelihood base. The study tried to analyze the change in living standards of the poor by examining poultry related initiatives and the changes in the outside environment. The situation becomes even more challenging because the external environment has undergone major changes in recent years due to many pro-poor policy initiatives by the government such as NREGS, National Rural Health Mission, Total Sanitation Campaign, and the Annapoorna. Antodaya Anna Yojana (AAY).
5. Many qualitative aspects were discussed at various levels. Apart from the household survey, forums such as focused group discussions (FGDs) and in-depth discussions with various beneficiaries were carried out to revalidate the findings.
6. The perceptions of various external stakeholders were incorporated to provide additional information and validate the findings in the study.

## POULTRY REARING IN KESLA

Poultry rearing as an income generating activity was introduced in Kesla by PRADAN in the late 1980s. The familiarity of the tribals with traditional bird rearing practices was one of the contributing reasons. Moreover, the villagers were in transition from forest-based livelihood systems to farm-based livelihood systems.

Interventions in dairy and other agri-based activities had not been very successful in the area due to lack of backward and forward linkages. Limited water availability in the region was also a hindrance in rearing large animals. Poultry, on the other hand, was part

**Salient Features and Learning from Each Phase**

| Phase | Salient Features | Learning |
|---|---|---|
| First Phase: 1988–1992<br><br>Experimentation<br><br>Introduction of improved breeds in backyard poultry setting; interventions in the market for better price realization; and community mobilization | 1. Marketing<br><br>2. Cage rearing of cockerels<br><br>3. Brooding and rearing done separately | • Little industry interaction; experimentation on one's own<br>• High return on investment but low absolute income fails to excite and bring intensity to the activity<br>• 25–30 birds cage rearing failed miserably |
| Second phase: 1992–1997<br><br>Pilot testing and demonstration of broiler farming | 1. Broiler rearing on deep litter initiated<br>2. Brooding and rearing done by the same family<br>3. Rigorous training<br>4. Standardization of production prototype | • Adequate financing: Units were underfinanced and required external support to facilitate linkages<br>• Criticality of unit size: Lower unit size did not adequately provide for debt servicing<br>• Absence of factoring financial implications of market volatility and lack of risk mitigation system made the intervention fragile |
| Third Phase: 1997–2002<br><br>Scaling up: Expansion, systems settings, institutionalizing producers' cooperatives | 1. Rapid expansion<br><br>2. Producers organized as cooperatives<br>3. Interventions in other components of the value chain—marketing, establishment of warehouse cum wholesaling, etc | • System to address market volatility key to success—de-linking of production and enterprise risks<br>• Creating ownership of the enterprise<br>• Creating margins to take care of establishment costs |
| Fourth Phase: 2002 onwards<br><br>Prototype development, documentation, developing systems for large-scale marketing, lobbying, setting up projects in new locations | 1. Modern retail outlet<br><br>2. Feed production<br>3. Replication by other NGOs, governments and by PRADAN | • Creating a good governance structure, which is able to exercise ownership and control on the operating structure managed by professionals, is a big challenge and takes years to establish<br>• Integration of all the cooperatives through a producer company dedicated to the growth of small-holder poultry farmers helps in building specialized services, enhances autonomy and ownership |

of the local livelihood systems, and interventions in this sub-sector were designed to optimize the available skill set. However, it has been a long journey, full of learning, in reaching the present sophistication in operations, structures and processes.

The intervention initially aimed at upgrading backyard poultry to modern poultry. New technologies such as cage-rearing practices, including brooding and balanced feed, were introduced. These activities were new for tribal villagers; therefore, a separate set of villagers were trained to brood the chicks and, thereafter, the brooded chicks were given to the farmers for fixed rearing charges. However, the returns from the farming and subsequent failure to engage with the market did affect the sustainability of the operations.

In 1990–91, a shift was made to cockerel rearing in *pucca* production sheds. Some of the sets were financed by the Integrated Rural Development Programme, IRDP, whereas some were financed by other donors. PRADAN also made a shift to broiler farming in the first half of the nineties. KPS was registered in 1997 and all business operations were formally separated from PRADAN.

The learning from the project over time and the steadfast commitment to poultry as an income generation option led to increasing sophistication in operations; at present, 580 producers are members of KPS, which has achieved an impressive turnover of nearly Rs 10 crores this financial year and has also been able to distribute surplus payment to farmers since 2008.

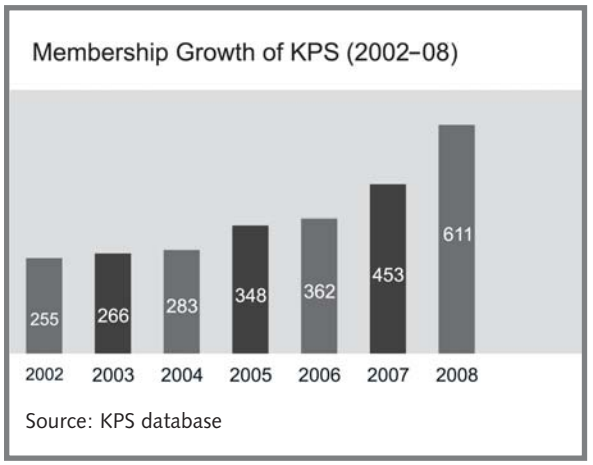
*Poultry rearing as an income generating activity was introduced in Kesla by PRADAN in the late 1980s. The familiarity of the tribals with traditional bird rearing practices was one of the contributing reasons. Moreover, the villagers were in transition from forest-based livelihood systems to farm-based livelihood systems.*

Poultry as an income-generation activity has been fairly successful in securing livelihoods for many of poor families in Kesla. However, it is also necessary to have an overview of the poultry industry in the country, and the opportunities for and threats to small producers. It is pertinent to examine the sustainability, achievements and impending challenges of poultry rearing.

## KPS: PROCESSES AND MANAGEMENT SYSTEMS

KPS was registered under the Societies Act 1860, to promote poultry and other income generating activities in Hoshangabad and Betul districts of Madhya Pradesh. At present, KPS is working in 21 villages in and around Kesla, in Hoshangabad and Betul districts. Poultry was introduced as an income generating activity by PRADAN in the mid-eighties. PRADAN professionals started and strengthened the initial poultry activities.

At present, KPS is an independent legal entity. It is not dependent on PRADAN in theory. It has its own CEO and other support staff and runs its business independently. However, there is a strong informal linkage between PRADAN and KPS even today. This is visible in the membership and the support structures of KPS. The membership, organizational structure and the operational procedures of KPS are detailed below.




## MEMBERSHIP

KPS is more or less a closed cooperative society. The society has also decided that the membership of the cooperative will remain confined to Schedule Caste (SC) and Schedule Tribe (ST) families, to safeguard its character as well as safeguard it from the potential threat of the local elite taking it over.

The households and SHGs that wish to take up poultry have to first make an application to Narmada Mahila Sangh, which is a federation of SHGs in the Kesla block. This community structure is also promoted and facilitated by PRADAN. The Sangh checks whether the village is connected with all-weather roads, and whether the applicant is less than 45 and has been disciplined in her/his transactions in the SHGs. When the Sangh is convinced about the willingness and capability of applicant to carry out poultry rearing, it arranges funds from donor agencies or government departments for shed construction, training and security deposits. The federation then forwards the application to KPS for consideration.

On receipt of the application, KPS carries out its own investigation before granting membership. Once selected by KPS, the new member has to undergo a 45-day residential training programme on poultry rearing. The training covers aspects such as chick management, measuring feed and medicine, prevention of disease and record-keeping.

## PRODUCTION SYSTEM

1. Production is completely taken care of by the individual producers.
2. Individual producers are provided day-old chicks (DOC), the feed and medicine (on a need basis) at their doorsteps, for brooding according to the production plan.
3. Producers are also provided sawdust and material for whitewash for pre-rearing management.
4. When the chickens reach a marketable age and size (approximately 35 to 40 days), these are collected by the trader from the producer's doorstep.
5. Monitoring of production is done by a team of supervisors (typically selected from among the villagers).
6. KPS has a CEO, who is the most important functionary and acts as a lynch pin for the various activities of the cooperative. He is assisted by a central supervisor, who monitors the work of other supervisors.
7. Each producer's performance is measured on an efficiency index. The efficiency index is a function of mortality, feed consumed and weight gain of the chick. The supervisor's payment is directly linked to the efficiency of his assigned producers, which, on an average, is around 50 paise per live bird sold. The incentive of the supervisor is also variable and there is a sharp decline in the incentive if the producer fails to achieve a satisfactory score on the efficiency index.

8. The co-operative endeavours to protect the farmer from any external business shock. As a result, the producer is reposed with production responsibility solely, and is assured a fixed minimum return per kilogram of broiler (plus additional payment linked to production efficiency).
9. The cooperative usually pays the surplus it accumulates at the end of the financial year as deferred wage payment. This amount is generally referred to as bonus by the producer members. In this study, therefore, wherever the word 'bonus' is mentioned, it refers to the deferred wage payment to the producer at the end of the year.

The co-operative takes care of procurement and marketing functions, and a team of field supervisors act as a medium for input distribution and collation during delivery to the market.

**FINANCIAL SYSTEM**

1. The cooperative has an elaborate MIS system that helps it keep track of all transactions and ensures accuracy and transparency in all dealings.
2. All transactions with members are recorded in the system, and an elaborate system of *challans* and counterfoils is used to ensure transparency between the members and the cooperative.
3. The cooperative uses the MIS software, 'Udyog Munshi', which is custom designed to suit the accounting and stock-taking requirements of KPS.
4. KPS has accounts with the State Bank of India (SBI) in Kesla and the Axis Bank in Itarsi. SBI provides a cash credit of Rs 25 lakhs to KPS. Both SBI and Axis Bank regard KPS as a valued customer. The representatives of both these banks regularly visit KPS.

**MARKETING SYSTEM**

1. KPS has two dedicated customers—Sahid and Kallu. Whereas Sahid is a supplier in and around Itarsi, Kallu mainly serves the Vidisha market. Sahid is the main customer of KPS and markets roughly 50 per cent of the KPS production.
2. There are many other suppliers, who purchase from KPS as per their needs and supply the Bhopal, Narsinghpur and other markets in the state.
3. All the sales are on cash basis, in which dedicated customers get three days of credit. However, dedicated suppliers also have to settle their accounts at the end of the financial year.
4. The boom in demand for poultry in rural areas has served KPS well. Most of the production is supplied to the nearby rural markets. KPS and the dedicated supplier believe that the rural market has got better potential; even when there are outbreaks of avian flu in different parts of the country, the local rural market is only marginally affected.

**HUMAN RESOURCES**

A trained and committed human resources (HR) department is necessary for institutional stability and sustainability. KPS has created a cadre of village-based supervisors. In addition, all the support staff of KPS have been locally recruited. At present, KPS has 10 staff on its payroll, and 27 supervisors and other staff, who are paid incentives on the production efficiency achieved by members. The CEO is a veterinary doctor, who is the only non-permanent resident of the area. The CEO now delegates many of his responsibilities and empowers his subordinates; thus,

even during a prolonged absence, the business of KPS runs as usual.

*It may be surprising for outsiders to even conceive that SC/ST women are responsible for running a multi-crore business entity. However, it was very clear that women can take important decisions easily, once the options and the possible outcomes of decisions are clear to them.*

## GOVERNANCE SYSTEM

The Board of Governors comprises producer members and two experts. Every village of producers nominates one member to the Board, which is the supreme decision-making body of the KPS. A Board meeting is held on the 10th of every month. The chairperson of the Board usually visits the KPS office once every week and is apprised of the weekly activities by the CEO. The CEO is also responsible to the Board and presents a monthly report to the Board. It may surprise many that SC/ST women are responsible for running a multi-crore business entity. However, women have proved that they can take important decisions easily, once the options and the possible outcomes of decisions are clear to them.

The Board has taken many decisions to discipline erring members, supervisors and other staff. The Board members engage themselves increasingly in the day-to-day functioning of KPS. Recognizing the need for sanitation to check the outbreak of diseases and the subsequent weight loss to the birds, the Board members now form teams and visit every village. The Board members check the sanitation level, educate the producers about its importance and even take action against erring members. However, the capacity building efforts and the leadership training of the Board needs to be stepped up because it will meet more challenging and complex situations in the future as the business of the cooperative continues to grow.

## STRATEGIC RELATIONSHIPS

KPS and other women poultry cooperatives of MP have come together to form Madhya Pradesh Women Poultry Cooperative Limited (MPWPCL), an apex organization of all the poultry cooperatives in the state, which undertakes advocacy works. It also does centralized purchase for medicines and prepares the medical mix to be used in feeds. All the managerial appointments in the cooperatives are made by the MPWPCL, which also provides strategic leadership and guidance to its constituent cooperatives.

