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Livestock insurance: Still a distant dream for tribal communities of Koraput tract, Odisha, India

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The aim of the study is to chronicle the challenges and suggest amendments in policies associated with planning, promotion, implementation and adoption of livestock insurance in tribal communities of Koraput tract in the Eastern Ghat mountain range, India. Two hundred tribal households in six villages belonging to *Kandha, Penthia* and *Poraja* communities were selected for the study employing methodologies such as focus group discussion and a structured questionnaire. The findings revealed the inefficient approaches followed in risk mitigation planning for animal husbandry activities involving small and marginal farmers in India. The findings also highlighted the absence of national level planning for encompassing the climate resilient indigenous breeds of cattle under livestock insurance. Lack of insurance coverage for unorganised backyard poultry farming, supporting livelihood of small and marginal farmers, was identified as a challenge for sustainable integrated farming. Policy recommendations were devised in consultation with tribal farmers for promotion and adoption of livestock insurance in tribal communities. These recommendations comprised social, financial and policy advocacy initiatives for a holistic approach towards risk management. Innovative solutions suggested by tribal farmers such as employment of advanced information and communication tools for accessing technical guidance of veterinarians reflected the need and the willingness of the agrarian communities to adopt sustainable animal husbandry practices. A comprehensive plan in participatory mode with the tribal communities was developed to promote food and nutritional security through sustainable agriculture in the hilly terrains of Koraput tract.

Keywords: Livestock insurance, tribal farmer, policy, risk management

INTRODUCTION

Agriculture is the primary occupation of tribal communities of Koraput tract, Odisha followed by animal husbandry activities. The agricultural practices of these Eastern Ghat mountain range tribes of Eastern India are characterised by marginality of land, rainfed agriculture, cultivation of native landraces of cereals, pulses, tubers and vegetables and rearing of climate resilient local breeds of livestock. Native tribes namely *Kandha, Penthia* and *Poraja* rear livestock mostly for draught, ploughing, hide, meat, egg and manure purposes with little attention to dairying. The local livestock population comprising cattle, buffaloes, goats, sheep and poultry birds play a vital role in maintaining the organic carbon content of soil through animal excreta. The readily available major nutrients in

animal waste contribute towards maintaining a healthy microbial population in soil resulting in effective soil health management. The sustainable agricultural practices followed by these tribal communities demonstrate the complex inter-relationship between agriculture and animal husbandry. Livestock contribute towards the livelihood of the poor by supporting subsistence consumption at household level, providing with complementary cropping activities, buffering against seasonality in income from other income generation activities and providing some assets for insurance against unpredictable demands for cash (Dorward *et al.* 2009).

During the last two decades, population growth, aberrant monsoon due to climate change, restrictions on land use, deforestation, cash crop plantation by big farmers, decreased land availability, sharp rise in land prices and industrialisation promoted through globalisation forced the tribal farmers to shift to intensive farming system from the traditional free range system (Bala Ravi 2004). The intensive rearing of livestock led to higher incidences of diseases and involvement of high feed cost due to stall fed system. Decrease in green and dry fodder availability from village common land and nearby forest areas with increased incidences of foot and mouth disease (FMD), pleuropneumonia, Peste des petits ruminants (PPR), avian influenza and anthrax enhanced the risk in commercial livestock production activities resulting in decline in native livestock population (FARD 2007). Fischer and Buchenrieder, 2009 established the fact that the absence of livestock insurance threatened the long-term livelihood of small farmers by increasing the vulnerability to acute financial loss in the mountainous regions of Northern Vietnam. A comprehensive study by Perry and Grace, 2009 highlighted the complex relationships among 'livestock, livestock disease, livestock disease control and global poverty' and concluded that livestock diseases affected poverty reduction. This signifies the introduction of sophisticated risk management mechanisms for sustainable livelihood of tribal farmers in the above scenario. Lack of proper animal husbandry extension support with veterinary healthcare services and risk minimisation options such as livestock insurance limited the livelihood options of tribal households adversely affecting dietary diversity, food security and income generation. Limited availability of organic manure from the decreasing livestock population, use of dry cattle dung as fuel for cooking due to diminishing availability of firewood, non affordability for use of alternate sources of energy as fuel for domestic purposes, high cost and scarcity of inorganic fertilizers threatened sustainable agriculture and soil health status in hilly terrains of Koraput tract (Bala Ravi 2004).

