

INDIA

Waste to Wealth: GobarDhan

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ALIGNMENT WITH SDGS



ABSTRACT

Carrying forward the idea as presented in the article to actual implementation, NDDB chose two villages in Anand district of Gujarat State to examine the robustness of the Manure Value Chain model. A total of 450 Flexi biogas plants of 2 cubic meter capacity were provided to women beneficiaries in these two villages. The entire process from procurement, processing and sale was benchmarked and standard operating procedures established. On the governance side, in order to manage operations, NDDB helped establish India's first women only manure cooperative. NDDB also extended its trademarked "SuDhan" brand to the cooperative for sale of manure products.

The responsible production as well as consumption of the organic manure promoted circular economy at the village level. During the two years of operations of the manure cooperative, 8.74 Lakh litres of slurry was procured from the farmers. The revenue of the manure cooperative grew by around 350% from INR 18.85 Lakh in 2020-21 to INR 64.34 Lakh in 2021-22. At the individual farmer level, the savings/additional income accrued was INR 3500 per month. Overall value generation from the entire set of activities was to the tune of INR 237 Lakhs (USD 300,000).

The usage of "SuDhan" products increased grain yield of wheat and maize crop to the

"This innovative approach to operate a dairy plant through renewable energy will begin a revolution in the field of green energy consumption in dairy sector enabling reduction in GHG emissions."

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tune of 24 and 32 per cent respectively and reduced usage of chemical fertilizers by almost 25%.

Based on the learnings from the small-scale biogas projects, NDDB is also working on a unique model to meet the entire energy requirements of a dairy processing plant through biogas plant.

Reference is cited to National Dairy Development Board's (NDDB) article published in IDF Dairy Sustainability Outlook 2020 which discussed about the initiative towards establishing a robust Manure Value Chain augmenting livelihood security of smallholder dairy farming system.

INTRODUCTION

India's dairy sector has seen a remarkable transformation over several decades, and it has become the largest milk producer in the world, accounting for about 21% of the world output (FAOSTAT, 2021) and growing at 6.2% CAGR with 210 million tonnes milk production in 2020-21.

However, it is characterized by a smallholder production system with small herd sizes and low productivity. NDDB decided to leverage and tap the existing potential of the small holder dairying system innovatively. A Manure Value Chain model was developed which focused on establishing "dung" as a commodity by attaching specific value to it. This enabled creation of demand in the small holder dairying system as the model provided avenues for additional income / savings to the farmers. At the same time, the model helped reduce methane emissions.

EXPERIENCE OF THE NATIONAL DAIRY DEVELOPMENT BOARD

In order to understand the social, economic and environmental impacts of the Manure Value Chain model, NDDB studied the results of the actual implementation of the model among 450 women beneficiaries in two villages of Mughkuwa and Zakariyapura in Anand district of Gujarat.

To manage the operations in a structured manner and to develop a sense of ownership among the beneficiaries, NDDB helped establish India's first women only manure cooperative. During the two years of its operation, the manure cooperative has made great strides in becoming economically viable. During the financial year 2021-22, the revenue of the cooperative was INR 65 Lakh which is an increase of about 350% from last year.

Based on the actual operations of the cooperative, an analysis was made on the