## FINANCIAL VIABILITY

KPS has emerged as a strong viable business model. One of the most important features of KPS is hedging the tribal livelihoods against any down risk and uncertainties in the market. Key inputs, veterinary support and market linkages are facilitated by KPS. Farmers have the mandate to rear chicks effectively. Depending upon the efficiency with which the farmer carries out the operation, she is paid. At the end of the financial year, the producer is also paid a share in the surplus of the KPS, as deferred payment.

At first glance, it may seem that KPS has assumed a significant risk, to protect the farmers. However, this model is being adopted by most of the integrators in the country. The benefit of the system is that the farmer is concerned only with production activities and is not encumbered with other details. KPS acts as strong service delivery platform. This is more imperative because the individual costs of accessing the gamut of services will make the enterprise unviable.

Moreover, the collectivization of risks reduces individual risks considerably. This model is most fitted for an enterprise that is rocked from time to time by bird flu outbreak risks.

KPS has been making consistent profit since 2008. The producers have received deferred payment at the end of the year as surplus bonus. KPS has also been strengthening its equity base by seeking contributions from its members. From 2008 onwards, its equity capital has grown to more than Rs 1 crore. Similarly, a bird flu fund, with a deposit of Rs 16.46, lakhs has been created, to meet any contingency arising out of the outbreak. The financial strength of KPS, therefore, is getting more robust every year.

Most of the vendors of KPS are satisfied with the prompt payment from the organization and would like to continue with the services. SBI and Axis Bank also express their satisfaction with the financial health of KPS. The audited estimates of 2008–09 show that the total payment to farmers has grown to Rs 1.86 crores. This translates to more than Rs 30,000 per annum income per household. The income from poultry alone can lift most of the KPS members out of the official poverty line now. However, the cash surplus in these three years has been used mainly for institutional strengthening. KPS itself is in the process of consolidation; therefore, such actions are necessary to ensure long-term sustainability of the institution. Hence, the net transfers to the households have been much lower.

A philanthropic organization, Dewan Foundation, gave financial assistance of Rs 10 lakhs to KPS; this is used for additional capacity creation by the members. As of now, more than 125 KPS members have taken the loan money to expand their production capacity. The loan repayment rate is 100 per cent, and many members have already repaid their loans in two years. Productive assets that are being created at the household level will

**Table 1: Financial Indicators of KPS (2006–7 to 2008–9)**

| No. | Financial Indicators | 2006–7 | 2007–8 | 2008–9 |
|---|---|---|---|---|
| 1 | Total wage payment to producers, including bonus | 40,49,514 | 67,22,129 | 1,86,50,673 |
| 2 | Total share capital | 2,38,100 | 4,97,000 | 1,049,800 |
| 3 | Bird flu contingency fund | 5,98,310 | 1,179,560 | 1,646,560 |
| 4 | Net payment to producers | 31,16,204 | 56,75,969 | 79,09,673 |
| 5 | Total sales | 3,64,38,701.00 | 5,36,02,814 | 9,89,93,628 |
| 6 | Membership fees | 9,400 | 11,475 | 12,575 |
| 7 | Total number of producers | 362 | 453 | 611 |
| 8 | Average production per member/annum | 1,00,659.39 | 1,18,328.50 | 1,62,019.03 |
| 9 | Average gross payment per producer/annum | 11,186.50 | 14,893.13 | 30,524.83 |
| 10 | Average net payment per producer | 8,608.29 | 12,529.73 | 12,945.45 |
| 11 | Grower's deposit | 18,26,693 | 19,52,418 | 14,737,362 |
| 12 | Capital reserve | 28,90,355 | 2,890,355 | 2,890,355 |

lead to increased cash flow. At present, productive assets are being strengthened both at the collective and the household levels, which will yield higher benefits to both, in the coming years.

*The benefit of the system is that the farmer is concerned only with production activities and is not encumbered with other details. KPS acts as strong service delivery platform.*

Poultry rearing has emerged as a viable source of livelihood in Kesla and nearby blocks. This model has been scaled up by PRADAN in other parts of Madhya Pradesh and Jharkhand. It has a positive impact on the lives of its producer members. In this section of the study, the substantiality and the viability of the enterprise will be examined by using the 7-S Mckinsey framework.

## ORGANIZATIONAL ANALYSIS OF KPS WITH THE 7-S MODEL

The 7-S Mckinsey model is a holistic tool to measure organizational effectiveness. This tool primarily helps in analyzing how the organization is positioned, to achieve its intended objectives. It also helps to understand how future changes might affect the organization and, hence, how to implement a proposed strategy. An understanding of the organization thus reached can be useful for refinement of processes and systems, leading to the improved performance of the organization.

## SHARED VALUES

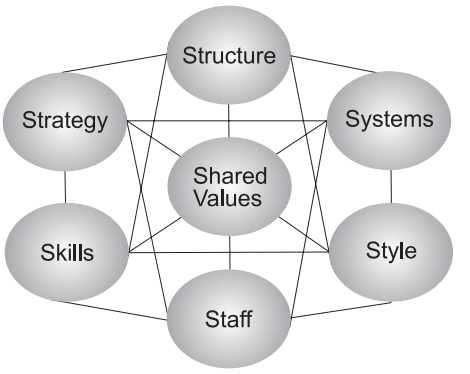
For KPS, the shared value system is fairly developed and owned, both by the functionaries and the producer owners. It is well established that KPS exists for the welfare of its producer members and its main concern is maximizing their monetary and non-monetary benefits.

KPS itself is established on the humanitarian concerns of caring for needy fellow beings, and the organizational culture is oriented to maximizing the income of the producer members. Transparency in its financial and operational transactions has heavily contributed to the building of trust and faith in the organization. The strong commitment of KPS and PRADAN to the poor is acknowledged by the members. The innovative use of IT, to facilitate transparency, is commendable.

## STRATEGY

The strategy of KPS is well in congruence with its shared values. Since 2009 members have contributed Rs 8.12 lakhs from their deferred payments to build an equity base of Rs 10.50 lakhs and a bird flu fund Rs 16.57 lakhs, to meet any contingency. Members have been able to identify that the financial stability of the organization is crucial, in order to protect the interests of members.

**THE 7-S MCKINSEY MODEL**



By design, KPS can never be a cash surplus organization because most of the operating surplus is distributed among the producer members as their deferred wage payment. The endemic poverty in the area also makes it very difficult to hold back payments from the poor producers. However, even in the face of such hardships, the women have recognized the long-term interests of the organization, and this is reflected in their strategic choices.

*KPS itself is established on the humanitarian concerns of caring for needy fellow beings, and the organizational culture is oriented to maximizing the income of the producer members. Even vendors such as Sahid believe that their work is part of a greater whole; he proudly claims that he has never worked for any other poultry producer or group, and will never work for them in the future.*

**STRUCTURE**

KPS is a very small organization and the structure is still evolving. Initially, the CEO of the organization was the central authority, who made all the decisions and who was responsible for the day-to-day functioning. However, in recent years, greater decentralization of authority is taking place. The members are now encouraged to oversee the functioning of the field supervisors and there is greater role clarity among the employees. However, this transition of roles among the members may take some more time to be firmly established. Many leaders of KPS are very clear about their role as owners; however, the same cannot be said of all the producer members.

**SYSTEM**

KPS functions in a mode of trusteeship and, hence, tries to keep maximum transparency in its operations. As the payment to the producers is made on the basis of their efficiency in rearing and most of the financial risk and working capital is borne by KPS, it is imperative that a detailed transparent system is put in place. All the input transactions with the producers are maintained by the field supervisors and the details are recorded in the computerized MIS system.

KPS makes direct payment to its producers and does not hand over wages and deferred payment to the husbands of the members. Hence, members can decide how to utilize the money, without interference from the male members of their family. These systems are producer- and human-centric, and supplement the shared goals of the organization.

**STAFF**

Most of the staff of the KPS belongs to the same village and socio-economic profile as the members. Hence, the staff can directly connect with the producer and her problems. Most of the supervisors are village-based and are not highly educated. Similarly, the field supervisor and the support staff have limited education. However, most of them are aware of their job responsibilities and are committed to the work. In some cases, unfortunately, the higher income flow to these supervisors has also led to higher liquor consumption by them. This is an aspect in which KPS needs to train and sensitize its field work force.

**STYLE**

As a human-centric organization, the CEO exhibits supportive leadership traits. There are clear performance indicators of leadership, and payment to the supervisors is made on this basis. Similarly, the CEO takes a lot of effort to educate the member producers about KPS being an institution owned by

## SWOT ANALYSIS OF KPS

### Strengths

- Well-developed and localized production support system
- Benefit of scale
- Even distribution of risk among producers
- Trained human resources
- Horizontal and vertical linkages with other cooperatives
- Community ownership
- Modern MIS System
- Location advantages to the growing rural market
- Excellent credibility with key stakeholders
- Proven success in different states

### Weaknesses

- Dependence for DOCs and other key inputs on external suppliers
- Dependence on a small number of distributors
- Limited governance ability among member owners
- Limited penetration in urban markets
- High exposure of business risk to KPS
- Limited reach among poorest villages
- Donor dependency for initial capacity building, working capital and infrastructure creation
- Illiteracy and fragile assets base of the producers
- Unfavourable response of financial institutions to organizations owned by the poor
- Emerging ecological challenges due to declining fuel and water availability

### Opportunities

- Fast growing market for poultry products
- Growing awareness among government and other donors of poverty concentration among SC/ST and other excluded social groups
- Possibility of diversification of production base
- Manure treatment as an additional income source
- Reducing competition from peri-urban producers
- Scope for vertical and horizontal growth
- Possibilities of exports
- Limited capacity creation by existing big farmers

### Threats

- Possibility of frequent bird flu H1N1 outbreak
- Growing competition from for-profit private sector integrators
- Increase in price of key inputs
- Small producers interest adversely affected by strong industrial poultry lobby
- Resistance by PETA and other animal rights activists
- Consumption shift toward vegetarianism
- Increased threat from imports
- Government regulations especially related to wet poultry market

them. The CEO also assists the board members in making decisions by explaining about various options; in recent times, board members have encouraged members to take decisions on vital issues concerning the governance of the organization. Additionally, women leaders have great faith in the CEO and respect his advice and suggestions.

*KPS has high member centrality. Most of the members of KPS reported that the earnings from poultry rearing constitute up to half the household income.*

**SKILL**

KPS has evolved into a unique people's organization. Because it was one of the first such people's initiatives in the poultry sector, the learning from it has led to further refinement and adoption of this model in other parts of Madhya Pradesh and country. The processes, systems and management have evolved as per need and, many a time, as per design. The unique working model, which combines the efficiencies of a big integrator and at the same time ensures people's ownership has been fairly successful in assuring an alternative source of livelihood to the poor in and around Kesla block.

One of the main reasons for such a strong value orientation can be attributed to the relatively small size of the organization. Moreover, most of the members of KPS belong to the same socio-economic strata. A predominant majority of them are already involved with the SHG movement and are familiar with PRADAN's ways of functioning. The strong informal relationship between PRADAN and KPS reinforces the value system with which both PRADAN and KPS were established.

**CENTRALITIES OF KPS**

Member centrality refers to the importance of the cooperative in the economic activities of its members. If the members of cooperatives are generating economic activities worth Rs 1,000 and the share of cooperative in this value creation is only Rs 100 it denotes a low member centrality. Centralities—member, patronage and domain—are, thus, a major factor in judging the relevance, utility and prospects of a cooperative or any producer-owned organization for its members.

KPS has high member centrality. Most of the members of KPS reported that the earnings from poultry rearing constitute up to half the household income. High member centrality also means that members of KPS will remain actively involved in the affairs of KPS because it continues to be their most important source of livelihood.

Patronage centrality on other hand refers to the direct benefits and the activities that are for the benefit of members. For example, if cooperatives create economic surplus worth Rs 1,000 and members receive surplus worth Rs 800, it denotes a high patronage centrality and, thus, the active interest of the organization in the well-being of its members.

Domain centrality refers to the degree of involvement of the cooperative in economic activities, both actual and potential, taking place in the domain of the cooperative.

KPS has high member centrality. It also has the potential for high patronage centrality. However, for many years, because the producers have been contributing a part of

their deferred earnings to strengthen the equity and bird flu fund, the actual payment to the producer is less.

KPS also has the potential for high domain centrality. Maize is the major crop in and around Kesla and also the principal constituent of the poultry feed. The farmers of the area, therefore, can get a ready market for their produce. Similarly, soybean is an important input grown locally. KPS can help in the generation of additional income by assisting in the production of these key inputs. It may also support additional income generation for its members by marketing manure (from bird waste) and diversification in other sources of animal protein.

### IMPACT ON THE LIVES OF MEMBERS

KPS was established with the mandate of strengthening the fragile assets-base of the poor, to create additional sources of income. However, over the years, it has had a significant impact on the lives of its producer members. The impact of an additional source of income on poor tribal households and, in particular, female producer members will now be examined in detail.

