

**National and Regional Consultations: Actionable Points**

# **Strengthening Small Ruminant Based Livelihoods**



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**SOUTH ASIA**  
**Pro Poor Livestock Policy Programme**



**Department of Animal Husbandry, Dairying & Fisheries**  
**Government of India**

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## Foreword

In January 2015, the Department of Animal Husbandry, Dairying and Fisheries (DADF), GoI and South Asia Pro-Poor Livestock Policy Programme (SA PPLPP) embarked on a journey, together with hundreds of other actors in the small ruminant development sector, to enable and facilitate dialogue and discussion between and among different stakeholders with the objective of recognizing and appreciating the importance of small ruminants in rural livelihoods; understanding better the issues and challenges faced by the stakeholders in furthering small ruminant based livelihoods; identifying options for action; and establishing mechanisms for working together.

In the course of a year, the journey has gathered tremendous momentum, and the initiative shown by many states to take up policy and programmatic issues pertaining to development of the sector has been quite remarkable. 'Livestock' is a state subject, and therefore the willingness and commitment shown by the state animal husbandry departments to engage with other stakeholders, and deliberate on policy matters at the highest levels, gives us hope and reason to believe that positive changes in the sector are imminent.

Between the first national workshop on Strengthening Small Ruminant Based Livelihoods in January 2015, and the concluding one in January 2016, there were four regional consultations at Jaipur, Bhubaneswar, Bengaluru and Bhopal. In the course of these national and regional consultations, we have directly reached over 600 individuals and 243 organizations, covering 26 states and Union Territories across the country. The consultations have yielded insightful recommendations, issued as 'actionable points' with the approval of the concerned authority. The following pages are a compilation of the actionable points from all the six workshops. The document may also be downloaded from the SA PPLPP website: <http://saplpp.org/files-repository/information-hub/compilation-of-actionable-points/view>

SA PPLPP Team

## Strengthening Small Ruminant Based Livelihoods: National Concluding Workshop

New Delhi, January 12, 2015

### Actionable Points

1. Goats and sheep offer an effective risk mitigation strategy to small and marginal farmers, especially in rainfed regions, where they are intricately linked with cropping systems, and make livelihoods more climate resilient. More than 83% of the livestock in India is reared in the mixed crop-livestock system, and therefore, the development of the two sub-sectors must adopt an integrated approach.

**[Action: DADF, GoI, State Governments/UT, development donors and partners]**

2. To develop a comprehensive document on management practices of goat and sheep husbandry, covering aspects pertaining to health, biosecurity, breed, marketing, and so on, based on deliberations during the series of workshops organized by SA PPLPP and DADF, GoI between January, 2015 and January, 2016.

**[Action: SA PPLPP and DADF, GoI]**

3. Although the *Pashu Sakhi* model of improving goat-based livelihoods is a demonstrated success, as evident from a multitude of projects around the country, enabling sustainability and legitimacy of their services requires that all States/UT quickly notify the Minor Veterinary Services (MVS) under the Section 30 (b) of the Veterinary Council of India Act, 1984, including provision of first aid, deworming and vaccination of small animals and poultry. At the same time, energies and efforts need to be directed towards ways and means of Certification, Accreditation, or otherwise recognition of trained *Pashu Sakhis* within the existing legal, institutional and administrative frameworks.

**[Action: State/UT Animal Husbandry Departments]**

4. In Madhya Pradesh, efforts were ongoing to link up *Pashu Sakhis* with veterinary institutions, after the regional consultation at Bhopal in September, 2015, hosted by the department of Animal Husbandry, Government of Madhya Pradesh. The process and outcome of these efforts to be shared with DADF, GoI and other States/UTs at the earliest possible.

**[Action: Department of Animal Husbandry, Madhya Pradesh]**

5. In replicating and up-scaling the *Pashu Sakhi* model in other regions and geographies, the centrality of women in the success of the pilots should not be forgotten, because that is the key to both accessibility and sustainability of the services provided, as well as empowerment of women.

**[Action: DADF, GoI, State governments/UTs, development donors and their partners]**

6. Over a two-year term, the SA PPLPP goat pilot in M.P. had resulted in doubling of the goat population, and a 1.6 times return on investment from sale of goats; on the other hand, the poultry pilot of similar scale in the same State had resulted in a 5.8 times return on investment, not counting the intangible gains in terms of empowerment of women, improved access to preventive veterinary services, convergence with local governance institutions, and so on. A major learning from the two pilot projects was the importance of combining goat and BYP, not only as livelihood options, but also for the financial sustenance of *Pashu Sakhis*. Results and learnings from SA PPLPP pilot projects to be made available to all delegates.

**[Action: Development donors and partners; SA PPLPP]**

7. Taking a cue from small ruminant livelihood development projects successfully implemented by NGOs across the country, all State/UT AH&VS departments were requested to recognize the feasibility and scope of fee-based service provision to livestock-keepers, and undertake large-scale deworming and vaccination programmes in their respective States/UTs.

**[Action: State Animal Husbandry Departments]**

8. Subsequent to the national workshop in January 2015, the DADF, GoI has developed biosecurity guidelines for poultry farms and for goat and sheep farms, and taken steps for policy interventions in the following areas: (i) community insurance of livestock; (ii) preventing negative selection of bucks for breeding purposes; and (iii) development of market infrastructure for livestock under the APMC Acts, enacted by the State/UT Governments. The guidelines would be shortly made available on websites of DADF and SA PPLPP.

**[Action: DADF, GoI and SA PPLPP]**

9. There was mention of Joint Forest Management (JFM) Committees planning to grow fodder tree species in areas under JFM in Tripura; the process of arriving at the decision, its implementation, management and outcomes need to be studied and assessed for replication and adaptation in other parts of the country.

**[Action: DADF, GoI with SAPPLPP, AHD – Tripura, and Tripura Forest Department]**

10. The State of Rajasthan has pledged INR 300 crores over a five-year term towards goat-based livelihoods development in the State, including INR 500 lakhs for market development. The aim is for the interventions to result in incremental incomes of INR 50,000 – 80,000 for about 3,00,000 households.

**[Action: Animal Husbandry Department, Govt. of Rajasthan]**

11. In Maharashtra, an excellent convergence initiative aimed at training and sustainability of a cadre of *Pashu Sakhis* had been implemented by the Maharashtra State Rural Livelihoods Mission (MSRLM), in partnership with The Goat Trust, AFARM and Kudumbashree, and Maharashtra AHD; the initiative also included financial services and interventions for establishing alternative market mechanisms. Results of the interventions to be documented and shared widely.

