ANNUAL REPORT
2021-22
Bridging needs and resources through knowledge-based support …
OUR MISSION
To provide knowledge-based support to institutions, policies and programmes involved in promoting sustainable livelihoods and participatory natural resource management.

OUR VALUES
Participation, Equity, Efficiency, Cost-effectiveness, Sustainability, Honesty and Transparency
FOREWORD

Recent ecological happenings have compelled us to develop community-managed rural infrastructures and promote climate-resilient agriculture systems and capitalize on micro and macro-level cooperation among agencies and rural communities. In 2021-22, the DSC team doubled up its efforts to reach out to more than 1100 villages of MP, Rajasthan, Maharashtra, and Gujarat by creating appropriate behaviour tackling COVID-19 and distribution of COVID kits and about 2600 extremely vulnerable tribal households by supporting government agencies, partner civil societies in the vaccination drive, making sure that we stayed connected and helped people to save their lives. Our collaborative projects also helped more than 1 lakh rural households from 19 districts to restart economic activities through water conservation, harvesting, agriculture production, allied income generation activities, etc. To support local cooperations, DSC also joined hands with existing and new donors and other networks such as RCRC to maximize outreach and impacts of research, capacity building, and implementation initiatives.

Water has always been the main work of DSC and it has accelerated its contribution for both restoring the control of communities on water resources through groundwater recharge initiatives and reducing water demand through more efficient irrigation systems and crop choices and diversification in favour of local ecology and needs. DSC collaborated with the government of Gujarat to achieve speed, scale, and quality in implementing two govt. flagship programs of Atal Bhujal Yojana in Mehsana district Gujarat and “Har Ghar Nal”: Jal Jeevan Mission scheme in Ahmedabad district that gives more control to farmers on local water governance and achieving water security. DSC is employing its proven participatory principles approaches with the support of existing and new collaborations to achieve the larger goals.

Continuing the legacy of a Knowledge Resource Centre (KRC) in Participatory Natural Resource Management (PNRM), 2020-21, DSC has been appointed as a KRC by the Ministry of Jal Shakti for the training for Middle level and community-level training under National Jal Jeevan Mission Program. It provided online training to district-level authorities of northeast and southern states. DSC also took firm steps towards preparing digitized and designed at-scale training and capacity-building content in collaboration with partners that have the potential to be used widely by training institutes and CSOs.

DSC`s agriculture program has been repackaged to develop water, food, nutrition, and environment-positive villages to develop climate-resilient communities. DSC targets to build in-house technical capacity in livestock management. DSC collaborated with the National Coalition of Natural Farming (NCNF) for strengthening the grassroots actions and capacity building in Gujarat, MP, and Rajasthan state for promoting natural and organic farming to strengthen the climate resilience of farmers and make agriculture less input-intensive. Hundreds of farmers have successfully managed the rising cost of farming through DSC`s support in Baran, Rajasthan, Mehsana, Gujarat, and other working areas of DSC.

The Farmer Producer Organisations (FPOs) are the most important pillar of DSC’s ‘Water to Wealth’ approach for promoting sustainable livelihoods. DSC replicated its proven Farmer producer Organization promotion model in the neediest tribal pocket of Nandurbar district Maharashtra by launching 5 FPOs in collaboration with NABARD’s nationwide program of promoting 10,000 CBBOs. The support from District Administration and partner agencies for the speedy formation, nurturing, and business development of FPOs is quite encouraging.
DSC is also building technical capacity in GIS-based Integrated Natural Resource Management (INRM) planning. It gained considerable experience in working on the internet and digital-based technologies for district-level INRM planning and pilot implementation in Barwani, Madhya Pradesh. It is gearing up to manage the programs at scale, speed, and quality especially in the field of Integrated Water Resources Management (IWRM), Participatory Groundwater Management (PGWM), Integrated on-farm livelihoods, Livestock management, etc.

Fast degradation of the natural ecosystem and child nutrition have always been some big challenges in the aspirational Nandurbar district. In the reporting year, DSC initiated the following new partnerships and noble initiatives that will bring unique values to DSC, Government, and CSRs to deal with the challenges in the Aspirational districts. DSC has launched a carbon credit program to incentivize 45000 farmers for reducing carbon emissions in agriculture. It also started Advance Nutrition Training Program for the 1900 Govt. Government Anganwadi Workers will help in controlling the child malnutrition problem through community-led nutrition diversity and security.

Two important research studies were carried out by the organization in collaboration with the DSC Foundation, including 5 states study on “Pradhan Mantri Fasal Bima Yojana” and Gujarat State Water Typology. Both studies will bring lessons for strategies to mitigate the challenges.

We are thankful to our academics, research, Government Department partners, and donors for their input and support in these efforts. Once again thank you very much for your kind support to DSC.

O P Rawat
Chairman
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1. INTRODUCTION

1.1 ABOUT DEVELOPMENT SUPPORT CENTRE

Development Support Center (DSC) is a resource organization which directly implements and provides knowledge-based support to organizations involved in promoting sustainable livelihoods and Participatory Natural Resource Management. The organization was established by Late Shri Anil C. Shah in the year 1994, in response to demand from various eminent individuals and stakeholders concerned with rural development in Gujarat. Currently, DSC covers four states of western India through direct field initiatives in collaboration with government departments, CSR and other partners. DSC provides a variety of services through a multi-disciplinary team of professionals that directly implements projects, helps in the capacity building of key functionaries, carries out field studies and takes initiatives for research and appropriate policy change.

1.2 KEY ACTIVITIES

Field Implementation

DSC is currently involved in the implementation of various programs covering 959 villages in 37 blocks of 19 districts of western India namely Gujarat, Madhya Pradesh (M.P.), Maharashtra and Rajasthan. The population in these villages is 3.65 lakh households and DSC’s programs directly reach 1.24 lakh
households covering a 2.83 lakh hectare geographical area. Since its inception, the organization has directly reached 1,034 villages having a population of 5.73 lakh households and covering 2.06 lakh hectares in 41 blocks of 19 districts in these four states.

DSC directly promoted the “Participatory Irrigation Management” (PIM) program covering about 1,20,000 ha command area of 4 major, 3 medium, and 12 minor tank irrigation projects in Gujarat, Madhya Pradesh, and Maharashtra. The organization has facilitated about 176 Water User Associations (WUAs), one Branch, and two Project level federations. It is one of the largest Non-Government Organisations (NGOs) in India working in the irrigation sector with its PIM projects cited as models in Gujarat and Madhya Pradesh. These projects have also been instrumental in influencing policies at the state and national levels and developing standard operating procedures for promoting and facilitating WUAs.

DSC has also been involved in implementing the Watershed and Integrated Watershed Management Program (IWMP) covering about 71,000 ha. in more than 240 villages in these four states in collaboration with government departments and CSR partners.

“The Integrated Water Resource Management” (IWRM) program including Participatory Ground Water Management (PGWM) is covering 112 villages covering 87203 hectares. area in the Aravalli, Sabarkantha, and Mehsana districts of Gujarat and the Nandurbar district of Maharashtra including the command area and rainfed villages. 92 Participatory Ground Water Management committees under Atal Bhujal Yojana, 97 Village Watershed Committees, 34 Village Sujal Samitis, and 1 registered Ground Water Cooperative have been promoted and facilitated.

The organization also promotes sustainable agriculture activities, forward-backwards linkages and integration through the promotion of 125 Agri-enterprise groups and 13 Farmer Producer Organizations (FPOs) in both rainfed and irrigated areas. 8 FPOs are facilitated by DSC.

More than 813 Women Self Help Groups (SHGs), 642 Farmer Groups (Kisan Club/ Learning Group/Farmer Field School), and 2 women federations have been promoted which are actively involved in saving, credit, convergence, collective enterprise, and on-farm and off-farm income-generating activities. The “Gramin Sushasan Project (GSP)” was implemented with 32 Gram panchayats in the Aravalli district in Gujarat and Dhar district in MP and has been scaled up to other new geographies of Maharashtra, Madhya Pradesh and Gujarat.

Capacity Building

DSC strongly believes that the success of participatory programs lies in the capacity building of various stakeholders including the community, NGOs, Corporate Social Responsibility (CSR) representatives, and academic and government functionaries. The organization is recognized as a resource centre for PIM, watershed, drinking water, and agriculture programs at the state and national levels. It has collaborations with the Water and Land Management Institute (WALMI) in Anand, Gujarat for promoting PIM in selected irrigation projects of the state. Similarly, it has collaborated with Jal Jeevan Mission (Jal Shakti Mantralay), the Gujarat State Watershed Management Agency (GSWMA), Rajiv Gandhi Jal-Grahan Mission (RGJGM), Bhopal, WALMI Bhopal, Sajjata Sangh, Ahmedabad, GujPro, Ahmedabad, CSRs and international donors to provide training to village functionaries as well as to the staff of project implementing agencies.
It has provided capacity-building support to nearly 350 WUAs that operate on 1.42 lakh hectares including over 100 WUAs covering 0.89 lakh hectares in the Mahi Irrigation Project, Tharad circle of SSNNL, Tapi Irrigation project, and Damanganga Irrigation Project in Gujarat. DSC has also provided capacity-building inputs to about 199 WUAs covering a 0.96 lakh hectare area of Krishna Koyna LiS S Kukdi, Timbu, Dehni irrigation schemes in Maharashtra through collaborative efforts with the State Water Resource Department, WALMI and other partner CSRs.

DSC actively hosts exposure visits for national and international delegations on Participatory Natural Resource Management (PNRM) and local governance. DSC also conducts practical learning programs for postgraduate and undergraduate students from institutes such as SP Jain Management Institute, Mumbai, Shiv Nadar University, Delhi, Institute of Rural Management Anand (IRMA), Anand Agriculture University (AAU), Enterprise Development Institute, Junagadh Agriculture University, etc. So far, DSC has organized more than 873 offline and 10 online certificate training programs at its well-equipped Participatory Learning Centre in Ahmedabad which can host about 70 participants with lodging and boarding facilities. The Anil C Shah Resource Centre set up by DSC in Visnagar is also involved in providing field-level capacity-building activities and exposure visits.

**Information, Education & Communication (IEC) Development**

DSC has developed user-friendly audio-video and printed Information, Education, and Communication (IEC) material on best practices in PNRM and livelihoods in Gujarati, Hindi, Marathi, and English languages that can be used for wider dissemination, training, and awareness of various stakeholders. These include print and virtual training modules, training literature, posters, panels, booklets, and video films on programs like PIM, Watershed, Integrated Water Resource Management, agriculture development, and Farmer Producer Organizations. Various government organizations and NGOs use these materials in their development projects. DSC has been instrumental in publishing about 121 print materials and 17 audiovisuals on water, agriculture, and collective enterprise management. The organization also publishes success stories for education and dissemination in the form of newsletters like ‘Divadandi’ which is a set of 19 issues and ‘Pahal’ which is a set of 5 issues that showcase best practices in NRM and sustainable agriculture. Some of these IEC materials are available on YouTube, Instagram and DSC’s Facebook pages and the DSC web page.

DSC provides mobile phone voice and text SMS services to more than 7300 farmers containing crop advisories and announcements of critical events such as weather updates, agriculture produce, market fluctuations, government schemes, and capacity-building programs.

**Research and Documentation**

DSC carries out research studies based on issues emerging from the field. These include documentation of best practices, case studies, impact assessments, project evaluations, and thematic studies at the state and national levels. It has also published more than 104 research papers, study reports, and case studies on best practices in PNRM, agriculture, and livelihood enhancement. A majority of these publications are available on DSC’s website www.dscindia.org. The studies are used by government officers, policymakers,
and eminent people who play an important role in influencing policies and procedures at the grassroots, State and Central levels.

**Policy Influencing**

The organization believes that lessons from the field should be shared with the policymakers at the state and national levels for further refinement of the program. Through direct field implementation and research studies, DSC provides realistic, grassroots-based feedback to policymakers through active participation in various committees at the district, state, and national levels. DSC played a considerable role in the High-level Task Force for drafting the Right to Water Act in Madhya Pradesh in the year 2019-20. It was involved in formulating guidelines for the ‘Integrated Watershed Management Program’ (IWMP) and the ‘XIIth Five Year Plan’s Approach Paper on Rainfed Areas. Earlier, it contributed to the ‘Recommendations of the Working Group on Major and Medium Irrigation and Command Area Development for the XIIth Five Year Plan (2012-2017)’ and the drafting of the "Hariyali" watershed guidelines.

The organization is also supporting the India Network on PIM in drafting the revised model PIM Act and capacity building initiatives in the country, National Water Mission and Indian Water Forum, etc. for developing capacity building and piloting IWRM and Participatory Ground Water Management, etc.

**Farmer Producer Organizations**

Looking at the need for timely and quality inputs as well as better price realization of farmers in its operational area, DSC has been promoting and incubating about 13 FPOs in the form of a Company and Cooperative. The list of FPOs which are promoted by DSC is given below:

1. Nandbhoomi Farmer Producer Company Ltd Nandurbar Block, Nandurbar Distt. Maharashtra (2022)
6. The Vavechi Sarhad Farmer Producer Company Ltd. Tharad block, Banaskantha district Gujarat (2020)
7. The Thirpur Farmer Producer Company Ltd. Tharad block, Banaskantha district Gujarat (2020)
8. Shri Nadesher Farmer Producer Company Ltd. Tharad block, Banaskantha district Gujarat (2020)
12. The Ekta Fruits and Vegetable Producer Cooperative Ltd, Daskroi, Gujarat (2013)

The 8 FPOs (excluding 6,7,8,9 and 12) are operational under DSC’s facilitation and they provide various services to member and nonmember farmers viz. input supply, value addition, and market linkage-related services to farmers in about 467 villages spread over 25 blocks of 9 districts in Gujarat and M.P. These FPOs have over 8800 shareholders including men and women that have mobilised more than Rs. 56 lakhs as working capital. These groups are engaged in various activities such as the production of seeds, organic
inputs, organic and inorganic cereals, spices, and pulses, retailing of grocery items and agriculture input supply, aggregation and buyback of farm products through Agro-outlets and contract farming. The FPOs also promote local value chains by providing technical know-how to these groups. The companies are governed by an independent Board of Directors that includes producers and experts.

**DSC Foundation**

In March 2012, DSC facilitated DSC Foundation as a registered Company under Section 8 of the new Companies Act 2013. The main goal of the Foundation is to provide know-how, guidance and necessary assistance in the field of PNRM and livelihood enhancement to community-based organizations, NGOs, government agencies and the private sector. These include conducting evaluation/impact assessment studies, training, hosting exposure visits for national and international participants and influencing policy at the state and national levels. To date, DSC Foundation has carried out studies for various agencies such as Sardar Sarovar Narmada Nigam Ltd., ITC Mission Sunehra Kal, Axis Bank Foundation, IDFC, NIRL, etc.

**Sajjata Sangh**

Sajjata Sangh is a state-level federation of Non-Government Organisations (NGOs) engaged in Natural Resource Management (NRM) and livelihood support in Gujarat. The formation of a state-level network of NGOs was facilitated by reputed NGOs including Aga Khan Rural Support Programme (I), NM Sadguru Water and Development Foundation, VIKSAT Foundation, Vivekanand Research and Training Institute (VRTI), Bhartiya Agro Industries Foundation (BAIF) and DSC. The main objective of the network is to cater to the needs of capacity building, mutual learning and support for NGOs engaged in watershed development programs. It was registered on 29th June 2000.

Currently, the board of Sajjata Sangh is chaired by Mr. Apoorva Oza, Global Lead, Aga Khan Foundation and Mr. Rajesh Kapoor (Founder, Cohesion Foundation Trust) the Honorary Secretary of the Network. Since its inception, Sajjata Sangh has been involved in providing a platform for mutual learning and enhancing access to external resources for knowledge on the watershed, NRM, livelihood etc. for its member organisations. Currently, 25 NGOs working on various development priorities across the state are members of the network.

**GujPro**

GujPro is a state-level consortium of Farmer Producer Companies having its headquarters at DSC Ahmedabad. GujPro was formed to promote farmer-led agri-business in Gujarat. The Company has representatives from 29 Producer Companies as its members with a combined producer base of more than 1 lakh farmers. It has collaborated with the Govt. of Gujarat, and national and international agencies for supporting farmers of Gujarat in backward and forward market linkages. The consortium and its members are involved in policy advocacy as well as in promoting innovations in agri-business and value chain interventions with farmers and agri-business entities and government departments.
1.3 Institutional Journey

**DSC founded**
Directly implementing & providing knowledge based support to organizations involved in promoting sustainable livelihoods and Participatory Natural Resource Management.

**1994**

**Sajjata Sangh**
Providing platform to NGOs engaged in Natural Resource Management to work as a strong network for mutual learning, capacity building, and gaining access to external sources of knowledge and positively influence policy initiatives.

**2002**

**Farmer Producer Companies in Gujarat and Madhya Pradesh**
3 Business entities of and for the farmers based in DSC’s project areas to undertake collective enterprise development.

**2005 onwards**

**DSC Foundation**
Providing consultancy services (like training, research, developing models, handholding, etc.) to organizations involved in natural resource management and livelihood enhancement at national and international level.

**2012**

**GUJPRO**
Providing platform to Farmers’ Producers Organizations (FPOs) spread across Gujarat to work at a higher level of supply / value chain promoted by Sajjata Sangh.
1.4 DSC’s THEORY OF CHANGE

**ENQUIRE & ASSESS**
Enquire needs of people to understand problems & probable solutions with empathy

**DESIGN & BUILD**
Design and build developmental models based on our extensive experience

**SUSTAIN & UPSCALE**
Working towards sustainability of the model and up-scaling them to create larger impact

**DEMONSTRATE & PROVE**
Demonstrate and prove models on ground with experienced and motivated staff and community leaders

At the heart of DSC lie its partners – rural communities, CBOs, NGOs, Government departments, academic institutions, and CSR units
DSC’s CONTRIBUTION TO SUSTAINABLE DEVELOPMENT GOALS (SDGs)

Through its various interventions in rainfed and irrigated areas, DSC is contributing to the following SDGs:

- Water Resources Development (1,13,15)
  - Watershed Development (1,13,15)
- Agriculture & Horticulture Development (1,2,13,15)
- Social Forestry / Tree Plantation (1,13,15)
- Dairy Development (1,2)
- Training and Capacity Building (1)
- Women SHGs, Women Leadership in Village Institutes and CBO (5)
- Drinking Water and Sanitation (6,13)
- Solar Based Irrigation System, Lighting System and Biogas (1,7,13)
1.5 AREA OF DIRECT INTERVENTIONS OF DSC

Location of DSC Field Unit Offices:

Gujarat: Visnagar | Himmatnagar | Meghraj | Mehsana | Tharad | Goblej | Viramgam
Madhya Pradesh: Manawar | Kukshi | Alirajpur | Mhow | Agar Malwa
Maharashtra: Alephata | Aurangabad | Nandurbar
Rajasthan: Baran
1.6 COVERAGE

States
Gujarat, Madhya Pradesh, Maharashtra and Rajasthan

4

19

Districts

37

959

Blocks
Villages

Village Households
Approx. in lakh

3.65 Lakh

Village Households Covered in Projects
Approx. in lakh

1.24 Lakh

Area Covered by Various Projects
(Ha. in lakh)

2.13

Community Based Organisations

2255

Multi district/ District Level Farmer Producer Company

2

02

Block level Women Federation
1.7 OUTREACH

**States Covered**
(Gujarat, Madhya Pradesh, Uttar Pradesh, Odisha, West Bengal, Maharashtra & Rajasthan)

- **Training programmes and exposure visits**: 872
- **Communication material**: 121
- **Films**: 24
- **Print Material**: 121
- **“Phone Pe Jaankari Karyakram” (Households)**: 8000
- **Research and documentation**: 104
- **Representation of Policies Networks at national and state level**: 11
1.8 GOVERNING BOARD OF DIRECTORS 2021-22

Shri O.P. Rawat
Chairman
Retired IAS & Ex Chief Election Commissioner, India

Mr. Jacob Ninan
Member
Ex Executive trustee & CEO
Axis Bank Foundation
Noted Banker and CSR strategic Advisor

Dr. Indira Hirway
Treasurer
Noted Academician and Former President of the Indian Society for Labor Economics

Ms. Nafisa Barot
Member
Gender Expert and Pioneer of WASH in Gujarat

Ms. Sandra Shroff
Member
Eminent Industrialist and active supporter of social causes in India

Dr. Jayanti Ravi
Member
Senior IAS officer of Gujarat Cadre and Secretary of Auroville Foundation

Prof Tushaar Shah
Member
Noted Academician and Internationally renowned Expert on Water Management

Shri Sunil Parekh
Member
Noted Management Expert & Senior Corporate Advisor for several companies and mentor-start ups

Dr. Sankar Bijay Datta
Member
Noted Academician specializing in Rural Development and Livelihood promotion

Mr. Mohan Sharma
Member Secretary
Executive Director with 24 years working experience of Participatory Natural Resource Management and Livelihoods
1.9 FINANCE COMMITTEE

- Shri O P Rawat - Chairman
- Shri Jacob Ninan, Board Member
- Dr Indira Hirway, Treasurer
- Shri Mohan Sharma - Executive Director

1.10 PERSONNEL COMMITTEE

- Shri O P Rawat - Chairman
- Dr. Sankar Datta - Board Member
- Shri Mohan Sharma - Executive Director
- Ms. Nafisa Barot, Board member
- Mrs. Rizwana Madhupurwala, Chief Finance & Admin Officer

1.11 PROGRAM COMMITTEE

- Shri O P Rawat - Chairman
- Dr. Sankar Datta - Board Member
- Shri Mohan Sharma - Executive Director

1.12 MANAGEMENT COMMITTEE

- Shri Mohan Sharma, Executive Director
- Ms. Rizwana Madhupurwala, Chief Finance Officer
- Ms. Sandipa Nelson, HR and Admin Executive
- Manu Vadher, Representative, Gujarat Field Team
- Dipak Rawal, Representative, Head Office Team
- Ravi Sisodia, Representative, Madhya Pradesh Field Team
- Krishna Chavan, Representative, Maharashtra Field Team
2. FIELD IMPLEMENTATION

DSC’s “Water to Wealth Development” Model

Based on its more than 25 years of practical experience, the DSC team has evolved a livelihood enhancement model applicable in both rainfed and irrigated areas. This approach advocates for sequential steps of community empowerment through the facilitation of three verticals in each village for (i) managing supply and demand of water, (ii) managing micro saving and credit needs, and (iii) managing the agriculture value chain and developing infrastructure on water, agriculture extension, and enterprise. DSC has succeeded in increasing and stabilizing the net income of rural families through this approach. The approach has also helped in developing a sense of self-reliance in the community. The organization is working to scale up the model through long-term collaboration with donors and government agencies.
INTERVENTIONS IN IRRIGATED AREAS

About 80% of the current water use is in agriculture. Irrigated area accounts for nearly 48.8% of the 140 million hectares (mha) of agricultural land in India. The remaining 51.2% is rainfed. However, various studies reveal that there is a wide gap between the potential created and the actual utilization of irrigation which is a cause of great concern for policymakers and practitioners. The gap between irrigation potential created through Major, Medium, and Minor Irrigation projects and the actual usage is increasing and affecting the country’s agricultural productivity according to the Indian Council of Agriculture Research (ICAR). The Central and State governments have adopted participatory approaches in irrigation management for ensuring sustainable use of created irrigation potential through community.
participation. As Participatory Irrigation Management (PIM) is policy-driven rather than community-driven, it has been difficult for it to sustain in different typologies of irrigation systems which pose various challenges in its implementation.