Thirty households that have been members of KPS for last five years were identified as the treatment group. Similarly, 30 households that, till the time of the study, were not associated with PRADAN-promoted SHGs or KPS were selected as the control group. The control group households were selected from a village where no significant economic activity had been initiated by PRADAN or KPS.

### WHY HAVE THE RURAL POOR STAYED AWAY

The tremendous success of poultry development has bypassed the rural poor for the following reasons.

- **High entry barriers:** Poultry industry is highly organized, complex, competitive and intensely market-oriented. The poor with their socio-economic disadvantages and low skill base cannot enter the sector without outside support or intervention.
- **Input supply, extension and marketing:** In contrast to the existing situation in which multiple agencies provide services input supply, extension and marketing, poor producers require all these services under one roof.
- **Access to technology:** Sophisticated technology, when not scaled down, will remain with the more well-to-do farmers. Appropriate technology, which is scalable, improves access in favour of the poor.

### ECONOMIC EMPOWERMENT OF KPS MEMBERS

Kesla is one of the poorest blocks of the country. The limited resource endowment and limited options for livelihoods compound the problem. At best, a majority of the

**Table 2: Share of Poultry in Household Expenditure**

| No. | Share of Poultry | Level |
|---|---|---|
| 1 | Between 50 and 75% | 1 |
| 2 | Between 40 and 50% | 21 |
| 3 | Between 30 and 40% | 6 |
| 4 | Between 20 and 30% | 2 |

villagers have food security for a mere six months. And if the rains fail, the villagers do not have food security for more than three months. The villagers have been dependent on migration and sand filling for their survival. These traditional coping mechanisms too are now under threat due to increasing mechanization.

*Poultry has now become the mainstay of the household economy for KPS members. More than 75 per cent of the treatment group respondents covered under the study reported that nearly half their monthly expenditure was directly met by poultry earnings.*

Discussions with the villagers revealed that survival was difficult for the poor. Locally available coarse grain was the main cereal and *dalia* (a coarse cereal boiled in water) were the main food items. Vegetables were a rarity and, sometimes, villagers had to go to bed on empty stomachs. This situation has improved significantly in the last decade thanks to government food distribution programmes as well as improved job opportunities.

However, the establishment of KPS has been one of the most significant institutional economic activities of this economically underdeveloped region in the last decade.

Poultry has now become the mainstay of the household economy for KPS members. More than 75 per cent of the treatment group respondents covered under the study reported that nearly half their monthly expenditure was directly met by poultry earnings. For a batch size of 300, the respondents reported that an income of Rs 10,000 to 15,000 was earned per annum. This income increased pro rata, with an increase in batch size.

The income from poultry is evenly distributed throughout the year. This distribution made it easier for producers to plan the household economy and made them even more credit-worthy. The women said that they could now borrow money from the SHG when in need and repay it.

Similarly, borrowing from the ration shop has also become easier for KPS members because the shopkeepers give them easy credit for their regular consumption needs. FGDs revealed that whereas many KPS members did not have to pay any interest on credit for the purchase of household rations to the shopkeeper, many of the control group members reported paying interest for this to the shopkeeper.

The table on the next page shows that the net income per household has increased from Rs 9,435 to Rs 15,070 in 2008–9. The actual income per household has more than Rs 35,000 in 2008–9. At present, KPS and its members are generating internal resources for vertical expansion (setting up a satellite hatchery) and a buffer for bird flu losses; hence, the net payment to the households is lower.

The members realize the benefits of poultry rearing. It gives them a chance to generate income by using their slack labour. They are also saved from drudgeries of manual labour and the problems associated with migration.

The data reveal that the producers have realized the usefulness of poultry to their households. In 2006 and 2007, there were 198 producers rearing a batch size of 300. However, most of them have now upgraded their shed capacity and there are only 76

**Table 3: Financial Indicators for Producers Rearing Birds for More than Five Years**

| No. | Financial Indicators | 2006–7 | 2007–8 | 2008–9 |
|---|---|---|---|---|
| 1 | Number of active producers | 250 | 250 | 249 |
| 2 | Total wage payment including bonus | 25,98,830 | 39,90,012 | 8,944,538 |
| 3 | Total bonus payment | 8,18,698 | 13,80,835 | 63,54,164 |
| 4 | Deferred payment taken back | 2,40,000 | 2,49,000 | 51,92,000 |
| 5 | Net payment to the producers | 23,58,830 | 37,41,012 | 37,52,538 |
| 6 | Gross income per producer/annum | 10,395.32 | 15,960.04 | 35,921.83 |
| 7 | Net payment to producer/annum | 9435.32 | 14,964.04 | 15,070.43 |
| 8 | Producers with a batch size of 300 | 198 | 198 | 76 |
| 9 | Producers with a batch size of 400 | 44 | 44 | 18 |
| 10 | Producers with a batch size of 500 | 3 | 3 | 2 |
| 11 | Producers with a batch size of more than 500 | 5 | 5 | 153 |

producers now, who have a shed capacity of 300. Similarly, there were only five producers in 2006 and 2007, who reared 500 chicks or more. This number has now gone up to 153. What is more remarkable is that most of the shed construction has been carried out with a loan from KPS. Members have supplemented the costs of shed construction with their labour, use of local resources and any savings they had. This demonstrates the faith the households have in the dependability and viability of the enterprise.

One of the main benefits of the poultry intervention has also been the stabilizing of the household economy. A direct impact has been the visible improvement in the quality of food and nutrition levels for the household. Many households have moved away from using cereals to wheat and rice. The AAY has also significantly increased the availability of food to the villagers.

Families report that vegetables, which were a rarity, have now become a regular feature of meals. Many households claim that they are now in a position to purchase tomatoes at Rs 40 per kg. A few households admitted that, at times, when vegetables are very costly, they are dropped from the regular menu.

The income from poultry has stabilized the household economy. There is great possibility of taking this forward. At present, households with 300 chicks need one more stable source of livelihood to live comfortably. Families that have no loan obligation may be considered to be above the official poverty line. Unfortunately, the rising inflation in the last two years in commodity prices has undone some of the good achievements of KPS.

The size of a family has a strong impact on the economy of a household. Families with

two children, which are primarily dependent on poultry, reported that they could meet their basic food and nutrition needs comfortably. However, families with more than six members needed an additional source of income other than poultry, to meet their household needs.

*One of the most important outcomes of having a regular source of income is the impact on migration. Only one of more than hundred poultry producers interviewed admitted to migrating for agriculture-related work outside their village.*

Clearly, if a family had an assured source of income other than poultry, whether a regular daily wage job or irrigated land, the household reported purchase of some durable assets in the last few years. However, if a household was dependent only on poultry and had an irregular source of wage labour, assets creation at the household level was not evident.

This is quite natural because most of the income was used for meeting household expenditure. The above table shows that the quantum of deferred payments, also referred to as bonus by the producers, has not been very significant. The highest average deferred payment to members, which was paid in 2008–9, was Rs 4,667.32.

Many members now have added additional shed capacity and have paid back most of the loan amount. Hence, although assets creation is not evident at the consumption level, it is significant at the level of creation of productive assets. These productive assets are expected to yield better cash flow in the coming years.

The amount of savings was the main difference between the control and treatment groups. Whereas control group members hardly had any savings, (the highest savings reported was Rs 3,000), the women in treatment group had savings of Rs 3,000 to Rs 7,000 per household. In many cases, these savings were deposited with KPS as working capital deposit.

The Narmada Mahila Sangh executives said that they realized that the SHGs in which poultry producers were members were more vibrant than other SHGs. A regular source of money made transactions in SHG more frequent and disciplined.

## MIGRATION

One of the most important outcomes of having a regular source of income is the impact on migration. Only one of more than hundred poultry producers interviewed admitted to migrating for agriculture-related work outside their village. Most of the women admitted that poultry as an alternative source of income has permitted them to focus

**Table 4: Migration by Women**

| No. | Migration for Work by Women in a Year | KPS Members | Others |
|---|---|---|---|
| 1 | 60 days to 80 days | 0 | 0 |
| 2 | 40 days to 60 days | 0 | 16 |
| 3 | 20 days to 40 days | 1 | 14 |
| 4 | Never | 29 | 0 |

more on their children and their well-being. In many cases, the male members of the family still migrate to augment the household income.

However, both women and the men agreed that such opportunities for work are increasingly declining. One KPS member admitted to migrating for work during the *rabi* season. Many men still continue to augment the household income although the number of days they migrate for is declining. Whereas the field supervisors of the KPS believed that this was because male members were averse to working, many of the KPS members said it was due to declining opportunities.

On the other hand, all the women in the control group still have to migrate to augment the household income. The women and their families form groups and migrate to other parts of the district and to nearby districts. One of the major achievements of KPS has been in reducing migration; this has a positive effect on the well-being of children and also saves the women from the hardships associated with migration.

**EDUCATION**

One of the most pleasant outcomes of the study is capturing the growing awareness about the importance of education in rural communities. In many villages, women are not only encouraging children to complete school but also encouraging them to study further. Many households, both from the treatment and control groups, have even been sending their wards to hostels in district headquarters and supporting their education. Women in both groups said that they believe education to be very important for the better future of their children. More than 90 per cent of the children in both the groups are completing their primary education. However, the importance of having a regular source of income was evident to the members in the treatment group.

The children of KPS members have an average schooling of more than eight years. In the control group, on an average, the period for schooling was five years. Many women in the control group reported that the unavailability of schools in the village and the distance of 3–5 km for the next level of schooling were the main reasons for children dropping out of school. Children of many KPS producers, on the other hand, who have been facing similar situations have continued their schooling. The dropout rate of the children of non-members was higher than the children of members of the treatment group, who asserted that they

**Table 5: Deferred Payment Bonus to the 250 Old Producers (2006–7 to 2008–9)**

| No. | Bonus indicators | 2006–7 | 2007–8 | 2008–9 |
|---|---|---|---|---|
| 1 | Number of active producers | 250 | 250 | 249 |
| 2 | Total bonus payment | 8,18,698 | 13,80,835 | 63,54,164 |
| 3 | Deferred payment taken back | 2,40,000 | 2,49,000 | 51,92,000 |
| 4 | Net bonus payment to the producers | 5,78,698 | 11,31,835 | 11,62,164 |
| 5 | Gross bonus payment | 3,274.92 | 5,523.34 | 35,921.83 |
| 6 | Net bonus payment | 2,314.79 | 4527.34 | 4,667.32 |

would support the education of their children as long as they showed interest in pursuing their studies.

In fact, economic hardship was not a handicap for the children of KPS producers. Most of the women who had children in the age group of 5 to 18 were quite aware of the importance of education. The major reason for dropouts in these cases was failure in the examination, particularly in the matriculation board examinations. There was no significant difference in the educational achievement of boys and girls; they attend school without any form of discrimination.

*In many villages, women are not only encouraging children to complete school but also encouraging them to study further. The dropout rate of the children of non-members was higher than the children of members of the treatment group, who asserted that they would support the education of their children as long as they showed interest in pursuing their studies.*

One of the major reasons for dropouts in the case of the control group is also economic. In spite of a free education system, women said that nearly Rs 1,000 to 1,500 per annum is spent on each child for stationery and examination fees to the school. The quality of education is an important issue that forces children to drop out of the education system. Children are usually promoted on the basis of internal assessment. However, it also results in a large number of failures in the external Board examinations, which are perceived to be stricter and devoid of unfair means.

Even among the KPS members whose children have crossed the school-going age before 2003, widespread illiteracy was observed, with the average schooling years being hardly more than five years. Hence, this emphasis on education has been a new phenomenon in this region and the growing awareness about the importance of education may have contributed to this trend. Equally significant is the fact that KPS earnings have made it possible for women to keep their wards in school longer.

## CONCLUSIONS AND THE WAY AHEAD

KPS has emerged as a sustainable model for livelihood generation for poor people in the tribal areas of Madhya Pradesh. Since 2008, the model has been replicated at five other deprived areas of Madhya Pradesh, and in Jharkhand, where 11 cooperatives have been set up. The operations in Jharkhand have also emerged as the largest commercial poultry rearing operations in eastern India. At present, these cooperatives have a total membership of 5,200. The total turnover of these cooperatives in 2008–9 was Rs 62 crores.

Models like KPS are highly relevant for the poor. Most of the poor in India, and particularly the SCs and STs, have negligible ownership of land. Similarly, most of the tribal households own rain-fed land, which gets increasingly degenerated. A small poultry farm hardly requires an area of 400 to 500 sq ft and, hence, may support livelihoods. Hence, unlike other agriculture-based livelihood initiatives, it does not require significant land assets-base and can be a good source of livelihood for excluded communities. The KPS model is highly relevant for the BIMARU states, where a large number of SCs and STs is concentrated. The proper implementation of pro-poor schemes such as NREGA will encourage poultry as a viable livelihood.