**[Action: MSRLM]**

12. Learning from past experiences with cross-breeding, and taking note of the ongoing issues, challenges, and departmental initiatives at improving productivity in small ruminants, all States/UTs were requested to develop a small ruminant breeding policy, with emphasis on conservation and improvement of native germplasm, and recognition of existing indigenous breeds. Further, all States/UTs were advised to exercise discretion in introducing and/or distributing exotic breeds in the field or among livestock-keepers in the State/UT.

**[Action: State/UT Animal Husbandry Departments]**

13. Disease control, prevention and eradication through comprehensive and systematic disease control programmes in small ruminants will transform the livelihoods of smallholder livestock-keepers; coordinated efforts by all the stakeholders are of utmost priority for achievement of this objective.

**[Action: All stakeholders, Government and non-Government]**

14. The goat market is valued at USD 7 billion, with involvement of over 14 million households; however, the goat value chain was disjointed and marketing mechanisms were inefficient. The BMGF-IFAD have launched a project for design of a Programme for private-public-private producer partnerships (4Ps) in small ruminant value chain development in India, which will cover the States of Uttar Pradesh, Bihar and Odisha and is expected to turn goat farming into a viable activity for the modern youth, through focus on commercial farms, abattoirs, marketing; partnerships between government, private sector and producers (4 Ps); and creation of new farmer institutions for aggregation of produce and improved market negotiation.

**[Action: IFAD, BMGF, concerned States and partner agencies]**

15. Taking cognizance of shrinking pastures, closure and/or diversion of forest areas, and spiraling conflicts between small-ruminant herders and the forest departments, it was recommended that the issue be taken up at the highest level between the DADF, the Ministry of Environment, Forests and Climate Change, and the Ministry of Tribal Affairs. A round-table consultation on the issue, with senior officials from the concerned departments and experts on forest management and regeneration, would be hosted by the DADF, GoI.

**[Action: DADF, GoI]**

## Strengthening Small Ruminant Based Livelihoods: Regional Workshop

Bhopal, September 14, 2015

*Participating States: Madhya Pradesh, Maharashtra and Uttar Pradesh*

*Host Organisation: Department of Animal Husbandry, Government of Madhya Pradesh*

*Facilitated by: Sampark Samaj Sevi Sansthan*

### **Actionable points**

1. Availability of vaccines (ET and PPR in particular) in adequate numbers needs to be ensured; State AH&VS departments to raise timely indents and proposals for procurement of vaccines from the Central Government

**[Action: State AH&VS departments, DADF, GoI]**

2. NGOs involved in promoting small ruminant based activities are required to submit their requirement of vaccines to the concerned District/ Block veterinary hospital well-in-advance, with a copy to the State Directorate of AH&VS. This will ensure that their requirements are integrated in the system.

**[Action: Concerned NGOs]**

3. For bringing services of Pashu Sakhis within the purview of 'Minor Veterinary Services' of the section 30 (b) of the Veterinary Council of India Act, 1984, it was suggested that the framework of the e-Vet programme (in MP) be considered, as it is also applicable to the Go-Sevaks. The e-Vet programme is currently operational in 6 districts of the state and there is a proposal for its expansion to 15 other districts.

**[Action: M.P. AH&VS department, Sampark, AKRSP (I), SAPPLPP and DADF (GoI)]**

4. The state of Maharashtra has issued a notification on 'Minor Veterinary Services' and the same should be circulated to all the other states, through the DADF/ SAPPLPP.

**[Action: Maharashtra AH&VS department, DADF (GoI), SAPPLPP]**

5. There was agreement at a broad level that until such time as may be required for the executive order/s to be issued, and/or other legal and policy changes required, Pashu Sakhis may be linked and registered with the local Block Veterinary Hospital.

**[Action: State AH&VS departments, concerned NGOs]**

6. Capacity building at the grassroots is the most important requirement for enhancing returns from small ruminant rearing; these needs to be undertaken in a campaign mode for ensuring that the benefits are sustainable and flow to the primary producers.

**[Action: State AH&VS departments, DADF (GoI)]**

7. To increase the 'margin of profit', focus of the AH&VS and other related departments and agencies needs to be on *reducing input costs*, health services and breed improvement

**[Action: State AH&VS departments, DADF (GoI)]**

8. There has been a steady reduction in areas of grazing lands and other land/ resources used for fodder production. In States such as M.P., where a large proportion of the total area is designated forest lands, closure and tightening control of these areas has resulted in untold difficulties to livestock-keepers. There is a need for the concerned actors, led by the DADF (GoI), to meet with the forest department personnel at the State and Central levels, to discuss and resolve the issues pertaining to entry/ grazing of goat and sheep in social forest

and JFM areas, and draw up feasible arrangements that are at the same time beneficial to livestock-keepers and not detrimental to the forest health or ecosystem.

**[Action: DADF (GoI), State AH&VS departments]**

9. Convergence between schemes of various departments is necessary for the intended benefits to accrue; in this context, it was commended that the state of MP had issued a joint order by the department of Rural Development and the AH&VS department, stating that the beneficiaries of schemes of the latter would receive housing support under MGNREGS (of the RD department). More initiatives of the kind referred above are required. Further, states to explore possibility of support for goat shelters as a priority activity under MGNREGS.

**[Action: State AH&VS departments, DADF (GoI)]**

10. The process of breed recognition needs to be reviewed and simplified, so as to be more amenable to the requirements of livestock-keepers; further, the process should be supported by civil society actors

**[Action: DADF (GoI), NBAGR]**

11. Conservation and cognizance of local, native breeds is paramount and measures are to be put in place for the same. Use of native breeds in all government programmes was stressed.

**[Action: State AH&VS departments, DADF (GoI)]**

12. Pricing of breed animals to be distinct from animals raised for meat only.

**[Action: DADF (GoI), CIRG]**

13. Amendment of the APMC Act was suggested, as had been done in Karnataka, to provide adequate space for livestock within market yards.

**[Action: State AH&VS departments, DADF (GoI)]**

14. Sale-purchase platform facilitated by the GoI (Kisan portal, mkisan.gov.in) to be utilized by all concerned actors, including the government departments, to enable informed market interventions.