DSC is a pioneer in the promotion of PIM in the country. Realizing the importance of community-managed irrigation systems, DSC demonstrated a robust participatory model in the Dharoi irrigation scheme in North Gujarat after PIM was introduced in the State in 1994 in collaboration with the Irrigation Department. Since then, DSC has been actively promoting PIM in Gujarat, Madhya Pradesh and Maharashtra directly through field implementation and in many other states through capacity building, research, development of IEC material and policy advocacy. Currently, it is involved in PIM support activities in a 1,09,500-hectare area including direct implementation in about 60,000 ha. in Gujarat and Maharashtra in collaboration with government departments and CSR partners, and capacity-building support in 1,02,500 hectares in Gujarat and Maharashtra.

Cumulatively it has facilitated the program in 53,000 hectares in MP, Gujarat and Maharashtra with 290 WUAs including direct implementation in 60,000 ha. with 178 WUAs and capacity building in 553,056 ha. for 198 WUAs.

INTERVENTIONS IN RAINFED AREAS

The Rainfed area accounts for nearly 51.8% of the 140 million hectares (mha) of agricultural land in India. The mean productivity of the rainfed area (71.62 mha) is about 1.1 tons per ha compared to 2.8 tons per ha. of the irrigated area according to the Director General, ICAR - India. Typically, rainfed agriculture is always vulnerable to weather fluctuations, monsoon variations and uncertain productivity and thus the socio-economic condition of communities living there is worse than those in irrigated areas. Hence, DSC lays special emphasis on better conservation and management of natural resources and productivity enhancement in rainfed areas. DSC is involved in implementing the Integrated Watershed Management Program (IWMP) and Integrated Water Resource Management (IWRM) projects in collaboration with government departments and CSR partners. Currently, It is involved in watershed management and IWRM activities in a 47,104-hectare area covering 95 villages in Gujarat, MP, Rajasthan and Maharashtra. Cumulatively, it has facilitated the program in 1,06,409 hectares covering 194 villages across the four states.
PROMOTING SUSTAINABLE AGRICULTURE AND ENTERPRISE DEVELOPMENT

In irrigated as well as rainfed areas, agriculture is the mainstay of livelihoods of rural communities. Yet there are many problems faced by farmers related to the availability of inputs, scientific knowledge, timely information regarding weather fluctuations and production advisory services. Unless these issues are addressed, the farmer is unable to stabilize production and realize a surplus from agriculture. Thus, one of DSC’s core mandates is to promote sustainable agriculture in its project areas along with watershed and PIM interventions.

The following sections describe the field implementation and outreach undertaken in Gujarat, Madhya Pradesh, Maharashtra, and Rajasthan during the year 2021-22.
GUJARAT

- No. of Districts: 5 (10)
- No. of Blocks: 17 (22)
- No. of villages: 374 (462)
- No. of Households (HH/H): 1,79,119 (2,01,780)
- No of Hs/H covered by DSC projects: 60,650 (96,528)
- Area covered by DSC projects: 1,14,232 ha. (2,04,790 ha.)
- No. of Community-Based Organisations: 922 (1639)

Key interventions:
- Participatory Irrigation Management (PIM)
- Integrated Water Resource Management (IWRM)
- Participatory Watershed Management
- Participatory Ground Water Management (PGWM)
- Sustainable Agriculture & Enterprise Development
- Savings and Credit

Note: Cumulative figures are given in parenthesis.
Developing Tharad Irrigation Circle as a Model for Participatory Irrigation Management in SSNNL Gujarat

The SSNNL (Sardar Sarovar Narmada Nigam Ltd.) is probably one of the world's largest reservoir-based public irrigation systems. It has about 18 lakh hectares of designed command area in Gujarat. The SSNNL and DSC have initiated an ambitious project to develop the Tharad Irrigation Project Command area as one of the Model PIM projects of Gujarat for improving the productivity, prosperity and livelihood of rural communities. Initiated in November 2018, it is a five-year project covering 60,000 ha. of command area and 75 villages. Approximately 17,000 rural households of Tharad, Vav, Suigam and Bhabhar talukas of Banaskantha district will be benefitted. The irrigation network is comprised of 4 Branch canals, 21 distributary canals, 128 minor canals and more than 1150 underground pipelines.

Major highlights of the year 2021-22

I. The DSC field team carried out PRAs in 26 villages to understand the cost-benefits of the crops, difficulties faced in crop cultivation and irrigation water requirement of the command area crops such as cumin seed and pulses. A field transect walk was conducted which helped in preparing irrigation command maps of 23 irrigation chuck.
II. 30 capacity-building events such as module-based training, exposure visits to successful WUAs and farmer-officer workshops were carried out, benefiting more than 1000 participants from 75 villages. These events helped build the technical, administrative and social mobilization capacities of the Water Users’ Office Bearers and other community leaders. Legal, technical, administrative and financial modules were covered in the training program. About 60 farmers’ leaders from 11 WUAs were taken to an exposure visit of Rangpur WUA in the Dharoi Irrigation Project to learn from the experiences of one of the most robust and vibrant WUAs of Gujarat.

III. Extensive Information Education and Communication (IEC) material including display panels, leaflets and booklets were developed, printed and distributed to 123 WUAs for the benefit of command area farmers. A two-way communication system among the SSNNL canal officers and WUA leaders was initiated by creating WhatsApp’s social media platform. This became very useful during the irrigation season to maintain regular contact, communication and coordination with the SSNNL staff.

IV. The field team and SSNNL Division jointly organized a workshop on Rabi 2021-22 irrigation planning with WUAs at the SSNNL Tharad office. About 90 farmers and leaders from 47 WUAs participated in the irrigation planning workshop. The objective of the irrigation planning workshop was to prepare a plan for water distribution at various levels such as the branch canal level, distributary level and the WUA level.

V. During the Rabi 2021-22 irrigation season, 26 WUAs of Malsan, Madka and Vejpura branch canals came forward to take on higher responsibilities including a formal collection of water demand for irrigation from farmers of the command area and submitting the consolidated demand to the concerned sub-division. Before the Rabi irrigation, WUAs also de-silted and cleaned their minor canals with the SSNNL issuing irrigation water charge bills to 40 WUAs.

VI. Special hand-holding support was extended to 58 WUAs during the Rabi Irrigation season. The WUAs reported that their overall irrigation demand has increased due to DSC’s hand-holding support. They also learned to regulate underground pipeline outlet gates, rotational water supply systems and alternate on-off water supply systems on minor canals. Some of the WUAs reported an increased level of satisfaction among tail-end farmer groups in receiving canal water.

VII. DSC’s team also worked with SSNNL to review the progress of project activities. The Chief Engineer (CAD), SSNNL, Gandhinagar, Chief Engineer (Patan), Superintending Engineer (Tharad circle), Executive Engineers, and Deputy Executive Engineers from SSNNL Tharad were involved in the review which brought out issues in the implementation of the project such as the deployment of partner NGOs, delay in fund release to DSC from SSNNL, coordination issues between WUAs, O&M agency and SSNNL, etc.

Advisory role in Dharoi, Guhai, and Mazum irrigation projects in North Gujarat

DSC formed 177 WUAs in 36,711 hectares of the command area of Dharoi, Guhai, and Mazum irrigation schemes from 1995 to 2008. Two project federations and one branch canal federation were also constituted. These WUAs were provided hand-holding support till 2008, after which they took over the
irrigation management in a formal manner. Since then, DSC has been an advisor by facilitating irrigation planning and review meetings as per requirement. In the reporting year, a shortage of rainfall was witnessed, as can be seen from the status of water storage in the reservoirs in the table below.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of project</th>
<th>Water storage available</th>
<th>Nos. of watering released</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dharoi</td>
<td>30% of the total storage capacity</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Mazam</td>
<td>74% of the total storage capacity</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Guhai</td>
<td>No water available</td>
<td>-</td>
</tr>
</tbody>
</table>

In October 2021, the respective Irrigation division of the Water Resource Department announced the allocation of only 2 watering from the reservoirs along with the irrigation schedule in the Dharoi and Mazam project commands, based on which the WUAs carried out their crop planning. The project-wise details of the area irrigated, revenue generated from water charges collection, dues paid to the department, and rebates retained by the WUAs are given in the table below:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of project</th>
<th>Irrigation season</th>
<th>Total irrigated area in ha.</th>
<th>Total revenue collection</th>
<th>Amount paid to the department</th>
<th>Revenue retained by WUAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dharoi</td>
<td>Rabi</td>
<td>11326</td>
<td>125</td>
<td>26.50</td>
<td>20.15 (including Rs. 2.49 to federation)</td>
</tr>
<tr>
<td>2</td>
<td>Mazam</td>
<td>Rabi</td>
<td>550</td>
<td>5.40</td>
<td>3.14</td>
<td>2.24</td>
</tr>
<tr>
<td>3</td>
<td>Guhai</td>
<td>Rabi</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>11,876</strong></td>
<td><strong>130.40</strong></td>
<td><strong>29.64</strong></td>
<td><strong>22.39</strong></td>
</tr>
</tbody>
</table>

Source: Govt. data and WUA data.

During the year, the WUAs irrigated an 11,876-hectare area and collected revenue of Rs. 130.40 lakh from irrigation charges from farmers and retained Rs. 22.39 lakh for O&M and administration. Out of Rs. 130.40 lakh revenue collection, Rs. 78.37 lakh was collected by the WUAs as additional charges over and above the Govt. rates and retained with themselves to meet the accelerating cost of operation and maintenance of the canal system during the poor monsoon year.

**Other highlights**

- DSC provided technical guidance to Branch-2 canal federation of the Dharoi project during monthly and annual general body meetings and 3 WUAs of the Guhai project for their annual account audit.

- Accounts and record-keeping training was provided by DSC to WUAs of the Dharoi project in collaboration with the Cooperatives department along with technical support to 2 WUAs for getting registration from the Cooperatives department.

- During the reporting year, there was no water availability in the Guhai project. In this scenario, 12 WUAs were trained on low water-intensive crops and water-efficient agriculture practices. As a result, the WUAs have taken low water-intensive crops in 600 hectares of command area.

- In the Guhai project, the authorities sanctioned a repairing plan for damaged pipelines and released Rs. 19.70 lakh grant to the 4 WUAs to carry out construction work of damaged pipelines.
NATIONAL ATAL BHUIJAL YOJANA (ABhY), MEHSANA DISTRICT GUJARAT

In December 2019, the Government of India launched Atal Bhujal Yojana to improve groundwater management through community participation, impacting around 78 districts and 8350 Gram panchayats in designated priority states like Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh. The duration of the scheme is from 2020 to 2025.

In Gujarat state, seven districts have been selected under the scheme covering 37 blocks and about 2100 villages. The State Project Management Unit (SPMU) in Gujarat has appointed DSC as one of the District Implementation Partners (DIPs) for the Mehsana block of North Gujarat. The project agreement was signed in March 2021 and till March 2022, the following activities were carried out by the field team;

- A multidisciplinary team of professionals from Civil Engineering, Agriculture, and Social Science was deployed for the day-to-day implementation of the project.
- District and block-level project launching workshops were conducted to involve the officers and authorities from relevant government departments in Panchayati Raj Institutions. Village meetings were conducted in all 92 project villages for fostering community participation in the project planning process.
- 82 youths were identified and trained from the project villages and appointed as Bhujal Jankars (BJs: well-informed groundwater para-scientists). Induction training was given to the BJs on various subjects like the concept of PGWM and its principles and protocols, community participation, primary and secondary data collection, measurement of demand and availability of water, and basic geohydrology and well monitoring.
- The team of 82 BJs and DSC staff mapped the status of groundwater, its quality and management challenges, and overall water inventory in the village in consultation with the community groups and leaders.
- 92 village-level Participatory Groundwater Management Committees (PGWMC) were formed and capacitated with representation from various community groups and Community Based organizations.
• 92 village-wise Water Security Plans (WSPs) were prepared and uploaded on the ABhY website and MIS portal after approval by Gram Sabha and the technical authorities. It was found that the 92 villages in Mehsana block have annual water availability of 848.98 million cubic meters from ground and surface water sources. Against the same, the annual water requirement in agriculture and domestic uses is about 971.1 cubic meters leaving a negative balance of 122.72 cubic meters. The project team facilitated the VGWMC to prepare a plan to bridge this gap in the coming years through various technical measures such as rainwater conservation, groundwater recharge, and large-scale adoption of less water-intensive crops, seeds, and different efficient irrigation techniques such as drip, mulching, alternative furrow irrigation methods, etc.

• Technical collaboration was established with Krishi Vigyan Kendra Kherva, Spice Research Centre Jagudan, and Wheat Research Centre Vijapur for capacity-building inputs and demonstration of crop-water technologies. 25 crop demonstrations were set up covering different crops like “Chana” “Ajwain”, Mustard, Cumin, and Wheat for the promotion of new climate-resilient seed varieties and crop practices. The results were shared with the other farmers for mass adaptation.

• 276 capacity-building events were conducted benefiting 3602 participants. The “Atal Jal Rath”-mass awareness campaign was conducted in all 92 villages. Wall paintings and slogans were painted in public places for information, education, and communication on groundwater management.

• DSC has been collaborating with ARGHYAM and ACT, Bhuj for developing a design-at-scale capacity-building approach in ABhY. The ARGHYAM is supporting DSC in preparing and digitizing user-friendly training content for BJs and the village community and making available the content to the registered users for regular virtual learning sessions. This digital tool helps the organization to achieve both qualitative and qualitative results with non-negotiable PGWM concepts and principles.
Developing a design-at-scale capacity-building approach for capacity building in Atalbhujal Yojana

DSC has collaborated with Arid Communities & Technologies (ACT), Bhuj, and ARGHYAM Bangalore for strengthening the Atal Bhujal Yojana capacity-building initiatives by adapting a proven and successful design-at-scale capacity-building approach with cost-effective, quality, and efficient digital technology. It aims at promoting participatory approaches and technologies in groundwater management. In this connection, ARGHYAM has supported both DSC and ACT in developing digital platforms like the Participatory Digital Attestation (PDA) mobile application to give digital access to training content to the trainees and trainers, PPT to video training content, and weekly virtual sessions with the team and Bhujal Jankars to help enhance the efficiency, effectiveness and delivery of training to the community and field facilitators. This digital tool helps the organization to achieve both qualitative and quantitative results in training and overall capacity-building management. Nearly 3000 participant days were generated on the digital platform. 120 PDA licenses were given to DSC out of which 84 Bhujal Jankars registered for access to digital training content. 3 virtual ToT were organized for the Bhujal Jankars on demand and supply side management of water, groundwater management, etc.
Managing Aquifer Recharge through Village Level Intervention- MARVI-Meghraj

The Western Sydney University (WSU), Australia, International Water Management Institute (IWMI), DSC, and other partners have been jointly implementing the MARVI project in the Meghraj watershed in Aravalli district, Gujarat and Dharta watershed in Udaipur district, Rajasthan. The initiative covers 1,500 households across 6 villages in Meghraj block which is a tribal-dominant, undulated, and drought-prone region in the Aravalli district. The MARVI project focuses on developing participatory approaches and tools to assist in improving groundwater supplies and reducing their demand through the direct involvement of farmers and other affected stakeholders. A unique feature of MARVI is the use of scientific measurements by citizens through the engagement of Bhujal Jankars (BJs), a Hindi word meaning ‘groundwater informed’ volunteers.

Key achievements:

I. Hydro-geologic parameters were derived through well-monitoring data captured by BJs. The Gram panchayats and farmer groups constructed water bodies for natural recharge. The MyWell App was developed and farmers from across India are uploading their data which is available on the web.

II. BJs are taking scientific measurements of groundwater and in the process, they are becoming an interface between researchers and village communities.

III. Through local data collected over the last four years, there is an indication that farmers now have acknowledged that groundwater is limited and that the falling water table is a village-level issue that needs to be tackled at the village level itself.

IV. The sensitized farmers have taken measures to stop deeper drilling, remove sediment from recharge structures, determine rabi crop areas from post-monsoon groundwater levels, improve mulching and water use efficiency and diversify crop types.
V. The farming community in the two watersheds is now debating the concept of sharing groundwater through ‘village groundwater cooperatives’ (VGCs). The concept of water productivity, rather than crop productivity, is gaining momentum among farmers. These are important outcomes of MARVI.

MARVI ‘Living Laboratory’

Under the MARVI project, a village-level living laboratory has been established at Navaghra village in Meghraj block, Gujarat to disseminate MARVI’s experiences to the other stakeholders in Gujarat. The laboratory was inaugurated by Shri V.S. Patel, Director, State Project Management Unit of Atal Bhujal Yojana, Gujarat on 20th August 2021. The senior faculty from WSU, the Australian Water Partnership, authorities from the Ministry of Jal Shakti, faculty from Maharana Pratap Agricultural University, and representatives from NGOs joined through online video conferencing, and 100 participants physically attended the event.

About 200 visitors have visited the living laboratory in the reporting year including staff of WTOR, Jabalpur MP, SAMARTH from Kutch, Gujarat, and officers from the state Water Resources Department, Gujarat to understand techniques of groundwater management, functioning of the groundwater cooperative and the role of BJs in groundwater management.

Activities of the Vasundhara Ground Water Users Cooperative

In the year 2018-2019, the ground and surface water user groups in the project’s Navaghra village registered "Vasundhara Groundwater Cooperative" (VGC) to evolve and implement common water use
and sharing protocols for recharge and use of groundwater. During the reporting year, 19 member farmers of the cooperative carried out micro-planning of their land and water resources and prepared a physical and financial plan for integrated management of groundwater resources in 66 acres of agricultural land. A 5-year work plan has been developed for the artificial recharge of groundwater sources, covering 100% area under efficient irrigation techniques and the construction of a pressurized irrigation network for sharing of groundwater from the 15 functional borewells among all farmers.

The VGC has also formally resolved not to drill any groundwater source from now onwards. A comprehensive proposal for developing a model PGWM village cooperative has been submitted to the Atal Bhujal Yojana, MoJS, India, and other domestic and international donors for financial support. Demonstration of this work plan will provide useful learning to the stakeholders to manage groundwater sources in an efficient, equitable, and sustainable manner.

**Model Village Initiative Programme – Kheda district**

DSC and the Hindustan Coca-Cola Beverages Private Limited (HCCBPL) are jointly involved in the implementation of the Model Village Initiative (MVI) in 7 villages of Kheda block of Kheda district in Gujarat. A total of 3,040 families have benefited from various interventions like safe drinking water, agriculture extension, community education, primary health, livelihood opportunity, access to information, social security schemes, sanitation and a sustainable environment.

The details of various interventions undertaken during the year 2021-22 are given below.

**Interventions on safe drinking water**

The project villages are located in the peri-urban areas of Ahmedabad city and therefore access to safe drinking water has always been an issue for the vulnerable sections of the community. Keeping in view this need, three villages including Goblej, Rasulpura and Kanara were provided with 50 to 100-litre capacity RO/UV plants with water cooler facilities at primary school premises. The infrastructure which was created and handed over to the school management under the supervision of local Gram Panchayats directly benefits more than 1000 school students.
Interventions in agriculture

Precise horticulture farming by Vegetable Producer Groups: The three project villages of Goblej, Vasannahur and Pansoli have good potential for horticulture development. The project supported willing small and marginal farmers in undertaking pilot-based precision farming of brinjal and tomato. The farmers were taken on exposure to Krishi Vigyan Kendra, Randheja, Kheda, and the Center of Excellence for Protected Cultivation and Precision Farming on Vegetables at Vadrad in Prantij.

- About 60 farmers formed Vegetable Producer Groups and set up precise tomato farming using the newly improved seed variety of ICAR Rakshak. The farmers liked the variety as it is more resistant to pest attacks, less irrigation intensive, and more productive compared to conventional seeds available in the local market. For the first time, farmers received 92 fruits from one plant. The farmers were also able to fetch a good price of Rs. 15 per kg in the Ahmedabad market.

- The other farmer groups supported for the development of mango and Chiku wadi in Vasannahur village. The farmers planted 70 fruit plants in a quarter-hectare with fodder intercropping for maximizing production per unit of land.

- 38 farmers were supported for training on trellis farming and pilot demonstration of trellis farming in tomato and brinjal.

- About 115 farmers were sensitized on precise horticulture farming, crop diversification, and intercropping to maximize farm incomes per unit of land. In one such training, rose cultivation was promoted through intercropping with conventional cereal and fodder crops.

Initiation of Farmers Learning Centre

A Farmers Learning Centre was initiated at Vasannahur village to provide physical training and meeting facilities and infrastructure. The purpose of the centre, which can accommodate 25-30 people at a time is to promote participatory learning and local action. More than 400 participants have benefited from the capacity-building activities carried out at the centre during the year 2021-22.
Interventions in livelihood promotion

In the year 2021-22, inputs were provided to women’s SHGs in the form of capacity building and physical infrastructure development for starting on-farm and off-farm income generation activities such as:

- 82 women were provided with a 2-day capacity-building module on Livestock management in Vasanakhardt and Pansoli villages. The women SHGs were trained on animal health management and animal-based natural farming by experts from the Krushi Vigyan Kendra, Kheda. Exposure was also provided to Bansi Gir Goushala, Ahmedabad so that they could understand the process of selection of breed, and take tips for maximizing milk production in different weather conditions.

- 12 members of women SHGs were provided with a backyard vermicompost production unit each, worth Rs. 3,000/-. The landless women will receive regular income from selling vermicompost to local horticulture farmers.

- 11 SHG women of Goblej and Samara villages were provided cotton wick machines. The women shared 33% of the capital cost of the machines and have started production at their homes, spending 3 to 4 hours per day, and earning Rs. 300 to 400 per day.

Interventions on primary health

Two healthcare camps were organized at the medical dispensary, Goblej including one women’s health and hygiene camp and one eye check-up camp benefiting 110 men and 30 women. The women’s health and personal hygiene camp were organized in collaboration with Rudhraksh Hospital, Bareja, and the eye check-up camp was organized jointly with Shivam Charitable Trust, Ahmedabad.

Creation of school Infrastructure
The Goblej village school is the largest school premise in the project cluster where more than 390 children study in 1-10 standard. Based on the need, a large shade has been provided from the project support for large gatherings like mid-day meals and cultural programs.

**Interventions for a better environment**

Under the government’s plastic-free village drive, the gram panchayats and DSC are jointly carrying out a 100-day plastic waste collection program in selected gram panchayats of Kheda and Sanand talukas. During the year, a 52-day drive was completed in 15 villages in which about 5,000 kg of plastic waste was collected and disposed of at the Ahmedabad Municipal Corporation (AMC) waste management centre.

In collaboration with ATMA, 53 lead farmers and community leaders in two groups from all project villages were sent on an exposure visit to a solar cooperative at Dhundi village in Anand and nearby Narsanda and Pinchaa villages to learn about environment-positive actions in rice cultivation and vegetable cultivation like zero chemical farming and solar farming without compromising the net income from agriculture.

**Better Cotton Initiative Project, Sabarkantha and Mehsana District, Gujarat**

Cotton is one of the important cash crops for the farmers of Gujarat as it gives good economic returns in favourable local weather conditions and market opportunities. DSC and the Better Cotton Initiative (BCI) are jointly implementing BCI interventions in the Sabarkantha and Mehsana districts of northern Gujarat.

