

# INDIA



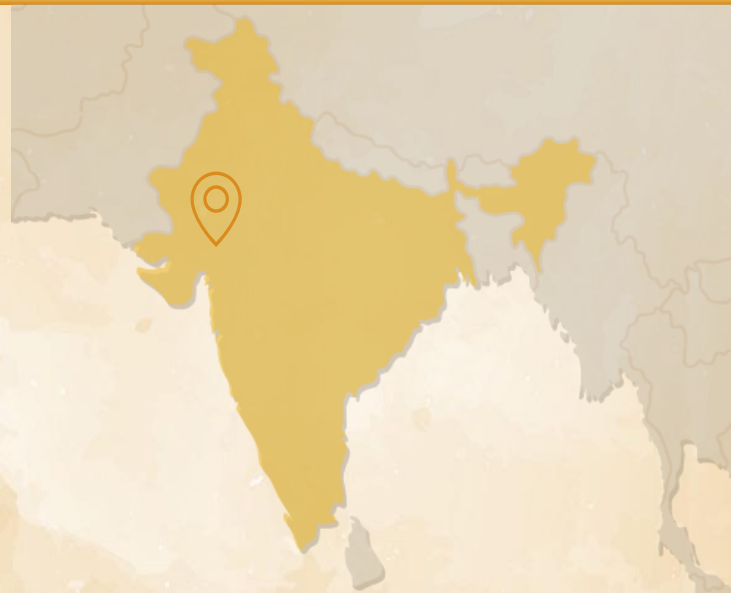
## Voluntary Association of Agricultural General Development Health and Reconstruction Alliance (VAAGDHARA)

*The Mission of VAAGDHARA is to create and nurture vibrant institutions of poor and tribal peoples in the Western India so that they have sustainable livelihoods through scientific, indigenous and appropriate knowledge and technologies and their children are well educated and nourished and free from bondage.*

### Map

The initiative is situated in the agricultural districts of Banswara and Dungarpur in the Vagad region of Rajasthan, an area of great natural biodiversity, fertile soils and generous water resource. Nevertheless, inappropriate cultivation has resulted in soil degradation, poor yields and poverty. Tribal peoples constitute 76.4 % of the total population. Most farmers depend on agriculture and animal husbandry but are extremely poor and illiterate.

Recurrent droughts, waterlogged lands and dominance of low value and low demand crops combine with inadequate infrastructure, small land holdings, poor irrigation sources, lack of off-farm employment opportunities, poor market support and lack of credit to perpetuate poverty.



### Context



Monsoon rains between July and September contribute most of the average rainfall of 710 mm. Great variations of rainfall occur from year to year and droughts are common.

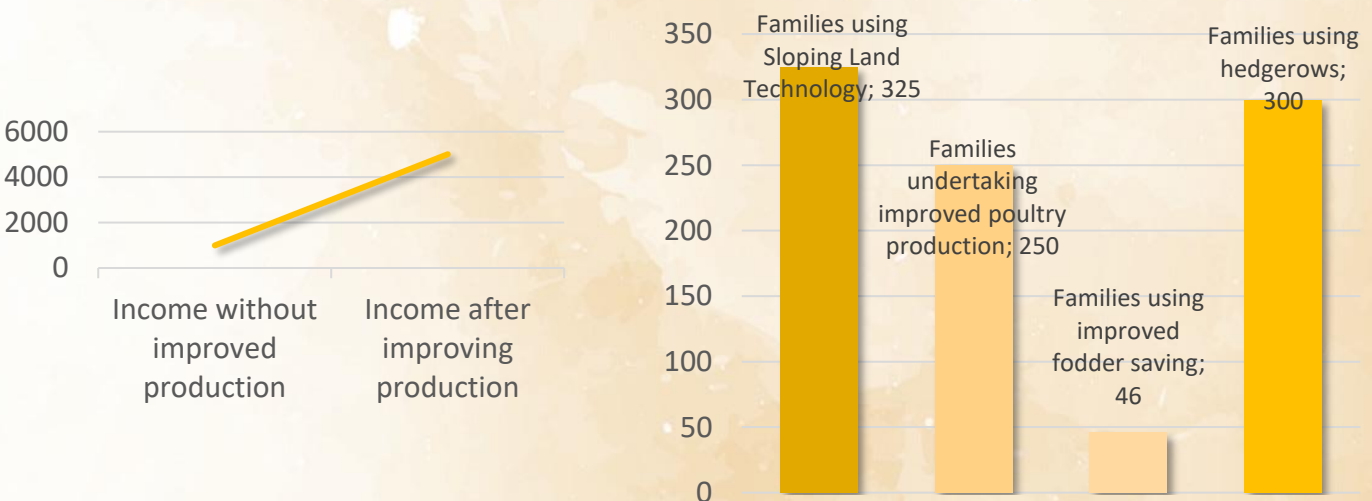
The major crops of the Kharif (summer monsoon) season are maize, rice, black gram), soybean and cotton, while wheat, gram and barley are major Rabi (winter sowing season) crops. Cereal crops constitute 88% of all crops, and pulses 11.5%. Poor adoption of sustainable production technology is associated with poor productivity and profitability.