In recent years, climate change has affected productivity and profitability in different sectors in several ways. Therefore, the present challenge of bringing in sustainability in animal husbandry sector justifies the adoption of risk management mechanisms. Insurance is a 'form of adaptive capacity for the impacts of climate change' that provides the insurance users with a better control over physical and business risks (Mills 2005). Absence of sound risk mitigation mechanisms may render the animal husbandry sector unprofitable and question the viability of the sector itself in the future.

Level of education of the insurance users is a major determinant of availing insurance coverage as it enhances the responsiveness of the users to risk management by enabling them to analyse the risks precisely with 'a possible change in risk attitudes that complement improved risk carrying capacities'(Sherrick *et al.* 2004). Due to poor planning and complex socioeconomic conditions, the overall performance of livestock insurance has been slow and poor in India. In 1988-89, 4.2% livestock population was insured in India which marginally increased to 6.09% in 2002-03 (Raju and Chand 2007). The present study attempts to record the existing bottlenecks in livestock insurance policies in India and to come up with relevant policy recommendations in consultation with tribal communities for extension of benefits of livestock insurance to small and medium farmers.

MATERIALS AND METHODS

The present study involving two hundred tribal households of *Kandha, Penthia* and *Poraja* communities examined the level of awareness, challenges for implementation and need for customisation of livestock insurance in a tribal context. Data were collected using a structured questionnaire and focus group discussions from male and female farmers belonging to three tribal communities in six villages.

RESULTS AND DISCUSSION

The study revealed that only 17% households were aware of the concept of livestock insurance against 51% households having awareness on crop insurance (see Table 1). 21% farmers had availed crop insurance but no one had availed livestock insurance. Securing crop insurance was mandatory for farmers availing any agricultural loan from the Government of India supported financial institutions. This acted as a catalyst for acceptance of crop insurance concept in tribal areas. For procuring livestock, mostly the farmers invested their personal savings accumulated over a period of time instead of taking credit from money lenders or financial institutions. In case of 89% households, the women farmers purchased poultry birds and small ruminants such as sheep and goats using their personal savings.

Table 1. Obstacles for non adoption and effect of non-availability of livestock insurance in the tribal communities of Koraput tract, Odisha

Sl. No.	Particulars	Agree (in %)	Disagree (in %)
1	Have awareness on livestock insurance	17	83
2	Have availed livestock insurance ever	0	100
3	Are interested to avail livestock insurance, if offered	73	27
4	Are interested to avail poultry insurance, if offered	87	13
5	Are aware of government sponsored programmes on subsidised livestock insurance for exotic and crossbred animals	04	96
6	Have availed any government sponsored programme on subsidised livestock insurance for exotic and crossbred animals	0	100
7	Obstacles for non adoption of livestock insurance		
	1. Lack of awareness	89	11
	2. Lack of knowledge	92	08
	3. Illiteracy	84	16
	4. Lack of familiarity with judicial language used in insurance documentation	91	09
	5. Lack of insurance documentation in non-tribal languages	95	05
	6. Lack of availability of veterinary healthcare facility in remote locations	87	13
	7. Lack of proper initiatives by state extension services to promote livestock insurance	82	18
	8. Dissatisfactory experience with veterinary healthcare in the past	91	09
	9. Dissatisfactory experience with crop insurance companies in the past during claim settlement	47	53
	10. Dependence on local veterinarian for insurance related certifications	68	32
	11. Inability to pay whole amount of insurance premium in one instalment	53	47
	12. Absence of subsidised livestock insurance schemes for indigenous breeds	81	19
	13. Non-feasibility to avail livestock insurance due to small unit size	86	14
	14. Inaccessible geographical locations with little communication facilities	69	31
	15. Indifference	08	92
8	Effect of non-availability of livestock insurance		
	1. Restricted herd size	76	24
	2. Acute financial loss	69	31
	3. Negative effect on complementary agricultural activities	81	19
	4. Weakened financial status of the household	62	38
	5. Loss of interest in animal husbandry activities	58	42
	6. Greater effect of seasonality on income generation	89	11