The major focus of the project is to orient the registered cotton growers, especially smallholder farmers - to the sustainable production and supply of cotton. This includes interventions related to skill-building, knowledge, and information sharing on the effective use of farm inputs and irrigation water, maintaining soil health, protection of natural habitat while growing cotton, sensitizing both farmers as well as labourers on responsible farming and keeping a check on the quality of cotton fibre for better price.
realization, etc. Details of the key activities conducted in different locations are given in the following table:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Visnagar</th>
<th>Vadnagar</th>
<th>Himmatnagar</th>
<th>Vijapur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Unit Establishment Year</td>
<td>2018</td>
<td>2018</td>
<td>2018</td>
<td>2019</td>
<td></td>
</tr>
<tr>
<td>No of the villages covered</td>
<td>26</td>
<td>23</td>
<td>27</td>
<td>22</td>
<td>98</td>
</tr>
<tr>
<td>Cotton farmers covered in nos.</td>
<td>3533</td>
<td>3501</td>
<td>3608</td>
<td>3500</td>
<td>14142</td>
</tr>
<tr>
<td>Expected cotton area covered in Ha.</td>
<td>1515</td>
<td>1768</td>
<td>1993</td>
<td>2190</td>
<td>7466</td>
</tr>
<tr>
<td>Expected production in tons (seed cotton)</td>
<td>3239</td>
<td>3344</td>
<td>3926</td>
<td>4674</td>
<td>15,183</td>
</tr>
</tbody>
</table>

The major highlights of various interventions taken up during 2021-22 are summarized below:

I. 14,142 cotton-grower farmers was registered and Module based training was provided to the 14,000 farmers on Better Cotton Initiative practices and techniques such as Integrated Nutrition Management, Intercropping, Integrated Pest Management, seed technologies, natural farming, post-harvest technologies, quality control, child labour law.

II. Focus group discussions with cotton farmers were conducted in 108 villages to identify the core principles of cotton farming and understand the practice gap, following which, the training and IEC materials were designed.

III. A project implementation team of 44 members having a 33% female ratio was deployed and provided module-based training on technical, social, financial, and environmental aspects.

IV. 40 field demonstrations following better cotton management protocols and practices were set up on farmers’ fields in 21 villages. Nearly 2500 farmers visited the demonstrations.

VI. Formed Child Labor Monitoring Committee to facilitate occupational health hazards. The training was imparted to 851 labourers including 50% female.

VIII. The project team conducted a 5-module training targeting 14,142 farmers. Farmer participation was highest in fibre quality training at 97.4 % followed by the INM module (93.6%), pre-sowing module (87%) decent work module (76%), and IPM and Water Stewardship module (71%).
MADHYA PRADESH

- No. of Districts: 4 (6)
- No. of Blocks: 9 (13)
- No. of villages: 177 (321)
- No. of Households (HHs/H): 52,473 (84,096)
- No. of (HHs/H) covered by DSC projects: 24,545 (34,020)
- Area covered by DSC projects: 5,7503 (57,530 ha.)
- No. of Community-Based Organisations formed by DSC: 422 (538)

Key interventions:

- Participatory Irrigation Management (PIM)
- Integrated Watershed Management
- Participatory Ground Water Management (PGWM)
- Sustainable Agriculture & Enterprise Development
- Savings and Credit
- GIS-based NRM planning for convergence of govt. schemes

Note: Cumulative figures are given in parentheses.
Improving water security, enhancing livelihood and well-being of tribal communities through integrated development initiatives

Project Area: Alirajpur District M.P

Alirajpur district is one of the poorest districts in Madhya Pradesh. About 94% of its population belongs to the Scheduled Tribes and the literacy rate of 37.22% is the lowest in the country.

The DSC and HDFC Parivartan jointly initiated the HRDP project “Improving water security, enhancing livelihood and well-being of tribal communities through integrated development initiatives” in 20 villages of Sondwa and Alirajpur block of Alirajpur district in January 2022 which is spread across a geographical area of 18,219 Hectare and will cover 6,498 households. The project covers 3 macro watersheds spread into three major river basins of Hathini, Ankhad, and Chitwa Narmada. The project duration is three years starting from Jan 2022 to Jan 2024.

During the year 2021-22, PRA and formation of IWRM Committees in all 20 villages were carried out, in which a total of 1297 people including 288 women and 1009 men participated.
The following activities were also conducted by the project team in the same year in coordination with the District Watershed Support Cell, Alirajpur.

Ridge area treatment such as afforestation of wasteland in 3.50 ha. and construction of 3362 loose boulder structures and 6 gabion structures carried out for preventing gully erosion. 5 Farm Ponds, 11 Percolation tanks and 2 groundwater recharge shafts were constructed benefiting 101 households.

About 1.79 lakh cubic meters of water storage capacity was developed by treating 119 ha. catchment area. Nearly 405 people benefited from these physical activities including 48% of resource-poor households. The community provided Rs. 8.11 lakh kind and cash contribution towards the costs of construction.

20 demonstrations on sustainable crop practices have also been carried out under the project including a package of improved crop practices for Black Gram, Green Gram, and Red Gram. The introduction of new crops like musk melon with drip irrigation systems was also introduced.

DSC has also facilitated the formation of the following community-based institutions as part of the HRDP project:

- 52 SHGs consisting of 542 members,
- 26 Kisan Clubs consisting of 256 members,
90 Users Groups consisting of 352 members and
6 Watershed Associations consisting of 66 members.

The women SHGs and Kisan Clubs mobilized Rs. 22.71 lakh from their monthly savings and disbursed Rs. 4.42 lakh as internal loans. In addition, Rs. 2.80 lakh were mobilized from MP State Rural Livelihood Mission for the women SHGs as a revolving fund.

24 capacity-building events conducted benefiting 1,680 participants including 556 men and 1,124 women on a variety of issues like soil and water conservation, construction management, support to village communities to minimize the impact of COVID-19 and strengthening preparation for the 3rd wave of the pandemic, health and sanitation, income generation, crop science, record keeping and administration etc.

558 tribal families benefited from convergence activities with the KVK, horticulture, veterinary and agriculture departments as part of crop insurance, animal insurance, drip and mulching, fodder and jackfruit production schemes.
“Pradhan Mantri Krishi Sinchai Yojana” (PMKSY) (IWMP-08)

Project area: Alirajpur District, Madhya Pradesh

Since 2014, DSC is working in Alirajpur and Sondwa blocks in the Alirajpur district of Madhya Pradesh through various interventions such as a government-assisted Integrated Watershed Management Project (IWMP) and a CSR-assisted sustainable agriculture and livelihood project.

As a result of these interventions, 6 micro-watershed committees and 2448 households in 7 villages of 6 Gram Panchayats - 3 each under Alirajpur and Sondwa blocks have benefited from the project.

- Cumulatively, Rs. 677.53 lakh was spent on the project, and treatment of 5646 hectares was carried out during the year. Through water harvesting, 7.07 lakh cum storage potential was built, which is sufficient to irrigate nearly 650 hectares of cultivated land. Also, 80 User Groups with 567 members have been formed.

<table>
<thead>
<tr>
<th>Name of Activity</th>
<th>Unit</th>
<th>Quantity</th>
<th>Water Storage Capacity in CUM.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm ponds</td>
<td>No.</td>
<td>14</td>
<td>39156</td>
</tr>
<tr>
<td>Check dams/Stop Dam</td>
<td>No.</td>
<td>48</td>
<td>260754</td>
</tr>
<tr>
<td>Nallah Bandhan (Earthen/Boulder)</td>
<td>No.</td>
<td>8</td>
<td>87000</td>
</tr>
<tr>
<td>Percolation Tanks</td>
<td>No.</td>
<td>17</td>
<td>257520</td>
</tr>
<tr>
<td>Ground Water recharge structure</td>
<td>No.</td>
<td>6</td>
<td>45000</td>
</tr>
<tr>
<td>Tank (Dyke cum Boulder check)</td>
<td>No.</td>
<td>1</td>
<td>18000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>94</strong></td>
<td><strong>7,07430</strong></td>
</tr>
</tbody>
</table>

- 9202 cubic meters of earthen and stone work along with 4 ha. afforestation was carried out for ridge area treatment in the catchment of the above water harvesting structures.

- Under the sustainable agriculture and livelihood promotion initiative, 43 Self-help groups were formed and 55 capacity-building pieces of training, workshops and exposures were conducted.

- The initiative has led to the creation of livelihood sources for 230 members through engagement in several activities such as poultry, apparel, goat rearing, dairy, selling vermicompost, and other small business-like grocery shops and tea shops etc.

- To support the financial sustainability of SHGs, DSC has created a link between SHGs and the National Rural Livelihood Mission. Seed money worth Rs.
3,90,000/- has been provided to 39 SHGs. Cumulatively, 16 Farmers’ Clubs have been formed for agriculture extension activities.

- DSC conducted 28 training, exposure, and capacity-building workshops covering topics like pest and disease control, low-cost technologies, soil health management, improved seed varieties, standing crop training, processing of Grain, seed production, and post-harvesting processing and covered 1,225 participants. Provided 120 demonstrations and through the demonstration activity, more than 1,400 farmers have actively participated in better agriculture practices.
Integrated Watershed Management Program (IWMP-06)

Project area: Sonkatch block, Dewas district

Since the year 2012-13, DSC was invited by Rajeev Gandhi Watershed Mission, Bhopal to participate in the watershed management activities initiated by the department in Sonkatch Block, Dewas District, Madhya Pradesh. DSC is working on various interventions such as a government-assisted integrated Watershed Management Project with the RBS Foundation on sustainable agriculture and livelihoods. DSC initiated an IWMP project in collaboration with the state government in 2012-13, which covered 4 Micro watershed committees, 6643 hectares, and 2263 households in 12 villages of 10 Panchayats under the Sonkatch block. The following are the activities that were carried out during the project period:

- The 4165-hectare watershed area was treated with physical measures, directly benefiting 642 households from the creation of 5,33,513 cubic meters of water storage capacity. With these water conservation structures, irrigation potential increased in a 223-hectare area.
- A comprehensive impact assessment study was carried out in the years 2019-2020 with the help of an independent agency and the report was disseminated to all the stakeholders.
- The project concluded in the year 2021-22 by handing over the physical assets developed under to project to Gram Panchayats and management to user groups.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Activity</th>
<th>Unit</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Check dam</td>
<td>No.</td>
<td>80</td>
</tr>
<tr>
<td>02</td>
<td>Construction of Extra class Room</td>
<td>No.</td>
<td>1</td>
</tr>
<tr>
<td>03</td>
<td>Water well construction</td>
<td>No.</td>
<td>3</td>
</tr>
<tr>
<td>04</td>
<td>Nala Bandhan (Earthen/Boulder)</td>
<td>No.</td>
<td>1</td>
</tr>
<tr>
<td>05</td>
<td>School Boundary wall</td>
<td>No.</td>
<td>1</td>
</tr>
<tr>
<td>06</td>
<td>Culvert Construction</td>
<td>No.</td>
<td>5</td>
</tr>
<tr>
<td>07</td>
<td>Gabion Structure</td>
<td>Cu m.</td>
<td>4165</td>
</tr>
<tr>
<td>08</td>
<td>Farm Pond</td>
<td>No.</td>
<td>66</td>
</tr>
<tr>
<td>09</td>
<td>Recharge Soft</td>
<td>No.</td>
<td>12</td>
</tr>
<tr>
<td>10</td>
<td>Gully plug/Loose Bolder Structure</td>
<td>Cu m.</td>
<td>125</td>
</tr>
<tr>
<td>11</td>
<td>Plantation</td>
<td>Hectare</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Water Security and Climate Adaption (WASCA) in Barwani district, MP

Water Security and Climate Adaptation in Rural India (WASCA) is an Indo-German Project, in partnership with the Ministry of Rural Development (MoRD) and Ministry of Jal Shakti (MoJS) along with GIZ for three years (April 2019-March 2022) in the Barwani district of Madhya Pradesh. The primary objective of the WASCA project is to enhance water security and climate adaptation by developing a GIS-based composite and integrated water resource management plan for the district and ensuring convergence of all line departments working on/ with water for enhancing the well-being of rural people.
The project was aimed at the following outputs

- Improved convergence of existing planning and financing approaches to strengthen water security.
- Demonstration of convergent planning, financing, and implementation at the local level
- Interpreting the Areas of Interest (AOI)

A five-member multidisciplinary team of professionals including experts in GIS, water resource development, agriculture, and social aspects has been involved in facilitating the WASCA Resource Centre at the Zila Panchayat office premises in Barwani since December 2019.

**Planning Phase of WASCA project: December 2019 to November 2020**

Phase I of the WASCA project: Planning was done on a watershed basis and major activities carried out are illustrated in the following illustration.
Phase II: Pilot implementation of the WASCA Plan by Zila Panchayat with technical support of DSC and GIZ.

The following activities were carried out in the year 2021-22 under the second phase:

- 20 Training Sessions (online and offline), 12 Workshops and 9 meetings were held which had 977 participants both from the community and the line departments including 115 women.

- Physical works worth Rs. 1,342.28 Cr. were identified for the whole district including 47,896 ha plantation in the wasteland, 11,827 ha for micro-irrigation to optimize irrigation in existing horticulture land, rejuvenation of 1,362 existing water bodies to harvest 1530-hectare meter surface water, treatment of 6,864 km drainage lines and construction of 4,167 artificial recharge structures for artificial recharge of groundwater.

- In addition, 792 km of gutter construction and soak pits were planned for sewage water management. It is estimated that more than 6,794 hectare-meter runoff will be harvested from various water conservation activities and 16,985 ha area could be brought under irrigation through surface water conservation.
Outcomes:

I. As per the district administration, there is a 67% jump in physical activity achievement under the MGNREGA scheme after the ready-to-use planning provided by DSC and GIZ.

II. In the COVID scenario, the WASCA team helped the district administration in identifying the hotspot of rising COVID cases in the district on the GIS platform on a day-to-day basis. The district got good recognition and appreciation from the state authorities for curbing the spread of COVID infection in the district.

III. District implemented Government funded PUSHKAR DHAROHAR SAMRIDDHI ABHIYAN for taking immediate action for the rejuvenation of 1,500 water bodies based on the WASCA Plan. In addition, the following NRM works identified under WASCA projects have been considered for approval of government-assisted watershed projects in near future.
Testimonial

“The Composite Water Resource Management Plan prepared using GIS technology is not limited to the MGNREGA scheme only, but all departments can take advantage of this plan. GIS technology will be used extensively in the future, so all departments need to pay attention to this technology. It helps in preparing a rapid and effective plan for a Gram Panchayat.

CEO
ZILA PANCHAYAT
BARWANI, MADHYA PRADESH

“Earlier, we used to go to the field for the survey of the plantation and mark the plot location through manual GPS application, which was quite a time taking and cumbersome. But through GIS tools used in WASCA, it can be easily done with the additional benefit of getting more scientific information about the proposed area which is key to preparing a technically sound proposal.

SHRI LOKENDRA MANDLOYI
VAN RAKSHAK, BARWANI RANGE,
Case Study

Greening Hillocks with plantation

Barwani has mainly two types of land use - revenue and forest. One-third of the geographical area or about 480 sq. kms of Barwani district is forest area which has huge potential for greening. Under the WASCA project, highly degraded forest land was identified which may otherwise have been very difficult for the district administration to survey manually. The Bhuvan ISRO LULC map (2015-16) was used for the demarcation of this land for afforestation work. Based on the WASCA plans, the greening of 10 ha. of degraded forest land has been initiated with 6,250 plants of local species such as Neem, Karanj, Jamun, Sabgon and flower plants in the hilly village of Segoan in Barwani district.

Ensuring supplementary irrigation through Check Dams

Barwani has hard rock strata consisting of basalt. This prevents water from percolating and recharging sub-surface aquifers. The humid and warm weather further leads to high evaporation losses. These factors limit the water harvesting potential in the form of check dams, stop dams, tanks etc. Also, due to the difficult topography of the region and the unavailability of digitized drainage flow, density and order, concerned departments are unable to locate technically feasible sites for water harvesting structures.

As part of the WASCA project, more than 15,000 km of drainage network was mapped digitally, indicating accurate drainage order and feasible locations on the GIS platform. Under MNREGS, checkdams were constructed in Moyda village of Pansemal block on a pilot basis and a 10 ha new area was brought under irrigation, benefiting 14 – (pls confirm if this is only 14) households.
PROMOTING SUSTAINABLE AGRICULTURE AND ENTERPRISE DEVELOPMENT

Livelihood enhancement through sustainable agriculture practices

DSC is promoting sustainable agriculture practices for livelihood enhancement of rural households covering 24 villages of Dhar, and Alirajpur districts of MP in continuation with the PIM and agriculture projects by collaborating with Ford Foundation, GIZ and other agencies. These projects focus on the promotion of better crop management practices for cost reduction, risk mitigation, productivity enhancement, value addition, and the formation and strengthening of farmer-producer organizations that aim to increase net profit from agriculture. The details of Kisan Clubs and SHGs promoted cumulatively under the sustainable agriculture program are given in the table below:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Activity</th>
<th>Key Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No. of Kisan Clubs</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>No. of Self-Help Groups</td>
<td>102</td>
</tr>
<tr>
<td>3</td>
<td>Total no. of Members</td>
<td>1,632</td>
</tr>
<tr>
<td>4</td>
<td>No. of Villages Covered</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>No. of Shareholders</td>
<td>809 (417 Women &amp; 392 Men)</td>
</tr>
<tr>
<td>6</td>
<td>Share Capital mobilised from members</td>
<td>Rs. 4.04 Lakh</td>
</tr>
<tr>
<td>7</td>
<td>Milk Collection Cooperatives formed by Women</td>
<td>03</td>
</tr>
<tr>
<td>8</td>
<td>Procurement of Milk in Liters</td>
<td>3600</td>
</tr>
<tr>
<td>9</td>
<td>Revenue from the Sale of Milk</td>
<td>Rs. 1.80 Lakh</td>
</tr>
</tbody>
</table>

Highlights of activities

The results of various projects supported by GIZ, IRFT, and Govt. IWMP projects and the funding leverage received through various government schemes are highlighted below:

I. About 50 field training and awareness workshops was conducted benefiting 847 participants where various topics such as integrated pest and nutrition management, soil health improvement, improved seeds varieties, post-harvest processing, canal water management and maintenance, FPO business plan, etc. were covered by agriculture scientists and lead farmers.

II. Technical collaboration was established with Krishi Vigyan Kendra (KVK) Dhar for developing training and IEC materials and guidance.

III. Capacity-building events were organized for women Self-Help Groups including training and workshops on health, sanitation collectively enterprises, record keeping and financial literacy etc.

IV. Around 70 farmers actively participated in demonstrations of better agriculture practices in cotton, chilli, soybean and wheat crops. System of Wheat Intensification (SWI) and hydrogel trials were taken up on a pilot basis.
V. About 42 farmers produced more than 120 quintals of vermicompost and 2400 litres of biopesticides used in their farms. The surplus was sold to neighbouring farmers for earning an additional income.

VI. 1,400 cattle were vaccinated to treat common diseases like Hemorrhagic septicemia (Gal Ghotu) and Black Quarter (Ektangiya), in 6 camps organized at Kukshi in collaboration with Gov Veterinary Dept. which covered 247 households.

VII. I-Safe Awareness Campaign on the safe use of pesticides in Dahi, Dhar district MP. The DSC and IRFT (International Resources for Fairer Trade) launched a four-month training and awareness program for farmers on the safe use of pesticides to avoid health and environment-related hazards in Dahi blocks. About 2,438 farmers have imparted training through 97 events conducted in 58 villages of the Dahi block. The trainers' teams gave live demonstrations on Personal Protection Equipment (PPE) and other safety measures to be taken at the time of field spraying of pesticides. About 450 farmers participated in a live demonstration of the I-Safe Campaign which was held on weekly market day.

**Mission Sunehra Kal in Mhow, District- Indore, Madhya Pradesh**

Since 2012, DSC has been implementing the Mission Sunehra Kal project in Mhow block, Indore district of Madhya Pradesh with the financial support of ITC Ltd. The journey started with the launch of the Integrated Water Management Program (IWMP-02) based on the Public Private Partnership (PPP) model in 2002.

After completing IWMP-02, the Mission Sunehra Kal initiatives were expanded to another adjoining 30 villages of the Manpur sub-block region from the years 2018 to date, covering 9.052 hectares of area.
Major highlights of activities

Water Conservation

During the financial year 2021-22, 7 water harvesting structures were constructed, including the renovation of 4 check dams and the construction of 3 new stop dams, creating a water storage capacity of 64,472 cum and an irrigation potential of approximately 90 hectares. Nearly 645 lakh litres of water are expected to be saved through this intervention. The total cost of construction of the water harvesting structures is about Rs. 66 lakhs, of which the community contributed nearly Rs. 3.3 lakh.

In addition, 8 Farm ponds were constructed under minor water harvesting structures, creating 16,315 cu m of water storage capacity and irrigation potential of more than 12 hectares, benefitting 8 marginal farmers. The total expenditure on these minor structures was Rs. 11.20 lakhs of which a local contribution of Rs. 27,174 was received. The structures will help the farmers to collect rainfall water more effectively and use it during the Kharif season.

Soil Conservation

714-hectare area has been covered under treatment work, which includes stone bunding, farm bunding, lose bolder structure and gabion works. All these works treated the ridge area of the watershed and undulated land of individual farmers, and covered intervention areas such as Gadaghat, Kalikiray, Olani, Naharkhedi, RaiKunda Sherkunda, Barkheda, Gokliyakund, Sejgardh. The work generated 3170 employment days for local labour.

Biodiversity promotion

Plantation work was carried out on 49 hectares of the area including 6.75 hectares of government land and 42.40 hectares of private land. Nearly 5000 horticulture plants/fruit trees of various varieties including mango, lemon, custard apple, jackfruit, naseberry, myrobalan, blackberry and guava were provided to 115 beneficiaries in the intervention area.

Integrated SMART Agriculture Practice

In the financial year 2021-22, DSC promoted 28 Farmers’ field schools (FFS) across 28 climate-smart villages that covered 588 farmers. Cumulatively, the reach of smart village activities extended to 4,118 farmers in 2,649 hectares of cultivated area.

- 1,500 farmers received weather forecasts, as well as market and crop-related information through WhatsApp, voice calls and text messages.
- 100-hectare area covered through sowing using broad bed furrow technique. Climate-resilient techniques of farming were disseminated to 3,000 farmers which helped them in improving and maintaining the organic carbon content in the soil.
- The Agriculture Business Centres achieved a turnover of Rs. about Rs. 5 lakh in bulk input procurement and supply to members and they saved about Rs. 10,000 from the procurement deal.
- 24 capacity-building events conducted in collaboration with Krishi Vigyan Kendra and other agencies benefiting 517 participants.
• Provided farmers training on seed banks and established two wheat seed banks in the intervention area. Close collaboration with the Indian Agriculture Research Institute Indore led to the introduction of a new variety of breeder seed which was demonstrated on 28 plots of targeted farmers. Farmers’ yield increased by around 4-6 quintals and they retained the seed in the seed bank instead of selling them in the market. The farmers received benefits worth Rs. 4,72,460 from governments’ farmer welfare schemes.

