

Sambhaav Trust Annual Report 2023-24

Introduction

In 2023-24, Sambhaav Trust focused on ecological restoration, water conservation, and strengthening livelihoods across Rajasthan, India. The organisation implemented four key programmes, each addressing critical issues in arid and semi-arid regions through community-driven approaches. These programs emphasised sustainable natural resource management, integrating indigenous knowledge with modern techniques to combat poverty, environmental degradation, and water scarcity.

The programs included:

1. Strengthening agricultural and pastoral livelihoods of Bhil families in Jaisalmer district, supported by American Jewish World Service (AJWS).
2. Ecological restoration and education in schools of Eastern and Central Rajasthan, supported by Asha for Education.
3. Revival of the Karara stream in Alwar district, supported by the New Zealand High Commission (NZHC).
4. Documentation of groundwater systems in the Thar Desert, supported by the Endangered Material Knowledge Programme (EMKP) of the British Museum.

These initiatives involved on-ground construction and restoration, documentation of processes and knowledge, and outreach through community engagement and education. Overall, they benefited thousands of individuals, restored significant land and water resources, and generated substantial economic impacts, while building local capacities for long-term sustainability.

Programme 1: Strengthening Agricultural and Pastoral Livelihoods of Bhil Families in Jaisalmer District, Rajasthan (Supported by American Jewish World Service)

Programme Description

The programme aimed to empower 77 economically poor and socially backward Bhil Adivasi (Scheduled Tribe) families in 8 villages (10 hamlets) of Jaisalmer district by developing community-managed farms known as *khadeens*. These structures serve as permanent sources of livelihood, enabling agriculture and pastoralism in a

drought-prone desert region. The project focused on building 33 *khadeens* over 1,687 *bigha* of land, promoting community contributions and sustainable practices to lift families out of poverty across generations.

Activities Taken Up

A. On-Ground Activities

- Conducted socio-economic-geographic surveys to identify suitable lands and families.



Socio-economic survey conducted with one of the beneficiary families in Jaisalmer

- Held extensive discussions with families to foster community-based action, motivating them to contribute 25% of costs; this social mobilisation took up to 5 months, and on-ground work started in June 2023.
- Constructed 33 embankments of the *khadeens* using JCBs, tractors, and manual labour in partnership with communities/ families.



JCBs were used to construct the earthen embankment of the Khadeen in Jaisalmer

- Built 11 *pucca nallahs* (conduit to remove water to enable sowing on time) and 6 pucca chadars or overflows, to help excess water escape so that the embankments are protected.



Different forms of Nalas were constructed using stone masonry and cement pipes to drain water from the khadeen



Stone masonry chaddars were constructed to drain the excess water from the Khadeen

- Made *dhora chapai* (covering embankments with thorny shrubs) on 21 *khadeens* to strengthen them naturally via wind-driven sand accumulation.



Dhora Chapai was manually done with thorny shrubs and trees in Jaisalmer

- Monitored *khadeens* during rainfall and provided ongoing technical support for maintenance, sowing, and cultivation (21 *khadeens* produced crops in 2023-24 despite drought).



Harvesting channa from the khadeen

B. Documentation Activities

- Recorded survey data, construction process, and yields.

C. Outreach Activities

- Engage with families through meetings and motivation sessions.



Discussions on the khadeen with multiple members of the family

- Provided technical guidance and best practices training to participating farmers.



Discussion with the families on the agricultural practices that can be adopted in the khadeens

- Supported farmers in leveraging government programs, mentoring 9 additional self-funded or government-supported khadeens in villages like Khuiyala, Ekalpar, and Sehuwa.

Outcomes and Impacts

- Built 33 khadeens benefiting 77 Bhil families (371 members) in 10 villages of Jaisalmer (10 hamlets) and restoring 1,687 bigha of otherwise barren land for agriculture (6.25 bigha = 1 Hectare).
- Mobilised INR 7.48 lakh amongst 77 farmer families, which covered about 25% of the total cost.
- Directly benefited 1,358 livestock (goat, sheep and cattle) from the families by providing access to food and water and indirectly 20,000-25,000 livestock in the 8 villages with drinking water from June to September.
- Generated INR 30.24 lakh in combined income during 2023-24 (INR 39,270 per family) despite drought.