Limited urbanization in these states is also a blessing in disguise for the small producers. As urbanization increases, these states will be the major consumption centres in the country. As more and more cities get urbanized, the land value in the peri-urban areas of bigger cities will also increase and the economic viability of traditional farms near big cities will decline. Further, increasing urbanization will also spur the domestic demand for poultry.

*Models like KPS are highly relevant for the poor. Most of the poor in India, and particularly the SCs and STs, have negligible ownership of land. A small poultry farm hardly requires an area of 400 to 500 sq ft and, hence, may support livelihoods. Hence, unlike other agriculture-based livelihood initiatives, it does not require significant land assets-base and can be a good source of livelihood for the excluded communities.*

The success of KPS as a model is also due to the pioneering work done by PRADAN in Kesla. Although KPS is an independent organization, strong linkages still exist among PRADAN, Narmada Mahila Sangh and KPS. The value-based organizational structure and culture can be largely attributed to the presence of PRADAN-promoted SHGs.

The above data clearly show the benefits that a cooperative like KPS adds to the community. The integrators pay a wage to the producers, who rear chicks for them. The rate varies from region to region. In the southern states, the producers earn up to Rs 1.7 per kg as rearing charges. In certain western and eastern parts of the country, integrators pay up to Rs 3 per kg as the rearing charges.

KPS has consistently paid its producers more than the rates paid by the integrators. For 2008–9, the rate differential is Rs 6.95 per kg between that offered by KPS and the integrators. Even if a higher wage charge of Rs 3 per kg paid by the integrators is taken into account, there is significant gap of Rs 5.65 per kg. With 21 lakh kg production, this differential adds up to more than Rs 1.20 crores. This is also the net value addition, which KPS brings to the community by its existence. The per producer net value addition is also approximately Rs 20,000. This is the premium of ownership.

A very interesting fact is revealed on analysis. The average gross income per household has been Rs 35,921 as mentioned in the Table 5. However, on an average, every producer has reared approximately 3,500 kg of live birds in 2008–9. At a wage rate of Rs 3 per kg, they might have earned Rs 10,500 had they been associated with an integrator. This amount is nearly one-third of what they have earned now through KPS. This additional value creation is generated by facilitating the rearing and marketing of birds. As KPS moves up the value chain, this value creation will improve significantly.

Once the entry barriers are removed and the small producer is part of a larger collective, his income potential increases many folds. The KPS model will be highly relevant for the poor households, where every additional rupee is important.

KPS has been able to achieve the same benefits of scale as an integrator. However, the integrators have not been able to outsource and decentralize bird rearing in Madhya Pradesh. KPS has been able to do so

by virtue of its strong social mobilization and a sense of ownership among producer members.

The important lesson from KPS is that, by design, it assumes significant business risk upon itself as producers mainly concentrate on production, and all arrangements for rearing, DOCs, feed and veterinary care are managed by the collective. In any case of leakage or lack of commitment of any producer, the collective suffers as a whole.

For example, feed is supplied by KPS; any leakage by the producer selling in the market will benefit the producer but will be a loss to the collective. Hence, any scale up would be preferable in areas where strong social mobilization is already in place and potential members are strongly oriented to the values of collective.

The increasing food inflation in recent years has wiped out many benefits that KPS had assured to its members. However, members with a batch size of 300 and an alternative source of income are comfortably placed. The analysis also shows that a batch size of 300, an annual income of Rs 15,000 may be assured to the producers.

Now that KPS has attained sufficient maturity in its operations, new members should be inducted with a shed capacity of 500. At present estimates, this will ensure a monthly income of Rs 3,000 per month, which will be sufficient to meet their basic needs. However, selection of a member should be done keeping in mind her familiarity with PRADAN, the SHG norms and a commitment and orientation to the values of collective.

The most important reason for the success of KPS has been a strong and dynamic leadership, especially in last few years. The success of KPS demonstrates the change that a qualified and committed leadership can bring to the lives of the poor. This will be a challenge that other organizations wishing to replicate the model will have to meet.

KPS will need to grow both horizontally and vertically. Aggressive efforts need to be made to generate resources for more sheds at the producer level, satellite hatcheries, and parent and grandparent farms. There is a limited scope for improving efficiency at the producers end. More benefits will occur to producers if KPS can attain the advantages of scale and increase its own control on the value chain. Moving up the value chain to own a hatchery, and parent and grandparent farm has the potential to double the income of the individual producer with the same batch size.

The model is getting replicated in other states and areas, and a national-level body may be set up, which undertakes advocacy and knowledge dissemination. Similarly, expansion of the model needs to be done by keeping the core value system intact. Strong social mobilization must precede the scaling up. At the same time, a new leadership may also be developed to take this initiative forward. Attracting and retaining qualified and committed manpower will be the biggest challenge that KPS will face in the near future.

**CASE STUDY: MANDIPURA**

Mandipura is a small tribal village, situated at a distance of 2 km from the Hosanagabad–Nagpur national highway. The village is connected by an all-weather road. All the 33 families in the village belong to STs. This village came into being in 1986–87 after the govern-ment decided to build new houses for

STs on a vacant plot of land, under the Indira Awas Yojna (IAY). The residents of Mandipura moved in from adjoining villages when they were sanctioned their land by the government.

*Belabai recounted that they used to earn Rs 5 per truck if they were lucky. In periods of limited demand for sand, many a time their earnings dropped to Rs 2 or 3 per truck.*

Belabai and her family used to live in the nearby Chowkipura village. Her family moved to Mandipura in 1986. Belabai remembers the old days and recounts the difficulties they faced. Her family had 2 acres of land, which hardly provided them any food security. The family's primary means of income was sand filling in the nearby river. Her husband Balchand and she used to go to the river early in the morning. Many men and women from nearby areas also congregated there because sand filling was their main source of livelihood. Belabai recounted that they used to earn Rs 5 per truck if they were lucky. In periods of limited demand for sand, many a time their earnings dropped to Rs 2 or 3 per truck. After a day of hard work, between husband and wife they hardly earned Rs 30–40 on a good day. Most of this money was spent on daily rations. Every evening, provisions were bought for the night and the next morning. Often, the family had to go to bed on an empty stomach.

Migration was other source of income. The whole family would migrate to Hoshangabad and other nearby places for employment. The family migrated during the harvest of *rabi* wheat and soybean, and were dependent on labour contractors for work. There were limited opportunities for wage employment in the area and survival itself was a challenge. Belabai vividly remembers when Ms Madhu Khetan, an executive from PRADAN, met her more than ten years ago and persuaded her to form an SHG. Belabai said she was very reluctant and apprehensive. In the past, many NGOs had come and fled with their hard-earned money. However, after much persuasion, she and ten other women of the village formed an SHG and started saving Rs 10 per month. Their association with PRADAN, and later with the Narmada Mahila Sangh, continues to this day.

Belabai has a large family. She and Balchand have six children—four girls and two boys. Belabai explored different sources of income to meet the household expenditure and took up poultry on the suggestion of PRADAN executives. A shed for 300 day-old chicks (DOC) was built, with the support of government schemes, and since then Belabai has been regularly rearing chicks in her backyard. Balchand started working as a field supervisor with the Kesla Poultry Samiti (KPS) a few years later and his income supplements the household income.

Balchand bought a motorcycle last year, with a loan from the SHG members. Belabai is encouraging her children to study. Her eldest daughter completed her schooling from a reputed Navodaya Vidyalaya. She lives in a hostel in Hoshangabad and is a regular student in the local degree college. Belabai's other children are in school, with the youngest child in Class III.

Belabai also served on the governing board of KPS for five years. She believes that KPS and poultry rearing have brought about a sea change in the life of her family members. Caring for her children left her with little time; increasing her shed capacity, therefore, was a major challenge. However, she is determined

**Table 6: Gross and Net Payment to Belabai**

| Year | Batch Size | Total Wage Payment Including Bonus (in Rs) | Deferred Payment Taken Back (in Rs) | Net Payment to Belabai (in Rs) | Average Monthly Income (in Rs) |
|---|---|---|---|---|---|
| 2006–7 | 300 | 12,785 | 1,000 | 11,785 | 982.08 |
| 2007–8 | 300 | 19,121 | 1,000 | 18,121 | 1510.08 |
| 2008–9 | 300 | 39,478 | 22,000 | 17,478 | 1456.50 |

**Table 7: Net Family Income of Belabai**

| Year | Net Payment to Belabai (in Rs) | Net Production Incentive Earned by Balchand (in Rs) | Total Family Income (in Rs) | Average Monthly Income (in Rs) |
|---|---|---|---|---|
| 2006–7 | 300 | 12,785 | 1,000 | 11,785 |
| 2007–8 | 300 | 19,121 | 1,000 | 18,121 |
| 2008–9 | 300 | 39,478 | 22,000 | 17,478 |

to do so this year. She will be adding an additional capacity of 400 birds and many more dreams to her household this year.

## WOMEN'S EMPOWERMENT

One of the most important outcomes of the poultry intervention has been the growing awareness and the ability of women to make informed decisions on the issues concerning their lives. Most of the women said that their income has helped them to have a greater say in household affairs and decisions. This does not mean that disputes do not arise among members of a household.

The women opined that most married couples in the world have differences over one issue or other. But more importantly, income distribution within KPS is a woman's decision. Many women also said that the men of the family considered this to be their independent income and did not interfere in their decisions on how to utilize it. In KPS, it is mandatory that payments to members are made directly to them and not to the male members of their families.

On the issue of social awareness, members of KPS have their own views and express them freely. Members of KPS are also members of PRADAN-promoted SHGs. Therefore, this empowerment may also be attributed to the good work done by PRADAN professionals in these villages over last two decades. The growing awareness among the KPS members has also led to some interesting outcomes.

One of the most important outcomes of the intervention has been the capacity of women to assume greater responsibility in planning and strengthening their family assets base. This has happened because women feel more confident about taking greater risks. More than 90 per cent of the members want to

expand their shed capacity and increase production output. The only reason for the reported non expansion was the increased household responsibilities because of the presence of small children or the lack of a helping hand. Over 125 women have taken a loan of more than Rs 10 lakhs from KPS and are repaying it regularly.

*One of the most important outcomes of the intervention has been the capacity of women to assume greater responsibility in planning and strengthening their family assets base.*

In contrast, most of the women outside of KPS were apprehensive of taking loans. The average loan size was Rs 1,000 only. The main reason was the fear that they would be unable to repay the loan, leading them into a debt trap. One major impact of KPS has been that in the treatment group the women have the confidence to take major risks and have the capacity to manage credit.

**CASE STUDY: BURRA**

Burra is a small village situated at a distance of nearly 8 km from Sukhtawa in Hoshangabad, Madhya Pradesh. The village has poor connectivity and a *kuccha* road connects the village to the outside world. The signs of impoverishment are visible all around the village. There are nearly 30 households in the village. The village is divided into two hamlets. Most of the houses are *kuchha* and the living conditions are abysmal.

The village has been formed because the villagers were displaced by the creation of a firing range nearby. In the absence of any legal documents, villagers claimed that they had received no land compensation even many years after their displacement. Most of the families depend primarily upon migration and livestock rearing for survival. Migration with the entire family is the norm and most of the families hardly have food security of more than three months. However, villagers reported that they receive subsidized ration regularly under the Antodaya scheme, which is a great relief for them.

The quality of life indicators are below satisfaction. At first glance, it is clear that the villagers do not have enough clothing or sanitation facilities. Most of the children had dropped out of school and were engaged in income generating activities.

Burra is a challenging village for PRADAN professionals in the Kesla team. Their efforts to form SHGs had failed twice in Burra. PRADAN executives attributed it to the very low income base of the poor and frequent migration by households.

A very distressing case was reported during the study. One of the respondents said that she had been married recently but had hardly been able to spend any time with her husband. On probing, it was learnt that her husband had borrowed Rs 10,000 for his

**Table 8: Work Availability in NREGA**

| No. | Work Availed of in NREGS | KPS Members | Others |
|---|---|---|---|
| 1 | Between 70 to 100 days | 0 | 0 |
| 2 | Between 40 to 70 days | 0 | 0 |
| 3 | Between 20 to 40 days | 0 | 0 |
| 4 | Between 0 to 20 days | 16 | 20 |

marriage and had been working since then with a businessman in Itarsi, in lieu of repayment of his debt. It was more or less a case of bonded labour and she had met her husband on rare occasions over the previous six months. This case highlights the acute problem in the area. PRADAN and KPS executives are working to meet the challenge to improve the living conditions in this village.

*Most of the women respondents in both the groups expressed the view that if they get work up to 100 days as guaranteed in the Act, they can meet their household needs without many problems.*

### ENTITLEMENT TO GOVERNMENT SCHEMES

Most of the community members in the treatment and the control groups were aware of the major flagship government programmes. Both the control and the treatment groups expressed satisfaction with the entitlements under the government schemes and made use of them. Some doubts were raised about the quality of services offered.