Award and Recognition

Indian Agriculture Research Institution Indore, honored with a certificate of appreciation to the DSC Mhow team for its significant contribution to the implementation of the “Tribal Sub plan scheme” in Mhow block.

Also, an award of Rs. 20,000/- for the first rank at the district level was received by the “Shri Ram” Self-Help Group promoted by DSC in collaboration with ATMA Department.
IMPROVING WATER SECURITY AND ENHANCING RURAL LIVELIHOOD THROUGH PARTICIPATORY NATURAL RESOURCE MANAGEMENT INITIATIVES

Project Area: Barod Block, Agar Malwa District M.P

DSC and the HDFC Bank under Parivartan program jointly initiated a Focused Rural Development Program in January 2022 focusing on water and Livelihood. The project will be implemented in 50 villages of Barod Tehsil of Agar Malwa district across 9,154 households covering about 29,000 Ha. The project also falls in the 3 major watersheds of the Aau, Kacchal and Kantal rivers.

During the inception period of the 3 years project, 20 IWRM committees were formed with a total of 507 members (445 men, and 62 women) that will lead the project planning process. Also, 7 Self Help Groups with 70 members were formed to mainstream the women in the project activities and 10 Local Resource
Persons were identified for coordinating the project activities at the village level.

In addition, 412 sites were selected for street solar lighting which will be installed in the next year as an entry point activity.

I-Safe Awareness Campaign on the safe use of pesticides in Dhar district, MP

The DSC and IRFT (International Resources for Fair Trade) launched a four-month training and awareness program for farmers on the safe use of pesticides to avoid health and environment-related issues that have impacted the Gandhwani and Dahi blocks of the Dhar district. About 5,000 farmers have imparted training through 198 events conducted in 113 villages each from Gandhwani and Dahi blocks. 500 on-site behavioural counselling sessions were conducted for daily wage workers and their families. In addition, a 50-day-long Jagrati Yatra was organized covering 193 villages where animated characters and audio-visual shows were used to spread awareness about the Covid-19 pandemic. During this program, 901 PPE kits were distributed for demonstrating safe practices while spraying pesticides. The project is making a positive impact on the farmers as the sale of safety kits has increased in the local market and the scrap pesticide containers are no more used for domestic purposes.

Sustainability and value-added practices in agriculture

DSC implemented the agriculture sustainability and value-added practices in the agriculture project supported by GIZ in 20 villages of Manawar block in the Dhar district to minimize the impact of COVID-19 on agriculture and improve livelihood. The short-duration project promoted low-cost natural farming, its importance, and the reduction of dependency on market products in farming as the COVID-19 pandemic impacted input supply both in quality and quantity.

Several capacity-building events were carried out including Training of Trainer module-based training and exposure and a mass awareness campaign and video show benefiting more than 2000 farmers.

Animal vaccination camps were organized with the veterinary department covering treating 836 animals. About 25 farmers were provided support to start green income generation activities such as vermicompost production, creeper vegetable cultivation, backyard poultry and goatary.
No. of Districts: 3 (3)
No. of Blocks: 9 (11)
No. of villages: 372 (372)
No. of Households (HHs/H): 1,28,517 (1,28,517)
No. of Hs/H covered by DSC projects: 23,000 (51,967)
Area covered by DSC projects: 51,967 (51,967 ha.)
No. of Community-Based Organisations: 886 (886)

Key interventions:
- Participatory Irrigation Management (PIM)
- Integrated Watershed Management
- Sustainable Agriculture & Enterprise Development
- Savings and Credit
- Strengthening Govt. Schemes at village and block level

Note: Cumulative figures are given in parenthesis.
Water Stewardship Program – Ghod Basin

The Ghod river is a tributary of the Krishna River which connects to the Bhīma River below Shirur taluka, Pune district. The basin is spread across Ambegaon, Junnar, Khed and Shirur talukas of Pune and Parner and Shrigonda talukas of Ahmednagar District. The entire basin has an unequal spread of rainfall, with high ridges receiving good rainfall of up to 2500 mm and lower areas receiving an average of 400-450 mm.

ITC under its Mission Sunehra Kal Programme decided to initiate water stewardship in the entire Ghod river basin which is in the catchment of ITC’s two factories (ITD & Foods) in a systematic and planned manner by involving credible organizations to improve water productivity in the basin through demand and supply-side management.

To promote off-farm and on-farm water use efficiency, DSC is supporting ITC as a knowledge and capacity-building partner in Participatory Irrigation Management (PIM) and contributing to the development of rainfed villages in the basin based on its long experience. The partnership began in 2015-16, and since then it is working in the Junnar block of the Pune district covering 80 villages and an area of more than 53,000 hectares. The selected villages have nearly 36,000 households with a total population of nearly 1,65,000.

The unequal spread of rainfall across the basin affects agricultural production in the project area. Also, post-monsoon, the basin has a negative water balance. DSC and ITC are trying to address these issues through demand and supply-side interventions to make the basin water positive.
Specific program objectives

- **Reduction of crop water demand** of major crops in the area by improving water productivity and related net returns for farmers.
- **Improving sub-surface flows in non-monsoon season** and also improvement in groundwater level in project villages focusing on managed aquifer recharge.
- To work for overall **biomass development in the basin, through biodiversity conservation** to improve green coverage and community livelihood.
- **Strengthening of WUAs** of the Kukadi project focusing on water budgeting, water demand, on-farm WUE and O & M activities.
- Scaling up of sugarcane PoP through sugar cooperatives staff.
- Liaison with the Forest department, GPs and MGNREGA to implement soil and water conservation and plantation activities as per the Detail Project Report.
- Capacity building of different institutions like women SHGs/Agribusiness Centres and Joint Forest Management Committees.

During FY 2021-22, the following interventions were carried out by the DSC’s field team.

**Soil & Moisture Conservation activities**
The project area has an average rainfall of 500-600 mm but due to the uneven rainfall patterns across the basin, there is a shortage of irrigation water post-monsoon. To address these issues, as part of the Ghod water stewardship program, 1655 Ha area in the project villages was treated during FY 2020-21 with 9764 cu m Waste Area Treatment and 564 cu m Core wall gabion (25 nos.) to arrest soil erosion and improve soil moisture. In addition, 137 groundwater recharge structures including recharge pits and sub-surface barriers were constructed to improve groundwater levels. Also, grass/tree seeding in private wastelands/common lands over 190 Hectares of the area the promoted to improve biodiversity conservation.

**Table: Target vs achievement status 2021-22**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Activity</th>
<th>UoM</th>
<th>Plan</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Treatment</td>
<td>Cu m</td>
<td>10000</td>
<td>9764</td>
</tr>
<tr>
<td>2</td>
<td>Groundwater recharge structures</td>
<td>Nos.</td>
<td>120</td>
<td>137</td>
</tr>
<tr>
<td>3</td>
<td>Biodiversity area</td>
<td>Ha</td>
<td>5000</td>
<td>5620</td>
</tr>
<tr>
<td>4</td>
<td>Watershed area</td>
<td>Ha</td>
<td>2530</td>
<td>1655</td>
</tr>
</tbody>
</table>

**Climate Smart Agriculture (CSA)**

Under the Climate Smart Agriculture initiative, DSC has promoted climate smart parameters such as water smart, seed smart, nutrient smart, weather smart and knowledge smart in the project area by establishing village-wise Farmer Field Schools (FFS) to improve productivity, net income and water use efficiency and
reduce the cost of cultivation. During the FY 2021-22, DSC promoted CSA practices in about 5700 Ha area covering more than 6000 farmers by establishing 80 Farmer Field Schools. To increase the area coverage and scale up the package of practices in sugarcane, it also tied up with sugarcane factories to train factory supervisors as master trainers.

**Table: Target vs Achievement status 2021-22**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Activity</th>
<th>UoM</th>
<th>Plan</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Farmer Field Schools</td>
<td>Nos.</td>
<td>80</td>
<td>80</td>
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<tr>
<td>2</td>
<td>Sustainable Agriculture Area</td>
<td>Ha</td>
<td>6500</td>
<td>5728</td>
</tr>
<tr>
<td>3</td>
<td>Farmers coverage</td>
<td>Nos.</td>
<td>5500</td>
<td>6114</td>
</tr>
<tr>
<td>4</td>
<td>ABCs</td>
<td>Nos.</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>Irrigation Units</td>
<td>Nos.</td>
<td>150</td>
<td>80</td>
</tr>
<tr>
<td>6</td>
<td>Compost Units</td>
<td>Nos.</td>
<td>100</td>
<td>40</td>
</tr>
</tbody>
</table>

**Integrated Command Area Development in the Ghod project area**

- The project partners collaborated with the Water Resources Department, Maharashtra to improve water use efficiency in command areas and the Maharashtra Forest Department to increase biomass cover of flora and fauna in the upper catchment of the Ghod basin. During the reporting year, 46 WUAs were trained on water use efficiency practices covering water budgeting, water indenting, on-farm WUE practices and O&M of canal systems aligned to the manual developed under the ICAD project with the WRD. The partnership with the Forest Department has helped mobilize the local community and GPs to initiate SMC works as per the DPR.

- World Women’s Day, Kisan Diwas and Women Farmer Day were organized in collaboration with KVK Narayangaon. As part of efforts to improve water literacy, a demonstration of 7 V-notches was made in control plots to measure the discharge of irrigation water and calculate water use efficiency in comparison to the demo plot.

- Uneven rainfall and depleting groundwater over the years have had a severe impact on the availability of water both for humans and cattle, as well as for irrigation purposes. Over time, however, the community’s understanding of the recharge interventions under the project and changes in the availability of water regimes has improved. The community has become aware of the benefits of water-efficient techniques like a pre-germinated seedling, micro-irrigation, trash mulching, wide spacing in sugarcane, raised beds with the drip in onion crops etc. and have started practising these techniques in their fields. Therefore, going forward, one of the important tasks for DSC is capacity building of different Community-Based Organisations in the village that could work collectively for more effective use of natural resources.

- There is a significant difference in yield and net income of sugarcane and onion farmers comparing demo and control plots. Also, there is a huge difference in groundwater levels between treated and untreated areas as a result of which, the team has planned to treat the remaining area, promote water use efficient techniques with new farmers, and scale up PoP through sugarcane factory supervisors.
CASE STUDY – BENEFITS OF SOIL AND MOISTURE CONSERVATION

Navalewadi village is located in a dry region of Junnar block, Pune district Maharashtra and therefore faces a problem of uneven rainfall and a prolonged dry spell. As a result, the post-monsoon period i.e. after December every year brings water scarcity to the village. Prakash Bhivaji Navale, a farmer of Navalewadi has 4 acres of land on which he grows onions. He has one borewell and two open wells in his field. Till 2017-18, the water level in Prakash’s wells was very limited and available only up to October. The lack of alternatives for irrigation threatened the survival of his onion crop and an annual loss of 5-7 tonnes of production was a regular phenomenon.

In 2017, the ITC Mission Sunehra Kal Ghod Water Stewardship program constructed water harvesting and groundwater recharge structures in Navalewadi village in the upper catchment, and two structures were constructed near Prakash Navale’s field as well. With these, the water level in Prakash’s open well and borewell has improved and now water is available till March. Being part of the FFS, he has also adopted water-efficient techniques in his field as a result of which, his yield has increased up to 6 tons per acre with an assured income of Rs. 90000 to 100000 per acre along with timely availability of water. Prakash is now growing short-duration vegetables after onion on 1.5 acres of land using the available water in the post-monsoon period, resulting in an additional income of Rs.1-1.5 lakhs per acre.
CASE STUDY- ENVIRONMENTAL AND ECONOMICAL BENEFITS OF SYSTEM OF SUGARCANE INTENSIFICATION

Jadhavwadi village comes under irrigated area because of the Kukadi irrigation canal/river and therefore has abundant water. Kisan Manjaba Jadhav, a farmer of Jadhavwadi has 0.53 ha. land out of which he uses 0.40 ha. for sugarcane cultivation. He has one bore well and one lift irrigation to irrigate his land. Kisan got connected with the Ghod Water stewardship project in 2018 and became a member of the FFS. Before long, he shifted from traditional farming to modern climate-smart farming and took training from Vasantdada Sugarcane Research Institute on sustainable sugarcane cultivation. He carefully planned the use of balanced fertilizers and organic fertilizers as per the recommendation of the Soil Health Card. He also shifted to a new CO-86032 variety of sugarcane which increased production by about 40% and used foundation seed brought from VSI instead of the old long-duration variety CO-265.

Earlier, Kisan was getting only Rs. 1,22,000 from his 0.40-hectare of sugarcane cultivation and water and labour were being overused due to traditional farming. After becoming a part of the project, he adopted a low-cost nursery, wide spacing, drip irrigation and smart nutrition management techniques under DSC’s support which increased his production, reduced the cost of cultivation by about 20% and increased his net income by almost 40%.

He also stopped supplying his cane to the local sugar factory and sent it instead to Punjab and Haryana traders for sugarcane juice extraction. Because of the shift to traders, he got Rs 4,100 per tonne of the crop from Punjab and Haryana traders instead of Rs 2,700 per tonne from the local sugar factory. After joining the CSV programme, Kisan's production increased from 60-65 tonnes to more than 100 tonnes from the same 0.40-Ha, resulting in an income of Rs. 4,36,600, which after deducting the cost of production of approx. Rs. 32,000/- per acre, gave him a net return of around Rs. 4,00,000/- or Rs. 2,80,000/- more than traditional farming.

After the sugarcane harvest, Kisan started to do trash mulching in his field which helped in the retention of moisture for longer periods, increased soil biomass and also helped to prolong the period between two irrigations. This resulted in a saving of more than 40% of water. He is now guiding other FFS farmers to adopt CVS practices and harvest higher yields while reducing water use.
Enhancing Incomes and well-being of tribal and other communities in Nandurbar district, Maharashtra

DSC and the Axis Bank Foundation are jointly carrying out an ambitious integrated Natural Resource Management and Livelihood Enhancement project in the Nandurbar and Navapur block since the year 2019, where 80% of the population is tribes and the Human Development Index is low. The area is continuously under drought and its impact is visible on tribal life. The project targets to help 45000 marginal and other deprived households spread in about 150 tribal dominant villages by involving them in sustainable natural resource management and on-farm livelihood activities for a period of five years; starting from October 2018 to September 2023. The project aims to enhance their income levels up to a minimum of Rs. 85,000/- per year through an integrated approach of NRM and Livelihood promotion activities. A team of 51 professionals operates from four field cluster offices which are located in Chinchpada, Dhanora, Khandbara and Nandurbar. The highlights of major interventions for the year are given below.

Ridge Area Treatment

About 80% of agricultural land in the project villages is rainfed. A majority of project villages have hilly or highly undulated ridge areas which are to be treated with physical and vegetative measures to check soil erosion and in-situ moisture conservation. About 870-hectare land in the ridge area was treated with various physical measures such as Continuous Contour Trenches, Water Absorption Trenches, and Loose Boulder Structures. It will reduce soil erosion considerably and will help in regenerating vegetation. Plantation of 56,850 Saplings.

Cumulatively 1043 hectares of the area have been covered by the project under these activities in 75 villages.
Drainage Line Treatment: To reduce soil erosion as well as to recharge the surrounding groundwater resources such as open wells and bore wells, around 122 gabion structures have been constructed. A total of 150 surrounding wells can benefit from constructing these gabion structures. Also, 1342 loose boulder structures have been constructed in the 1st and 2nd order stream to reduce the flood velocity in the ridge areas.

Area Line Treatments: 471 units of wasteland have been converted into agricultural lands through levelling and farm bundling.
Water Harvesting and Ground Water Recharge Initiatives: In total 121 water harvesting /recharge structures have been developed creating 1821000 cubic meters of water storage potential. This includes Repairing old structures and rehabilitation of old structures such as check dams, percolation tanks, etc. in the drainage line and seasonal river. The series of structures in particular the drainage line has improved the base flow. About 84 ha. Irrigation potential has been created for 814 families in 25 villages.

Cumulatively 164 structures have been developed creating 24,40,031 water storage that would irrigate 1150 hectares of cultivated land by 1096 Families in 32 villages.
Participatory Ground Water Management

About 580 dug-well were being monitored by 40 Bhujal Jankars (Para Geohydrologist) on monthly basis for the rise and fall of groundwater for the creation of awareness among community members on the vulnerability of groundwater sources and scope of recharge and safe harvest of water. The Bhujal Jankars are involved in taking water level reading from wells every month to draw village aquifer maps and trends of groundwater fluctuation which then is to be shared with the Community Based Organizations to take appropriate actions for demand and supply side management of groundwater and surface water.

Integrated Agriculture Practices

The situational analysis has been carried out on 8 Nos of principles crops by the Agri staff through thematic Participatory Rural Appraisals to identify the gaps between the conventional and scientific methods of crop cultivation, then after the extension of improved crop practices has been introduced in 2 crops viz. Gram and Wheat. 895 Demonstration carried out on a system of root intensification in paddy, wheat and sugarcane, gram and vegetables. 407 Farmer Field Schools were formed where 2897 farmers participate in agriculture extension activities.

Promotion of technologies for risk mitigation, drudgery reduction, and cost reduction demonstrations has been focused to increase farm income, which has benefited 9787 Nos of farmers through vermicomposting, biopesticides, Input supply, seed treatments & soil testing, etc.

2191 soil samples were collected from 55 villages and tested in the project laboratory and at the KVK soil testing lab. More than 55% of beneficiary farmers adopted the recommendation of soil testing reports.
548 Wadi were developed and funds from the MGNREG scheme were mobilized for post-plantation care and to ensure 100% survival.

Saving and credit and Income generation activities by women collectives

37 women enterprises were formed comprising 120 women. They initiated various income-generating activities through “Dal processing”, Chilly processing, groundnut grading etc. 69 post-harvesting units have been set up benefiting 280 households for value addition and better price realization by farmers. Portable and single-phase separated machines such as Paddy Threshers, Maize Threshers, Pellet making machines, and Winnowing Wheels for seed cleaning was provided to the women’s enterprise groups.
Livestock Development

Agricultural income is not sufficient unless it is supplemented by additional vital income from allied activities such as livestock rearing that enable rural poor to survive during distress and in good times even thrive. Nearly 5639 animals were vaccinated by arranging Animal Health Camp in 55 project villages to promote livestock development in the villages.

227 resource-poor households belonging to women SHGs were supported to start backyard poultry units as a secondary and sustainable source of income. These groups were trained and provided 100 chicks to each SHG at the initial stage. A professional para vet was appointed as Pashu Sakhi to monitor any discrepancies in every village.

<table>
<thead>
<tr>
<th>Backyard Poultry</th>
<th>Nos supported</th>
<th>Mortality %</th>
<th>Balance Birds (Nos)</th>
<th>Expenditure Per Bird (Rs)</th>
<th>Total Income from the bird (Egg+Meat)</th>
<th>Net income per bird</th>
<th>Net Profit per Unit</th>
<th>HHs Supported</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry</td>
<td>100</td>
<td>20</td>
<td>80</td>
<td>85/-</td>
<td>385/-</td>
<td>300/-</td>
<td>24000</td>
<td>227</td>
<td>5448000</td>
</tr>
</tbody>
</table>

Promoting water positive watershed through Integrated Water Resource Management in the Tapi River Basin

This project which has been jointly initiated by DSC and the Mahindra and Mahindra Foundation covers a geographical area of about 5,000 hectares spread over a cluster of 9 villages having nearly 1,800 HHs and a population of 9,000. The project aimed at ridge area treatment, land reclamation and development of water harvesting measures by the village community through capacity building of Gram Panchayats and Water User Groups. Major activities carried out under the project are highlighted below.

Ridge area treatment:

About 42-hectare land in the ridge area was treated with various physical measures such as continuous contour trenches, and water absorption trenches, while about 4900 cu m volume has been excavated to reduce soil erosion and is expected to help in regenerating vegetation. Cumulatively, 108 hectares of area in 6 villages have been covered by the project under these activities.
Water harvesting and groundwater recharge initiatives:

In total, 16 water harvesting/recharge structures have been developed, creating more than 84,000 cubic meters of water storage potential. This includes repair and rehabilitation of old structures such as check dams, percolation tanks etc. in the drainage line and seasonal river. 84 ha. irrigation potential has been created for 69 families in 7 villages. Cumulatively 43 structures have been developed, creating 180715 cu m water storage that would irrigate a 435-hectare area and benefit 282 families in 7 villages.

Drainage Line treatment:

To reduce soil erosion as well as to recharge groundwater resources such as open wells and borewells, 21 gabion structures have been constructed, which have benefitted 17 surrounding wells. Also, 77 nos. of Loose Boulder Check dam have been constructed in the 1st and 2nd order stream to reduce the velocity of the flowing water in the ridge areas.

Participatory Ground Water Management:

Over the last 2 years, 70 observation wells are being regularly monitored monthly concerning the fall of groundwater to create awareness among community members on the vulnerability of groundwater sources and the scope of recharge and safe harvest of water.

Soil improvement:

The excavation also provides a good amount of silt. Silty soil is usually more fertile than other types of soil and is good for growing crops since silt promotes water retention and helps in the aeration of the topsoil. Around 275 hectares of land have been made fertile by the application of silt, benefitting 240 households.

Plantation:

About 5000 Mahua, Bamboo, Karanja (Millettia pinnata), Sapota (Sapodilla) and neem saplings have been planted on earthen bunds, to help strengthen the Nala bunds and control soil erosion.

Integrated agriculture practices:

A situational analysis was carried out with the help of thematic Participatory Rural Appraisals on 8 principal crops by DSC’s agriculture experts to identify gaps between conventional and scientific methods of crop cultivation. As a result, improved crop practices have been introduced in 2 crops viz. gram and
wheat. A total of 7 Gram demos and 4 System of Wheat Intensification demos were conducted by 11 FFS and subsequently 264 farmers adopted the improved crop practices.

Promotion of practices for risk mitigation, drudgery and cost reduction through vermicomposting, use of bio-pesticides, input supply, seed treatment, soil testing etc. has also resulted in increased farm income, for over 250 farmers. To reduce the cost of fertilizer doses that are applied by farmers, 175 soil samples were collected from 7 villages and tested at the KVK soil testing lab. The report was explained to the farmers resulting in 55% of the farmers adopting the soil testing report recommendations.

**Awareness and capacity building:**

7 exposure visits were arranged during the year to a Rural Development Program implemented by AKRSP(I) in Dangs district of Gujarat to provide exposure to SMC activities, water management, multi-layer cropping patterns and organic market linkages. More than 500 farmers actively participated in this capacity-building event.

35 kits facility kits were provided to SHGs while 350 farmer group members received training on livelihood, dairy formation, goat farming, and institution building. 6 agriculture training programs were also conducted on natural farming, benefiting 62 farmers.
Project impact

I. Against the overall project target of harvesting or arresting 805 TCM surface runoff from 7 project villages till 2022, about 300 TCM surface runoff has been arrested. This has provided water access to villagers till the summer season which was earlier available only up to December.

II. The groundwater level in the project villages has increased by 2-3 meters and the area under Rabi and summer crops has also increased.

III. 7 villages that used to survive entirely on water imported from surrounding villages during peak summer have become tanker-free. It has reduced the drudgery of women in fetching drinking water for their families and they are now able to spend more time on productive work and care of their children.

IV. The silt excavated from water bodies and Nala beds has been used by farmers for their cultivated land. About 245 hectares of the area have benefitted from the fertile silt, with farmers observing an increase in crop production by 10-25%.