**[Action: State AH&VS departments, Farmer Producer Organizations]**

**Strengthening Small Ruminant Based Livelihoods: Regional Workshop  
Bengaluru, August 31, 2015**

*Participating States: Karnataka, Andhra Pradesh, Telangana, Kerala and Tamil Nadu*

*Host Organisation: Department of Animal Husbandry and Veterinary Services, Government of Karnataka and  
Karnataka Sheep and Wool Development Corporation*

*Facilitated by: Foundation for Ecological Security*

**Actionable points**

1. The importance of extending primary and preventive veterinary care to the village level is being recognized by state AH&VS departments, and efforts are afoot to make these services more accessible to smallholder livestock keepers; however, greater attention to small ruminants, and allocation of financial as well as human resources is called for.  
**(Action: State AH&VS departments, DADF, GoI)**
2. Provision of adequate care and facilities (e.g., mobile shelter, solar light, net, gum boots, etc.) for shepherds along the migratory routes, in addition to mandatory deworming and vaccination was suggested in Karnataka.  
**(Action: AH&VS department, Karnataka, KSWDC, and DADF, GoI)**
3. Intensification of efforts on development of vaccines for diseases such as Brucellosis, Blue Tongue and CCCP.  
**(Action: DADF, GoI and relevant R&D organizations)**
4. Training of livestock-keepers and community animal health workers (CAHWs) needs to be undertaken in an extensive and focused manner.  
**(Action: State AH&VS departments, DADF, GoI)**
5. Concern was voiced over the high levels of pesticide and chemical fertilizer usage on farm lands; the chemicals remain in the agriculture residue that herds of goats and sheep graze on, and hence is a hazard to the health of the animals, as well as the end-users who consume the meat or milk of these animals. There is a need for awareness creation regarding judicious use of chemical pesticides and fertilizers, and possibly compensation for shepherds who lose animals from food poisoning through appropriate insurance products.  
**(Action: State AH&VS departments, DADF, GoI, and insurance companies)**
6. Registration of 'undescribed' and lesser known breeds through promoting establishment of Breeders' Associations was suggested; this will result not only in conservation of the breed, but also fetch higher economic returns.  
**(Action: State AH&VS departments, DADF, GoI and NBAGR)**
7. Quality bucks, because they fetch higher prices, end up in abattoirs. At the same time, inbreeding and negative selection of bucks and rams are seen as major problems which the state departments want to tackle. Policy and programmatic support is sought by state AH&VS departments in checking these practices.  
**(Action: DADF, GoI)**
8. Construction of goat shelters using locally available resources is not only cost-effective and animal friendly, but also easier to construct and maintain – there is a need for knowledge generation and dissemination in this area.  
**(Action: DADF, GoI and SAPPLPP)**

9. Livestock-keepers are primarily dependent on common lands for meeting the fodder requirements of small ruminants, and institutions for the management and development of commons occupy the center-stage in promotion of programmes aimed at livestock (small ruminant based in particular) development. However, grazing resources are fast depleting and measures need to be taken up for augmenting the same.

**(Action: DADF, GoI, State AH&VS departments and other concerned agencies /departments)**

10. Feed and fodder conservation measures, as well as operation of fodder banks (as found in Rajasthan and Gujarat) to be reviewed and adapted in south India.

**(Action: State AH&VS departments, SAPPLPP)**

11. Development of market infrastructure was suggested as a basic requirement, including construction of shed/ shelters for animals and their keepers, provision of water, screening of diseased animals from healthy, veterinary care and quarantine facilities.

**(Action: State AH&VS departments)**

12. DADF, GoI will develop a framework for promoting livestock markets, which will be shared with all the state governments for formulation of appropriate policies and programmes in support of development of livestock markets.

**(Action: DADF, GoI)**

13. Extension of financial services to livestock-keepers through GoI's Kisan Credit Card scheme was stressed upon by the JS; 'farmer' includes both agriculturists and livestock rearers – awareness creation required among both officials and livestock farmers.

**(Action: DADF, GoI and State AH&VS departments)**

**Strengthening Small Ruminant Based Livelihoods: Regional Workshop  
Bhubaneswar, July 24, 2015**

*Participating States: Odisha, Bihar, West Bengal, Chhattisgarh and Jharkhand*

*Host Organisation: Fisheries and Animal Resources Department, Government of Odisha*

*Facilitated by: Regional Centre for Development Cooperation*

**Actionable points**

1. Scaling up of successful practices and approaches as demonstrated through SAPPLPP/GoI models in Madhya Pradesh, and other organizations working on goat-based livelihoods improvement, with an emphasis on creation of a cadre of trained women community animal health workers, convergence with the AH&VS department at the Panchayat/Block level for supplies and technical support, and establishment of community institutions (farmers' collectives).  
**(Action: State AH&VS departments, DADF, GoI)**
2. Options for formalization of the role of CAHWs to be explored  
**(Action: State AH&VS departments, DADF, GoI)**
3. Wherever SHGs are available, synergies between CAHWs and SHGs/ their collectives should be strengthened for improving chances of sustainability of their services; SHGs can help by exerting pressure on livestock-keepers to pay up for services rendered by CAHWs.  
**(Action: All organizations supporting CAHWs, State AH&VS departments)**
4. Need to enhance supply of good quality breeding bucks from government farms and other sources, including through public-private partnerships  
**(Action: DADF, GoI and State AH&VS departments)**
5. Infrastructure (physical, financial and human) for training of livestock –keepers to be strengthened, and systematic capacity-building of livestock-keepers to be incorporated in departmental policy and programmes  
**(Action: State AH&VS departments, DADF, GoI)**
6. Government should provide financial and technical support for buck exchange programmes on a large scale and regular basis  
**(Action: State AH&VS departments)**
7. In states with significant dependence on small ruminants, the state livestock policies need to be revisited and revised, with due recognition given to small ruminants and their role in livelihoods improvement  
**(Action: State AH&VS departments)**
8. Establishment of a multi-stakeholder platform for information sharing and inter-departmental coordination at the state level, with involvement of all departments that have a bearing on small ruminant based rural livelihoods (Animal Husbandry, Agriculture, Fisheries, Forestry, Rural Development and Panchayati Raj); it was stressed that these inter-sectoral bodies should encourage coordination, cooperation and convergence between and among government departments  
**(Action: State AH&VS departments, with support from DADF, GoI)**
9. Training, technical and financial support for establishment of Breeders' Associations for conservation of indigenous breeds should be provided by the government.  
**(Action: State AH&VS departments)**