### ENTITLEMENT TO NREGS

Access to NREGS remains one of the challenges in these villages. Most of the respondents in both the control and the treatment groups were registered under the scheme and had job cards. There was also a demand from households for NREGS work. But very few respondents reported having worked under the scheme for more than 10 days. Not a single household worked more than 20 days in 2009 under NREGS.

Most of women respondents in both the groups expressed the view that if they get work up to 100 days as guaranteed in the Act, they can meet their household needs without many problems. Most of them had applied for and received job cards. However, three ladies in the treatment group, who had additional sources of income, had not applied for job cards. The arrest of a *panchayat* head in Kesla in a case of embezzlement in NREGS has, however, certainly affected progress in the scheme.

### HEALTH

KPS members were aware of the health issues that households faced. In general, people are dependent on government hospitals for medical aid. ICDS centres and *anganwadi sevikas* are the first point of contact. People were also aware about the role of Asha workers. Members in the treatment and the control groups were aware about the benefits of institutional delivery and facilitating government initiatives.

### CHALLENGES IN SCALING UP

The increasing unavailability of fuel wood and water were identified as two most important challenges by KPS members. The producers were worried about the rapidly decreasing forest cover and the subsequent increasing cost of the fuel wood. Similarly, access to water was identified as a major challenge in managing production and expansion of sheds. The major source of water in these villages is hand pumps. Once the chicks grow, the increasing need to supply water and the limited hand pumps take up substantial time of women. In summer, the problem is more acute. These two constraints are the biggest challenges that KPS needs to address in the near future.

# The Initiative that Changed the Lives of Fulmani Devi and Many Others

PAWAN OJHA

***Trying every means to keep home and hearth together, struggling in abject poverty, migrating to distant places, Fulmani, like the women in her village, finally finds strength and sustenance through SHGs and poultry farming.***

Fulmani Devi of Silum village in Raidih block of Gumla district, Jharkhand, is happy and proud about her newly constructed poultry farm, which has a capacity for 1,000 broiler birds. This has become possible after nine women (including her) started the poultry co-operative way back in 2002. Prior to this, her family used to harvest paddy prematurely so that it could get an early supply of food grain. She recalls, "My husband, Tapeswar Oraon, once went to Ranchi, which is about 100 km from my house on foot, in search of work as labour."

Before taking up poultry as a means of livelihood, Fulmani Devi's quality of life was pathetic. She and her family lived in a mud hut; she had a few utensils. She had three acres of land, of which one acre was cultivable; however, only one crop of paddy could be cultivated there because it had no irrigation facility. The family had no other means of livelihood. After selling the harvested paddy, they had food security for six months in a year. Three meals a day was a distant dream…they hardly ate twice in a day. Their meal comprised rice and vegetables and quite often they had gruel (stale rice with water and salt). The income from the paddy was just enough for other household expenses such as oil, spices, medicines and education of children. They had no income and no food for the rest of the year.

Fed up with the condition, in 1997, Fulmani, her husband and a daughter, who was a few months old, migrated to Shimla, with Rs 500 that they had borrowed from relatives. They left behind their elder son, aged 13, and daughter, aged 11, in the village to look after the house. Their stay in Shimla was equally painful but they could earn their bread with the hard work they did. They earned Rs 50 each per day and managed to save Rs 10 to 20 each day. Fulmani does not even know the names of the places in which they worked. They worked in brick kilns on the outskirts of towns. They constructed temporary settlements with the unused bricks at the work site. She was constantly worried about her home and children. She was always looking to getting back to her village but lack of opportunities there forced her to stay for six months.

Fulmani returned to the village with her daughter and husband. Tapeswar Oraon went back after some time whereas she stayed back in the village because there was no one to look after her children. In the absence of proper guidance, the children had stopped going to school. Her son had taken to gambling and theiving. As a result, her son was on the verge of getting arrested by the police but was saved because the villagers intervened. She weeps as she recalls those times and feels grateful to the villagers for their help. Life was no easier after her return. She had to look after household chores and work to earn money. She started working as a daily wage labourer in another villager's fields and earned Rs 10 per day. Sometimes she went to Gumla to work in the construction sites and earned Rs 30 per day. Life continued this way till she joined a Self-Help Group (SHG) in her village.

Initially, Fulmani and the other women of the village were reluctant to join the SHG because they were not convinced about the concept. Later, following the persistent persuasion of PRADAN professionals and noticing the inevitable benefits of being a member, they formed a new SHG named Jagriti in 2001 with 20 members, who deposited Rs 10 each as their weekly savings. Subsequently, she borrowed Rs 5,000 from the SHG for the marriage of her elder daughter. She returned it in nine months, from her as daily wages. The repayment was easier for her because of the low interest rate charged and because she could repay small amounts at regular intervals spread over a longer period.

However, this was not enough. She needed a more sustainable source of livelihood in the village. This was a common problem among the members of her group. The professionals from PRADAN then advised them to start poultry farming as a means of livelihood in the village. To give them an exposure about the activity, the members were taken to Lohardaga where women had started poultry farming. The women in Lohardaga told them about the process of poultry farming, their experiences and the benefits. They said that they earned profits to the tune of Rs 3,500 to Rs 4,000 from each lot.

Livestock rearing has been an age-old and common occupation for the villagers. Now with easy access to loans, Fulmani readily agreed to take up poultry. She initially took a loan of Rs 2,000 with nine other members from the SHG to start poultry farming. This money was given to the professionals from PRADAN to get a supply of chicks and feed. Initially, she started with the semi-scavenging, cross-breed called kroilers. She did not build any separate shed for the kroilers; instead, she earmarked a part of her living room and reared the poultry there. She did not even buy any equipment for feeding or drinking water. She reared the chicks indigenously. Without any medicine and vaccinations, quite a number of chicks died. It took 40 days for the rest of the chicks to mature. They were then taken to the local markets. The price recovered was not enough and she incurred a loss of Rs 300, which she was able to compensate. She, however, did not lose hope, and with the other members decided to restart poultry farming with proper logistics, equipment and better services.

In October 2002, PRADAN executives talked to the villagers about the concept of poultry farming through co-operative societies. Fulmani was among the nine members who came forward to initiate the poultry farming through a co-operative society. The office bearers were elected from the group. Fulmani

was elected Governing Board member. Thus, Gumla Grameen Poultry Co-operative Society Ltd. came into existence. With support from Department of Cooperatives, Government of Jharkhand, and loan from Grameen Bank, she constructed a poultry shed of 300 sq ft in which 300 chicks could be reared. She received a loan of Rs 10,000 from Grameen Bank and a grant of Rs 9,500 from the Department of Co-operatives. In the first year, she earned Rs 5,150 and in the second year, she earned Rs 12,376. Sensing a bright future ahead in the village itself, she called her husband back from Simla and constructed another shed that had a capacity for 350 chicks after receiving a grant of Rs 20,000 from the block for the construction of the shed. Her own contribution was Rs 15,000. In 2009, she once again expanded the business by constructing a shed of 1,000 sq ft with a capacity of 1,000 chicks. This time she took loan of Rs 80,000 from Punjab National Bank, at an interest rate of 6 percent. The annual income of Fulmani Devi is given in the table below:

She is thankful to the co-operative society and the broiler farming model for changing her life. Her family now has meals three times a day. She recalls that there were times when a kilogram of oil had to be stretched for two months whereas now even 2 kg of oil is not enough for a month. The productivity of her agricultural farm has increased three times. Poultry droppings are a very effective organic fertilizer in the fields. She is now able to buy better quality seeds and has solved the water crisis for irrigation by digging a well in the field. Her husband is now engaged with the cultivation. He helps her with poultry farming too. Her son works as a daily wage earner, supplementing the earning, whereas her daughter-in-law looks after the household chores and the livestock. After repayment of the loan to the SHG and the bank, Fulmani has been able to create some assets.

**Table 1: Annual Income of Fulmani Devi**

| Financial Year | Amount in Rupees | Remarks |
|---|---|---|
| 2003–04 | 5,150 | Shed capacity 300 birds |
| 2004–05 | 12,376 | Shed capacity 300 birds |
| 2005–06 | 13,775 | Shed capacity 300 birds |
| 2006–07 | 17,546 | Shed capacity 650 birds |
| 2007–08 | 20,792 | Shed capacity 650 birds |
| 2008–09 | 28,268 | Shed capacity 650 birds |
| 2009–10 | 71,565 | Shed capacity 1,000 birds |
| **Total** | **1,69,472** | |

**Table 2: Fulmani Devi's Assets**

| Assets | No. | Cost |
|---|---|---|
| Television | 1 | 4,000 |
| Bicycle | 1 | 2,200 |
| Mobile | 2 | 6,000 |
| Well | 1 | 30,000 |
| Livestock | 5 | 8,500 |

**Table 3: Annual Sales Turnover**

| | FY 2003–04 | FY 2004–05 | FY 2005–06 | FY 2006–07 | FY 2007–08 | FY 2008–09 | FY 2009–10 |
|---|---|---|---|---|---|---|---|
| Membership | 475 | 829 | 1,380 | 2,100 | 2,500 | 3,235 | 3,467 |
| Sales (MT) | 395.54 | 810.35 | 1,963.24 | 2,428.11 | 3,015.39 | 4,814.47 | 5,429.3 |
| Sales turnover (Rs in lakhs) | 142.00 | 299.00 | 770.57 | 993.13 | 1,252.79 | 2,688.93 | 3,272.17 |
| Members' profit (Rs in lakhs) | 12.11 | 19.26 | 71.79 | 86.81 | 91.85 | 250.72 | 348.38 |

She has a television set, bank savings and has invested in insurance. She saves Rs 700 in Sahara; she also deposits Rs 500 in LIC and saves more than Rs 10 per week in the SHG. She also has a bank account in the United Bank of India. All these accounts are in her name. Her only regret is that she could not educate her children properly. They dropped out of school. Her children do not find education necessary. According to them, they are earning well in the village through their hard work and skills, which they will continue.

She has heard about an automatic drinking system for the poultry from the members of the co-operative. She is planning to install it because it will help her manage the units more efficiently. This will be helpful when she expands her business to the extent that it will be difficult to manage things manually. She wishes to expand operations for the coming generations and to secure their lives so that they will not face similar trials and tribulations in life.

She visualizes an alcohol-free village and her group has already taken steps towards achieving that. She used to sell liquor way back; she thinks it is not a dignified livelihood. She avoids talking about it. Men used to indulge in all sorts of crimes after consuming alcohol. She does not want to see other women facing similar situations and hence she visualizes an alcohol-free village. She had participated in similar social action earlier. She along with other women of the village participated in the deforestation drive in which they did not allow people from other villages to cut the trees. These social initiatives have nothing to do with her being economically well off. She stopped making liquor and struggled her way out of it. Similarly, she wants other to find solutions to their problems. She took to poultry rearing early; this motivated other women to come forward. According to her, recognition is not important; she would have continued the work even if she were not recognized for it because it helped her family to surmount bad times.

Like her, 530 members of the Gumla Grameen Poultry Self-Supporting Cooperative Society Ltd. as well as 3,267 members of the Jharkhand Women's Self-supporting Poultry Cooperative Federation Ltd. are being benefited by the activity.

# Workshop on Small-Holder Poultry Rearing: A Sustainable Livelihood Opportunity for the Rural Poor: A Report

***The South Asia Pro Poor Livestock Policy Programme (SAPPLPP), Professional Assistance for Development Action (PRADAN) and the National Small-holder Poultry Development Trust (NSPDT) jointly convened a workshop on 'Small-Holder Poultry Rearing: A Sustainable Livelihood Opportunity for the Rural Poor' in New Delhi on 28 December 2010. A report on the workshop.***

## BACKGROUND

The workshop was designed with the objective of building awareness about the immense potential of poultry rearing as a viable income earning opportunity for the rural poor, identifying opportunities that the poultry sector presents and planning what needs to be done to enable small-holders to participate in and benefit from an expanding poultry market. Over 80 participants from government programmes and research institutions, NGOs and donor agencies attended the day-long workshop, which was inaugurated by Dr. Amarjeet Singh Nanda, Animal Husbandry Commissioner, Government of India. Dr. Nanda delivered the keynote address.

The poultry sector in India can be broadly categorized into the organized and the unorganized sub-sectors. Small and medium farmers are increasingly under contract farming arrangements with large integrators, primarily for broiler rearing. The needs of both the sub-sectors are very different. There is also an emerging, but marginal sub-sector, moving from the unorganized to the organized. As per the Livestock Census (2007), there are 648 million poultry birds in the country, of which 45 per cent (294 million) comprise birds raised at the household level, under backyard poultry production systems. Approximately 77 per cent of the egg production is from improved poultry and the remaining 23 per cent is from *desi* indigenous birds.