V. Farmers are using the stored water in check dams to provide supplementary irrigation to the Kharif crop in the event of long dry spells of monsoon. Some farmers have set up drip irrigation through convergence with government schemes and have started vegetable cultivation.

VII. 6 bio-fertilizer production units have been set up by as many farmer groups after receiving training on natural farming. The produced biofertilizer is distributed among farmers, which has helped in a cost reduction of 20-25% as compared to chemical fertilizers.

Improving tank productivity in partnership with WRD, Maharashtra

12 Minor Irrigation (MI) Tanks contributed by the government were identified (8 in Navapur and 4 in Nandurbar) in Participatory Irrigation Management initiatives. These 12 MIs cover 56 villages and have a command area of 11,206 hectares. The Water User Associations (WUAs) will be constituted under the provision of the Maharashtra Farmers’ Irrigation Management Act.

The following activities were carried out during the year 2021-22 under the project:

1. Different capacity-building activities such as training, exposure and meetings for command area farmers including:
   • 28 village-level meetings, attended by 756 members including 189 women
   • 15 WUA meetings, attended by 139 members including 32 women and 13 WRD officers.
   • 4 training events on operation and maintenance, good agriculture practices and water management, attended by 106 members including 65 women farmers.
   • An exposure of 30 women farmers to the Devrai Model of plantation.

2. 307 ha. area has been irrigated in the command of 5 irrigation projects in the 2021-22 Rabi season. Rs. 91,500/- worth of cess has been collected by the (proposed) WUAs and handed over to the
respective WRD officers. The major crops irrigated include wheat (110.84 ha), sugarcane (96 ha),
green gram (43.9 ha) and ground nut (11.82 ha).

3. The farmers took initiative for canal repair and maintenance and to reduce water loss through
different activities as below:
   • 14.75 km of canals of 4 irrigation tanks viz Pawala, Kokanipada, Raingan and Thanepada were
     cleaned by 145 farmers through the contribution of Rs. 24,100/- and with machinery support
     from the government.
   • Around 300 ft of tarpaulin sheet was laid in the canal to reduce seepage loss in 3 irrigation
     projects viz Pawala, Kokanipada and Thanepada, with a contribution of Rs. 7650/-
   • 10 gates were repaired by the government and beneficiary farmers in Waghshepa village of
     the Pawala irrigation project.

4. 24 demonstrations on good agriculture practices like soil testing, seed treatment, IPM/INM
   techniques and improved high-yielding seed varieties were conducted in the command area as part
   of demand-side management activities.

5. Physical works like continuous contour trenches, water absorption trenches, farm bunds and soil
   and moisture conservation activities were carried out in the undulated command area villages to
   stop land degradation and promote conjunctive use of surface and canal water.

6. 2 Farmer Producer Companies (FPCs) were promoted in which farmers from the command area
   have become members. The FPCs will help in the backward and forward linkage of agricultural
   produce, thereby reducing the cost of production, increasing crop yield and facilitating better prices
   for the farmers’ produce.
LEVERAGING CARBON FINANCE FOR SOCIO-AGROFORESTRY IN NANDURBAR, MAHARASHTRA

Agriculture is a major source of Greenhouse Gas (GHG) emissions, accounting for 60% and 70%, respectively of global anthropogenic emissions of CH4 and N2O, mainly due to the use of chemical fertilizers, pesticides and animal waste. This rate is bound to further rise as a result of an increase in the demand for food by a growing global population. Effective GHG mitigation by the agricultural sector requires an improved understanding of the factors behind different farms and systems.

The Water Resource Group 2020, Maharashtra government, VNV Advisory and DSC have collaborated to work jointly with communities to ensure that ecosystems are restored and sustainable growth is achieved through clean and low-carbon means. To respond to the problem of GHG emissions from agriculture, DSC and VNV Advisory plan to support about 45000 vulnerable tribal households in Nandurbar, Maharashtra in regenerating their existing and potential livelihoods and ecology.

The pilot project will be undertaken in a subset of the area in which DSC is currently working through PPCP projects targeting a 90,000-ha area of Nandurbar district in Maharashtra. 75% of this area would be covered by sustainable agriculture, extension activities and livestock management, while the rest (25%) by non-farm interventions and other activities.

Low Carbon Interventions:

The objective of low carbon interventions is to sustainably increase agricultural productivity and incomes; adapt and build resilience to climate change; and reduce or remove GHG emissions, where possible. A non-exhaustive list of key carbon interventions to adapt to the impacts of climate change and mitigate emissions is presented below:

I. Precision Agro-forestry
II. Organic amendments
III. Livestock and Agri residue management
IV. Drip irrigation and other water efficiency measures
V. Reduced energy use for irrigation and pumping
VI. Improved agronomic practices in soil and nutrient management

These carbon interventions when successfully implemented through a formal monitoring, reporting and evaluation framework to measure outcomes, will be eligible for finance through a results-based carbon financing mechanism.

**Leveraging disruptive agricultural technologies:**

Through this pilot, data from satellites, drones, IoT sensors and smartphones, combined with analytical solutions through predictive analysis, data science, imaging, knowledge algorithms and AI on technology-based platforms will provide inputs for agri-water advisory services for farmers and farmer collectives to improve agricultural productivity and sustainability.

**Blending innovative financing models and multi-stakeholder engagement**

The following innovative financing models are being integrated into the program:

- Samunnati to provide credit linkages to FPOs engaged in promoting sustainable agriculture. An existing USAID-Rabobank Credit Facility to provide first loss guarantee support in agroforestry and sustainable landscape sector to support FPOs and enterprises actively engaged in promoting sustainable agriculture activities in the district.

- VNV Advisory to provide a Results Based Carbon Financing (RBCF) mechanism as an incentive to farmers/farmer groups to successfully transition from existing agricultural practices to low-carbon practices. This will be payable every year for 10 years from project inception and can be used by these farmer groups for various activities such as backward integration, market linkages, enhanced value chain creation as well as the broader agenda of increasing creditworthiness and more financial inclusion. Algorithms based on the baseline data captured through set processes and methods will be used to compute the payouts.
**Expected Project Outcomes:**

- The primary outcome would be the crystallization of a long-term development model that offers huge scope to achieve a sustainable livelihood scenario for the tribal landscape of the Nandurbar district of Maharashtra.

- There will be a well-informed transition toward farm and non-farm-based practices that are cost-effective and reduce carbon emissions, eventually making the tribal population of the region more resilient to the future impacts of climate change through gradual mitigation and adaptation frameworks.

- There will be stronger institutional establishments at every layer of DSC-promoted PIs (people’s institutes) such as primary group(s), cluster(s) and federation(s) in terms of organizational structure, internal governance, operations and their engagement with the external entities (development institutions and organizations).

- There will be improved access, optimized use and continuous recharge of the existing and created natural resources concerning the project domain for the livelihood enhancement of the local community. These would include the farm and/or non-farm-related assets derived from the water, soil, flora, fauna and habitation.

- Unique financial model combining the benefits of both Carbon Finance and Ecological Return to the community and implemented institution.

**Rewards Utilization**

The earned rewards can be invested or utilized by the promotion of FPCs and their capitalization with the funds. Inception and implementation of sustainable agriculture projects to be carried out by DSC with the support of Government line departments through the influx of foundation costs. The rewards can be spent on the same impact area village(s) for further development of components and products. The optimal size of rewards could be used as financial capital by the DSC to manage its costs of project operations and implementation.

**'POSHANAM' - Securing Nutrition and Enhancing Resilience**

**Background**

Malnutrition is a problem that is acutely felt in tribal districts like Nandurbar and has therefore been a focus area for the Women and Child Development and other departments of the government. Welthungerhilfe (WHH) and GIZ are already working to address malnutrition among women and children in areas where it is high, such as in the tribal districts of Shivpuri and Shyopur in MP. As a result of these efforts, positive changes in the nutritional status of women and children have been seen. Looking at its success, the initiative is being expanded to the Nandurbar district of Maharashtra in partnership with DSC from 2022 onwards.

An important part of this collaboration is the 'Poshanam' project (SENU- Securing Nutrition, Enhancing Resilience), which is being implemented by GIZ in partnership with the Department of Women and Child Development (DWCD), WHH and DSC with the help of various local NGOs.
Project Objectives:

1. To retain the knowledge and practices of effective community nutrition education in districts where the project has been previously implemented and to build these districts as centres of knowledge (guidance centres) for further expansion of the project.

2. To implement the 'NPLA-Nutrition Participatory Learning and Action' program and complementary activities.

3. To empower the DWCD to replicate an 'Integrated Nutrition-Sensitive Approach' that is evidence-based and consistent with the State Nutrition Policy and can be scaled up elsewhere in the State.

Specifically, the project aims:

- To increase knowledge and awareness among people about diet diversity, maternal and childcare and Water, Sanitation and Hygiene (WASH) – both personal and community - and improve their current practices.

- To increase the availability of nutritious food for women and their families.

- To strengthen nutrition governance at the community level (Nutrition Sensitive Micro planning).

Project Area:

The project will be implemented in all the villages of the district and will focus on the nutritional status of women in the reproductive age group (15-49 years) and children in the age group of 0-23 months.

<table>
<thead>
<tr>
<th>Number of Blocks Covered</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Villages Covered</td>
<td>946</td>
</tr>
<tr>
<td>Number of Anganwadi Workers+ Supervisors to be Covered</td>
<td>1967</td>
</tr>
</tbody>
</table>

Project Planning and Phases:

The program officially began in Jan 2022 with online training and orientation of the project team. The team was on board in February 2022 followed by rigorous induction training and exposure to successful projects like Sheopur, and Madhya Pradesh to gain knowledge about nutrition education and peer learning and also to understand MGSA’s work in the SENU project. During the exposure visit, a discussion was carried out on creating awareness of diet & diversity through the display. There were 14 participants from DSC, SSP and MGSA teams presented. Poshan Matka, Rangoli, Videos, field visits, 10 food groups and motivational stories by the community were exhibited and spread awareness about nutrition, homestead nutrition garden and how to control malnutrition and malnutrition discussed in demonstration villages.

In April and May 2022 team members visited different stakeholders and AWC to build good relations and understand Anganwadi roles in community development. During this month team members understood all health situations in the community.

July 2022 month TOT takes place through the team to gain knowledge about N-PLA training for AWW as well as team members’ capacity building about nutrition, health and Community Nutrition Garden take place.
Bajaj Water Conservation Project, Aurangabad district, Maharashtra

DSC is working in 15 villages of Gangapur and Aurangabad blocks of Aurangabad district in Maharashtra as part of the Bajaj Water Conservation Project (Phase-II). The objective of the project is to arrest 70% of runoff and increase the groundwater table through water storage activities like check dams, Nala deepening-widening, aquifer recharge shafts, core wall gabion, etc. The project also aims to fulfil the drinking water needs of the village through the digging of a community well for the gram panchayat.

Under the project, different village institutions like Village Development Committees and Water User Groups have been formed and capacitated to take care of the assets created. Also, a cadre of local resource persons including women has been developed to ensure participation in village-level activities, the long-term sustainability of created assets and the collection of well-monitoring data.

Over the past four years of the Bajaj Water Conservation Project (Phase-II), the following major works have been completed:

Table: Cumulative achievement of project activities:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Activity</th>
<th>UoM</th>
<th>Achievement till March 2021</th>
<th>Achievements in 2021-22</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nala deepening &amp; widening</td>
<td>No</td>
<td>53</td>
<td>7</td>
<td>60</td>
</tr>
<tr>
<td>2</td>
<td>Deepening of existing percolation tank</td>
<td>No</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Construction of Cement Nala Bund (CNB)</td>
<td>No</td>
<td>27</td>
<td>17</td>
<td>44</td>
</tr>
<tr>
<td>4</td>
<td>Repairing of existing CNB</td>
<td>No</td>
<td>4</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Core Wall Gabion (CWG)</td>
<td>No</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Repairing of existing Earthen Nala Bund (ENB)</td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Farm pond</td>
<td>No</td>
<td>20</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>Drinking water community well</td>
<td>No</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Recharge shaft</td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
**Project impact**

- Stored water in surface water bodies created under the project has helped provide 2 supplementary irrigations during the late Kharif and Rabi seasons.
- There is an increase of nearly 300 ha. of the area under agriculture due to the deposition of silt.
- Increased rate of groundwater recharge and rise in the water table by 5 meters is seen.
- Crop yield has gone up in cotton from 12 qtl. /Ha to 22 qtl. /Ha. and wheat from 10 qtl. /Ha to 24 qtl. / Ha.
- 15 project villages have become water positive in terms of drinking water.
- Some economic growth is also witnessed among beneficiaries in terms of farm machinery, education and improved access to health facilities.
- More importantly, there is a decrease in farmer suicide cases.
A dream came true for Karbhari Ballai after water conservation initiatives

Karbhari Ballal is a farmer from Ambelohal village of Gangapur block in Aurangabad district and one of the members of the Water User Group (WUG) of the NDW 9 site (Madhukar Bankar). Ballal has 0.92 ha of land with an open well near the Nala Deepening and Widening structure. Although his land is quite productive, he is unable to cultivate his entire landholding due to insufficient water and has faced crop failure on multiple occasions due to uncertain rains. Also, his well holds water sufficient only for drinking purposes, that too up to January.

The DSC team started NDW work after the due process of the formation of the WUG and collecting contributions for the work. Ballal contributed Rs. 10,000/- for the work. During last year’s monsoon, the structure got filled with water and the water level in Ballal’s well also increased by 30-40 feet. Interestingly, the water table did not decline even after the rains stopped, which gave the family relief from the worry of crop failure.

Buoyed by the positive impact of the structure on water availability, Ballal and his wife decided to change the cropping pattern from crops like cotton, maize etc. which they had been taking for a long for the cultivation of vegetables like brinjal, chilly, tomato, bitter gourd, bottle gourd, lady finger and coriander. According to him, his total expenses for last year were about Rs. 60,000/- and the gross income from cultivation was nearly Rs. 2,50,000/-. After witnessing the impact, Ballal is extremely happy with the work carried out and says that his contribution of Rs 10,000/- has given him returns in many multiples, which he had never imagined!
RAJASTHAN

- No. of Districts: 1
- No. of Blocks: 2 (2)
- No. of villages: 36 (36)
- No. of Households: 5741 (5741)
- No of households covered by projects: 3020 (4169)
- Area covered by DSC projects: 6,978 ha. (10,114 ha.)
- No. of Community-Based Organisations: 174 (174)

Key interventions:
- Watershed Management
- Sustainable Agriculture, Crop Diversification
- WADI
- Savings and Credit

Note: Cumulative figures are given in parenthesis.
Livelihood Enhancement of Rural Families through Community Managed Integrated Natural Resource Management in Baran district Rajasthan.

Development of Rainfed Areas:

DSC has been involved in facilitating community-managed Integrated Natural Resource Management and Livelihood Enhancement initiatives in collaboration with the Mission Sunahra Kal of ITC. With implementation across a cluster of 36 villages since the year 2016, more than 4000 farmers and 8474 hectares of the geographical area in the Kishanganj and Shahbad blocks of the Baran district are being covered. The target villages have a dominant (66%) population of the “Shahariya” tribes. They are one of the most backward primitive tribes in India.

Work under the Natural resource management initiative:

During the year 2021-22, 5 check dams were constructed, creating a water storage potential of 43201 cum, increasing an additional 134 ha of land under irrigated section. Accumulative 22514 cum farm field bund done benefiting 123 households along with 5 Gabion Structures constructed and 25 pasture land development, with a total of 454 ha treated from both Gabion and Farm bund and worth Rs 10.14 Lakh Community Contribution done in kind. This intervention benefitted 42% of ST families, 16 % of SC families, and 42 % of other Communities and facilitate Rupees 39 Lakh Community contribution in kind. About 15,460 labour days were generated for those activities. Additionally, 36 wells were identified, and data collection of pre-and post-monsoon of the good inventory.
Promotion of sustainable agriculture practices:

The Direct Seeded Rice (DSR) method of rice cultivation was adopted by farmers in 6978 hectares area which helped them in reducing the cost of cultivation by Rs. 4550 per hectare. Ten demonstration models were showcased to increase awareness and adoption of sustainable crop practices for cultivating paddy and wheat, and the results have been encouraging. Further, women have been using these practices in developing kitchen gardens. More than 100 kitchen gardens were developed by women SHG members which have added to their food and nutrition security besides helping generate surplus production which could be sold in the local market to provide additional income during the challenging times of the Covid-19-induced lockdown.

Training and capacity building

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Type of Training</th>
<th>Covered Topic</th>
<th>No. of Male</th>
<th>No. of Female</th>
<th>Total beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water User Group Training</td>
<td>WHS training pre- and post-management, WUG formation, During the contraction of structure monitoring, and discussion about contribution.</td>
<td>121</td>
<td>26</td>
<td>147</td>
</tr>
<tr>
<td>2</td>
<td>Climate-smart village training</td>
<td>Training on INM &amp; IPM Practices in rabi crops, Training on Rabi crop sowing, Training on Rabi crop sowing</td>
<td>379</td>
<td>28</td>
<td>407</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td>Farmer’s Field School</td>
<td>Training on Management of insect-pest in Kharif crops &amp; PMFBY Scheme, Training on Jivamrut Pani and Ghanajivamrut, Mandap Wadi and vegetable production technical training program for women farmers under Sustainable Agriculture Project, Water drainage method in Soyabean crop.</td>
<td>1120</td>
<td>218</td>
<td>1338</td>
</tr>
<tr>
<td>4</td>
<td>SHG financial literacy training</td>
<td>Saving credit, scheme linkage awareness</td>
<td>11</td>
<td>425</td>
<td>436</td>
</tr>
<tr>
<td>5</td>
<td>Natural farming training</td>
<td>Making organic products like Jivamrut, Gan Jivamrut, and Bijamrut.</td>
<td>126</td>
<td>358</td>
<td>484</td>
</tr>
<tr>
<td>6</td>
<td>Farmer’s Field Day</td>
<td>Yield Analysis of Demo and control plot and crop demonstration BBF, DSR and Zero tillage</td>
<td>284</td>
<td>120</td>
<td>404</td>
</tr>
<tr>
<td><strong>Total beneficiaries covered</strong></td>
<td><strong>Total beneficiaries covered</strong></td>
<td><strong>Total beneficiaries covered</strong></td>
<td><strong>Total beneficiaries covered</strong></td>
<td><strong>Total beneficiaries covered</strong></td>
<td><strong>Total beneficiaries covered</strong></td>
</tr>
</tbody>
</table>

**Convergence with Government Schemes:**

A key strategy adopted by DSC for the sustainability of its initiatives is to leverage government schemes and programs for the benefit of the local community. Resources worth nearly Rs. 30 lakhs were leveraged from various departments such as KVK and Agriculture department to provide support to about 570 farmers. Details of convergence activities carried out are as follows:

- 7 solar pumps install under the PM Kusum scheme.
- 324 farmers received 3,860 kg seeds of black gram, soybean, maize, chickpea, and garlic
- 20 families received seed storage bins
- 20 farmers received 400 chicks for poultry through convergence with Krishi Vigyan Kendra (KVK) Antah and Agriculture Department.
- DSC also collaborates with KVK Antaha for various events. Soil scientists, agronomists, and officials from KVK actively participated in the village-level training and farmers’ exposure visits to the KVK.
- Please also add details of Zero Budget Natural Farming Kit, Irrigation Pipe etc.
Activities under National Coalition for Natural Farming (NCNF):

DSC is an active member of NCNF which is a state-level coalition of organizations working in Rajasthan and other states. The Baran unit of DSC participates in the regular network activities of the coalition. During the year, a pilot demonstration of natural farming was carried out with 300 farmers. The farmers learned to prepare “Bijamrut”, “Jivamrut” and “Ghanajivamrut” - organic fertilisers that can help rejuvenate the soil and increase farm productivity in the long run.

Institution and Capacity Building

DSC has promoted 115 Community-Based Organizations (CBOs) across 36 villages since it commenced work in Rajasthan. These include 62 Women SHGs, 36 Farmers’ Field Schools (FFS) and 17 Water User Groups (WUG). These organizations have a collective membership of 2150 members who actively take part in regular meetings to decide and act on a common agenda. DSC also carried out 126 capacity-building events related to financial literacy, production of organic compost, biopesticides, climate-smart village concept, conservative crop practices and use of improved farm machines, water resource management etc. benefitting 3216 participants including 1175 women and 2041 men.

Promotion of sustainable livelihoods for Scheduled Tribe communities through Wadi (Fruit Orchard)

NABARD and ITC have collaborated with DSC for implementing the Wadi project with the tribal community in 15 villages of Kishanganj and Shahbad Blocks of the Baran district. The project supports 500 poor tribal families through the development of agro-horticulture models as an alternative source of income generation for sustainable livelihoods. The model is based on developing one acre of land for small and marginal farmers through a combination of horticulture plants and a vegetable intercropping system. The graft of fruit crops like Lemon (Kanji) and Guava (L-49) was given to the farmers based on the recommendation of scientists from the Horticulture Department, Baran and ATMA department. During the year, 94 Wadis were developed on 94 acres of land, with 60 grafts of Guava and Lemon in each unit. Cumulatively, 500 wadis have been developed, benefiting an equal number of tribal families since the initiation of the project. In addition to the fruit crops, six types of vegetables have been grown by the farmers as intercrop and 10 farmers have grown creeper vegetables as well. The farmers gained an income of Rs. 52500 each from selling the creeper vegetables in both seasons. Water conservation measures coupled with water tanks using the micro irrigation (Drip) method saved approximately 70% of water compared to conventional methods in use.
List of training provided by DSC under the WADI project

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Training</th>
<th>No. of Trainings</th>
<th>Topics of training</th>
<th>No of beneficiaries</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Financial literacy</td>
<td>40</td>
<td>Understanding of Financial management</td>
<td>445</td>
<td>All SHG member</td>
</tr>
<tr>
<td>2</td>
<td>WADI management training</td>
<td>18</td>
<td>Improved agriculture practices and organic farming</td>
<td>543</td>
<td>Covered all FFS and other villagers</td>
</tr>
<tr>
<td>3</td>
<td>Exposure visit</td>
<td>6</td>
<td>Capacity building of WADI farmer’s</td>
<td>212</td>
<td>RSS Sawai Madhopur, BAIF, GVT, KVK</td>
</tr>
</tbody>
</table>

Monitoring visits were made to the project area by NABARD officials who expressed satisfaction with the plant growth and overall development of the Wadi in Kherla and Nayagav villages. The project also emphasizes the promotion and extension of Wadi and allied activities. In this context, 20 Wadi Farmers’ Groups and 60 women SHGs were formed in 15 villages. 15 field training programs and exposure visits were conducted for 126 farmers to different NGOs like BAIF, and Ranthambore Seva Sansthan to help them understand the various aspects of Wadi development. Deputy Director of Agriculture, Baran, and Assistant Director, Horticulture, Agricultural Technology Management Agency, Baran organized two horticulture training in the DSC project area at Amroli and Hatwari villages. One veterinary camp was organized for vaccination and awareness about fodder management. A health camp was also organized for the community where 342 tribals benefitted from the services provided during the camp.

Over the year, 150 Wadi farmers grew onions and were able to get a profit of Rs. 10.5 lakh after factoring in the cost of cultivation. On average, an additional income of Rs. 7000/ per farmer was generated. The project also supported 25 landless families through alternate livelihood opportunities such as sewing machines, cycle repair shops, goat rearing, and grocery shops for generating income.