Channa growing in a khadeen in Jaisalmer

- Expanded Sambhaav's reach with new villages (Nimba, Roopsi, Lanela, Khuiyala, Siyambar, Ramgarh) and inducted/mentored two new local team members.



Newly constructed earthen embankment of a khadeen in Jaisalmer

Programme 2: Ecological Restoration and Education in Schools of Eastern and Central Rajasthan (Supported by Asha for Education)

Programme Description

This initiative aimed to address water scarcity in government schools across rural areas in Jaipur, Alwar, Dausa, and Ajmer districts, combining ecological restoration with educational initiatives. It focused on areas including Dausa, Rajgarh, Baswa, Phulera, Mozmad, and Dudu, aiming to improve access to drinking water, promote conservation awareness, and integrate sustainable practices into government schools.

Activities Taken Up

A. On-Ground Activities

- Onboarded and trained two long-term team members.
- Conducted secondary research using Bhuvan's WRIS and GWIS to understand the present groundwater, verified through primary block-level assessments. Surveyed 116 schools to assess water needs and engaged principals, teachers, and parents.
- Implemented restoration in 24 schools, including rainwater harvesting structures storing 11.36 lakh litres and recharging 1.54 lakh litres annually.



Renovation and expansion of existing tanks in the schools



New pipes were used to collect water from the terraces of the school building to the tanks



Pipes from the terraces were connected to the tanks to harvest rainwater



Drinking water is stored in the renovated tank to be used through the year

- Developed kitchen gardens in Sakat school, planned for kitchen gardens in 7 more schools



Kitchen garden is maintained by the students

B. Outreach Activities

- Conducted ecological education and restoration in 24 schools, with regular follow-up meetings during and after the activities were conducted.

- Gifted books like "Aaj Bhi Khare Hain Talaab" and "Rajasthan Ki Rajat Boondein" by the late Anupam Mishra ji (also former Chairperson, Sambhaav Trust) to 19 schools as educational resources.
- Organised 20 exposure visits for 876 children, 129 teachers, and 54 parents (total 1,059 participants) across 21 schools (1 visit had two schools together).



Exposure visits to different schools to understand the different concepts of ecology across Alwar

- Held essay competitions in 2 schools (120 children), with more planned.

Outcomes and Impacts

- Benefited 5,441 children and 331 teachers (a total of 5,772 people) by meeting 30-100% of drinking water needs and up to 75% of domestic water requirements.
- Enhanced participants' awareness of water conservation, fostering long-term behavioural change.
- Improved school nutrition through kitchen gardens (the kitchen garden in the Sakat school covers 50% of its fresh vegetable needs), reducing dependency on external supplies.
- Built local capacities with trained team members and community involvement, enabling scalable replication in rural areas.
- Contributed to groundwater recharge and ecological health in water-stressed blocks.



Construction of a drain to connect the water collected from the terrace of the school

Programme 3: Revival of the Karara Stream, Part of the Lower Nanduwali River System in Alwar District, Rajasthan (Supported by New Zealand High Commission)

Programme Description

The program focused on reviving the Karara stream in 4 villages (Rampura, Danta, Kakrali, and Goverdhanpura) in Alwar District through community-led natural resource management. It aimed to address water constraints for agriculture and livestock by establishing village committees to plan and implement restoration projects to improve resource management.

Activities Taken Up

A. On-Ground Activities

- Organised *gram sabhas* (village assemblies) and *nukkad* (street plays) to form Village Development Committees in each village with members elected from the community and defining roles for resource management.