Therefore, livestock insurance received less attention in comparison to crop insurance in tribal communities.

The initiatives by the Government of India for promoting improved animal husbandry practices even failed to identify the gap in efficient risk mitigation planning in the animal husbandry sector mostly involving indigenous breeds. The Government of India sponsored programmes such as the 'National Project for Cattle and Buffalo Breeding' (NPCBB) and the 'Livestock Insurance Scheme' having been implemented on a pilot basis during 2005-06 and 2006-07 of the 10th Five Year Plan took into consideration the crossbred and high yielding cattle and buffaloes (Ministry of Agriculture 2007), but not the indigenous cattle and buffaloes. In Odisha state, out of the total cattle and buffalo population of 14.28 million and 1.4 million respectively, the exotic cattle, crossbred cattle, indigenous cattle, crossbred buffalo and indigenous buffalo population comprise 0.65%, 7.9%, 91.45%, 3.95% and 96.05% respectively (FARD 2010). The Government of India supported 'Special Livestock Breeding Plan' (SLBP) and the State Government of Odisha sponsored 'State Livestock Development Plan' (SLDP) implemented over ten years

from 2002 to 2012 focused on intensive farming system involving exotic and crossbred livestock population (FARD 2002).These integrated livestock development plans failed to promote livestock insurance in tribal communities rearing indigenous breeds of livestock. In spite of being a significant proportion of the total livestock population, the indigenous breeds of livestock mostly owned by tribal households and economically weaker sections of the society have always been ignored in livestock insurance policies of the Government of India. In the present study area, none of the households possessed livestock belonging to exotic and high yielding breeds, thus making them ineligible to take advantage of any government supported subsidised livestock insurance plan. The effectiveness of the government funded animal husbandry schemes was further diminished due to lack of sufficient infrastructure and technical human resource support in remote tribal localities.

83.8% households of tribal dominated Koraput district under 'below poverty line' (BPL) (DRDA 2010), a social category identified by the Government of India based on the household income, self explain the inability of tribal farmers to purchase expensive and high yielding exotic and crossbred livestock. Subsidised livestock insurance for exotic and crossbred cattle directly benefitted economically better off section of the society. The limitation of the government sponsored programmes to facilitate subsidised livestock insurance for indigenous breeds deprived the tribal households of availing the benefits of risk mitigation policies in animal husbandry sector.

Backyard poultry farming is an integral part of tribal culture. 97% households had backyard poultry and used the proceeds from the sale of the surplus birds and small ruminants on clothes, medicine, children's education and social occasions. In 98% households the women managed backyard poultry and took decisions on breeding, rearing, sale and use of monetary benefits derived from this activity. Poultry insurance against backyard poultry farming is not facilitated by any government or private sector insurance agency. Comprehensive poultry insurance schemes are applicable to poultry farms consisting of layer birds, broiler birds and parent stock (hatchery) which are exotic and cross-bred. Thus the economically weaker sections of the Indian society are left without any risk mitigation policy for backyard poultry farming. This adversely affects backyard poultry rearing limiting the financial freedom of women farmers. This further led to reduced availability of poultry meat in 71% households with a decrease in per household animal protein availability and consumption. 87% households showed active interest in taking up a backyard poultry insurance plan if it is made available with a nominal premium by any government owned or private insurance agency. In this case, a nominal premium refers to the existing premium rates applicable to broiler and layer birds under large scale commercial farming in India.