DSC is an active member of KVK Antah’s Scientific Advisory Committee. The committee is responsible for preparing the district-level Annual Action Plan and its follow-up for quality training delivery to farmers in the district. DSC shares field learning at this forum to contribute to the development of farmer-centric capacity-building plans.
Success Story of a Model WADI Farmer

Raju Shahariya has a total land of 3 acres, out of which he used to cultivate 2 acres traditionally and keep 1 acre fallow. Raju was selected for the Wadi project and a garden was planted on the fallow land, in which 30 citrus and 30 guava plants were planted. DSC guided Raju on vegetable production through intercropping, as a result of which, he managed to earn nearly Rs. 75,000/- by selling vegetables in the local market over the last three years.

The holistic approach adopted by the farmer led to success

- Adoption of SOP for major crops wheat, soybean, and black gram through FFS training & exposure.
- Knowledge of agriculture inputs, better practices, agricultural schemes, daily local market rates & weather advisory through WhatsApp group.
- Livestock management training through animal health camp and department.

Table: Change in the income of Raju Sahariya

<table>
<thead>
<tr>
<th>Livelihood Type</th>
<th>Particulars</th>
<th>Before intervention</th>
<th>After intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Paddy</td>
<td>34400</td>
<td>51400</td>
</tr>
<tr>
<td></td>
<td>Wheat</td>
<td>68000</td>
<td>76000</td>
</tr>
<tr>
<td></td>
<td>Green gram</td>
<td>0</td>
<td>34000</td>
</tr>
<tr>
<td>Livelihood Diversification</td>
<td>Vegetable</td>
<td>0</td>
<td>25000</td>
</tr>
<tr>
<td>Institutional Linkages</td>
<td>Grocery shop</td>
<td>0</td>
<td>36000</td>
</tr>
<tr>
<td></td>
<td>PM Kisan</td>
<td>0</td>
<td>6000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>102400</td>
<td>228400</td>
</tr>
</tbody>
</table>
The success story of a Woman Entrepreneur

Sheela Bai was associated with the interventions of DSC and ITC through an SHG in the year 2018, after which she took training in making vermicompost through the SHG group. Sheela Bai subsequently made bed vermicompost and used it in her wheat crop, in which her expenditure on fertilizer was reduced by about Rs 4200. In the second year, Sheela Bai prepared three beds in which 150 quintals of vermicompost were prepared, of which 100 quintals of compost were sold at the rate of Rs. 6 per kg for Rs. 60,000/-. Similarly, Sheela Bai is getting an income of about Rs. 50-60,000 per year by selling vermicompost manure through her SHG for the last three years. With this extra income, Sheela Bai has been able to get her daughter enrolled for a B.Sc., Nursing.

Table: Change in the income of Sheela Bai

<table>
<thead>
<tr>
<th>Livelihood Type</th>
<th>Particulars</th>
<th>Income Before intervention (Rs.)</th>
<th>Income After intervention (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Soybean</td>
<td>60,000</td>
<td>80,000</td>
</tr>
<tr>
<td></td>
<td>Wheat</td>
<td>72,000</td>
<td>86,000</td>
</tr>
<tr>
<td>Livelihood Diversification</td>
<td>Kitchen garden</td>
<td>0</td>
<td>4,500</td>
</tr>
<tr>
<td></td>
<td>Vermicompost</td>
<td>0</td>
<td>60,000</td>
</tr>
<tr>
<td>Institutional Linkages</td>
<td>PM Kisan</td>
<td>0</td>
<td>6,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,32,000</td>
<td>2,36,500</td>
</tr>
</tbody>
</table>
The success story of a farmer who adopted toilet link biogas (TLBG)

Mr. Hari mohan Chandel was associated with the intervention of DSC and ITC through a Farmer Field school in the year 2018, under the program DSC & ITC. A toilet-linked bio-gas plant was constructed at his house with the support of the DSC-ICT project for promoting household-based climate-resilient green technologies. Since the construction of the structure sometime in mid of 2019, he has saved Rs.16,860/- by stopping the use of almost 12 LPG cooking gas cylinders and other benefits. In addition, he used the slurry as fertilizer which further reduced the cost of fertilizer.

**Table: Benefits of Toilet Linked Bio Gas**

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>Particular</th>
<th>Before TLBG</th>
<th>After TLBG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Use of compost in kg</td>
<td>175</td>
<td>450-500</td>
</tr>
<tr>
<td>2</td>
<td>No of gas cylinder refilled</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Fertilizer in kg</td>
<td>220</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>Production of Paddy crop per acre (quintal)</td>
<td>19.76</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>Savings per year in Rs.</td>
<td>0</td>
<td>16,860</td>
</tr>
</tbody>
</table>
3. ENABLING COMMUNITIES FOR PROTECTION FROM COVID-19 AND RESTARTING ECONOMIC ACTIVITIES

DSC directly works in more than 740 villages in 33 talukas of 18 districts of Gujarat, Madhya Pradesh, Maharashtra, and Rajasthan. In almost all the locations DSC works in, there are migrants and vulnerable sections of the community that have low incomes and insecure livelihoods. The second outbreak of the Covid-19 pandemic in 2021 was more devastating compared to the first wave in 2020 and greatly affected the rural economy, further exposing the vulnerabilities of these vulnerable sections. DSC was quick to respond to the need of the community in the summer of 2021 with the help of financial support from its existing partners i.e., Azim Premji Foundation, Axis Bank Foundation, Coca-Cola Beverage, RCRC, New Delhi etc.

At the national level, it actively joined the initiatives of the national NGO coalition on Rapid Rural Community Response to Covid-19 (RCRC) in which more than 60 reputed NGOs from across the country came together to minimize the impact of Covid-19 at the community level. As part of the coalition, DSC engaged in continuous networking, field research, capacity building, etc. Through RCRC, DSC received
assistance for initiatives aimed at providing relief and emergency supplies of sanitization material and ration supplies for vulnerable families to safeguard them from the pandemic.

The Ford Foundation and GIZ assisted DSC to enable rural communities to re-start their economic activities and also avail benefits of government schemes.

DSC played a key role between the Gram Panchayat, the village community, and the district-level Government Medical and Health Department in increasing the reach of the Covid-19 vaccination campaign to the last mile, especially in the tribal pockets of Aravalli and Banaskantha districts in Gujarat, Alirajpur, Indore and Dhar districts of MP and Nandurbar district of Maharashtra.

In all, DSC covered 1131 villages spread across 33 talukas in 18 districts of Gujarat, Madhya Pradesh, Maharashtra and Rajasthan through the promotion of Covid-19 appropriate behaviour, need-based support to the most vulnerable households for emergency supplies, developing resistance against the spread of pandemic and to re-start economic activities of agriculture, water, and livelihoods and also avail the benefits of government schemes.

The major highlights of the Covid-19 relief and support activities are summarized below;

- More than 3000 vulnerable families were identified from among 1131 villages and they availed emergency supplies, government schemes and services. DSC field teams and gram panchayat
members helped them in obtaining Aadhar Cards, special category certificates and open Bank accounts.

- DSC-assisted community resource persons coordinated with taluka-district level officials to provide access to government schemes to the community in remote villages.
- Economic recovery through support to 1220 income-poor farmers with agriculture input kits to help them restart farming.
- Emergency relief supplies of 72,919 masks, 35365 hand gloves, and household kits (ration, soap, and sanitizers) to 7202 households especially labour, daily wage workers, landless, and the economically backward. 3890 labourers were supported with isolation kits.
- 95 awareness rallies for vaccination were organized in collaboration with the health departments and as a result, 26,200 individuals were vaccinated in remote locations.
- 2913 Anganwadi/ASHA workers were supported with Covid-19 testing and protection equipment and materials as per the local need such as thermal gun/oximeter, digital thermometers, sodium hypo Chloride, self-Covid-19 test kit, hand gloves, PPE kit, face shield, etc.
- 193 field workers who worked closely with Covid-19 infected people were insured through special Covid-19 medical insurance.
- The building premises of primary schools, gram panchayat and village cooperatives were provided with basic sanitization materials and equipment.
- Mobilized gram panchayats to carry out Rs. 5.80 crores worth of physical work generating more than 1.82 lakh person days employment under MGNREGA, particularly in tribal blocks of 4 states.
- The gram panchayats, taluka panchayats and other government departments recognized DSC’s contribution to vaccination and awareness campaigns in the rural areas by awarding certificates.

**Support for the economic recovery of marginal farmers**

The GIZ provided special short-term grant support to DSC to enable marginal farmers and agricultural labourers in 100 selected villages falling under the cotton belts of Maharashtra, Gujarat, and MP to restart farming and stabilize their farm incomes. The project aimed at providing crop advisory services, information on government schemes, quality agriculture inputs, and backward and forward market linkages for the purchase and sale of agriculture products. The collective enterprises of women and Farmer Producer Organisations (FPOs) also received assistance to restart their farmer welfare services and supply agriculture inputs to the member and non-member farmers.
About 5000 small and marginal farmers were supported under this initiative covering 10,517 hectares of the cultivated area through the following activities.

- Handholding of the existing Water User Groups and Associations and women SHGs that are working on demand and supply side management of water for improving equity and reducing the cost of irrigation.
- Demonstrating proven farming practices for cost saving, risk mitigation, stabilizing/increasing production, and improving price realization.
- Providing vulnerable groups/individuals, with material and training support for restarting local procurement, processing and marketing of on-farm products.
- Supporting women groups for restarting savings and credit through convergence, setting up custom hiring centres, and off-farm and on-farm income-generating activities.
- Providing gap funding support to 3 FPOs for their operations, bulk purchase of inputs, supply of inputs at the doorstep of farmers in remote areas, general insurance, transportation, etc.

**Impacts of the interventions:**

I. Project could reactivate 36 SHGs belonging to resource-poor women in tribal villages.
II. Project could restart operations of 3 FPOs working in remote tribal belts of Alirajpur and Dhar districts in MP and Meghraj block in Gujarat.
III. Project could provide direct support to 15 enterprise groups for starting livelihood activities
IV. 145 farmers could get seed and organic inputs at their doorsteps in time without going to local cities.
V. Three FPOs could carry out Rs. 30.71 lakh worth of business turnover during the toughest time of lockdown while serving their members and other needy farmers.
VI. 105 families from 21 villages could sell their products in the market as a result of transportation facilities.
VII. Hand-holding support at the time of dire need was the most valued.
4. Piloting the Pradhan Mantri Fasal Bima Yojana (PMFBY) in Selected Regions of Gujarat, Madhya Pradesh and Maharashtra

Addressing the impact of climate change on agriculture has been one of the significant areas of DSC’s work over the past few years. Risk mitigation in agriculture through the development of a package of practices for climate-resilient crops along with weather-based crop insurance thus forms a key strategy of DSC’s programmes.

The government of India launched a program for crop insurance, the Pradhan Mantri Fasal Bima Yojana (PMFBY), which has been
operational in many states of the country since 2017. Gujarat was one of the states in which DSC partnered with the Ford Foundation to pilot the program in 10 blocks with help of Sajjata Sangh members. In 2020, after the PMFBY was made voluntary for the states, Gujarat decided to discontinue the PMFBY scheme in the state leaving the task of promoting risk mitigation through weather-based crop insurance for farmers unfinished.

In collaboration with the Agriculture Insurance Company of India (AIC), DSC promoted weather-based insurance products during Kharif 2021. Various block-level workshops and district-level meetings were organized for the dissemination of information about crop insurance products and also to provide a platform for farmers to interact with government officials and resolve their queries.

**Weather-based Crop Insurance (Kharif 2021)**

<table>
<thead>
<tr>
<th>Farmers</th>
<th>Sum Insured for Rs. 13.63 lakh</th>
<th>Payouts completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>258</td>
<td>47.96 hectares</td>
<td>Rs. 1.15 lakh</td>
</tr>
<tr>
<td>premium of Rs. 0.6 Lakh</td>
<td>The payouts</td>
<td>Farmers Benefited: 245</td>
</tr>
</tbody>
</table>

During Rabi 2021-22, the program with AIC was continued in 8 blocks of Gujarat in which 269 farmers took weather-based insurance for 72.08 hectares with a sum insured of Rs.18.10 Lakh by paying a premium of Rs 0.54 Lakh. During the Rabi season, there were no payouts as the weather variations were not observed. DSC used this opportunity to discuss with farmers how even though payouts cannot be guaranteed every time, taking crop insurance can help them in times of distress by making a payout for crop loss.

At present, two studies are being conducted by DSC – (i) Impact Assessment of the Piloting of PMFBY in 10 districts of Gujarat and (ii) Study of the implementation of PMFBY Phase 2 in 5 states - which are expected to be completed by the end of June 2022. Ensuring proper outreach by organizing various stakeholder workshops at the National, District and Block levels for sharing the findings of the studies will help influence and sensitize bankers, insurance agencies and Government Officers about the ground realities of implementation.

The Impact Assessment Study was done by Inclusive Development Partnerships, Ahmedabad covering 10 NGO partners and the study of the implementation of PMFBY in 5 states was done by DSC Foundation, Ahmedabad which covered Madhya Pradesh, Maharashtra, Rajasthan, Chhattisgarh & Uttarakhand in
which 57 villages and 556 respondents participated along with Panchayati Raj Institutions (PRI), District level Government officials, Insurance Company representatives and Bankers.

With approval from Ford Foundation, DSC has extended the PMFBY promotion in select remote, tribal areas of Madhya Pradesh and Maharashtra since December 2021. This was done through the initial Training of Trainers workshop organized for the DSC team at 10 locations in Madhya Pradesh and Maharashtra and intensive community awareness activities like one-to-one meetings, group meetings, cluster level meetings, campaigns undertaken for promoting PMFBY and mobilizing the community for Kharif 2022.

A total of 16000+ farmers in 311 villages have shown interest in becoming enrolled for Kharif 2022. This makes DSC hopeful that more and more farmers will enrol and start mitigating their agriculture risk through weather-based insurance.
5. FARMERS PRODUCER COMPANY

Krushidhan Producer Company Ltd. (KPCL)

The Krushidhan Producer Company Ltd. (KPCL) has emerged as one of the leading Farmer Producer Companies in Gujarat promoted by DSC Ahmedabad under the Companies Act, 1956. The main objective of the company is to provide mutual assistance to farmers through collective efforts for input supply, value addition of agricultural products, collective bargaining and sale of agricultural products, and welfare measures and facilities to the member farmers. The Registered Office of the Company is at the premises of DSC in Bopal, Ahmedabad with Cluster Offices in Vadnagar (Mehsana), Himmatnagar (Sabarkantha), Modasa (Aravali), Meghraj (Aravali) and Dhari (Amreli). In the year 2021-22, more than 10,000 farmers of 11 blocks benefited through input supply, trading, seed production, cattle feed processing and retail activities of
the company through block level Input supply centres. The company has also developed a network of about 28 small enterprise groups of women farmers for the production and sale of organic fertilizers and pesticides.

The affairs of the company are being managed by a Board of Directors comprising primary producers representing the clusters and an Expert Director from DSC. KPCL conducts a Board meeting every quarter wherein a review of planned operations and strategic issues is done, and an Annual General Meeting of its shareholders every year. The company’s day-to-day affairs are managed by a team of professionals and field supervisors. DSC with financial assistance from their partner agencies i.e. Foundation, APPI and GIG has been playing the role of an incubator to the company by providing financial and technical assistance and facilitating collaboration with the government, private sector, and other producer groups. The authorized share capital of the company is Rs. 45 lakh in the form of 9,000 equity shares of Rs. 500 each. At present, the company has 4409 farmers as shareholders including 3326 males and 1183 females and a paid-up share capital of Rs. 44.08 lakh as of 31st March 2022.
**Financial status and business turnover of the company**

Benefits to Farmers The farmers have cumulatively benefited to the tune of about Rs. 1.75 crores due to a combination of factors which include improved availability of good quality seeds, organic inputs, increased productivity, trading, potato contract farming etc. Also, local vendors have been compelled to reduce the inflated agriculture input price in the local market because of fair business practices followed by KPCL.

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**Adimjati Gramoday Producer Company Limited**

The Adimjati Gramoday Producer Company Limited (AGPCL) in Alirajpur district in Madhya Pradesh was formed in 2017. Presently it has 321 shareholders including 215 men and 106 women. The AGPCL is involved in supplying agriculture inputs to tribal farmers in about 32 villages of the Alirajpur and Sondwa blocks. The agriculture inputs include cotton, maize, wheat, soybean, black gram, green gram and vegetable seeds and locally made natural inputs such as neem oil, vermicompost and urine-based herbal pesticides. The company has also organized several training sessions for promoting a better package of crop practices, grading and packaging of pulses for farmers.

The AGPCL is managed by a Board of Directors comprising primary producers representing the clusters. DSC has played the role of an incubator to the Company for almost 6 years by providing financial, technical, administration and community organising support. The authorized share capital of AGPCL is Rs. 25 lakhs in the form of 5,000 equity shares of Rs. 500 each. At present, the company has 320 farmers as shareholders including 215 male and 105 female, and a paid-up share capital of Rs.1.60 lakh as of 31st March 2022.
• In the financial year 2021-22, the company achieved a turnover of Rs. 3.5 lakh benefiting 516 farmers from Sondwa and Alirajpur blocks through its service i.e. input supply trading, and seed production. It has an Input supply centre in Sondwa and Alirajpur.

Narmada Valley Producer Company Limited

The Narmada Valley Producer Company Limited at Manavar and Kukshi Block of Dhar District in MP was formed in 2015. Presently, it has 1500 shareholders including 778 men and 722 women. The NVPCL is involved in supplying agriculture inputs to tribal farmers in about 90 villages of the Manavar and Kukshi blocks. The agriculture inputs include cotton, maize, wheat, soybean, black gram, green gram and vegetable seeds and locally made natural inputs such as neem oil, vermicompost and urine-based herbal pesticides. The company has also organized several training sessions for farmers to promote a better package of crop practices and grading and packaging of pulses and vegetables for better price realization.

The company is managed by a Board of Directors comprising primary producers representing the clusters. DSC has played the role of an incubator to the Company for almost 7 years. The authorized share capital of NVPCL is Rs. 30 lakh in the form of 6,000 equity shares of Rs.500 each. At present, the company has 1500 farmers as shareholders including 778 males and 722 females and a paid-up share capital of Rs.15 lakh as of 31st March 2022.

In the financial year 2021-22, the company achieved a turnover of Rs. 17.90 lakh with about 730 farmers of 2 Blocks benefitting through input supply, trading and seed production activities of the company through block-level input supply centres.
Partnership with NABARD, Maharashtra for the promotion and incubation of FPOs

DSC has been empanelled as a Cluster-Based Business Organization (CBBO) for Maharashtra by NABARD (Resource Institute) for the promotion of Farmer Producer Companies under the Central Sector Scheme, a flagship programme of the Government of India.

Since the year 2018-19, DSC with the support of Axis Bank Foundation and other partners such as Ford Foundation and Mahindra and Mahindra Foundation has been making comprehensive efforts to create infrastructure and build village institutions for improving access to water for irrigation and other uses and enhancing and stabilizing agriculture income by increasing agriculture production using better management practices. The next level of interventions includes establishing backwards and forward market linkages so that farmers can get access to market opportunities and realise better prices through post-harvest value addition.

In the year 2021-22, DSC got an opportunity to take forward this initiative with the help of NABARD, Maharashtra by setting up 5 FPOs in the Nandurbar district.

The following activities were carried out during the financial year 2021-22 under a three-year MoU with NABARD.

DSC undertook community mobilization and identified the lead promoter of the FPOs for registration. Five companies were registered and put into operation in a period of 1 year. Gradually, the companies have shaped up into three-tier institutions having small farmer interest groups at the bottom, village-level information committees in the centre, and the FPO at the top.

300 farmers were registered as shareholders in each FPO including women farmers from 10-15 villages. A series of village-level meetings were held where youth and women farmers were encouraged to do a collective assessment of their problems related to agriculture, the market and how they could overcome problems through collectives like FPOs. The shareholders were educated on the objectives and functions
of the company, its structure, roles and responsibilities of the members and office bearers, source of funds, legal obligations, services and business opportunities etc.

The FPOs have undergone different activities like village meetings, focused group meetings, training, exposure visits, and preparation of business plans for capacity building.

The general details of the 5 FPOs that came into existence during the year in Maharashtra are as below:

### Tabel: FPOs in Nandurbar district of Maharashtra

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of state/District</th>
<th>Name of block</th>
<th>Name of FPO</th>
<th>Year of registration</th>
<th>No. of share holders</th>
<th>Crop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maharashtra/ Nandurbar</td>
<td>Dhadgaon</td>
<td>Amu Akha Ek Se FPO</td>
<td>2021-22</td>
<td>320</td>
<td>Amchur and Custard apple</td>
</tr>
<tr>
<td>2</td>
<td>Akalkuwa</td>
<td>AMOP FPO</td>
<td>2021-22</td>
<td>333</td>
<td>Amchur and Minor millet</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Shahada</td>
<td>Bramhanpuri FPO</td>
<td>2021-22</td>
<td>311</td>
<td>Banana and Papaya</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Nandurbar</td>
<td>Nandbhoomi FPO</td>
<td>2021-22</td>
<td>301</td>
<td>Red Chilly</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Nawapur</td>
<td>Dasheri Tur FPO</td>
<td>2021-22</td>
<td>303</td>
<td>Pigeon Pea (Tur)</td>
<td></td>
</tr>
</tbody>
</table>

- The Amu Akha Ek Se FPO has done a pilot business of Custard apple and has sent a sample of Amchur to the Vadilal group in Surat.
- The Bramhanpuri FPO has started dialogues with banana and papaya buyers from Raver, Nashik, and Vashi APMC.
- The AMOP FPO has sent a proposal to the district collector’s office for setting up a value additional unit of minor millet.

### The Sangam Saving and Credit Women Co-operative

The Sangam Women’s Savings and Credit Cooperative Ltd. (SWSCCL) has been working since December 2008 to provide saving and micro-credit services to tribal women in a cluster of 18 villages in the Meghraj block in Aravalli district of Gujarat. The Cooperative has 900 women members. During the year, loans worth Rs. 3.35 lakh were disbursed to 32 women for setting up small enterprises, repayment of loans to private lenders, education, medical expenses, purchase of agriculture inputs, animal husbandry, etc. Cumulatively, 1,268 loans amounting to Rs. 92.2 lakh were disbursed till March 2022 through recycling of Rs.24.05 lakh capital. Cumulatively, it achieved a turnover of Rs. 90 lakh from income-generating activities. Over the year, 122 vermicompost production bags worth Rs. 33,700 have also been sold.
House repairing by Laxmiben through saving and credit support by Sangam

“My name is Lakshmiben, I am a native of Dhandhiya village, in Meghraj Taluka, and have a family of 8 people. I have been saving in Sangam since 2011. Initially, I was saving Rs. 50 per month; currently, I am saving Rs. 100. At present my savings are Rs. 6000 and I take loans from the federation as and when needed and pay them back with interest on time. My old house required to be repaired urgently before the monsoon. I took Rs. 30,000/- as a one-year term loan from the federation to build the house. I am so happy that my family is living in a safe house and all of them now appreciate my association with the federation.

