

LEADS DEVELOPMENT MODEL

Sustainable Livelihood Promotion Initiative

Chuan (Perennial water source) Promotion for sustained irrigation/Livelihood

Background: Jharkhand is endowed with rich natural resources, with nearly 29% of its geographical area covered with forest. It is also characterized by diverse flora and fauna, undulating terrain, numerous water bodies and several perennial water sources. Despite this abundance of natural resources only about 11-12% of the cultivable land is irrigated. Expanding irrigation coverage is therefore essential for enhancing agricultural productivity and ensuring sustainable livelihood. Experience shows that communities with access to reliable irrigation facilities are able to sustain livelihood activities throughout the year. Chuan – is one of the available options that has proven to serve as a perennial source of water (*natural source of water which also serves as perennial water source as it provides continuous source of water. However, due to limited water-holding capacity and inadequate water conservation structures, much of the water from these springs flows away as runoff, leaving it largely unused for irrigation*). In many villages water from Chuan is used for drinking because of its natural mineral content. Recognizing the significant potential through experience LEADS has developed a promotional plan to promote the conservation, development and diversified use of Chuans.

Concept: A Chuan is a perennial and natural source of water which naturally collects water in unstructured depressions. In its natural state much of the water is lost as runoff due to the absence of appropriate storage and conservation structure, limiting its productive use. The model promoted by LEADS enhances its water holding capacity by making a proper structure without hampering its natural discharge point while at the same time improving its water storage capacity. The stored water serves multiple purposes, including safe drinking water, irrigation, maintaining livestock and also for other household use. A single Chuan can irrigates 5-6 acres of nearby land significantly improving farming opportunities and enhancing livelihood sustainability. The development of Chuan has received wider community support because of their direct contribution to improving water availability and strengthening year-round livelihood opportunities and because above all, it eases their survival and day to day life.



Steps of Chuan Promotion:

Step 1: Site Selection with the support of community: Site is selected with the support of community in a village where such perennial source of water exists. The farmers whose lands surround the Chuan are enlisted. The objective of the initiative is articulated by the community itself, fostering sense of ownership and ensuring sustainable use of such water bodies as they are involved since the beginning of chuan promotion.

Step 2: Community Plan: LEADS professionals conduct meeting with the community to develop a structure through their support. Community wisdom serves crucial in the construction of the structure of discharge which releases water throughout the year and which shall not be hampered.

Step 3: Water User Groups: A water user group is promoted for ensuring their support during construction of such structure. This group also contributes by way of providing labour and material as per availability and their capacity. They also contribute financially, by maintaining a joint account to manage and promote Chuan in future too.

Step 4: Construction of Chuan: Required materials such as stone bolder, sand, cement, chips, steel etc are collected/purchased as per requirement and the construction is designed, in the form of half irrigation well so the perennial source is kept intact. (See photo at end)

Step 5: Plan for use of promoted Chuan: LEADS professionals organise and convene a User group meeting to plan the usage. The meeting discusses plan for crop cultivation as per the season and suitable crops are mapped with the support of community members. A plan for crop cultivation with participating farmers who possess land in the area nearby the Chuan is devised. They are encouraged to purchase seeds or are supported with good quality seeds as part of their training and demonstration programme. Besides irrigation other cautionary measures such as – informing the users about the capacity of Chuan and its usage without exhausting the water in short span of time using motorised equipment are also discussed and emphasised upon.



Step 6: Plantation with Intercropping: Plantation and intercropping is also planned and implemented where ever suitable opportunities exist. Such initiatives improve the quality of life by creating sustainable livelihood opportunities in remote locations while supporting supporting farmers who live in hand to mouth condition. The entire approach is designed to build on the community's

existing skills capacities and resources requiring only minimal external support.

Step 7: Use of Agri produces: The community cultivates a wide variety of vegetables including lady's finger, potato, tomato, beans, leafy vegetable, onion, cabbage, cauliflower, brinjal chilly, banana, papaya etc. After meeting their household consumption needs, the surplus produce is sold in local markets, providing an additional source of income to support their financial requirement.

LEADS Experience : LEADS has promoted more than 30 structure in various locations of Jharkhand. Over 200 model farmers are using these structure for irrigation. This has enabled them to sustain their livelihoods throughout the year. In addition to irrigation, the stored water serves multiple household needs. It serves as a readily source of safe drinking water, fulfils the need of water for livestock, bathing, washing clothes, cleaning utensils, and other domestic purposes. This low cost intervention has created a significant and sustainable impact on lives of rural communities.

Sustainability: Chuan-based water users groups, functioning under the Gram Sabha, effectively manage community water sources. To ensure regular maintenance and operation, the groups maintain a joint account and collect a regular nominal fee from households utilizing the water for irrigation purpose. Water used for domestic purposes remain free of charge. This community-led management system ensures the long-term sustainability. The initiative relies on simple, low-cost practices rather than technologies requiring continuous financial investment. As a result, the initiative provides an affordable and sustainable solution that delivers lasting benefits to the community.

Concluding Remarks: We believe the upgradation of Chuan offers a sustainable and cost-effective support to vulnerable families in Adivasi regions where these perennial water sources are found in abundance. This provide sustained support to vulnerable families for longer period without any regular expenditure. Once developed they provide long term benefits with minimal recurring expenditure. They help meet the essential water needs of households while also enhancing livelihood opportunities through cultivation of high-value crop. When communities are adequately facilitated and empowered to manage these resources, they can leverage their traditional knowledge to ensure sustainable water management and improved livelihoods.