Gram sabha organised to discuss roles and responsibilities, Alwar

- Conducted monthly committee meetings to identify issues related to water and a lack of livelihood opportunities. The community worked together to build *johads* (ponds), farm bunds, and reforest the upstream catchment and local pastures.
- Constructed 4 *johads* (Badi Johad and Gurjarowaala in Rampura, Dungiwaala in Kakrali, Kholawaala in Danta).



Making of a Johad, post excavation in Alwar



A newly constructed Johad or pond

- Built farm bunds over 11.5 hectares with 49 families.



Farm bund near a ploughed field in Alwar

- Protected 250 hectares of forest (100 Ha in Goverdhanpura, 70 Ha in Rampura, 50 Ha in Danta, 30 Ha in Kakrali), with plans for 250 Ha more.

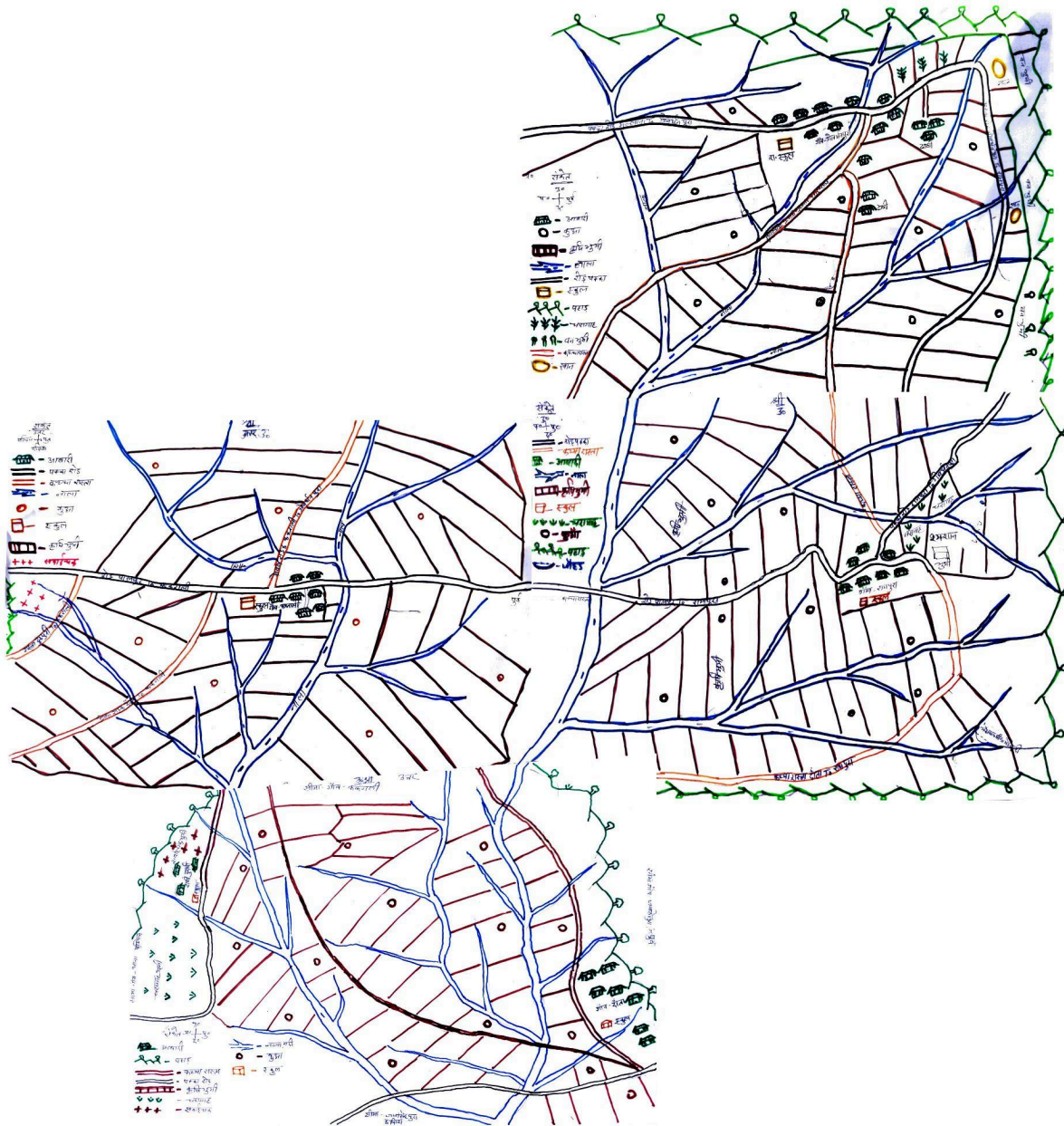


Forest restoration efforts



Protected forest lands

- Developed 2 Ha of pasture in Rampura with Gram Panchayat funds (Rs. 2 lakh), planting 50 trees and erecting boundaries.
- B. Documentation Activities
- Completed socio-economic-geographic household surveys and created natural resource maps (baseline and post-year updates).



Resource map of the stream flowing through 4 villages in Year 0 (Baseline), Alwar

C. Outreach Activities

- Engaged communities through assemblies, plays, and meetings to mobilise approximately 20% contributions via shramdaan (voluntary labour).
- Motivated locals to leverage government funds for additional works, like pasture development.

- Community organisations formed in villages (including women and elders) – where locals took responsibility for development, planning, and implementing the work.

Outcomes and Impacts

- Recharged 45 wells (recharged by *johads* and farm bunds), protected 161.5 Ha from soil erosion, restored 250 Ha of forest, and revived 8 km of the Karara stream.
- Directly benefited 350 families and indirectly 650 families (total population in 4 villages), reducing encroachments on common lands and catchment areas.
- Enabled triple cropping on 100 Ha (from previously a single rainfed crop), tripling net profits to Rs. 75,000/family/year (from Rs. 25,000) for 5 bigha/family holdings.
- Ensured year-round food and fodder for families and livestock, reducing debt and distress migration.
- Strengthened community organisations, increasing interest in resource management and local employment in agriculture/pastoralism.