Sangam saved me from misery

My name is Meenakshiben, I am a native of Dhandhiya village, and I have a family of 5 people. I am saving Rs.100 per month in Sangam since 2012. At present my savings are Rs. 500/-. Initially, I used to take loans for seeds and repay the loan with interest on time every year. This year I took Rs. 50,000/- loan from Sangam to repay an overdue bank loan instalment. It was a very tough time during the Covid-19 pandemic.

Ultimately, I could retain possession of my tractor due to the timely support extended by the Sangam federation, or else the bank would have taken the tractor back into their possession as I had defaulted on the loan repayment. I am earning good money as the tractor is giving good support in farming activities and earning money by giving the tractor rent to farmer’s businesses post Covid-19. Thanks to the Sangam federation for this big help.
"I have been selling corn and pulses in KPCL for the last two years which gives me the price of APMC sitting at home in the village, which saves my time, transportation cost, and labor inputs worth Rs 250 to 300"

- **Menat Niruben Ashvinbhai Navagrah, Meghraj**

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“"I am associated with Krushidhan for the last 5 years. During the Rabi Season, farmers use the wheat seed produced by KPCL as it gives the best results. The increase in production per bigha is about 60-80 KG."

- **Patel Manibhai Katvad, Himmatnagar**
6. CAPACITY BUILDING

PARTICIPATORY LEARNING CENTRE

In the year 2021-2022, a total of 13 training programs (10 online and 3 offline) were conducted at DSC’s Participatory Learning Centre, Ahmedabad. 40 training days benefited 419 trainees (344 men and 75 women). The details of various training which were organised at the centre are given in the following sections.

National Jal Jeevan Mission Training

The Central Government of India launched one of the world's most ambitious rural drinking water programs - the National Jal Jeevan Mission - to provide potable drinking water connection and service utility to every individual household in rural India. DSC was appointed as Key Resource Agency by the National Project Management Unit, NJJM to provide training to middle-level management (district teams) and the community. During 2021-22, DSC organized 3 online training modules for middle management level officers of North East
states on software aspects of the NJJM program such as participatory planning, O&M for Har Ghar Jal, developing leadership skills required to manage rural water supply systems, women and water, and conflict management. 112 participants from the states of Sikkim, Punjab, Kashmir, Karnataka, Assam and Orissa participated in the virtual training.

Despite the management challenges of virtual training carried out during the Covid-19 period, DSC received encouraging feedback from the participants about the usefulness of the training.

**One month Module Based Training on PIM to MSc Fellows, Shiv Nadar University**

Students of the M.Sc. in Water Post Graduate Course at Shiv Nadar University, Delhi were given training for a Certificate PIM Course from 21st February to 11th March 2022. A total of 11 trainees participated in this training. The training guided on topics like the PIM approach, PIM status in India, Acts of different states, PIM steps, technical and administrative operations for different stakeholders, operating stage, various challenges, the role of organization and government, conflict solutions, resolutions and maintenance. In this training, senior government officials, NGO practitioners, academicians, and farmer co-trainers facilitated the training sessions. Field exposure was organized for successful projects to provide first-hand experience to the participants. The trainees provided good feedback on the overall training and showed willingness for further integration with DSC in near future.
Training Inputs to Civil Society Organizations

Two national-level NGOs including WOTR, MP, and SAMARTH Gujarat sent 34 of their field team members to DSC to learn about its water-to-wealth approach for livelihood enhancement and its field practices in the areas of integrated water resource management, agriculture extension, collective enterprise and participatory groundwater management. DSC also made its training premises (Participatory Learning Centre) available for training and workshops by various reputed NGOs, CSR agencies and government departments throughout the year.

While the learning tour of 10 team members of WOTR was organized during 16-17 September 2021, the 24-member SAMARTH team from Kuchh toured during 28-30 December 2021. The two visiting teams had in-house interaction sessions with DSC’s thematic leaders at Ahmedabad and also visited its ongoing field operations in canal command and rainfed field units in Gujarat. The visiting teams appreciated the institution-building capacity of DSC and the robust community-based organizations that had been created in the field. The visiting teams also expressed interest in the application of the water resource development plan which DSC developed under the Gujarat Water Typology study.
Development of Virtual Training Content in collaboration with ARGHYAM

ARGHYAM, Bangalore and ACT Bhuj collaborated with DSC to identify the training needs of community-level stakeholders involved in participatory groundwater management and to develop user-friendly virtual training content. An action-oriented training of trainers was provided to the senior staff of DSC for developing their technical capacity in designing and developing audio-visual training content. 3 sets of content were prepared by the DSC team on the following topics as part of the collaboration:

1. Definition of watershed, ridgeline, demarcation, and characterization.
2. Watershed-wise area, rainfall, runoff estimation types, norms equation
3. Domestic water demand-drinking water for humans and cattle.

Gujarati translation of national guidelines and distribution to stakeholders

At the request of the concerned authorities, the following 3 documents were translated from English to Gujarati: JM Panchayat Guidelines, JJM KRC Guidelines and Atal Bhujal Yojana guidelines. Soft copies of the guidelines were provided to the various government departments and field functionaries for community training and field facilitation.

Staff Training

For the staff of the organisation, training is organized from the central office in Ahmedabad for all the relevant subjects related to each field unit and for subject-specific expert staff as per requirement. A total of 15 training days (925 participant days) were offered on topics such as TOT of Jal Jeevan Mission, sexual harassment, Covid-19 safety measures at the field level, and basic photography.

Apart from this, a total of 105 days of offline and online training was provided to 82 staff for various program needs and personal development as part of the Management Development Program (MDP). These training subjects mainly included subjects like FPO management, crop management, GIS and MIS.

The various pieces of training were provided by the government, non-government and other academic institutions including agricultural universities, Krushi Vigyan Kendras (KVKs), Azim Premji University, Bangalore, BIRD – Lucknow, Charkha Network Gujarat, FES Gujarat, NABARD, GIZ and Peace of Employees etc.
Community vigilance to safeguard the lives of the rural community from Covid-19

During the covid pandemic, 10 virtual training sessions were conducted for the DSC staff, health workers, and community leaders on community vigilance to safeguard the lives of the rural community from Covid-19. These sessions were delivered by Dr. Yogesh Jain, Ex-Medical Officer, Indian Institute of Medical Science (AIIMS), New Delhi in which a total of 678 staff and community resource persons from 18 districts of MP, Gujarat, Rajasthan, and Maharashtra participated.
7. RESEARCH, DOCUMENTATION & POLICY INFLUENCING

Building informed and scalable water security solutions for Gujarat – A study on Water Typology and Solutions

The Development Support Centre and DSC Foundation in partnership with the Hindustan Unilever Foundation aim to develop a research-based framework for Gujarat that will integrate the key variables that impact water sufficiency. The outcome of the study also aims to create different water typologies that demonstrate distinct characteristics across the state and highlight appropriate interventions. The main objectives behind conducting this research are:

1) to study the status of water resources, soil health, agriculture and animal husbandry and identify the key problems in different regions of Gujarat
2) to review the existing interventions and their impact on the water resources of the State from secondary data and available literature
3) to establish water typologies, water security scenarios for the State, and a solutions framework for the future
4) to develop a region-specific solution that can be driven through government, private sector, civil society, and community participation and implemented at scale.
For this, six parameters along with their associated variables were taken for multi-criteria analysis. The main parameters were rainfall, surface water, groundwater, irrigation infrastructure, soil, agriculture, and animal husbandry.

A Steering Committee comprising eminent researchers, practitioners and policymakers was formed to guide the study team. The members provided their valuable inputs during each stage of the study including the preliminary findings that were shared during the consultative workshops conducted for each region. A Project Management Unit (PMU) was formed to design and execute the study. It had a multidisciplinary team with expertise in GIS, water resources development, agriculture and data management. Knowledge partners such as Advance Centre for Water Resource Development and Management (ACWADAM), Pune and India Natural Resource Economics and Management (INREM) Foundation, Anand provided critical inputs for developing the study framework, identifying region-specific problems, developing a solutions toolkit, and proposing the future course of action on groundwater management and water quality. Aalekhan Communications worked on the micro website development while Charkha Development facilitated the regional workshops which were conducted virtually and built the capacities of the field researchers for documentation of case studies.

A state-level analysis has been carried out which covers all thirty-three districts. The study analyses both secondary data and primary survey data of defined parameters to inspect the differences. For ground-truthing of secondary data, 12 representative watersheds from seven typologies were selected to conduct a primary survey. 838 households were surveyed on different thematic parameters i.e., soil quality, water quality, groundwater monitoring, cropping pattern and animal husbandry. ArcGIS software was used for seamless data collection (geo-tagged) from field, interpretation, geospatial analysis, visualization and map creation on different themes. Also, seven regional consultative workshops with experts, CBOs, government officers and NGOs (with a total of 143 participants), and seven regional community workshops (with a total of 317 farmers from 57 villages) were conducted.

From the parametric quantitative and qualitative analysis, key region-specific problems and their possible solutions associated with water, soil, and agriculture were identified and described in the study report. The study provides important takeaways for the government, CSR, NGOs, and farmer communities to work on technical and institutional solutions under the specific hot spots identified by the study.

The key findings from the research were:

1. Water Management (surface and groundwater), soil health, agriculture and animal husbandry are interrelated. If water security issues have to be addressed, one needs to intervene in all four aspects. The study supports the argument to discounting get rid of a “hydro-schizophrenic” approach to water management.

2. Groundwater is a major source of irrigation across the state. An increase in the use of tube-well irrigation and a decrease in the use of open wells is seen in the last decade. However, canal irrigation has also increased considerably during the same period.
3. Water quality is an issue across a majority of the districts and therefore needs urgent intervention in terms of both policy and practice.

4. There is a need for developing, repairing and maintaining local water bodies, and making Panchayats accountable.

5. Considerable increase in cropping area is seen from 2008 – 2018 leading to high water demand in agriculture. Thus, there is a need to promote pulses rather than cereals such as wheat and paddy which have a considerably high-water footprint and low economic returns.

6. The growth of dairy in the last two decades has been quite phenomenal, especially in North Gujarat, Kachchh and the eastern Tribal Belt. Thus, there is a need for interventions to reduce the water demand in the same.

7. Transported water is both a boon and a bane as on the one hand it has increased the area under irrigation but in some regions caused water logging and salinity.

8. Due to the excessive use of water by farmers across all regions, there is an urgent need to promote water literacy, water measurement, water recycling and water recharging measures.

9. Surface irrigation systems need to be more water-efficient as we have a water deficit even in canal-irrigated areas such as Central Gujarat and North Gujarat. The state can no longer afford flood irrigation.

10. Though Micro Irrigation System has been promoted in 16.7 lakh hectares it does not seem to have much impact on the water demand e.g., North Gujarat has the highest area under Micro-irrigation System yet it is an over-exploited zone as per Central Ground Water Board.

11. Low Organic Carbon content is found in soils across all typologies due to excessive use of chemical fertilizers leading to decreasing soil health and groundwater contamination. Despite the Soil Health Card scheme, not much awareness is found among farmers.

12. Identification of hotspots in terms of groundwater supply, water quality, and water demand 1) High water supply - Low soil and water quality – High water Demand was found in 9 districts specifically from North Gujarat and Kachchh region, while Low water supply- Low soil and water quality – High water demand) were found in five districts from Central Gujarat and the Saurashtra hinterland region. The emerging hotspots in terms of water demand were found in the eastern Tribal Belt region. Similarly, the study has identified crops based on their economic return, water footprint in each district, and possible strategies for demand-side management of water.
Annexures

1. Annual Accounts
2. Statutory Details about DSC
3. Contact Details
4. DSC Team
5. Acknowledgements
6. DSC in Media Coverage
Annual Accounts

Auditors’ Report

NAME OF THE PUBLIC TRUST: DEVELOPMENT SUPPORT CENTRE

ADDRESS: MARUTINANDAN VILLA
NR. GOVT. TUBEWELL
BOPAL, AHMEDABAD – 380 058

TRUST REGISTRATION NO.: F/4260/AHMEDABAD

Report on the Standalone Financial Statements

We have audited the accompanying financial statements of DEVELOPMENT SUPPORT CENTRE ("the Trust"), which comprise the Balance Sheet as at March 31, 2021, and the Statement of Income & Expenditure Account for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management’s Responsibility for the Financial Statements

Management of the Trust is responsible for the preparation of these financial statements that give a true and fair view of the financial position and financial performance of the Trust in accordance with the accounting principles generally accepted in India, including the Accounting Standards issued by the ICAI. This responsibility also includes the maintenance of adequate accounting records for safeguarding of the assets of the Trust and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of internal control, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

Auditor’s Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the Standards on Auditing issued by the ICAI. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.
An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Trust's preparation of the financial statements that give true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by the management of the Trust, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the financial statements.

Opinion

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs of the Trust as at 31st March 2021 and its performance for the year ended on that date.

Report on Other Legal and Regulatory Requirements

We have audited the accounts of above named Trust at Marutinandan Villa, Nr. Govt. Tubewell, Bopal, Ahmedabad – 380 058 with Registration No. F / 4260 / Ahmedabad for the year ended 31st March, 2021 and report as under:

1) The books of accounts are maintained regularly and in accordance with the provisions of the Act and the Rules;

2) The receipts and disbursements are properly and correctly shown in the books of accounts;

3) The Cash Balance and Vouchers in the custody of the accountant on the date of the audit are in the agreement with accounts;

4) All the books, deeds, accounts, vouchers or other documents or records as required by us were produced before us;

5) An inventory, certified by the Trustee of the movables of the Trust has been maintained;

6) The Trustee / Accountant required to appear before us did so and furnished the necessary information required by us;

7) No property or funds of the Trust were applied for any object or purpose other than the object or purpose of the Trust;
8) The amounts outstanding for more than one year is Rs. 9,25,063 (P.Y.: Rs. 15,49,711) and the amounts written off is Rs. 6,13,522 (P.Y.: NIL);

9) Tenders were invited for repairs or construction involving expenditure exceeding Rs. 5000;

10) No money of the Public Trust has been invested in contrary to the provisions of section 35;

11) No alienations of any immovable property has been made in contrary to the section 36; and

12) Any special matters to be reported: Please refer notes forming part of accounts.

13) We further report that we have not made physical verification of cash balance as on 31/03/2021. Resolution Book, Public Trust Records Register, Agenda Book and Dead Stock Register are subject to verification.

For, SAURABH R. SHAH & CO
Chartered Accountants
Firm Reg. No. 127176W

Saurabh R. Shah
Partner
Membership No. 117471
UDIN: 21117471AAAABO6005

Ahmedabad
August 27, 2021
## DEVELOPMENT SUPPORT CENTRE - AHMEDABAD
MARMITANAND VILLA, NR. GOVERNMENT TUBE WELL
BOPAL, AHMEDABAD - 380 058.
SOCIETY REG. NO. 4400/A’BAD, TRUST REG. NO. F4260/A’BAD
BALANCE SHEET AS ON 31ST MARCH 2021

<table>
<thead>
<tr>
<th>Funds &amp; Liabilities</th>
<th>Sche date</th>
<th>2020-21</th>
<th>2019-20</th>
<th>Assets</th>
<th>Sche date</th>
<th>2020-21</th>
<th>2019-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust Fund</td>
<td>A</td>
<td>2,500</td>
<td>2,500</td>
<td>Fixed Assets</td>
<td>C</td>
<td>31,836,463</td>
<td>28,950,341</td>
</tr>
<tr>
<td>Corpus Fund</td>
<td>A</td>
<td>125,000</td>
<td>125,000</td>
<td>Investments</td>
<td>F</td>
<td>35,750,211</td>
<td>38,840,122</td>
</tr>
<tr>
<td>Ford Foundation Endowment &amp; Matching Fund</td>
<td>A</td>
<td>38,160,335</td>
<td>37,365,772</td>
<td>Deposits</td>
<td>G</td>
<td>30,393</td>
<td>152,625</td>
</tr>
<tr>
<td>Earnstook Fund</td>
<td>A</td>
<td>6,814,861</td>
<td>6,534,174</td>
<td>Current Assets, Loan &amp; Advances</td>
<td>H</td>
<td>2,314,289</td>
<td>3,903,069</td>
</tr>
<tr>
<td>Resolving Fund</td>
<td>A</td>
<td>622,109</td>
<td>622,109</td>
<td>Grant Receivables</td>
<td>I</td>
<td>8,392,528</td>
<td>4,615,255</td>
</tr>
<tr>
<td>Reserves &amp; Surplus</td>
<td>A</td>
<td>2,080,206</td>
<td>2,080,206</td>
<td>Release For Innovative Projects</td>
<td>J</td>
<td>265,320</td>
<td>265,320</td>
</tr>
<tr>
<td>Depreciation Fund</td>
<td>C</td>
<td>22,028,062</td>
<td>20,080,027</td>
<td>Cash &amp; Bank Balances</td>
<td>K</td>
<td>94,608,182</td>
<td>97,014,671</td>
</tr>
<tr>
<td>Capital Expenditure Grant</td>
<td>E</td>
<td>15,833,102</td>
<td>14,812,374</td>
<td>Income &amp; Expenditure Account</td>
<td>B</td>
<td>5,357,061</td>
<td>6,749,601</td>
</tr>
<tr>
<td>Balance as per last year</td>
<td>Add.: Received during the year</td>
<td>2,659,676</td>
<td>1,020,348</td>
<td>Balance as per last year</td>
<td>Add/ (Less) : during the year</td>
<td>(544,628)</td>
<td>(1,392,540)</td>
</tr>
<tr>
<td>Current liabilities &amp; provisions</td>
<td>B</td>
<td>7,130,598</td>
<td>2,267,111</td>
<td>Total</td>
<td>E</td>
<td>4,412,633</td>
<td>5,357,061</td>
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<tr>
<td>Unutilized grants</td>
<td>E</td>
<td>82,000,597</td>
<td>94,194,252</td>
<td>Total</td>
<td></td>
<td>179,067,403</td>
<td>179,184,253</td>
</tr>
</tbody>
</table>

As per our report of even date annexed herewith

For Saurabh R. Shah & Co.,
Chartered Accountants

Saurabh R. Shah
Partner
M. No. 117471

Place: Ahmedabad
Date: August 27, 2021

The above Balance Sheet to the best of our belief contains a true account of Funds & Liabilities & the Properties and Assets of the Trust.
## Statement of Income & Expenditure for the Year Ended on 31st March 2021

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Schedule</th>
<th>2020-21 (Amount Rs.)</th>
<th>2019-20 (Amount Rs.)</th>
<th>Income</th>
<th>2020-21 (Amount Rs.)</th>
<th>2019-20 (Amount Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tu Salaries - FIST Team</td>
<td>3</td>
<td>5,917,707</td>
<td>6,270,421</td>
<td>By Grants</td>
<td>E</td>
<td>152,838,723</td>
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<tr>
<td>Tu Office Operation Exp.</td>
<td>4</td>
<td>1,779,231</td>
<td>2,004,837</td>
<td>By Interest</td>
<td>2</td>
<td>1,772,797</td>
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<tr>
<td>Tu Payment To Auditor</td>
<td>5</td>
<td>100,000</td>
<td>100,585</td>
<td>By Interest</td>
<td>1</td>
<td>1,634,137</td>
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<tr>
<td>Tu Contribution To Admin Fund Charity Commissioner</td>
<td>6</td>
<td>50,000</td>
<td>50,000</td>
<td>By Donation</td>
<td>1</td>
<td>1,034,000</td>
</tr>
<tr>
<td>Tu Vehicle Fuel, Repair &amp; Maintenance</td>
<td>7</td>
<td>9,713</td>
<td>76,307</td>
<td>By Donation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tu Travelling Expenses</td>
<td>8</td>
<td>69,051</td>
<td>1,311,245</td>
<td>By Contribution For Training Centre Facilities</td>
<td>350,176</td>
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<tr>
<td>Tu Capacity Building Expenses</td>
<td>9</td>
<td>4,315,987</td>
<td>864,229</td>
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<td>Tu Research Project Expenses</td>
<td>10</td>
<td>756,290</td>
<td>676,315</td>
<td>By Other Income</td>
<td>I</td>
<td>9,162,250</td>
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<td>Tu Support To KFCL</td>
<td>11</td>
<td>-</td>
<td>488,880</td>
<td>By Consultancy Fees</td>
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<td>Tu PMFBY Project Expenses</td>
<td>12</td>
<td>3,673,297</td>
<td>4,562,694</td>
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<td>Tu FWWB Project Expenses</td>
<td>13</td>
<td>929,256</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>To Programme Exp. (Irrigated Area Field Units)</td>
<td>14-38</td>
<td>15,374,519</td>
<td>20,944,518</td>
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<tr>
<td>To Programme Exp. (Rainfed Area Field Units)</td>
<td>14-38</td>
<td>127,819,024</td>
<td>100,029,765</td>
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<td>To Depreciation</td>
<td>C</td>
<td>1,948,035</td>
<td>1,359,287</td>
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<td>To Grant Written off</td>
<td></td>
<td>813,322</td>
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<tr>
<td>To Income &amp; Expenditure Appropriation A/c</td>
<td></td>
<td>544,628</td>
<td>1,392,549</td>
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**Total**                                                                                                                                 |

| 163,008,500                          |
| 140,811,506                           |

As per our report of even date annexed herewith

For Saurabh R. Shah & Co,
Chartered Accountants
FRN: 127176W

Saurabh R. Shah
Partner
M. No. 117471
Place: Ahmedabad
Date: August 27, 2021

The above statement to the best of our belief contains a true account of Income & Expenditure of the Trust.
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Statute</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Date of Incorporation of organisation</td>
<td>06.05.1994</td>
</tr>
<tr>
<td>2</td>
<td>Registered under Act</td>
<td>Registered under section 21 of the Society Registration Act 1860 with registration no. GUJ/4400/Ahmedabad and Registered section 29 of Bombay Public Trust Act 1950 with registration no. F/4260/Ahmedabad</td>
</tr>
</tbody>
</table>
| 3      | 12(A)                             | Provisional Registration Number: AABFD8824CE20206  
Date of provisional registration: 27-05-2021                                                                                     |
| 4      | 80(G)                             | Document Identification No.: AABFD8824CF2021901  
Date of Approval: 30.09.2021  
From AY 2022-23 to AY 2026-2027                                                                                                      |
| 5      | FCRA                              | FCRA Registration No. 041910204. FCRA renewed certificate is valid for a period of five years with effect from 01-07-2022 till 30-06-2027. |
| 6      | PAN CARD NUMBER                   | AABFD8824C                                                                                                                                 |
| 7      | TDS-TAN NUMBER                    | AHMD00678G                                                                                                                                 |
| 8      | GST NUMBER                        | 24AABFD8824C1ZU                                                                                                                                 |
| 9      | Postal address and contact details | Development Support Centre (DSC), C/o, Marutinandan Villa, Near Govt. Tube well, Bopal, Ahmedabad 380 058 Gujarat India. |
| 10     | Phone                             | 02717-235994/97  
dsc@dscindia.org  
www.dscindia.org                                                                                                                      |
| 11     | Contact Person                    | Mr. Mohan Sharma  
Executive Director  
Contact details:  
mohan@dscindia.org  
Mobile: 9601281123                                                                                                                |
| 12     | GOVT. DARPAN ID                   | GJ/2017/0114855                                                                                                                        |
CONTACT DETAILS

HEAD OFFICE: GUJRAT
Development Support Centre
Near Government Tubewell, Bopal, Ahmedabad-380 058
Tel: + 91-2717-235994/5/8 Fax: 235997 Email: dsc@dscindia.org, dscbopal@gmail.com
Website: www.dscindia.org

---------------------------- REGISTRATION ----------------------------------------
Society Registration No.: GUJ/4400/AHMEDABAD, dt. 6.5.1994  FCRA No.: 041910204, dt.28.1.1999
Trust Registration No. : F/4260/AHMEDABAD, dt.6.5.1994  PAN No. : AABFD8824C

---------------------------------------------------------------------------------------------------------

FIELD OFFICES – GUJRAT

Meghraj  :  Shri Ketan Gohil, Team Leader, Development Support Centre,
        Hari Om Society, B/H: Iswar Borwell, Panchal Road , Meghraj,
        (M) 9824560764, Email ID: dscmeghraj@gmail.com

Himmatnagar  :  Shri Amarsinh Chavda, Team Leader, Development Support Centre,
               C/o, House of Amlaben Vinodchandra Danani, House No-15,
               Girdhar Nagar society, Motipura, Near Hero Honda Showroom,
               Vidhya Nagari Road, Himmatnagar- 383001.
               (M) 9601281142, Email ID: dschimatnagar531@gmail.com

Goblej  :  Shri Hirenkumar Parmar, Team Leader,
           Development Support Centre, C/o, Ranjanben Manibhai Patel’s House
           B/20 Shrijibag Society, Vibhag 1, Near Gayatri Dispensary, Bareja
           Block - Daskroi, Dist- Ahmedabad, 382425
           (M) 9601281971, Email ID: dscgoblej@gmail.com

Tharad  :  Shri Manubhai Vadher, Program Executive, Development Support Centre,
           Ambikanagar society-1, Opp. Baroda Gujarat Gramin Bank,
           Besides Adarsh Blood Bank, Deesa-Tharad Highway,
           Tharad-385565, Dist- Banaskantha.
           (M) 9601281153, 8200147596, Email ID: dsctharam@gmail.com

Visnagar  :  Shri Rajendra Patel, Programme Executive, Development Support Centre,
            S , Sarvodaynagar Society, Nr. Gayatri Mandir,
            Visnagar - 384315, District-Mahesana.
            (M) 9601281156, Email ID: dscvisnagar@yahoo.co.in

FIELD OFFICES – MADHYA PRADESH

Kukshi  :  Shri. Jaideep Singh Panwar, Team Leader, Development Support Centre,
           C/o House of Kantikumar Jain (Advocate), Opp. Honda Service Point,
           Alirajpur Road, Kukshi Dist. Dhar-454331.
           (M) 9116513244, Email ID: dsckukshi@gmail.com
Manavar : Shri Ravi Sisodiya, Team leader, Development support centre, Near LIC Office, Dhar Road, Manavar-454446, District - Dhar, Madhya Pradesh. (M) 9993357989, Email ID: dscmanavar@gmail.com

Alirajpur-Nanpur : Shri. Kamlesh Rajat, Team Leader, Development Support Centre, F/01, Jobat Pariyojana Colony, Kukshi - Alirajpur Road, NANPUR, District: Alirajpur. (M.P). (M) 094071 23913, Email ID: dscnanpoor@gmail.com

Mhow-Manpur : Shri. Durgesh Tawar, Team Leader, Development Support Centre, Mahalaxmi Apartment, Near Mahajan Dharmshala, Khurd Road, Tehsil Mhow, District Indore Pin - 453661. (M) 9993955487, Email ID: dscmhow@gmail.com

Barwani : Development support Centre, C/o, Zila Panchayat Office, Barwani, District - Barwani, Pin - 454 446, Madhya Pradesh.