The poultry sector currently provides employment to over three million people in the country, and is one of the fastest growing economic sectors, averaging a growth rate of 10–15 per cent per annum over the last decade. The rapid advancement of the poultry sector has, however, largely bypassed the poor, for whom poultry rearing has been a traditional livelihood activity that contributed significantly to household food and nutrition security. Whereas poultry rearing is recognized as a

key poverty reduction strategy, with a number of schemes on poultry development and promotion, the high growth in the sector is currently confined to the commercial, organized sector. This is largely because of the poor risk-bearing capacity of small-holders, the lack of a coordinated supply of inputs, extension and market services, and limited access to new knowledge and technology by small-holders. To enable small-holders to effectively participate in and benefit from the rapidly expanding poultry sector, a designed approach that is based on the existing knowledge, resources, and access to inputs and markets is required, which helps small-holders to graduate from a nutrition and food security focused intervention to a livelihoods and income earning intervention.

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The key elements of profitable and sustainable poultry rearing models for small-holders was highlighted, commencing with a description of a low input/low output poultry production system that focused on the rearing of *desi* (non-descript) birds. This is an auto-run system that requires no or negligible investment. Birds have dual purpose; they are raised for both the meat and the eggs. Being native to the environment, these birds demonstrate high levels of adaptability.

The rearing of *desi* birds meets critical household food and nutrition security needs and 'emergency' income requirements. Similar to the system of rearing *desi* birds is the rearing of indigenous poultry breeds, a wide variety of which are found in India (for example, the *Kadaknath* of Western Madhya Pradesh and *Aseel* of Andhra Pradesh). Poultry production systems that are based on improved breeds, with relatively higher productivity, require moderate inputs (particularly related to sourcing of birds, feed, health services and access to markets). High input/high output poultry production systems are dependent on strong backward and forward linkages, and necessarily require that aspects related to sourcing of birds, health services, feed and market access are ensured.

The detailed aspects of facilitating a 'level playing field' for small-holders in poultry rearing were stressed. First, the selection of the most appropriate model, based on the resources of the household (including time and knowledge) and access to markets, is important. Second, the need to ensure access to preventive vaccination services is also crucial.

Documentation of good practices from the region, adequately demonstrates a significant reduction in bird mortality following the provision of vaccination services at the 'door-step' of small-holder poultry rearers. The high cost of feed is another major constraint faced by small-holders in up-scaling poultry rearing. Production of maize, a key ingredient in poultry feed, has remained static over most of the last decade, and the high import costs, have led to an increase in poultry feed prices.

There is need for the development of alternative sources of poultry feed, based on

*The rearing of* desi *birds meets critical household food and nutrition security needs and 'emergency' income requirements.*

crops grown locally, as also the diversification of feed sources, based on local practices. There are numerous traditional practices, which could act as an alternative for poultry feed such as rearing termites in earthen vessels as high-protein feed for poultry, adding crushed snail shells to the feed, promoting vermi-compost in mixed farming systems and the feeding of greens, such as onion and garlic leaves.

There needs to be both facilitation and support through the collectivization of small-holders, which will enable economies of scale for accessing inputs and services as well as for accessing markets. A parallel was drawn with the successful Amul model of milk collection and marketing, dependent on small farmers collectively marketing their produce through an institutional system that facilitates access to consumers in markets at considerable distance. The need for extension systems to centre-stage small-holder poultry rearing, as also for the veterinary course curriculum to include small-holder production and rearing systems rather than the current priority of being focused largely on commercial production systems, was stressed on.

Currently, the poultry sector in India is classified neither as an agricultural sector nor as an industrial sector, and an emerging policy issue is the need to recognize small-holder poultry rearers as agriculturists and eligible for sector support and incentives. Information on on-going government schemes for the promotion of small-holder poultry rearing and assistance through both subsidy and interest-free loans for the setting up of mother units were provided.

Information was provided on the establishment of poultry estates, selected on a pilot basis in Sikkim for broiler farming and in Orissa for layer farming, as the Poultry Venture Capital Fund and the work of the Central Poultry Development Organisation focused on the supply of quality chicks and farmers training.

Mention was made of a few state governments (for example, of Orissa) where poultry is already designated as an agriculture sector, and farmers are eligible for sector benefits and subsidy. Concern was expressed that whereas subsidies did exist, these were largely targeted at commercial poultry for export; however, no subsidies or insurance policies are available for small-holders. The lack of insurance schemes that are tailored to the needs and priorities of small-holders was a major limiting factor in up-scaling small-holder poultry rearing. NABARD is the coordinating agency for the subsidy-cum-loan scheme for poultry rearing. It should be approached, to avail the benefits of the scheme.

**SECTORAL OVERVIEW**

An overview of the poultry sector and a sector SWOT analysis with respect to small-holders was presented. The unique position that poultry occupies in the country's livestock economy, characterized by a co-existence of an intense system (technology, capital, scale) with integrated production and marketing, and a system that is based on traditional knowledge and practices were highlighted. Small scavenging poultry production systems are the most widespread animal production systems in the country.

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Three decades back, 70 per cent of the poultry population comprised *desi*/indigenous birds, accounting for 70 per cent of the egg production. Today, over 80 per cent of the poultry production is under the commercial intensive-managed production system. There is a decline in the share of small-holders in this rapidly advancing sector. However, policy and public institutions have not kept pace with this change. Small-holder poultry production systems can be categorized as (i) traditional *desi*/indigenous; (ii) improved *desi*/ indigenous; (iii) new breeds introduced in the same context; and, (iv) small-scale modern poultry systems.

As one moves across these four categories, there is a reduction in the unit cost of labour and supervision, a higher quality of husbandry and a shorter response time. However, given the importance of aspects such as nutrition and ready cash income, small flock sizes of even 9–10 birds are significant and important for small-holders. Whereas successive rural development and livelihood improvement projects have identified poultry development as a pro-poor intervention, there are few successes, and this is largely on account of the failure of extension initiatives in reaching out and benefiting small-holders. Poverty reduction interventions need to factor in key aspects related to nutrition and food security, and ensure that income gains remain in the hands of women.

The key statistics relate to the poultry sector in India, detailing the significant opportunity presented by the poultry sector in India today. With a population of over one billion, and annual per capita income increases of 5–6 per cent, India is a very large market. In bridging the consumption gap that currently exists between the current production and the recommended norm of the National Institute of Nutrition of 180 eggs and 11 kg of meat per capita each year, there is the potential to create an additional 10 million jobs. As per Government of India estimates, an increase in the per capita consumption of one egg or 50 gm of poultry meat will generate an additional 25,000 jobs. The current level of growth itself creates opportunities for 60,000 jobs in the primary sector. There is renewed focus on addressing nutritional deficiency, and poultry products (eggs and meat) are some of the most economical food options available.

The strengths of the poultry sector in India include some of the best production infrastructure in the world and high levels of productivity, comparable with the best in the world (320 eggs annually, and 1.8 kg broiler growth in six weeks). India is self-sufficient in its genetic stock, and globally ranks second in egg production and fifth in poultry meat production. Almost 75 per cent of the non-vegetarian food consumed in India comes from poultry produce. Poultry production offers the highest return on capital and per unit land, and demonstrates the best biological efficiency in the animal meat category. However, whereas the country has over 39 veterinary colleges, the development of skills and

knowledge has not kept pace with the growth of the industry and there is need for efficiency at all levels of the value chain. This is a major weakness of the sector in India.

*Almost 75 per cent of the non-vegetarian food consumed in India comes from poultry produce. Poultry production offers the highest return on capital and per unit land, and demonstrates the best biological efficiency in the animal meat category.*

Further, the dominant production system is the commercial high input/high output system, dependent on exotic breeds. Traditional household-level poultry rearing has been gradually marginalized. The agriculture or industry status of the poultry sector is not consistent across the country, and some states have resorted to taxing even live meat. There are differential VAT structures for equipment, ingredients, etc. Formal financial systems are not supportive of investments in this sector. Major threats faced by the sector include disease outbreaks leading to culling of large numbers of poultry, the high cost of feed, the withdrawal of protection to domestic poultry markets while continuing with the restrictions on the import of feed ingredients such as corn and soya.

The 11th Plan document recognized the significant contribution of the poultry sector, with the annual growth rate being 10 per cent, higher than the overall growth target. Much more than the growth rate of agriculture, as also the importance of institutional restructuring, support for public-private partnerships and the setting up of producer collectives (similar to the Amul model in milk production), the corresponding investment in the sector is less than 4 per cent of the total investment in animal husbandry.

There is implicit acknowledgement that the growth of the sector is to be driven by private capital. Against the backdrop of technology, infrastructure and credit constraints, there is increasing marginalization of small-holders, who are currently not a part of the rapid growth and advancement of the sector. A comparative assessment of the poultry sector with other animal husbandry sectors such as dairy and fisheries was also made.

Policy development of the sector is constrained by the lack of data and, in some cases, the availability of distorted data. In detailing consumer preference patterns, the NSS surveys capture data for meat, fish and eggs—poultry meat is not mentioned as a distinct category. The database for feed and feedstuff is lacking, requiring dependence on USDA estimates. Given the lack of data, the real impact of the sector is underestimated.

In highlighting what needs to be done to enable the poor to participate in the growth and expansion of the poultry sector, stress was placed on the need to leverage the current rural-urban divide in consumption patterns. Whereas the average egg consumption in urban India was 100 eggs per capita annually, the corresponding figure for rural India was 15 eggs. Similarly, whereas the per capita consumption of poultry meat in urban areas was 2.1 kg annually, in rural areas, this was 0.15 kg. Since 95 per cent of the poultry meat is sold in wet markets, there are considerable

cost implications of servicing an increasing urban consumption.

Efforts to develop and expand rural markets will facilitate access to the poor. Further, there is need for institutional mechanisms to enable pro-poor vertical integration in the poultry value chain and support for contract/ cooperative farming, to keep pace with the shift in the structure and the operation of the industry. Highlighting that Andhra Pradesh produces a fifth of India's poultry output, the importance of ensuring the supply of adequate skills, extension services and availability of raw materials were emphasized.

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It was also highlighted that small-holders can compete with modern commercial poultry because of productivity advantages. There is need, however, to substantially increase public investment, particularly for institutional development, to enable small-holders overcome the high transaction costs they face in securing quality inputs and accessing markets.

The creation of a National Poultry Development Board (on the lines of the National Dairy Development Board and the National Fisheries Development Board) was proposed, to facilitate a structured impetus to the sector, enable public-private partnerships and leverage the inherent strengths and dynamism of the sector. Other critical needs of the sector are the provision of insurance and the need to indigenize feed resources, thereby reducing production costs.

It was reiterated that there is urgent need for insurance cover for poultry rearing, 'which required the government to develop an insurance product targeted at small-holders. Poultry rearing has high initial capital cost, which is difficult for small-holders to arrange. Whereas subsidy is available, it does not reduce the urgent need for credit for the sector.

## THE BACKYARD AND COMMERCIAL MODELS OF POULTRY

The need to differentiate between backyard poultry and rural poultry was mentioned. The backyard poultry model is a zero-input model, with the birds primarily scavenging for food whereas the rural poultry model is similar to intensive commercial poultry rearing, scaled down to the individual household level. Participants also felt that small-holders have to be linked to the rapidly expanding poultry market and should not be confined to backyard poultry production systems. Scaled-down systems of commercial poultry, tailored to

**Poultry's Missing Voice**

Poultry contributes Rs 35,000 crores more than sugar cane (Rs 25,776 crores) and equivalent to 70 per cent of the contribution of the fisheries sector (Rs 49,891 crores). The absence of strong farmer lobbying makes this a 'silent' sector.

the capacity of individual households would help small-holders link up and benefit from the rapid growth of the sector.

What needs to be done to ensure a 'level playing field' for the poor in the poultry sector was highlighted. Primarily, this is the recognition of the coexistence and growth of both production systems (village-based, small-holder production systems and the scale-intensive commercial systems).

*Poultry rearing has a high initial capital cost, which is difficult for small-holders to arrange. Whereas subsidy is available, it does not reduce the urgent need for credit for the sector.*

## A. SELECT GOOD PRACTICES ON SMALL-HOLDER POULTRY REARING

### Bastar Integrated Livestock Development Programme

Poultry rearing in Bastar is characterized as a low-input/low-output production system, primarily carried out by women. Birds raised largely comprise the *desi* and the Aseel, which is culturally of great significance in the region because of the traditional practice of cock fighting. Disease, predation and theft result in high losses among young flock. On account of the remoteness of the area, access to extension health services, inputs and markets are low.

The Bastar Integrated Livestock Development Programme (BILDP) focused on interventions to reduce and mitigate disease loss among the existing poultry flock reared by tribal communities. Rather than introducing a new breed or upgrading the existing breed, programme interventions recognized the positive traits of *desi* poultry birds and efforts were made to secure this critical asset through the provision of health services at the 'door-step' of poultry rearers.