- Promoted gender-inclusive development and reduced reliance on urban migration to towns like Dausa and Alwar.

Programme 4: Documentation of Groundwater Systems of the Thar Desert (Supported by Endangered Material Knowledge Programme, British Museum)

Programme Description

The programme documented the social and geographical dimensions of the endangered practice of hand-made deep artesian wells (*pataali kuan*) and shallow percolation wells (*rejwani beri*) in Jaisalmer district. It explored indigenous knowledge of local geology, hydrogeology, and socio-cultural traditions for water management, with the aim of preserving these practices for future generations. The work integrated historical, ecological, and technical insights to understand the groundwater systems of the Thar Desert.

Activities Taken Up

A. Documentation Activities

- Conducted fieldwork across Jaisalmer, collaborating with local historians, geologists, and communities to study the use, making and history of the systems
- Collected primary data using various means of documentation



The team on the ground documented wells through audio-visual means

- Extensive secondary data collection, literature reviews, and archival research, including records from the East India Company and princely state archives and records.
- Gathered qualitative insights through community dialogues, cultural events, and festivals.
- Analysed data multidimensionally (historical, geological, hydrological, ecological, structural, economic, social) using GIS software, photogrammetry, 3D visualisations, audiovisual recordings, and sketches.
- Documented wells previously constructed or restored by Sambhaav through its earlier work.

B. Outreach Activities

- Shared findings with local community members and leaders.

Outcomes and Impacts

- Enhanced multidisciplinary analysis capabilities, with potential for broader dissemination to inspire conservation and policy on sustainable water management in deserts.
- Through fieldwork, 200 wells were verified, covering approximately 20% of the district.



Well depths and make were studied

- Documented narratives across various age groups, genders, and communities.



Different community members were interviewed through the fieldwork

- Increased awareness about the rich water heritage of Jaisalmer district through social media.