Agar Malwa : Ravi Sisodiya, Team Leader, Development Support Centre, C/O, Shankar Singh Sisodiya House, H.N.163, Ward No.23, Master Colony, Pal Road, Agar Malwa, Madhya Pradesh - 465 441 (M) 9993357989, Email ID: ravi@dscindia.org

FIELD OFFICES – MAHARASHTRA

Aurangabad : Shri. Vijay Namdev Bansode, Project Manager, Development Support Centre C-5 Bajaj Vihar, Bajaj Nagar, Oyasis Chowk, MIDC Waluj, Aurangabad-431136. (M) 9049793590, Email ID: dscaurangabad1@gmail.com

Narayangaon-Alephata : Shri Bharat Raut, Team Leader, Development Support Centre, 2nd Floor, Chopada Building, Khodad Road, Narayangaon. Pin-410 504. Maharashtra. (M) 9503234275, Email ID: dscalephata2016@gmail.com

Nandurbar : Shri Jitendra Rohidas Sonawane, Programme Manager, Development Support Centre, Plot No - 37, Jayantilal Nagar, Nandurbar- 425412. (M) 7720045808, Email ID: dscnandurbar@gmail.com

FIELD OFFICES – RAJASTHAN

Baran : Shri. Anil Shrivas, Team Leader, Development Support Centre, Village Post: Kelwara, Jagdishpura Road, Danta, Dist. Baran, Rajasthan PIN - 325 216 (M) 9713821382, Email ID: dscbaran@gmail.com
## DSC TEAM

### HEAD OFFICE

1. Mohan Sharma  
   Executive Director

### FIELD IMPLEMENTATION SUPPORT TEAM (FIST)

2. Shubha Khadke  
   Programme Director
3. Gordhan Kantariya  
   Prog. Executive-Training
4. Dipak Raval  
   Programme Executive
5. Krishna Chavan  
   Programme Manager- NRM
6. Jasvant M Chauhan  
   Manager-Producer's Company
7. Kunj Shethiya  
   GIS Specialist
8. Kaushal Gadariya  
   GIS Expert
9. Vaibhav Paul  
   MIS Expert

### Support Staff

10. Rizwana Y Madhupurwala  
    Chief Finance & Admin Officer
11. Sandipa Nelson  
    Executive- HR & Admin
12. Kamlesh M.Patel  
    Accounts Officer
13. Darshana R. Patel  
    Account Assistant
14. Ketan Khatri  
    Guj. Stenographer
15. Indrasinh Majawat  
    Driver cum Messenger
16. Jorawarsinh Rathod  
    Driver cum Messenger

### GUJARAT

#### Visnagar Team

17. Rajendra kumar Balchanddas Patel  
    Team Leader cum Programme Executive
18. Gandaji Hathiji Thakor  
    Community Organiser
19. Patel Anupmabhen Babulal  
    Community Organiser
20. Prajapati Rahulkumar Govidbhai  
    Community Organiser
21. Chavda Amarabhai Kamabhai  
    Team Leader
22. Arvindsinh A. Thakor  
    Senior Community Organiser
23. Yogi Taralben Shaileshbhai  
    Senior Community Organiser
24. Padhyumansinh J Chavada  
    Senior Community Organiser
25. Matadar Vasimahmad M  
    Engineer
26. Alpeshkumar Pravinbhai Patel  
    Community Organiser
27. Patel Jigneshkumar Pravinbhai  
    Community Organiser
28. Thakor Kiranbhai N  
    Community Organiser

#### Himmatnagar Team

29. Amarsinh Chavda  
    Team Leader
30. Chandrapalsinh Rathod  
    Community Organiser
31. Divya Goswami  
    Community Organiser
**Goblej Team**

32. Hiren Parmar   Team Leader
33. Prabhukumar R Thakor   Agriculture Expert

**Meghraj Team**

34. Ketan Gohil   Team Leader
35. Chetan Raval   Agriculture Assistant
36. Bipin Taral   Agriculture Expert
37. Nandlal Menat   Community Organiser
38. Jashoda Damor   Community Organiser
39. Deva Bharvad   Lab in Charge
40. Sanjay Pandor   Field Supervisor

**Tharad Team**

41. Manubhai Vadher   Team Leader cum Programme Executive
42. Ranchhod Manjibhai Rajput   Project Engineer

**MADHYA PRADESH**

**Manawar Team**

43. Savan Vyas   Programme Executive
44. Anil Yadav   Agriculture Specialist
45. Archana Patel   Community Organiser
46. Vijay Singh Mandloi   Field Supervisor
47. Radheshyam Tanwar   Agriculture Specialist

**Kukshi Team**

48. Amit Rana   Agriculture Assistant
49. Komal Chowhan   Community Organiser
50. Laxmicharan Jhavar   Field Supervisor
51. Arvind Chauohan   Field Supervisor
52. Walsingh Tersingh Mandloi   Field Supervisor

**Alirajpur Team**

53. Kamlesh Rajat   Team Leader & Livelihood Expert
54. Jaideep Singh Pawar   Project Manager HRDP
55. Rani Rana   Community Organizer
56. Danish Patidar   Account
57. Pawan Kushwaha   Social Expert
58. Nakul Patidar   Agricultural Field Expert
59. Vijay Yadav   Civil Engineer
60. Anil Hihor   Civil Engineer
61. Anjaneeya Pandey   GIZ Expert
62. Mukam Singh   Field Supervisor
### Mhow Team
63 Durgesh Nandan Tawar  
64 J.P Tripathi  
65 Ronak Tawar  
66 Vikash Joshi  
67 Devendra Luniya  
68 Harisingh Karma  

*Team Leader*

### Durgesh Nandan Tawar  

*Project Engineer*

### Ronak Tawar  

*Field Accountant*

### Vikash Joshi  

*Agriculture Expert*

### Devendra Luniya  

*Community Organizer*

### Harisingh Karma  

*Community Organizer*

### Agar Malwa Team
69 Ravi Sisodiya  
70 Anand Shah  
71 Priyanshu Bhardwaj  
72 Lakhan Singh Chouhan  
73 Rahul Khirdia  
74 Ruchi Saxena  
75 Makhan Singh  
76 Manohar Bhilala  
77 Bhagwan Vijay  

*Project Incharge*

### Ravi Sisodiya  

*MIS Executive*

### Anand Shah  

*Agriculture Engineer*

### Priyanshu Bhardwaj  

*Civil Engineer*

### Lakhan Singh Chouhan  

*Sr. Community Organiser*

### Rahul Khirdia  

*Community Organiser*

### Ruchi Saxena  

*Community Organiser*

### Makhan Singh  

*Community Organiser*

### Manohar Bhilala  

*Accountant*

### Narayangaon Team
78 Bharat Dattatray Raut  
79 Prashant Balasaheb Salve  
80 Tushar Sudam Kute  
81 Gangadhar Maruti ghyyar  
82 Ravikant Kailas Khilari  
83 Mahesh Shantaram Doke  
84 Uttam Maruti Jadhav  
85 Rohan Chandrakant Shelke  
86 Kiran Balasaheb Sondkar  
87 Sahil Abbas Sayyad  

*Team Leader*

### Bharat Dattatray Raut  

*Agriculture Expert*

### Prashant Balasaheb Salve  

*Community Organizer*

### Tushar Sudam Kute  

*Project Engineer*

### Gangadhar Maruti ghyyar  

*Field Accountant*

### Ravikant Kailas Khilari  

*Agriculture Supervisor*

### Mahesh Shantaram Doke  

*Agriculture Supervisor*

### Uttam Maruti Jadhav  

*Agriculture Supervisor*

### Rohan Chandrakant Shelke  

*Agriculture Supervisor*

### Kiran Balasaheb Sondkar  

*Agriculture Supervisor*

### Sahil Abbas Sayyad  

*Agriculture Supervisor*

### Aurangabad Team
88 Vijay Namdev Bansode  
89 Suraj Hira Gupta  
90 Rucha Baban Gavali  
91 Ajitkumar Gahininath Khedkar  
92 Kailas Krushna Thorat  
93 Balkrashna Kailas Ugale  
94 Prashant Gawli  
95 Sagar Dilip Jadhav  

*Team Leader*

### Vijay Namdev Bansode  

*Project Engineer*

### Suraj Hira Gupta  

*Project Accountant*

### Rucha Baban Gavali  

*Social Coordinator*

### Ajitkumar Gahininath Khedkar  

*Technical Supervisor*

### Kailas Krushna Thorat  

*Agriculture Assistant*

### Balkrashna Kailas Ugale  

*Field Supervisor*

### Prashant Gawli  

*Field Supervisor*

### Sagar Dilip Jadhav  

*Agriculture Assistant*

### Nandurbar Team
96 Jitendra Sonawane  
97 Daksha Vasave  
98 Aasif Shaikh  
99 Prakash Sonawane  

*Project Manager*

### Jitendra Sonawane  

*Program Executive-Social*

### Daksha Vasave  

*Program Executive-Social*

### Aasif Shaikh  

*Program Executive-Social*

### Prakash Sonawane  

*Program Assistant-Social*
<table>
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<th>No.</th>
<th>Name</th>
<th>Designation</th>
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<tr>
<td>100</td>
<td>Lalitsingh Rajput</td>
<td>Program Executive - Social</td>
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<tr>
<td>101</td>
<td>Kalpesh Patel</td>
<td>Program Assistant - Agriculture</td>
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<tr>
<td>102</td>
<td>Mahendra Thakare</td>
<td>Office Assistant</td>
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<td>103</td>
<td>Umesh Gurav</td>
<td>Program Executive - Technical</td>
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<td>104</td>
<td>Savitri Chaure</td>
<td>Program Assistant - Social</td>
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<td>Shamkant Patil</td>
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<td>106</td>
<td>Pramila Thakare</td>
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<td>107</td>
<td>Jitendra Birari</td>
<td>Accountant</td>
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<td>108</td>
<td>Asha Gaikwad</td>
<td>Program Assistant - Social</td>
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<td>109</td>
<td>Pushpa Mavli</td>
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<td>110</td>
<td>Sandipsing Rajput</td>
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<td>111</td>
<td>Pavlu Sable</td>
<td>Office Assistant</td>
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<tr>
<td>112</td>
<td>Pankaj Thakare</td>
<td>Program Executive - Livelihood</td>
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<td>113</td>
<td>Sonali Sonawane</td>
<td>Program Assistant - Social</td>
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<td>114</td>
<td>Sandip Koli</td>
<td>Program Assistant - Social</td>
</tr>
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<td>115</td>
<td>Rahul Borase</td>
<td>Program Assistant - Social</td>
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<td>116</td>
<td>Sachin Nile</td>
<td>MIS Executive</td>
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<td>117</td>
<td>Pravinkumar Ahire</td>
<td>Program Executive - Agriculture Expert</td>
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<td>118</td>
<td>Tejashree Patil</td>
<td>Livelihood Expert</td>
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<td>119</td>
<td>Dnyaneshwar Bhamare</td>
<td>Program Assistant - Agriculture Expert</td>
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<td>120</td>
<td>Mahesh Pingale</td>
<td>Account Assistant</td>
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<td>121</td>
<td>Nitin Chaudhari</td>
<td>Program Assistant - Agriculture Expert</td>
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<td>122</td>
<td>Yuvaraj Kharde</td>
<td>Program Assistant - Social</td>
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<td>123</td>
<td>Sajan Padvi</td>
<td>Program Assistant - Social</td>
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<tr>
<td>124</td>
<td>Sanee Jadhav</td>
<td>Program Assistant - Engineering/Technical</td>
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<tr>
<td>125</td>
<td>Yogesh Kantilal Chaudhari</td>
<td>Program Assistant-Engineering/Technical</td>
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<td>126</td>
<td>Rahul Thakare</td>
<td>Program Assistant - Social</td>
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<td>127</td>
<td>Digvijay Sharma</td>
<td>Program Executive - Engineering</td>
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<td>128</td>
<td>Sanjay Madavi</td>
<td>Program Executive - Social</td>
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<tr>
<td>129</td>
<td>Madhuri Shinde</td>
<td>Field Officer</td>
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<td>130</td>
<td>Sapana Panpatil</td>
<td>Field Officer</td>
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<tr>
<td>131</td>
<td>Vinod Adokar</td>
<td>Lead Trainer</td>
</tr>
<tr>
<td>132</td>
<td>Pritesh Patil</td>
<td>Program Executive - Engineering/Technical</td>
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<tr>
<td>133</td>
<td>Vikas Suryawanshi</td>
<td>HR Assistant</td>
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<tr>
<td>134</td>
<td>Santosh More</td>
<td>Project Coordinator</td>
</tr>
<tr>
<td>135</td>
<td>Lahu Bagul</td>
<td>Program Assistant - Social</td>
</tr>
<tr>
<td>136</td>
<td>Sandip Valvi</td>
<td>Program Assistant - Social</td>
</tr>
<tr>
<td>137</td>
<td>Ashwini Salve</td>
<td>MIS Assistant</td>
</tr>
<tr>
<td>138</td>
<td>Simabai Padvi</td>
<td>Field Officer (Shahada)</td>
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<td>139</td>
<td>Yamuna Pawara</td>
<td>Program Assistant - Social</td>
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<td>140</td>
<td>Tapsing Padvi</td>
<td>Program Assistant - Social</td>
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<tr>
<td>141</td>
<td>Sanjaykumar Tamboli</td>
<td>PE-Engg/Tech.</td>
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<td>142</td>
<td>Rajnikant Chitte</td>
<td>Program Assistant - Agriculture</td>
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<td>143</td>
<td>Ambilal Gavit</td>
<td>Program Assistant - Social</td>
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<tr>
<td>144</td>
<td>Bhushan Mali</td>
<td>Program Executive - Engineering/Technical</td>
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<tr>
<td>145</td>
<td>Sagar Wankhede</td>
<td>Office Assistant</td>
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<tr>
<td>146</td>
<td>Vinod Nimbolkar</td>
<td>Livelihood Expert</td>
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<tr>
<td>147</td>
<td>Mayuri Patil</td>
<td>Lead Trainer</td>
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<td>Designation</td>
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<tr>
<td>148</td>
<td>Kalyani Girase</td>
<td>Account Assistant</td>
</tr>
<tr>
<td>149</td>
<td>Lokesh Ahire</td>
<td>Program Assistant- Agriculture</td>
</tr>
<tr>
<td>150</td>
<td>Nilima Pawar</td>
<td>MIS Assistant</td>
</tr>
<tr>
<td>151</td>
<td>Prashant Chavhan</td>
<td>Program Executive - Agriculture Expert</td>
</tr>
<tr>
<td>152</td>
<td>Priyanka Gavit</td>
<td>Program Executive - Agriculture Expert</td>
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<td>153</td>
<td>Jota Pawara</td>
<td>Program Assistant - Social</td>
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<tr>
<td>154</td>
<td>Pravin B. Kokani</td>
<td>Field Supervisor</td>
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<tr>
<td>155</td>
<td>Kalpesh Vasave</td>
<td>Field Supervisor</td>
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<tr>
<td>156</td>
<td>Roshani Dipak Tamboli</td>
<td>MIS Assistant</td>
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<tr>
<td>157</td>
<td>Bharti Laxman Bagul</td>
<td>MIS Assistant</td>
</tr>
</tbody>
</table>

**RAJASTHAN**

**Baran Team**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>158</td>
<td>Anil Shrivas</td>
<td>Team Leader</td>
</tr>
<tr>
<td>159</td>
<td>Hari mohan Meena</td>
<td>Project Engineer</td>
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<td>160</td>
<td>Manoj Choudhary</td>
<td>Agri Expert</td>
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<td>161</td>
<td>Durgaparsad Patel</td>
<td>Horticulture Expert</td>
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<td>162</td>
<td>Saroj Kushwah</td>
<td>Community Mobilizer</td>
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<td>163</td>
<td>Naresh kumar Sen</td>
<td>Community Organizer</td>
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<td>164</td>
<td>Mohamad Shahdab</td>
<td>Field Accountant</td>
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**Bankers**

(1) State Bank of India  
(2) Punjab National Bank  
(3) HDFC Bank  
(4) Axis Bank Limited  
(5) Bank of Baroda  
(6) Central Bank of India

**Auditors**

Saurabh R Shah & Co.
Chartered Accountants, Ahmedabad.
Media Coverage of DSC

...
Groundwater levels in A'bad 3rd deepest in India

RS Data: 22 Of 33 Districts Have Fluoride, 21 Salinity In Patches

Ahmedabad: A data table in the Rajya Sabha recently pointed to Ahmedabad city having groundwater level at 17 metres (55 feet) in the confined aquifer. At 17 metre, Ahmedabad had the third deepest groundwater aquifer after Ajmer (57.7 metres) and Dehradun (56.9 metres). To put the figure in perspective, the deepest level in Delhi was at 64 metres, 25.6 metres in Chandigarh and 48 metres in Lucknow.

Other Gujarati cities recorded with deeper levels at 10.2 metres in Vadodara, 15.5 metre in Surat and 46 metre in Bharuch. The data was collected from wells in Ahmedabad, and Vadodara cities.
राजस्थान फ़िल्मा
बांल, बुधवार, 19 मई, 2021

किसान खेतों में मूंग के साथ सज्जी की फसल भी कर रहे बाढ़ी ने बढ़ाई क्षेत्र के किसानों की आय

गोरखनगर में सहायिता मुंग की फसल हुई सहायीय कृषि

इन किसानों के अलावा भी अन्य फसलों की जीवनी किसानों की निजी सहायता योजनाओं से ली गयी गयी थी।

किसान फसल में ही अपनी सज्जी को बढ़ाते हैं और आंतरिक आय ग्राहक करते हैं। यदि ग्राम के लोगों की भी बाजार में किसान लेने नहीं जा सकता है तो बाढ़ी की सहायता कसी फसल अंदर 20 किसानों को संबंधित कराया गया था। बाढ़ी के किसान अपने खेतों में मूंग की फसल के साथ सज्जी की प्रसार भी कर रहे हैं।
ग्रामीण राजस्थान को हरी झांडी दिखाकर रवाना किया

निदेशक को तालाब के आतिशबाजर में धूप प्रदान अभियान का सूचना

निदेशक को तालाब के आतिशबाजर में धूप प्रदान अभियान का सूचना

योगेश यादव

रायपुर प्रांत को सुधार के लिए राजस्थान तलाव के प्रदान अभियान का आयोजन आया। इस अभियान का लक्ष्य है कि ग्रामीण राजस्थान के हरी झांडी दिखाकर रवाना किया जाए। इसके लिए ग्रामीण को धूप प्रदान का सूचना दिया गया है। धूप प्रदान अभियान का लक्ष्य है कि ग्रामीण राजस्थान के हरी झांडी दिखाकर रवाना किया जाए।
उद्यान विभाग ने किसानों को दिया उत्तरत खेती का प्रशिक्षण

उद्यान विभाग ने किसानों को दिया उत्तरत खेती का प्रशिक्षण। उद्यान के अध्यायिनी विजय कुमार राज ने कहा कि उद्यान विभाग ने किसानों को उत्तरत खेती का प्रशिक्षण देने के लिए रवाना की है। उद्यान विभाग ने किसानों को उत्तरत खेती का प्रशिक्षण देने के लिए रवाना की है।
Khedut Sarthi: Mobile Laboratory equipped with Advanced Equipment's and Technical Expert

- An estimated 14000 tests are done per year of soil and water testing
- The farmers are expected to collect soil and water samples from their farm and share minimum 50 sample for testing in mobile van
- Reports to be available in Gujarati/Hindi at a reasonable cost and on time
- Reports will help farmers in crop selection and understanding soil health
- In addition, advisory on irrigation, seeds, fertilizers, pest control of various crops will also be suggested.
- Importantly, soil testing and advisory service is run by para professionals in guidance of agriculture experts.

Reduction Cost ▪ Increase in crop production ▪ Increase in profit

Financial Support Aga Khan Foundation, European Union (Scale Innovation Fund)

Contact us
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