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IMPROVED HOUSING AS A CATALYST FOR ENHANCED **GOAT PRODUCTIVITY**

A Case Study from Alluri Sitharama Raju District, Andhra Pradesh

Written by

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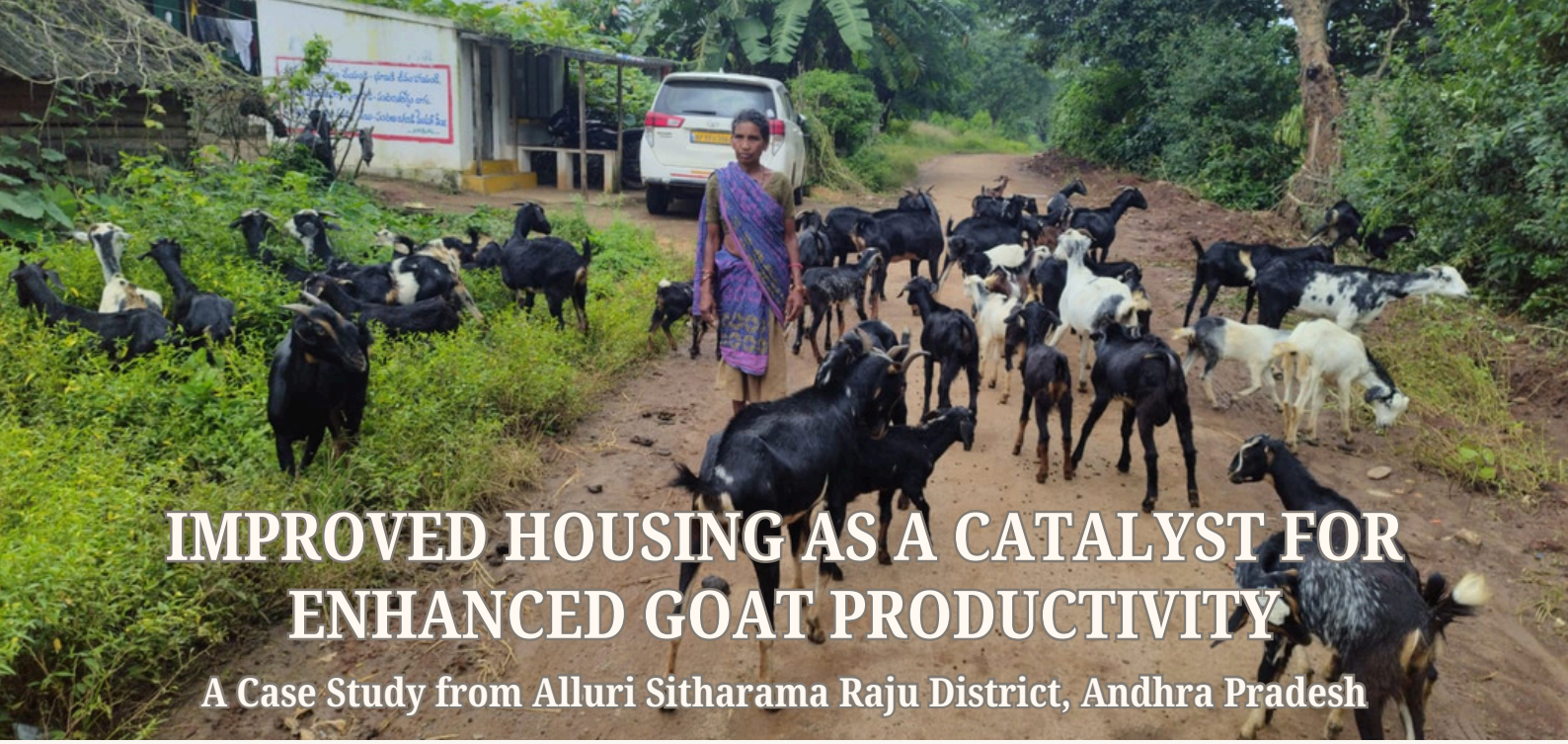
SATAKA KANTHAMMA, a 65-year-old widow from Sukuruput village in ASR District, Andhra Pradesh, practices rainfed farming on one hectare of dryland, growing millets, pulses, spices, paddy, and vegetables. She is supported by her second son in goat rearing, while her eldest son works as a temple priest.