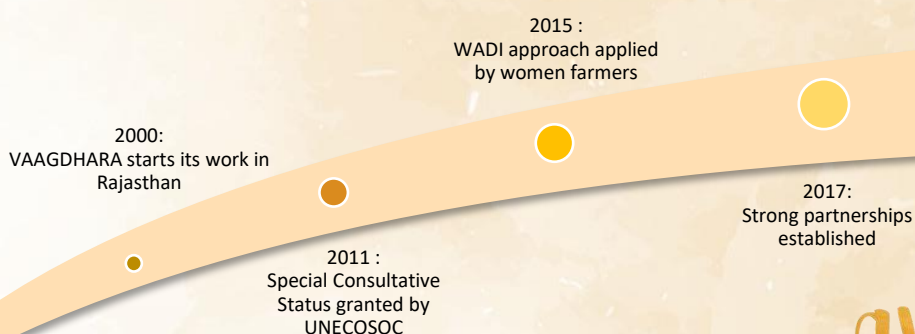
## Description

The initiative nurtures peoples' institutions and empowers the communities to manage development interventions in a sustainable way. The 'Sustainable Integrated Farming System' (SIFS) approach supports farmer groups to transform their farms into more productive and sustainable systems. Farmers use multiple natural resource-based strategies to get more benefit from their produce through sustainable agroecological production, improved post-harvest management, value-addition and marketing.

SIFS focuses on increased farming system productivity based on agroecological combinations of crops, horticulture, agroforestry, livestock and aquaculture. Use of external inputs is minimized by enhancing the recycling of materials within the farm system. Participatory farmer-based learning processes underpin the design of improved farming systems by farmer groups in collaboration with identified experts and facilitators. Choices are determined by available local natural resources, knowledge and skills, as well as household and nutrition needs and market opportunities. Women's empowerment is advanced by providing micro credits through Self Help Groups.



## Trajectory





## Results and Benefits



250 families have **increased their income** through improved poultry production, starting with 40 - 50 chicks. Before adopting the approach one farmer earned Rs. 500 - 1000 per month, but after acquiring improved chicks of the Pratapdhan variety his earnings rose to Rs. 4,000 – 5,000 per month.

300 families have adopted **hedgerow intercropping**, farming annual crops between rows of multipurpose trees. The trees **cycle nutrients** from deep in the soil, provide **organic matter** on the surface, **restores soil structure**, **reduces erosion** and **enhances water retention** while **improving the micro-climate** for crops.



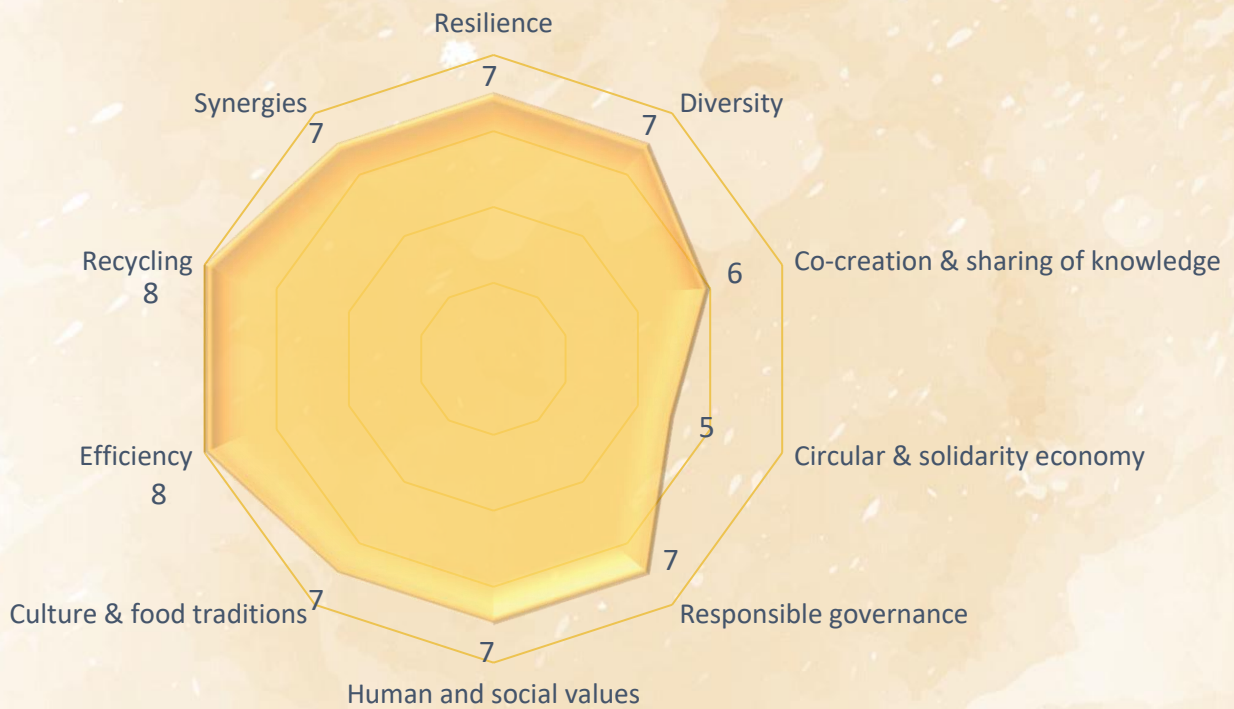
72 women have implemented **integrated farming systems** and established **kitchen gardens** using the **Wasteland Agriculture Development Intervention (WADI)** approach. This units established through this tree-based farming system contribute to other production components of the farm such as annual crop fields and livestock, creating productive agri- horti- forestry systems.