BILDP focused on the creation of a cadre of village facilitators, trained and equipped to carry out regular vaccination, under the guidance and direction of the Animal Husbandry Department. To facilitate and ensure the quality of vaccines, the project strengthened the vaccine cold chain up to the village. A package of practices, building on the traditional knowledge base and practices of the community, was documented and disseminated. This included a range of ethno-veterinary practices based on locally available herbs, low-cost technologies and improved husbandry practices. Key innovations documented and scaled up by the programme included the rearing of white ants as protein supplement; the use of bamboo for housing and low-cost waterers, which led to significant reduction in worm infestation; egg candling to identify fertilized eggs; and vaccination drives such as Pulse Ranikhet.

An evaluation study in 2006 detailed the major impact of the programme, including an increase in income from household-level poultry rearing, averaging Rs 300 a month, a three- to four-fold increase in poultry numbers and the income earned by the trained cadre of village facilitators, which ranged from Rs 500 to Rs 1,500 per month.

## B. NATIONAL SMALL-HOLDER POULTRY DEVELOPMENT TRUST IN JHARKHAND AND CHHATTISGARH

The National Small-Holder Poultry Development Trust (NSPDT) has promoted small-holder commercial poultry farming with resource-poor communities in Madhya

Pradesh, Jharkhand and Chhattisgarh.

Interventions have successfully linked small-holder poultry rearers to the expanding market for poultry meat through an institutional model that ensures access to inputs, health services and market opportunities. The key elements of the institutional model include 'right-sizing' the unit in terms of risk, return and investment for the farmer, adapting the best technology for high performance, and having faith in the abilities of the poor. Women members of tribal and dalit households are the key target community. Participating households are organized into collectives and systems are ensured throughout the value chain, to enable competitive production and efficiencies of scale comparable with the best industry standards.

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Participating households have reported a 75 per cent increase in annual income, with resultant investments in land, children's education and health. There is significant reduction in distress migration. Poultry rearing has also contributed to farm-based livelihoods by creating an income buffer, as also providing manure through poultry litter. Each of the 18 cooperatives has created 15–20 sustainable job opportunities for rural youth as technical supervisors and cooperative staff.

Small-holder poultry rearers raise an average of 400–700 birds. The unit cost per household is in the range of Rs 52,500 (Rs 30,000 for capital assets, Rs 15,000 for working capital, Rs 2,000 for capacity building and Rs 5,500 for institutional infrastructure and external support).

The household is the first level of the institutional structure. Income earned is in the range of Rs 75–100 per day. With an average of 200 days of work per year, this ensures an annual income of Rs 15,000 to Rs 20,000. Around 300–400 producers organize into a cooperative, which is the second level of the institutional chain. The cooperative maintains accounts and is responsible for ensuring supply of inputs and market linkages. Supervisors are appointed by the cooperative to support clusters of 30–40 producers. The average turnover for the producer cooperatives ranges from Rs 4 to 5 crores.

Based on the experience of NSPDT, how small-holder poultry rearing is competitive was detailed, primarily on account of the use of household labour as compared to employed/hired labour in large-scale commercial enterprises. Decentralized smaller units demonstrate better production efficiency, and when the opportunity cost of labour is low and access to inputs are assured, the poultry rearing enterprise is scale-neutral. The institutional model developed by PRADAN detailed the role of each stakeholder in the value chain.

*RLN's interventions have focused on reducing mortality through the provision of vaccination services, increasing hatchability and reducing egg spoilage, intensifying feed availability and feed supplementation, and developing market networks.*

## C. THE BANGLADESH MODEL

The BRAC model of poultry rearing from Bangladesh is a unique public-private partnership initiative. The model comprises seven enterprises—poultry vaccinators, chick rearers, key rearers, feed sellers, egg collectors, model breeders and mini hatcheries. Each enterprise is targeted at economically disadvantaged women. Access to key inputs such as credit, information, skills, appropriate technology and market access is ensured.

Poultry vaccinators are identified from among the community, based on criteria developed by BRAC. These include married, widowed or destitute women, who are permanent residents of the village, with a high level of social acceptability and motivation to work for the community. An initial five-day training is provided, which includes extensive field training sessions on vaccination, de-worming and minor first-aid. Refresher training is convened every month. BRAC provides the vaccination kits and equipment whereas the vaccines are supplied by the district animal husbandry office twice a month. Poultry vaccinators charge a small fee, ranging from BDT 0.50 to BDT 1 for vaccinating each bird. Often payment is in kind. One poultry vaccinator is appointed for approximately 1,500–2,000 birds, and there are currently over 19,000 poultry vaccinators across the country. The bird flu outbreak in 2007 and 2008 resulted in the culling of a large number of birds, BRAC has, in particular, focused on the promotion of bio-security measures at the level of households rearing small poultry flock. BRAC's small-holder poultry rearing model has increased the income for households at each level of the enterprise. Monthly income increases, ranging from 50 to 60 per cent, have been recorded, in addition to an improvement in household nutrition levels, resulting from the increased availability of eggs and poultry meat. The mini-hatchery technique was developed by BRAC. The technology builds on local knowledge, in which heated rice husk is used as artificial incubation to hatch both chicken and duck eggs.

## D. KEGGFARMS: SUPPLY CHAIN FOR THE PROMOTION OF THE KUROILER

With the objective of reaching out to rural communities and facilitating an improvement in rural livelihoods, Keggfarms developed a dual-purpose village hardy bird, combining the adaptability of the *desi* poultry bird with the improved productivity of exotic birds. The Kuroiler, as the Keggfarms developed poultry breed is called, has an annual egg production of 150, as compared to 40 by the *desi* bird. Further, the average body weight of the male bird is 3.5 kg as compared to 1 kg for the *desi* poultry breed. The supply chain promoted by Keggfarms, to facilitate the supply of day-old chicks (DOCs) in rural areas, comprises mother units, the owners of which are trained and equipped to raise DOCs until they are three weeks old, including providing critical

vaccinations. These 'started' birds are then purchased by village vendors, who supply these birds to the poultry rearing households.

Through voluntary inter-dependence, each stake-holder sustains a system that benefits all stakeholders in the supply chain. When the presentations of select good practices from within the South Asian region concluded, the Ford Foundation-supported Rain fed Livestock Network (RLN) presented the emerging results of its work on the piloting of backyard poultry rearing interventions across 13 locations in the country. Backyard poultry comprises 52 per cent of the total poultry population, contributing 21 per cent to the country's egg production and 8.47 per cent of poultry meat production. The distinct features of backyard poultry are presented as follows.

*Improved breeds, combining the characteristics of* desi*/indigenous poultry breeds with exotic breeds have had limited success on account of the high feed costs, which make the production system unviable.*

RLN's piloting of backyard poultry rearing has been undertaken through partner NGOs across six states of the country (Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, Karnataka and Orissa), working with 2,603 households. Interventions commenced with a detailed baseline, mapping key village data, existing numbers of birds and productivity parameters. Key findings from the baseline survey in programme villages indicate that hens comprise 26.3 per cent of the total poultry population, cocks comprise 17 per cent and chicks 56.6 per cent. The average number of hens raised per household is 3.5. The average egg production per clutch is 15, averaging 46 eggs per hen each year. The percentage of egg hatchability is 68 per cent. Mortality in chicks is high and recorded at 54 per cent, largely on account of predation (32.7 per cent) and diseases (21.3 per cent). The contribution of backyard poultry rearing to household income ranges from 2.4 to 7.8 percent. RLNs interventions have focused on reducing mortality through the provision of vaccination services, increasing hatchability and reducing egg spoilage, intensifying feed availability and feed supplementation, and developing market networks.

Activities related to the provision of vaccination and health services include development and dissemination of a vaccination calendar, in collaboration with the animal husbandry department, training village-level poultry vaccinators and ensuring access to equipment such as ice-boxes, syringes and needles. Interventions to reduce chick mortality and predation comprise support for improved night shelters and the setting up of chick rearing centres (CRCs), where 10-day-old chicks are reared in an intensive system, ensuring feed and vaccination services. Fifty per cent of the chicks reared at the CRCs are returned to the participating households, and 50 per cent are retained by the owner of the CRC as his/her profit. Similar to interventions under BILDP, egg candling to segregate fertilized eggs has been promoted, and improved husbandry practices such as feeding white ants, production and feeding of azolla, and integrating cereals and millets as supplementary feed have also been promoted

The initial learning from the pilot interventions demonstrates that the

establishment of CRCs has increased the number of clutches per year by breaking the broodiness of the hens. The number of clutches has increased to 6/7 from the initial 3/4. Intensive rearing in the CRCs has improved the weight of chicks and has reduced mortality. CRCs must, however operate continuously because chicks are available at different times throughout the year. Emerging policy issues from the initial piloting by RLN include recognition of backyard poultry production systems as a viable income opportunity for the poor, with a clear budget allocation.

*The importance of electricity for small-holder poultry rearing, and specifically for brooding and hatching was highlighted, as was the need to develop alternatives such as solar heating and lighting in view of the limited availability of electricity in rural areas.*

This production system must be distinguished from other small-holder poultry production systems. Up-scaling backyard poultry rearing should follow an area-based approach to facilitate economies of scale. Poultry vaccinators/animal health workers should be accountable/anchored within the *panchayat* system. To ensure delivery of vaccine services, storage facilities should be made available at the block/*mandal* level. Further, vaccines should be marketed in smaller quantities, and research on development of thermo-stable vaccines particularly for diseases such as Newcastle should be intensified.

## POULTRY SECTOR GROWTH PROJECTIONS

NSPDT aims at becoming one of the top 10 broiler producers in India over the next five years, registering a five-fold growth rate. It further aims at generating over Rs 20 crores of income in the hands of the poor, expanding to new areas in Assam, West Bengal and Bihar, strengthening and further building the institutional infrastructure.

The priority need to conserve backyard poultry production systems that thrive on a scavenging base was highlighted, as also the qualities of broodiness and disease resistance found in backyard poultry production systems. Improved breeds, combining the characteristics of *desi*/indigenous poultry breeds with exotic breeds have had limited success on account of the high feed costs, which make the production system unviable. Research has largely focused on commercial poultry production and development of improved breeds with higher productivity. The key attributes of *desi*/indigenous breeds such as broodiness and disease resistance are gradually dying out, and there is an urgent need to preserve these.

Other specific comments related to the need for inclusion of poultry rearing under the DFID-funded Poorest Area Civil Society Programme (PACS) in the Bundelkhand

**NSPDT Vision for Community Poultry**

By 2020, fifty thousand farmers will produce 200 million live birds annually valued at Rs 15 billion (Rs 1,500 crores) generating Rs 1 billion (Rs 100 crores) in the hands of the farmers and Rs 200 million (Rs 20 crores) additional income in the hands of community workers, support and professional staff. These 50,000 farmers are organized in 100 primary producer organizations, making it the largest family poultry initiative in the world and among the top five broiler producers in India with the gross turnover, including that of its associates, being Rs 2,000 crores.

region of Madhya Pradesh, where animal husbandry is a key intervention. However, poultry rearing, which is a relevant intervention for the area, is currently not part of the programme. The high investment and capacity building required for the setting up of viable community institutions, including human resource costs, were mentioned. These costs, which are related to the identification and placement of committed and qualified staff at the grass roots, are often not factored into programmes and budgets, and are often the reason for the failure of many well-thought-through schemes for poverty reduction and livelihoods enhancement.

**POLICY OVERVIEW**

Various interventions of the central government initiated over the 10th and 11th Five Year Plans focused on the development of rural poultry rearing. These included the distribution of subsidized maize to the sector and a temporary ban on maize export to control prices.

With the objective of increasing the export of poultry products, cold storage facilities, pressured air cargo capacity, etc., are being strengthened. The Prevention and Control of Infectious and Contagious Diseases in Animals Act, enacted in 2009, further strengthens reporting and surveillance. Other initiatives include the setting up of a National Poultry and Meat Processing Board and a Food Safety and Standards Authority, to ensure quality control of veterinary and biological products; the National Institute of Animal Health has been set up and it is proposed to set up a National Bio-security Network. Building community awareness and facilitating access to services at the grass roots is another priority; over 11,000 community workers have been provided training in artificial insemination.

A National Livestock Policy is in the pipeline; it proposes an integrated approach for the development of the livestock sector. Some of the major gaps in the sector are:

1. Absence of a realistic database of numbers and productivity
2. Inadequate availability of improved bird stock (low input technology breeds)
3. Lack of an effective doorstep health service delivery system
4. Absence of corpus/institutional financing for technology upgradation
5. Absence of a framework for implementing standards in the sector
6. Lack of risk mitigation measures for epidemics and pandemics
7. Inadequate HRD for specialized poultry operations
8. Lack of incentives for exports
9. Lack of recognition of poultry as an agriculture sub-sector in many states.