WASSAN



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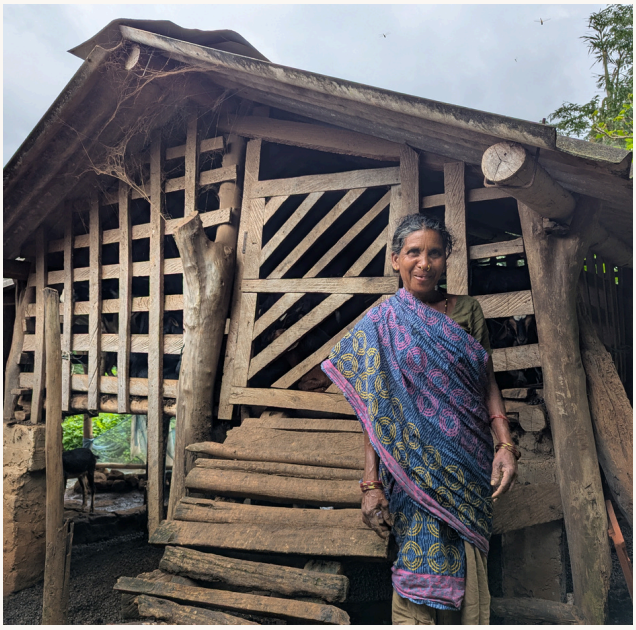
Goat and Sheep rearing is one of the most promising livelihood options for tribal farmers in Alluri Sitharama Raju District of Andhra Pradesh. According to the District Handbook (2022–23), nearly 50,000 families are engaged in rearing about 4,44,018 small ruminants, comprising approximately 1.26 lakh sheep and 3.17 lakh goats. Goat and sheep rearing is generally practiced as a supplementary source of income, with farmers largely following extensive, open-grazing systems and depending entirely on common grazing lands.



Baseline assessments indicate that tribal farmers are not able to optimize income from small ruminants due to several constraints. Inadequate animal shelter has emerged as one of the critical factors contributing to poor productivity, leading to increased morbidity and mortality. The data reveals that nearly 50% mortality occurs among kids and lambs, along with a high prevalence of foot rot, skin ailments and pneumonia or other respiratory infections.

In this context, **WASSAN (Watershed Support Services and Activities Network (WASSAN)** initiated a pilot intervention with sheep and goat rearers in 2021 in Sukurputtu, D. Gonduru, Gurrampanuku, and Kokella villages of Paderu Mandal. The pilot involved five farmers, where traditional goat shelters were renovated and upgraded into elevated sheep & goat sheds. WASSAN organized training programmes for goat and sheep farmers focusing on seasonal disease management, shelter management, and improving access to feed and fodder resources. Linkages were also established with the Department of Animal Husbandry to ensure regular vaccination and deworming services.

Subsequently, the elevated shed intervention was expanded to cover **15 villages** across **four Gram Panchayats - Paderu, Hukumpeta, G. Madugula, and Dumbriguda** - in Alluri Sitharama Raju District. Of the 30 farmers supported under this initiative, seven belong to Particularly Vulnerable Tribal Groups (PVTGs), while the remaining 23 are landless and economically poor tribal households.

NATURE OF THE INTERVENTION

A one-metre elevated shed design was customized for each farmer based on flock size, adhering to a standard of approximately 1.5 square metres per animal. To reduce construction costs, locally available resources were identified and utilized at the village level. Farmers sourced materials such as bamboo and wooden planks locally, while roofing materials (asbestos cement sheets) were provided as part of the pilot initiative. The shed floor was constructed with wooden planks, maintaining a one-inch gap between each plank to allow droppings to fall to the ground, thereby ensuring better hygiene. Farmers also provided proper entry and exit ramps for sheep and goats, along with secure gates to protect the animals from predators.