10. Concern was expressed over the increasing lack of access to, and diversion of lands otherwise available for grazing purposes, especially as a result of developments in the forestry sector. Intermediation between DADF, MoA and MoEF at the highest levels was requested.  
**(Action: DADF, GoI)**
11. Development of robust inter-state quarantine systems for disease control  
**(Action: State AH&VS departments)**
12. Explore feasibility of increasing floor area under Indira Awas Yojana by 100 sq ft for housing of goats/ small animals  
**(Action: DADF, GoI)**
13. Studies on the following aspects may be taken up, for purposes of improved knowledge and practice, and information dissemination:
- Anthelmintic drug resistance and appropriate regime for administration of dewormers in goats and sheep
  - Relevant information and best practices in construction of goat sheds using locally available materials
  - Regulatory framework - Options for livestock markets
  - Traditional knowledge and ethno-veterinary practices in livestock rearing
  - Systems for enhancing productivity of common lands and other grazing/ land resources
- (Action: DADF, GoI, SAPPLPP and relevant research institutes)**
14. Documentation and dissemination of impact of PRADAN's interventions in Keonjhar and Kandhmahal in Odisha, with improved nutrition from locally available resources, and cost-benefit analysis of the same.  
**(Action: PRADAN, SMILE, SAPPLPP, DADF, GoI)**
15. Initiate action for registration of 'unrecognized' and important breeds found in the state of Odisha  
**(Action: AH&VS department, Odisha, DADF, GoI, and NBAGR)**

**Regional Workshop on Strengthening Small Ruminant Based Livelihood in Western India  
Jaipur, 23 May, 2015**

*Participating States: Rajasthan and Gujarat*

*Host Organisation: Department of Animal Husbandry, Government of Rajasthan*

*Facilitated by: Centre for microFinance*

**Recommendations from the workshop**

1. Small-ruminant rearing is a significant source of livelihood for many households in the states of Rajasthan and Gujarat, and programmes aimed at strengthening the sector should be undertaken by the central and state governments, in collaboration with NGOs and other civil society actors.
2. Formation of Farmer Producer Organisations (FPOs), for livestock keepers to systematically engage with the changing economics of goat and sheep markets was emphasized.
3. Issues and challenges at the state level and between the livestock-keepers and the district/ state are well within the purview of the state government to resolve; GoI could support by way of issuance of directive orders and guidelines, wherever required and requested by the state agencies.
4. The issue of breeding by negative selection has been a concern in the small ruminant sector, and although it has been often talked about, the need to act is now imminent. The DADF, GoI will formulate a policy and/or framework under the NLM guidelines to incentivize retention of the best breeding bucks and rams.
5. Programmes to prevent breeding by negative selection to be planned and supported by state and central governments; and implemented by state and non-state agencies. Possibilities include purchase (by government farms) of best quality bucks for breeding and their incorporation in the breeding network, either through AI or otherwise; handing-over responsibility of breeding bucks to Gram Sabha/ people's institutions after building their capacities; and involvement of universities, and other institutions.
6. Augmentation of feed and fodder resources for sustainable development of the small ruminants sector is mandatory, and calls for greater inter-sectoral coordination in planning, implementation and monitoring of projects.
7. The shift to community-based insurance in small ruminant livestock was strongly recommended, in tandem with creation of a cadre of grassroots workers (Pashu Sakhis and/or para-vets) who will ensure that mortality rates are reasonably lowered; the NLM is already working on developing a model community insurance scheme based on experiences in Rajasthan and Andhra Pradesh – this would be included in the revised NLM guidelines.
8. A major thrust area requiring government intervention pertains to livestock markets, especially for goat and sheep meat; it was decided to develop a paper, based on recommendations from the national and regional workshops, for strengthening of the markets for goat and sheep meat, and use it for consultations with stakeholders, including the municipal bodies, FSSAI, DADF, MoEF/Pollution Control Board, and so on.
9. There's a need to connect the small islands of excellence which have been demonstrated through various pilot projects; establishment of platforms for regular and systematic exchange of ideas and success stories between and among various stakeholders was suggested; the responsibility for enabling these exchanges rests with universities, state and central governments. To begin with, the AH departments of the state and central government could provide links to relevant information on their respective websites.

**Minutes of the “National Workshop on Strengthening Small Ruminant Based Livelihoods” held on January 16-17, 2015, by DADF, Ministry of Agriculture and SAPPLPP, New Delhi at UNDP Conference Room, 55 Lodhi Estate, New Delhi**

A national workshop on “Strengthening Small Ruminant Based Livelihoods” was organised jointly by the South Asia Pro-Poor Livestock Policy Programme (SA PPLPP), a joint initiative of FAO of the UN and National Dairy Development Board (NDDB), India, and the Department of Animal Husbandry, Dairying and Fisheries (DADF), Ministry of Agriculture (MoA), Government of India (GoI), at New Delhi on January 16-17, 2015.

The objective of the workshop was to facilitate multi-stakeholder interaction, arrive at a collective understanding of the issues and challenges confronting actors in development of goat and sheep-based livelihoods, exchange experiences and good practices, and deliberate on a way forward for integration of demonstrated good practices within the functioning of the State Animal Husbandry Departments.

The inaugural session was graced by Shri Anup Kumar Thakur, Secretary, DADF, Mr T Nandakumar, Chairman, National Dairy Development Board (NDDB), Mr Sanjay Bhoosreddy, Joint Secretary (Administration and National Livestock Mission), DADF, Mr R S Rana, Joint Secretary, Livestock Health, DADF, Dr Suresh Honnappagol, Animal Husbandry Commissioner and Dr Kevin Gallagher, FAO Representative, Food and Agriculture Organisation of the UN.

Mr T Nandakumar in his keynote address stressed the need to have a link between farmers and Government organisations, which is essential to exploit the full potential of a number of Government run schemes and programmes. He confirmed this linkage by citing specific examples of the ongoing integrated pilots in Khargone and Jhabua districts of Madhya Pradesh. Shri Anup Kumar Thakur, Secretary, DADF, expressed his extreme delight to see women community health workers participate and share their experiences during the workshop, which has successfully brought all the stakeholders, from animal link workers to policy makers, under one roof to discuss the pertinent issues on small ruminant rearing. He emphasized that full potential of this workshop must be harnessed to draw a detailed demand supply framework, especially for meat markets, so that farmers get good remuneration and goat rearing emerges as a sustainable livelihood source for poor and marginal farmers. Joint Secretary (ANLM) briefed about the National Livestock Mission and its scope for improvement of Small Ruminant based livelihoods. He emphasized that NLM offers a framework and an opportunity for supporting, a multi-state Comprehensive Small Ruminant Development Programme, to be implemented in collaboration with multiple stakeholders at the state and national levels.