325 families have adopted **Sloping Agricultural Land Technology (SALT)**, creating hedgerows nitrogen-fixing species on contour lines to **trap sediments** and gradually **transform sloping land to terraced land**. Contour trenching, planting and tending operations have generated **significant local employment** and ended seasonal out-migration



46 families have applied **improved fodder saving** methods for cattle production using cultivated fodder crops such as multi-cut pearl millet, maize, cowpeas, berseem, oats and lucerne. Mixed/intercropping of cereals and legumes is a better crop management practice for providing the nutritive fodder to animals and results in 20-30 % fodder saving using stall feeding practices.

# Lessons learned & reflected FAO principles



## Resilience: 7

The initiative has enhanced the resilience of farming systems and the communities which depend on them. The impact of droughts and other extreme weather events has been ameliorated, and the increased diversity of crops has also enhanced resilience



## Human & social values: 7

Farmers use no chemical-based fertilizers and pesticides, as these are undesirable for the health of the community. Based on their common values, yields are protected from pests and incomes are enhanced. The skills and status of women and the youth have been at enhanced.



## Diversity: 7

Farmers have diversified their cropping systems and conserved natural resources such as biodiversity, seeds, water and land. Land, water and biodiversity have been regenerated. Agroforestry has restored productive agricultural ecosystems.



## Culture & food traditions: 7

The initiative has had a positive impact on the lives of small holder farmers through farm and crop diversification, resulting in enhanced food security based on culturally accepted food crops and livestock.



## Co-creation & sharing of knowledge: 6

The bottom-up, systematic approach of the initiative has built on the knowledge of local people. Strong farmer networks enable information resulting in increasing diversity of farming systems, Local technologies, resources and knowledge optimize & sustain yields without negatively impacting the environment.



## Efficiency: 8

The WADI approach restores land while producing crops and garden vegetables. Herbal decoctions or extracts of plants applied to crops protect them from pest infestation and increase their production at low cost.



## Synergies: 7

Ecosystems are sustained and land and water resources rehabilitated by adopting suitable strategies like SALT, watershed management, bunding, construction of appropriate rainwater harvesting structures. Crops are produced that are suited and adapted to the region.



## Responsible governance: 6

VAAGDHARA is governed by an effective Board and managed by competent staff. The organisation houses all the administrative and support functions of the initiative.



## Recycling: 8

The initiative conserves and manages both rainwater and ground water resources effectively through appropriate structures to harvest surface run-offs, renovation/de-silting of existing water bodies and other rainwater harvesting structures.



## Circular & solidarity economy: 5

Producers barter and trade their products within their communities and sell surpluses at local markets and to traders. Facilities and structures for alternate agricultural, post-harvest processing and value addition generate alternate employment opportunities.

# Contacts and Bibliography

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Rajasthan, India

## Bibliography :

Vaagdhara, Annual report 2013-2014

**The Avaclim project aims to create the necessary conditions for the deployment of agroecology in arid areas.**

**For more information : [www.avaclim.org](http://www.avaclim.org)**

## Financial partners:



FONDS FRANÇAIS POUR  
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