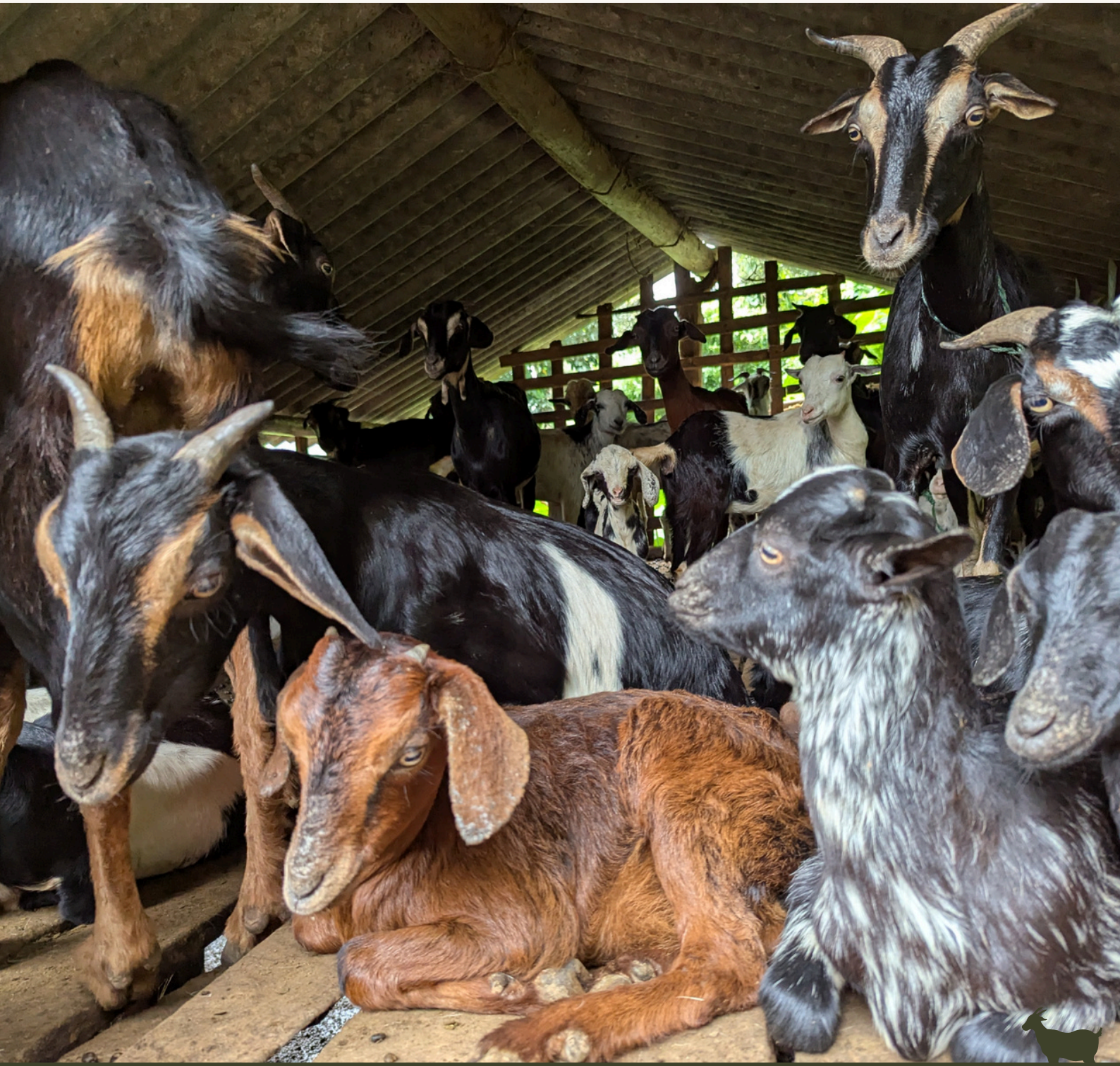
Feeder troughs were installed on both sides of the sheds, enabling farmers to provide roughage and green fodder efficiently. Farmers were trained in fodder promotion practices, and pilot farmers cultivated Super Napier grass on field bunds. During lean periods, this cultivated green fodder was used as a supplementary feed at the shed level. Supplementary green fodder proved particularly beneficial for pregnant sheep and goats as well as for weaners. Additionally, farmers were encouraged to provide mineral mixture bricks to enhance immunity and overall health of kids and lambs.