Participants of the workshop included delegates from State Animal Husbandry Department, knowledge and development partners, NGO practitioners, donor representatives, and community health workers.

Following recommendations were arrived:

1. Under *Mahila Kisan Sashtikaran Pariyojana* (MKSP) of the National Rural Livelihood Mission (NRLM) NGOs work closely with the Government and can submit proposals. Taking this as an analogy and precedence a window may be created under National Livestock Mission (NLM) enabling NGOs to take more interest and submit proposals to the State Government in consultation with district level officials.

***[Action: DADF, supported by SAPPLPP and NGOs associated with NRLM]***

2. NGOs are interested in building capacities in the Panchayat Raj Institutions (PRIs) so as to develop proposal for improvement of productivity of different kinds of common lands since this is a very desirable activity for augmenting nutritional inputs for small ruminants. Similarly developing water bodies in common lands along migratory route of shepherds is another necessity. It will be helpful that desirability of involving local NGOs by the PRIs for this purpose is highlighted in the guidelines for NLM.

***[Action: DADF, supported by SAPPLPP]***

3. A standardized training curriculum for Community Animal Health Workers (CAHWS), clearly defining the kind of livestock to be dealt with by them may be developed under the Sub-Mission on Skill Development, Technology Transfer and Extension. This may be further followed up by preparation of occupational standards for CAHWS as well as specifications on quality and performance of services provided.

***[Action: DADF, in consultation with Veterinary Universities]***

4. Separate guidelines for sheep and goat development are necessary since sheep rearing is generally a primary vocation of the rearers while goat rearing is a supplementary activity.

***[Action: DADF]***

5. Design of breed improvement programme and breeding goats may be decided in consultation with livestock keepers. Community led breed improvement programmes must focus on formation of Breeders' Associations for conservation of indigenous breeds and their genetic improvement through artificial/ objective-oriented selection.

***[Action: DADF and organisations involved in small ruminant breeding research and improvement programmes]***

6. There is need for creation of a mechanism for inter-ministerial coordination of land use planning and policy making with respect to common land, wasteland and grazing areas. Involved Departments may be Animal Husbandry, Forest, Rural Development, Agriculture & Cooperation, Water Resources, etc.

***[Action: DADF, Ministry of Agriculture and Government of India]***

7. Five Regional Workshops will follow this National Workshop.

***[Action: DADF, State Animal Husbandry Departments, SAPPLPP and concerned NGOs]***

8. Use of ICT based tool for migratory shepherds may be encouraged and facilitated to enable them seek assistance on livestock health and production and obtain advice and information on related matters.

***[Action: DADF, State Animal Husbandry Departments, SAPPLPP and concerned NGOs]***

9. Concerted efforts may be made to tap funds available under Corporate Social Responsibility (CSR) for use in animal husbandry projects.

***[Action: DADF, State Animal Husbandry Departments, SAPPLPP and concerned NGOs]***

10. Animal shelters to be designed in accordance with the local agro climatic conditions.

***[Action: State Animal Husbandry Departments, concerned NGOs]***

11. For last mile delivery of health care the role of women community health workers is critical and requires sustained support in capacity building. Scope of their services needs to be clearly defined and demarcated. They are to be made accountable to the service recipients, anchored within community institutions, and also have linkage with local veterinary institutions.

***[Action: DADF, State Animal Husbandry Departments, SAPPLPP and concerned NGOs]***

12. Inclusion of community based livestock insurance within the framework of NLM was strongly recommended as a strategy for risk reduction in small livestock holdings.

***[Action: DADF, SAPPLPP and concerned NGOs]***

13. Development of infrastructure of livestock markets, as well as a conducive policy environment for livestock trading may be considered as priority areas for investment by the Government.  
*[Action: DADF]*
14. Significant investment on development of social and human capital over a sustained period of time would be necessary for the community based model to accrue sustainability.  
*[Action: DADF, State Animal Husbandry Departments, agencies supporting small ruminant development programmes]*

## Background Paper

### National Workshop on Strengthening Small Ruminant Based Livelihoods<sup>1</sup>

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#### 1. Introduction

Small ruminants contribute substantially to household livelihood and nutrition security; by helping resource-poor families tide over the losses in agriculture, and the adversities faced by them in the absence of adequate health and social security systems, small ruminants also assist them to effectively hedge the debt traps that they are susceptible to find themselves in. An estimated 27 million households are rearing over 200 million small ruminants in the country. Whereas small and marginal farmers constitute over three quarters of the farmer households and own only a quarter of the agriculture land, statistics published by the Government of India (GoI) indicate that around 70% of the goat and sheep in the country are reared by small and marginal farmers and landless labourers (GoI, 2007)<sup>i</sup>; evidently, the spread of small ruminants is far more equitable than the ownership of agriculture land in the country.

Livestock, and goats in particular, are among the most indispensable and readily liquidated assets owned by the poor, thus forming a core of their livelihood and risk management strategies. For the same reason, animal mortality and morbidity could prove to be catastrophic to the lives and livelihoods of the poor. It has been found that areas with low cropping intensities (higher percentage of current fallows) tend to have a higher percentage of small ruminants as percent of total livestock population. However, districts with low cropping intensities, as well as low percentage of small ruminant population, have been found to be the worst off in terms of poverty; field findings corroborate the fact that small ruminants are a reliable pathway out of poverty.

Notwithstanding the rapid economic growth witnessed by India in the previous decade, the number of poor people in India in 2011-12<sup>2</sup> was conservatively estimated to be approximately 270 million, of which 80% reside in rural areas. The poor constitute about 26% of the total population in rural areas. Whereas some states are notoriously poor (e.g., MP, Bihar, UP, Rajasthan), there are some other states with overall lower percentages of poor, but include the poorest pockets in the country, for e.g., the Dangs district in Gujarat has the highest percentage of poor in the country (88.4%); other examples include Gadchiroli and Bid in Maharashtra (65% and 55% poor respectively), Raichur and Haveri in Karnataka (59% and 55% respectively), among others.