There is urgent need for systems to constantly monitor and ensure health coverage to the backyard poultry sector; create and update the database of the poultry sector regularly, using GIS tools, with particular focus on the vulnerable unorganized sector and live bird markets; develop participatory epidemiological tools and focus on technology upgradation for small units, to enable them cope better with the impending requirements of bio-security, food safety regulations and mitigation of environmental damage.

Other priority initiatives required urgently include collaboration and partnership by state governments with NGOs and other institutions to upscale government

programmes and increase outreach, training and human resource development at different levels, and an urgent need to document progress and field practices (including traditional practices such as the use of rice husk to promote hatchability), to facilitate knowledge sharing. Following the completion of presentations, participants were invited to share their views on policy recommendations to strengthen small-holder poultry rearing and upscale this activity as a viable livelihood opportunity for the rural poor. The recommendations, once compiled, will form the basis of policy dialogue initiatives of SAPPLPP, PRADAN and NSPDT for greater recognition and support for small-holder poultry rearing as a viable income opportunity for rural communities.

The Central Poultry Development Organisation is working on schemes to develop and conserve germ-plasma focused on rural poultry. Priority activities are training and capacity building of farmers; NGOs and state government representatives present at the workshop were requested to widely disseminate this information and enable farmers avail the training provided. The need to distinguish between commercial and backyard/small-holder poultry rearing was highlighted. For small-holder poultry, rearing an area-based approach that would facilitate collectivization and access to inputs, services and markets was stressed.

In view of the high potential of poultry rearing as an income earning opportunity for the rural poor, the need for increasing investment for this sector in rain-fed regions of the country was mentioned. The importance of electricity for small-holder poultry rearing, and specifically for brooding and hatching was highlighted, as was the need to develop alternatives such as solar heating and lighting in view of the limited availability of electricity in rural areas.

The budget of the Animal Husbandry Department was Rs 800 crores in the 10th Five Year Plan. For the 12$^{th}$ Five Year Plan, it was increased to Rs 1,200 crores; additionally, a fund request of Rs 3,350 crores is being developed. A major hurdle in utilizing the allocated funds was the absence of requisitions from the state governments, which often did not account for even 10 per cent of the total budget. In such a scenario, targeting and ensuring benefits for small-holders is a challenge.

## EMERGING POLICY RECOMMENDATIONS

First and foremost is the recognition of the huge potential of poultry rearing to household food and nutrition security as also a significant poverty reduction/income earning opportunity for the poor.

1. *Improvements in existing programmes and schemes*

Prioritize the creation of a 'decentralized' grass-roots vaccination and health delivery system.

- Identify, train, recognize and support poultry vaccinators linked to and working under the direction of the Animal Husbandry Department.
- The Animal Husbandry Department can facilitate access to key vaccines, and ensure cold chain maintenance facilities up to the point of vaccination.
- Services of poultry vaccinators to be on a cost basis. Good practices documented by SA PPLPP demonstrate that small-holders are willing to pay for preventive health services for their

livestock, provided these services are available on a regular and sustained basis.

- Regular refresher training to be provided to the poultry vaccinators.
- Identify, document and promote of ethno-veterinary and improved management practices, that build on local knowledge and tradition. These practices are often low-cost, use equipment and material that are readily available in rural households, and can lead to reduced mortality and improved health and productivity. Some of these practices have been documented and can be accessed from the SA PPLPP website (www.sapplpp.org).
- Promote the packaging of vaccines in smaller doses.
- Build first on poultry assets that the community has or is familiar with.
- *Desi*/indigenous breeds function well on a scavenging base, adapt to the local environment and should be the starting point for any small-holder poultry initiative.
- Improvements in management and rearing practices can significantly reduce mortality and improve the productivity of *desi*/indigenous breeds, directly contributing to household food and nutrition needs, as also small but sustained income improvements. Focusing on poultry resources that the community has and reducing mortality through a network of trained village facilitators working under the guidance and direction of the Animal Husbandry Department has been effectively demonstrated by the BILDP, Government of Chattisgarh.
- Small-holders willing to expand poultry rearing interventions and take this up as a full-time activity can be supported to 'graduate' to small-holder poultry production models that use improved breeds.
- Recognize various small-holder poultry models, and enable those poultry rearers who are willing, and have the required time and resources to invest, to graduate from food security/household nutrition-focused poultry models to semi-commercial/commercial poultry models. Different small-holder poultry production models could be: (i) low input/low output (primarily the rearing of *desi*/indigenous breeds under backyard production systems); (ii) moderate inputs/moderate outputs (rearing of improved breeds)—dependence on strong linkages, health services and market access; (iii) high input/high output (small-scale intensive systems)—need for strong institutional systems, high level of dependency on linkages (health services, feed and market access need to be ensured).
- Promote insurance for as low as 10–50 bird holdings.
- Promote and upscale the use of poultry litter for bio-gas generation. Use of poultry litter for biogas generation can potentially reduce the health hazards of disposal of poultry litter. For commercial farms, use of poultry litter for biogas should be made mandatory.
- Develop norms for ensuring bio-security and cleanliness, particularly around commercial farms.

2. *Recognize the commercial poultry model as a viable model for income-generation for small-holders in rural areas and provide a facilitating policy and programme environment.*

- Support collectivization of small-holders

to achieve economies of scale and market access (for example, cooperatives, producer companies, other aggregations).

- Support the establishment of robust and sustainable institutional models through these collectives (by governmental or non-governmental promoting agencies) that ensure the supply of critical inputs (DOCs, veterinary support, including vaccination, feed mix and feed, production supervision and monitoring,); facilitate and enable market linkages; and absorb price risks.
- Recognize need for human resources and capital infusion into these collectives and provide appropriate provisions in programming.
- Design and promote a bankable scheme for small-holder poultry rearers (techno-managerial model for small-holders).

3. *Veterinary education and research priorities.*

- The small-holder poultry sector has been adversely affected by human resources/skills gap. The veterinary course curriculum should include small-holder production and rearing systems rather than the current priority, which is focused largely on large ruminants and commercial production systems. The graduate veterinary course curriculum should have electives with specialized courses on poultry production that students can opt for.
- As has been demonstrated by a research study by the School of Extension and Development Studies, Indira Gandhi National Open University, the number of graduate veterinary doctors is much lower than what the sector requires (as per the study, whereas India needs 72,000 graduate veterinary doctors, the current availability is 43,000. However, there is a surplus availability of post-graduate doctors. The study also highlighted the need to set up polytechnics for veterinary education based on the requirement of technicians at the grass-root level).
- In view of the growth of the poultry sector, the establishment of veterinary ITIs (as has been done in Andhra Pradesh) should be considered. This would increase the number of veterinary technicians at the grass-roots.
- Research priorities should focus on the emerging needs of the sector, for example, the development of thermo-stable vaccines and area-specific feed formulations based on locally grown crops.
- The government should play a more pro-active role in promoting/making available technology to improve the availability of laying stock. Currently, most research programmes in this area are led and implemented by the private sector.
- There is need to bring more rigour and content in the data, to capture the potential and the current strength of the poultry sector. NSSO should separately detail consumption of poultry meat and obtain information on numbers of poultry rearers, and not only list those engaged in this activity for more than 180 days.

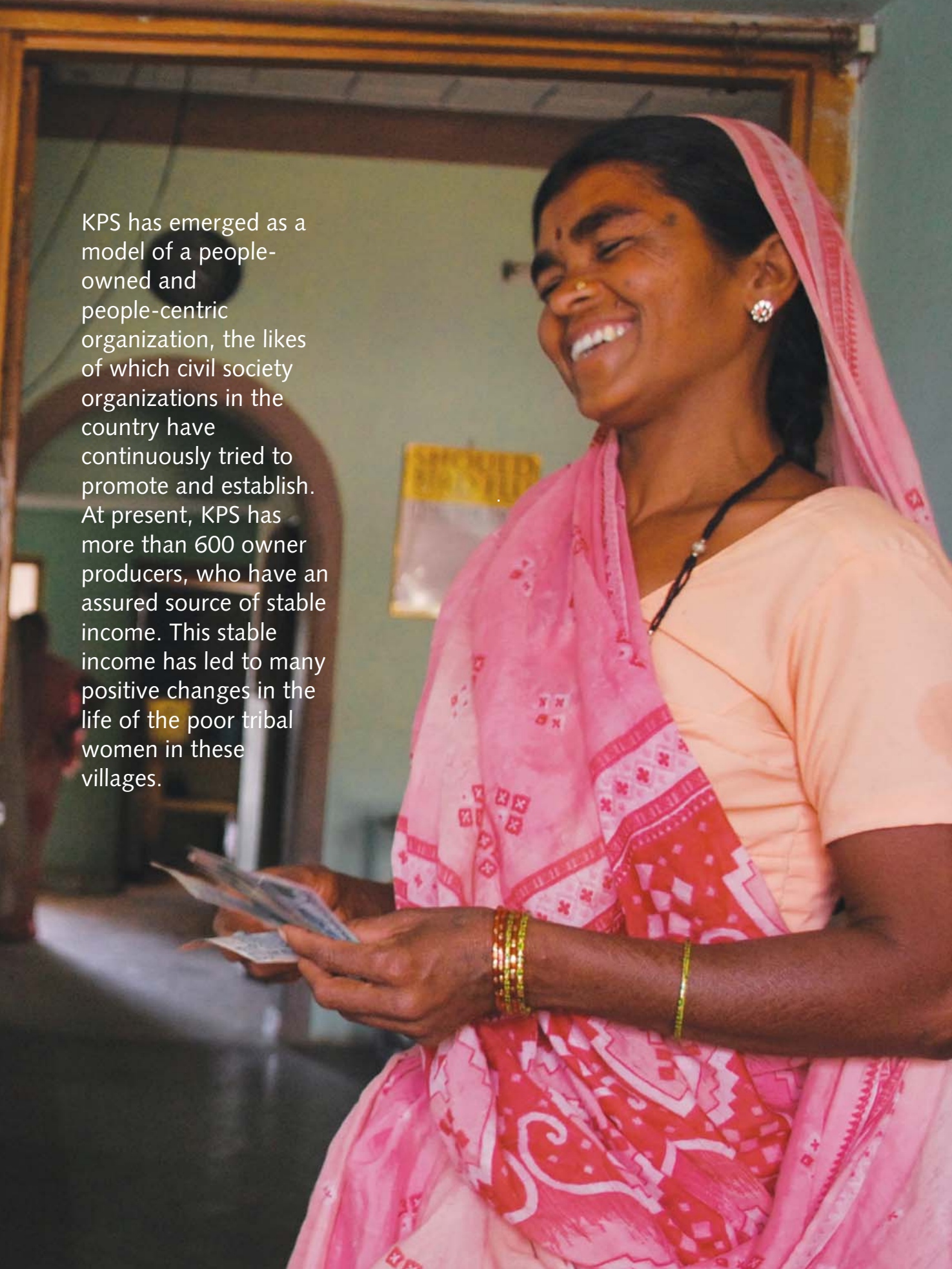
4. *Conservation of indigenous poultry Breeds.*

- In collaboration with NGOs and other relevant institutes, NBAGR should undertake a mapping of the status and numbers of indigenous poultry breeds

across the country. Schemes should be designed to promote the rearing of indigenous breeds relevant for different regions.

- Farmers rearing indigenous poultry breeds should be recognized and supported by way of access to health and vaccination services, feed and market support. Conservation of indigenous poultry breeds should be viewed as a public good and supported.
- Marketing networks to promote indigenous poultry products (eggs and meat) should be developed to enable urban consumers to access these products.

5. *In the budget proposal for the 12th Five Year Plan, to be submitted by the Department of Animal Husbandry, ensure a specific allocation for small-holder poultry rearing.*
6. *The poultry sub-sector should be classified as an agriculture sector, eligible for appropriate benefits and taxation structures. Linked with this is the recognition of poultry cooperatives on par with agriculture, dairy and fisheries cooperatives and, therefore, eligible for reduced taxation norms.*



KPS has emerged as a model of a people-owned and people-centric organization, the likes of which civil society organizations in the country have continuously tried to promote and establish. At present, KPS has more than 600 owner producers, who have an assured source of stable income. This stable income has led to many positive changes in the life of the poor tribal women in these villages.

PRADAN

**Pradan** is a voluntary organization registered in Delhi under the Societies Registration Act. Pradan's work through small teams of professionals in selected villages across eight states. The focus of Pradan's work is to promote and strengthen livelihoods for the rural poor. It involves organizing the poor, enhancing their capabilities, introducing ways to improve their income and linking them to banks, markets and other economic services. The professionals work directly with the poor, using their knowledge and skills to help remove poverty. News*R*each, Pradan's monthly journal is a forum for sharing the thoughts and experiences of these professionals working in remote and far-flung areas in the field. News*R*each helps them to reach out and connect with each other, the development fraternity and the outside world.

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