PRELIMINARY ASSESSMENT OF THE PILOT INTERVENTION

The elevated shed design enabled easy and regular collection of dung, significantly improving shed hygiene and overall management. Farmers now clean the sheds daily, allowing for efficient manure collection. The collected manure is applied to crop fields, enhancing soil fertility and generating additional income. For example, a goat farmer from Sukurputtu village (Kanthamma) earned supplementary income by selling manure at ₹1,200 per tractor load. Overall, the elevated sheds contributed to improved labour efficiency and better livestock management. In addition, farmers adopted the cultivation of green fodder and Sesbania fodder trees along field bunds to enhance feed availability.

Prior to the intervention, 20 out of 30 families reported livestock mortality, with a total of 45 animals lost due to diarrhoea, pneumonia, and dog bites. As per the MIS data after shifting to elevated sheds, farmers reported no incidence of foot rot, no predation losses, and a substantial reduction in mortality—particularly from disease-related causes—underscoring the protective role of improved housing. Regular vaccination and deworming, combined with supplementary feeding practices, resulted in healthier animals and improved productivity.

Collectively, the 30 tribal farmers generated an annual income of ₹18.88 lakh, with an average income of ₹72,615 per family. The use of locally available bamboo made the elevated shed model affordable and easily replicable in tribal areas. On average, farmers invested approximately ₹25,000 to construct a 150 sq. ft. elevated shed.



CASE STUDY OF A FARMER

Sataka Kanthamma, a 65-year-old widow, is a resident of Sukuruput village in D. Gonduru Gram Panchayat, Paderu Mandal of Alluri Sitharama Raju (ASR) District, Andhra Pradesh. She is primarily engaged in rainfed agriculture and owns one hectare of dryland, where she cultivates finger millet, little millet, groundnut, beans, turmeric, ginger, paddy, and vegetables. Her second son supports her in goat rearing, while her eldest son works as a temple priest.

Goat rearing has been a critical livelihood activity for Kanthamma, complementing her rainfed farming system. Traditionally, goats were housed in ground-level shelters, which resulted in poor sanitation, higher disease incidence, and frequent livestock losses. In 2020, she owned a flock of 10 goats. In 2021, with technical guidance from WASSAN and the Department of Animal Husbandry, Andhra Pradesh, she constructed an elevated goat shed. Improved housing, along with timely vaccination, regular deworming, and better management practices, led to a steady increase in her flock size.

Alongside improved housing, Kanthamma adopted enhanced feeding practices. She allocated five cents of rainfed land on a hill slope for fodder cultivation, growing Super Napier grass and Sesbania to ensure year-round fodder availability. In addition, goats are taken for open grazing on nearby common lands, helping to reduce feeding costs.

In 2024, she sold 19 goats during the Dasara season and earned approximately ₹1.4 lakh, establishing goat rearing as a reliable livelihood that effectively complements rainfed farming. The stable income from goat rearing enabled her to construct a permanent house in the same year. At present, she manages a herd of 65 goats, comprising 30 does, 2 bucks, 3 young bucks, and 30 kids. Kanthamma actively participated in regular training programmes, gaining a clear understanding of the importance of preventive healthcare, hygienic housing, balanced feeding, and timely animal management. She has adopted regular deworming schedules, timely vaccinations, and supplementary feeding practices, marking a significant transition from traditional methods to improved and sustainable goat husbandry.