Evidently, there is an uneven spread of the benefits accruing from economic growth, which may be on account of the nature and sectoral composition of the growth, or because of social, political and economic barriers in accessing productive assets, skills and services. This means that sustainable poverty reduction cannot be achieved without active targeted public interventions that can navigate and guide public and private investment in sectors with most potential for generating rapid poverty alleviating growth. It has been estimated (FAO, 2012)<sup>ii</sup> that the livestock sector in India has the highest multiplier effect in terms of poverty reduction, as compared with crops, fruits and vegetables, manufacturing and services.

The livestock sector alone contributes nearly 25.6% of Value of Output at current prices of total value of output in Agriculture, Fishing & Forestry sector. The overall contribution of Livestock Sector in total GDP is nearly 4.11% at current prices during 2012-13. Goats and sheep together constitute 40% of the

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<sup>1</sup> Co-organized by the Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Government of India, and the South Asia Pro-Poor Livestock Policy Programme (SA PPLPP), a joint initiative of the Food and Agriculture Organisation of the United Nations and National Dairy Development Board, India

<sup>2</sup> As per the Tendulkar methodology

country's livestock population, with the total numbers having declined by 9% and 4% respectively in the case of goats and sheep over the last five years (19th Livestock Census, 2012).

Despite it being a key driver of the rural economy, and a crucial component of the poor's livelihood portfolio, the small ruminant sector as a whole has received little attention from policy-makers and development practitioners. The institutional set-up of the animal husbandry department; low budgetary allocations for animal husbandry and livestock development, including in support of development of forward and backward linkages; lack of investment in research and development; absence of policy and regulatory mechanisms for market infrastructure development (for livestock); and lack of attention to developing systems for utilization of the by-products (viz., milk, leather and wool), are all testimony to the denial of the sector its due.

Under the extensive and semi-intensive management systems practised for goat and sheep rearing in the country, there is little, if any, competition between animals and human beings for scarce food grains; the ruminants' feed base comes primarily from crop residues and wastelands, thus converting non-edible material into highly valuable and protein-rich food, and providing an effective pathway to poverty alleviation and economic development on a large scale.

## **2. Small Ruminant Health and Veterinary Care: Challenges and Opportunities**

Whereas livestock keepers are persistently faced with high mortality, poor productivity and sub-optimal returns; the state animal husbandry departments are also under-staffed and ill-equipped to support them.

The main challenges confronting the animal health sector include:

- Grossly inadequate infrastructure, including for cold storage and distribution of vaccines
- Severe lack of technically qualified and equipped personnel
- Inefficient and inadequate mechanisms for disease surveillance and reporting, which delays appropriate interventions in response

India had a total of 10,094 veterinary hospitals and polyclinics and 19,531 veterinary dispensaries as on April 1, 2012<sup>3</sup>. Most of these have poor infrastructure and equipment. Further, technical and qualified human resources required are grossly inadequate, at about 37% of the requirement, to support health programmes for the massive livestock population (approximately 25,000 veterinarians in government sector as against the estimated requirement of about 67,000) (DADF, MoA, 2013)<sup>iii</sup>. As constrained as the Animal Husbandry department is by the lack of deployment of human resources, it is also hampered by the absence of an effective outreach mechanism for engagement with livestock keepers. Delivery of vaccination and other preventive veterinary care services is further constrained on account of insufficient budgetary allocations, inadequate travel allowances for extension workers, and lack of equipment and/or resources for maintenance of supply cold chains up to the point of delivery. The resources at the disposal of the department and the livestock owners are therefore prioritised for use in dairy animals, which are considered more economically remunerative.

It is estimated that a 10% mortality in kids results in a 38% reduction in net profit from goat rearing (Vihan, 2010)<sup>iv</sup>. It is a well-known fact in the sub-sector that a number of the most prevalent diseases and health conditions in goats are of a preventable nature, viz., worm load, indigestion and diarrhoea, cough and cold, heat stress, and malnutrition; the community-based animal health worker model has been tested by NGOs and state animal husbandry departments in Rajasthan, West Bengal, Bihar, Uttar Pradesh, and Chhattisgarh, among others. Across various project locations, goat kid mortality has been estimated to be in the range of 15 – 40%, and adult mortality ranges from 10 to 30%; undoubtedly, any intervention aimed

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<sup>3</sup> In addition, as per the BAHS, 2011, there were a total of 24,858 Veterinary Aid Centres/ Mobile Dispensaries in the country.

at reducing mortality in goats would result in significant gains in productivity and income of livestock keepers.

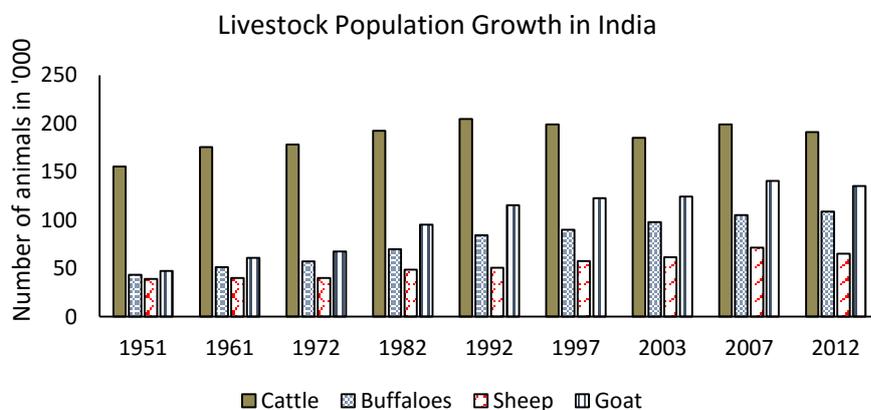
Findings from an ongoing SA PPLPP field pilot on goat-based livelihoods in Madhya Pradesh, being implemented at Jhirniya Block in Khargone district by the Aga Khan Rural Support Programme (India), are quite encouraging. It is found that adult goat mortality reduced from 37% to 6.7% over a period of six months through basic interventions in preventive veterinary care, improved housing, feeding and management practices; similarly, goat kid mortality reduced from 32% at baseline to 2.1% in October 2014.

In Chhattisgarh and West Bengal, the state Animal Husbandry departments have adopted the concept of community based animal health workers, known by the title of *Pashu Mitra* and *Pashudhan Mitra* respectively, and the approach adopted by these states is showing the way for replication of the model at scale. In October 2014, the National Rural Livelihoods Mission incorporated the *Pashu Sakhi* Model in its implementation strategy, and issued a Livestock Advisory to the effect to all the State Rural Livelihoods Missions.