41% literacy rate in the area under study is not much far from the average literacy rate of 49.9% in the Koraput district (DRDA 2010). For illiterate and little educated tribal farmers, filling up complex application forms in non-tribal languages is a major hindrance for availing crop and livestock insurance. 47% farmers encountered bitter experience of having been deceived by insurance agents and other mediators during filling in forms or making claims for crop insurance. 85% farmers were not able to understand the clauses and conditions mentioned in the crop insurance documents which involved technical jargons in judicial language. 93% farmers could never understand the insurance documents fully as the documents had been written in *Odia,* the official language of Odisha state, in *Hindi*, the national language of India and in English. None of the tribal languages is used in official documentation which makes the tribal farmers unable to understand the indemnity clauses. This has dissuaded 89% farmers from availing crop insurance unless it is not made mandatory.

74% households revealed that the lack of technical support in veterinary services in time had resulted in morbidity, mortality or permanent disability of livestock. 91% households suffered from financial loss due to non availability of recommended vaccination for livestock by the state animal resources department. Incidences of vaccine failure in livestock due to several reasons including non-maintenance of vaccines in continuous cold chain has led to disease breakouts. 67% farmers have experienced this problem which might make the insurance coverage for livestock invalid because of ineffective inoculation. Non availability of veterinary services in time towards issue of health certificate, vaccination, deworming, disease diagnosis, treatment and submission of post mortem/permanent disability report poses as a major hurdle for promotion of livestock insurance in remote tribal villages. Poor agricultural extension services have benefited only 9% households limiting the awareness creation on scientific animal husbandry practices and risk mitigation processes.

Policy Recommendations Developed Through Community Based Approach in Participatory Mode

Non-availability of required number of qualified veterinary professionals limited the scope of extending veterinary healthcare support and legal certifications in remote tribal locations. The tribal communities proposed for creation of a cadre of veterinary workers for providing basic veterinary services to the farmers under the supervision of qualified veterinarians. Remote satellite linked service offerings

through interactive sessions were suggested for making veterinary health services available at the door steps of tribal households of Eastern Ghat mountain range. Development of instruction manuals and official forms in tribal languages in addition to the present practice of official use of state and national level languages was strongly recommended by the communities for better understanding and higher adoption of risk mitigation plans. Awareness creation for enhancing knowledge of the tribal farmers on livestock insurance and associated legal conditions was realised by the community. Introduction of functional literacy programmes in the tribal communities was welcomed with focus on simple arithmetic calculations.

Non-feasibility of insurance coverage for small scale animal husbandry activities by individual marginal and small farmers due to involvement of a few animals per household was identified as a major obstacle for promotion of risk mitigation plans. Organisation of small and marginal farmers into groups and offer of group insurance coverage for livestock was realised to be a sustainable solution to this issue. This sort of arrangement could alleviate the risks associated with animal husbandry securing the livelihood of financially weaker tribal farmers and also could improve the financial feasibility of offering livestock insurance in unorganised sectors consisting of small units each with a few heads of livestock.

CONCLUSION

The findings confirmed that the continuous inattention to risk mitigation planning in tribal area has caused serious erosion of native genetic resources and there is a greater urgency for extending support for higher sustainability in agriculture. Lack of access to livestock insurance has resulted in reduced herd size, financial loss, greater effect of seasonality on income generation, loss of interest in animal husbandry activities and adverse effect on complementary agricultural activities such as draught, ploughing and organic manure application. The inter-dependence of agriculture, animal husbandry and human nutrition can be addressed successfully with efficient planning in risk management thereby negating the adverse effects of climate change on food and nutritional security. A participatory approach with strategic planning for promotion, implementation and adoption of livestock insurance in tribal communities of Koraput promises a healthier community with efficient intensification of agriculture in the distant lands of Eastern Ghat mountain range of India.

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Note

Orissa, an Indian state on the east coast by the Bay of Bengal was officially renamed as Odisha under 113th amendment of the constitution in 2011.