In a World Bank-supported agriculture project in Maharashtra, which is also focusing on development of the goat value chain, 355 Lady Link Workers (LLWs) have so far been trained (by Heifer International) and are working in 6 project districts, overcoming constraints through issuance of licenses for selling mineral mixture concentrate, and other income-earning opportunities. The LLW deliver basic services like deworming, poultry vaccination to 4-5 farmers per week in one or more villages, and earn a minimum of INR 1200 per month (part-time). Although travel time is a limitation for many, some of the more entrepreneurial LLW are working in up to 6 villages; during a recent visit by the Bank’s Livestock Specialist, it was found that the highest earner reported an income of more than INR 15,000 annually, and had been recognized by the community for the vital role she played. The program has been a livelihoods lifeline for widows particularly in suicide affected communities: in Yavatmal (another project district where farmer suicide rates are amongst highest in the country) 20 of the 50 LLW supporting the high value goat farmers are widows who reported incomes of INR 200 per day.

### 3. Feed and Fodder Resources for Small Ruminants

The livestock sector in India is under transition. There is diversification in agriculture to cash crops and a resultant reduction of crop residue suitable for fodder, reduced availability of common lands, closure of both common lands and forest lands for grazing, and an increasing dependence on wage labour and migration. The composition of livestock is also changing in favour of small ruminants and increasing commercialization.



The extent of common lands in India is currently estimated at 22.80 per cent of the total land mass (this includes seven out of the nine land-use categories<sup>4</sup>). However, on account of increasing encroachment, the extent of available common lands may be much less than the estimated 12%; further, the lands have become less productive because of neglect and overgrazing. Grazing based livestock production is crucial to the livelihood security of a diverse range of people, from the landless and socially marginalised to those with access to land and other resources. A survey of CPRs in the sub-humid to arid areas of India concluded that 69% of households were grazing their livestock on commons and 23% of them collected fodder from the commons. All in all 37-68% of the annual fodder requirement for livestock was sourced from commons (Kishore, 2012)<sup>v</sup>. The extent of CPR contribution to livestock rearing was found to range between 33% and 50% of the fodder requirement for bovine livestock populations, whereas small ruminants (goat and sheep) almost entirely subsist on open grazing on CPRs.

However, common lands are under increasing pressure of encroachment, privatization and allotment for purposes other than those of use to the local community. Loss of designated grazing lands, closure of forest areas, and diversion of common lands for other purposes has intensified pressure on available resources, leading to their degradation. All of the above factors have adversely affected small ruminant rearing, which used to be a highly productive low-input system dependent on these lands for fodder and grazing resources. There has also been an erosion of synergies between agriculture and animal husbandry due to an interplay of various factors, making small holder livestock keepers' livelihoods more vulnerable.

Against the backdrop of increasing environmental degradation and un-favourable agriculture production systems, village-level community institutions for the management and protection of common property resources and dependent livestock production systems provide an opportunity for sustainably enhancing the livelihood security of resource poor rural populations. Different arrangements for managing CPRs range from free open access grazing post monsoon, to cut and carry systems and rotational grazing; the viability of various options depending on the context - the extent of commons available, the potential for grazing and harvest from forest lands, the scale and fodder produce from CPRs. Livestock holding of the village, extent of agriculture lands and availability of crop residue, and external grazing pressure.

In a majority of instances where projects have succeeded in developing common lands for fodder, the preferred CPR management regime was found to be controlled grazing post Diwali. This helped in tiding over the critical winter season till the wheat harvest towards the end of March. A project of Seva Mandir in Udaipur, Rajasthan, reported that the cut and carry system was a preferred option by the tribal community to tide over fodder scarcity by restricting open grazing, in spite of facing regular fodder shortage and the high labour investment involved in cutting grass. Even where the CPR provided fodder for a relatively short period of the year, this was the most critical time period for marginal and small farmers to sustain their livestock. In addition, agencies such as PRADAN in Odisha have developed a nutritious local feed supplement called *Bokashi* from locally available grains and material.

Investments in rehabilitation and regeneration of CPRs are a valuable tool for increasing livestock production and productivity, as well as contributing to poverty reduction.

The main challenges in provision of adequate and quality feed and fodder for the livestock are summarized below:

- While the number of livestock is increasing, the grazing lands are diminishing, and area available for fodder cultivation is limited
- Breakdown of traditional community institutions and structures for management of commons

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<sup>4</sup> Forest lands, culturable waste, permanent fallows, permanent pastures and other grazing lands, barren and uncultivable land, land under miscellaneous trees and crops.

- Diversion of crop residues for other industrial use; diverse uses of agriculture crop residues (paper industry, packaging, etc.) which can be used as feed/fodder have widened the gap between demand and supply of feed and fodder
- Decline in the area used, over the last 30 years, for cultivation of coarse cereals, which were also used as fodder for livestock
- With the advent of ‘improved’ harvesting technology, substantial amounts of crop residues are burnt by the farmers after harvesting main crops like wheat and paddy
- Wide gap between the production/availability and requirement of improved fodder seeds

Under the current development paradigm, there is an urgent need to revisit land use, management and development policies, as well as explore alternatives for meeting feed and nutrient requirements of small ruminants through measures that are non-competitive with human food and consumption needs.

The National Livestock Mission (NLM) provides a window for development of feed and fodder resources. The Sub-Mission on Feed and Fodder Development under NLM, is designed to address the problems of scarcity of animal feed and fodder resources, and focuses on increasing both production and productivity of fodder and feed through adoption of improved and appropriate technologies best suited to specific agro-climatic regions in both arable and non-arable areas. To this end the following components have been included in the sub-mission:

- Fodder production from non-forest wasteland/rangeland/grassland/non-arable land. Financial assistance ranges from Rs 100,000 per hectare to Rs 30,000.
- Fodder production from forest land up to a maximum assistance of Rs 50,000 per hectare.
- Cultivation of Coarse grains and dual purpose crops to be operated under the National Food Security Mission.
- Fodder seed production/procurement and distribution.
  - (a) Distribution of hand driven chaff cutters.
  - (b) Distribution of power driven chaff cutters.
  - (c) Establishment of high capacity Fodder Block making units.
  - (d) Distribution of low capacity, tractor mountable, Fodder Block making units, hay-baling machines/reapers/forage harvesters.
  - (e) Establishment of silage making units with financial assistance ranging from Rs 50,000 to Rs 100,000 depending upon the metric ton capacity.
  - (f) Establishment of bypass protein making units.
  - (g) Establishment of area specific mineral mixture/feed pelleting/ feed manufacturing unit.
  - (h) Establishment/modernisation of Feed testing laboratories.
- Setting up of Regional Fodder Stations
- Training and Human Resource Development

#### **4. Long-term Measures for Small Ruminant-Based Livelihoods Development**

##### ***Markets***

Unlike agriculture markets, which are characterised by participation of the state in the production, procurement and distribution of food grains; regulation by way of licensing and so forth, and development of infrastructure support, livestock markets are almost completely bereft of any state intervention – this, despite the fact that the poor are more dependent on markets for returns from livestock than agriculture,

which is mostly of a subsistence level in the case of the poor. Livestock markets are characterized by intermediaries, contractors and commission agents, and there is no mechanism to check unfair trade practices. Markets of two classes are where livestock owners and sellers come in contact with the market economy:

- (i) Exclusive animal and/or bird markets on pre-determined days of every week, usually at the Block or Tehsil level; and
- (ii) Allocated sections for livestock in weekly markets (*Haats*), which include all kinds of products, usually held at the Panchayat level.

Although locations for livestock markets are earmarked and auctioned by the local PRIs, the markets are very poorly developed, with little, if any, infrastructure in place. Most often, the markets are just sizeable yards, frequently uneven, without any kind of construction, and seldom with a fence or a boundary wall. Auctioning of the yards happens on an annual basis by the concerned PRI, with the highest bidder gaining the rights to management of market operations and collection of user fees. Most of these markets function outside of the ambit of government regulations.

A study of the small ruminant market chain suggests that the markets have developed in a manner that puts the livestock keeper at a disadvantage, and are structured in favour of intermediaries, to the disadvantage of the consumer, producer, and the by-products markets. Transactions in the livestock trade are non-standardised and one comes across numerous unfair trade practices because of the ad-hoc nature of the market; animals are sold on the basis of a visual estimation of their weight, age and appearance. Whereas transactions remain unrecorded and unreported, there is virtually no value addition that takes place along the value chain from producer to consumer, even though the price of the commodity keeps increasing at each stage along the channel. The need for value chain development of the meat and by-products industry has often been articulated, but there is limited experience within the country in this area.

### ***Breed***

Of the 144 registered breeds of livestock and poultry in India, there are only 39 breeds of sheep and 23 of goats. Cross-breeding of animal species was introduced to enhance production of milk, wool, and meat production; the official breeding policy recognized crossbreeding of only non-descript varieties (breeds) with exotic breeds as a tool for improving productivity, and recommended limiting the exotic inheritance to 50% only. Although intended only for hilly tracts and resource rich areas with a pre-ponderance of non-descript animals, the resultant economic gains led to its indiscriminate adoption in all areas, including with well descript and indigenous breeds. The majority of sheep and goats in India belong to 'un-described' (usually referred to as non-descript) breeds or they are 'local' animals not necessarily belonging to a distinct, 'recognized' group or breed.

Given the structure of the market and its operations, it is found that the best quality bucks end up in abattoirs, resulting in non-availability of good quality breeding bucks and rams in sufficient numbers. There have been limited attempts, if any, at either government or community levels, for identification, recognition and conservation of germplasm of superior bucks. The sustainable use and conservation of animal genetic resources is accorded low priority in developing agricultural, environmental, trade, human and animal health policies.

The focus on 'breed improvement' through cross-fertilization with superior and recognized breeds has produced mixed results, and there is a need to complement these measures with appropriate interventions for recognition of indigenous breeds, and their conservation in native breeding tracts. The concept of Breeders' Associations has often been suggested, but there has been no systematic attempt undertaken in this direction.

## *Livestock insurance*

For promotion of the livestock sector and livelihoods based on livestock-rearing, interventions at risk reduction are necessary along with providing more effective steps for disease control and improvement of genetic quality of animals, to minimise eventual losses incurred by the livestock keepers. As with other areas, investments in livestock insurance too are disproportionately skewed in favour of dairy animals. Community-based insurance models have been developed by organisations such as Ibtada, PRADAN and The Goat Trust, among others; however, up-scaling and replicability of the models requires considerable investment in building local human resource capacities.

## **5. Conclusion**

It has been estimated (by FAO) that the livestock sector in India has the highest multiplier effect in terms of poverty reduction, as compared with crops, fruits and vegetables, manufacturing and services. The extensive and semi-intensive management systems offer minimal competition for scarce food grains, thus providing one of the most effective pathways to poverty alleviation on a large scale. The importance of goats and sheep for the poor in rainfed areas cannot be overemphasized.

The potential returns from small ruminant rearing are not forthcoming because of underdeveloped and poorly serviced production and marketing systems, characterised by disproportionate investments in development of the dairy vis-à-vis small ruminant sub-sectors, inability of small holder livestock keepers to access veterinary care services, and virtual absence of any kind of regulatory mechanisms in the establishment or management of livestock markets in the country. Other key challenges that plague the sector are high adult and kid mortality rates among animals, inability of the livestock keepers to access mainstream (government) veterinary care services, lack of access to credit and other financial services, including insurance. The returns to rearers can be multiplied several times by incremental improvements in production systems, including housing and health care for animals.

SA PPLPP field pilots in Madhya Pradesh and other initiatives around the country (by NGOs such as PRADAN, BAIF, Ibtada, and others) have conclusively demonstrated the high-impact and magnitude of consequences of some modest and low-cost interventions, including community mobilization, and capacity-building of community based animal health workers. There is an urgent need for the learnings from these experiments to be distilled and adopted on a larger scale by the state animal husbandry departments.

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<sup>i</sup> Government of India. Undated. Department of Agriculture and Cooperation Input Survey 2006-07, Ministry of Agriculture, New Delhi

<sup>ii</sup> FAO. 2012. Livestock Sector Development for Poverty Reduction: An Economic and Policy Perspective – Livestock's Many Virtues, by J. Otte, A. Costales, J. Dijkman, U. Pica Ciamara, T. Robinson, V. Ahuja, C. Ly and D. Roland-Holst, Rome, pp.61.

<sup>iii</sup> DADF, 2013. Annual Report 2012-13, Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Government of India

<sup>iv</sup> Vihan, V.S. 2010. Diseases of Small Ruminant, Satish Serial Publishing House, New Delhi

<sup>v</sup> Kishore, K. 2012. Livestock Futures. The Need to Look at Alternatives. Paper presented at the Livestock Futures Conference held in Bonn, 6-8 September, 2012.



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