



DASERAN WATERSHED PROJECT (DW)

Social Return on Investment (SROI)-Impact report



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EXECUTIVE SUMMARY

It gives us pleasure to present the Social Impact Measurement of Daseran Watershed(DW) project implemented by Ambuja Cement Foundation. The assessment was conducted to understand the socio-economic value creation in the project. NABARD has been funding and supporting watershed development projects since 1990s. ACF, significantly values agricultural and livelihood opportunities and watershed development for the community's development. Accordingly ACF works in collaboration with various State Governments, local NGOs and academic institutions and implements water conservation programmes. ACF has implemented and facilitated the DW projects, and NABARD funded the same.

Objective of watershed projects

Increasing agriculture productivity and production

Soil and water conservation

Water resource development

Afforestation

Dryland horticulture

Promotion of sustainable livelihood development

Integrating interventions

(Technology transfer, extension, financial inclusion, credit intensification, value addition, aggregation of farm produce, skill development, climate proofing, climate change mitigation and adaptation, convergence of state/ centrally sponsored schemes)

Watershed community is mobilized as groups

User Groups (UGs)

Farmers Interest Groups (FIGs)

Self Help Groups (SHGs)

Joint Liability Groups (JLGs)

Farmers Clubs (FCs)

To address adverse impact of climate change on agriculture, productivity, and livelihood of the farmers, there is a need for climate proofing in such projects with implementation of following activities:

Project Management Activities

Ridge to Valley-Participatory net planning

Village Watershed Committees (VWCs)

Capacity Building Phase

Community Ownership-16% unskilled labor cost as 'shramdan'

Maintenance fund

PROJECT FACILITATION AGENCIES (PFA) - ACF

DPR-Detail Project Report

Integration of Livelihood development interventions

Sustainable Development Plan-Credit intensification, Financial Inclusion, Social Security Schemes and FPOs

Watershed community is mobilized as groups

Soil test based nutrient application

Summer ploughing/ Conservation Agriculture

Need based additional soil and water conservation measures, water harvesting structures

Weather Based Advisory Services

Promotion of efficient use of water resources through demonstration and adoption of drip and sprinkler irrigation systems

Crop water budgeting

Demonstration of Poly house cultivation

Demonstration of integrated farming system models covering dairy, horticulture, agro-forestry etc

Community participation through involvement of Village Watershed Committees (VWCs) in planning, implementation, monitoring and supervision of watershed development activities.

The watershed activities were carried out across 18 villages in Kunihar block of Solan District, Himachal Pradesh. The works done and positive impacts are briefly seen in agriculture, dairy, societal well-being and others. The critical watershed challenges are unique to their own geography, hilly landscape, demographics, annual rainfall water storage facilities, irrigation, farming practices and much more. The research exercise was conducted through the framework, Social Return on Investment(SROI) that absolutely captures the impact through Stakeholder Engagement-Surveys, Focus group discussions and Technical Experts interview.

Table 1.0: SROI Composition

Stakeholders	Outcomes of Daseran Watershed project	Equivalent Financial value creation in the next 5 years	Percentage of Total value creation
FARMERS	Agriculture and Horticulture	₹2,552,796.63	13.65%
	Dairy	₹3,182,430.04	17.02%
	Financial Empowerment	₹8,507,708.26	45.49%
LOCAL COMMUNITY	Women Empowerment	₹190,307.80	1.02%
	Societal -well being	₹316,981.43	1.69%
	Self Governance	₹892,067.81	4.77%
ACF and NABARD	Community trust and outreach	₹288,000.00	1.54%
	Technical Knowledge	₹1,115,705.68	5.97%
	Credit availability and linkage for NABARD	₹1,657,500.00	8.86%

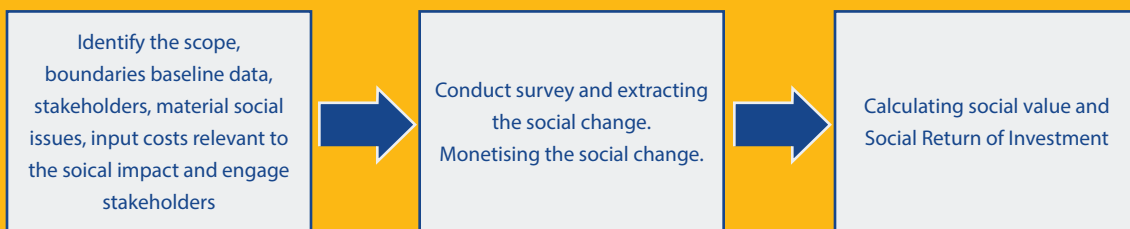
SROI tells the story of how change is created by measuring social, environmental and economic outcomes – and uses monetary values to represent them. By revealing social value, it will help to revisit the areas of significant impact, identify the agents of change, witness the range of impact from positive to negative and maximum to minimum, guide decisions and influence investment decisions. The guiding principles of SROI analysis are to always involve stakeholders, understand what changes, value things that matter, do not over-claim, be transparent, and verify the results. We have been extremely conservative. This endeavour aims to gauge and quantify the Socio-economic Impact of DW project.



1. OUR APPROACH TO SROI

Sustainable Square India Private Limited is the brain-child of the micro-multinational Sustainable Square, specializes in Corporate Social Responsibility (CSR) and sustainability consultancy. We deliver international best practices with deep local expertise to offer think tank and advisory services in the field of CSR, sustainability and social impact measurement. Being a micro-multinational enterprise, we appreciate and commit to providing niche-localized CSR disciplines.

We have identified scope, boundaries, baseline data and material social contexts. The below flow diagram will highlight the approach to complete the SROI exercise in brief.



ACF acted as an implementation agency for watershed project in Daseran. The cost of investments in the project is 1.2 Crores. ACF chose the Social Value International SROI framework, which is standardized by the United Kingdom's SROI Network. It is the leading and most advanced framework for social impact measurement by valuing financial outcomes from non-financial impetus, used as a social investment strategy, and to pioneer social measurement as a practice in India.

DASERAN WATERSHED VILLAGES

Original input costs = ₹ 1,20,14,927 for the entire population

Adjusted input costs for sample of 112 households= ₹ 16,93,901

(Adjusted to the surveyed households of 112, depreciation of the structures which have been built and reflecting to the survey respondents in the operating villages)

Total social value creation = ₹1,43,00,043

Social Return on Investment-SROI = ₹ 8.44**

Foot note: **The values reported are calculated through the data from Survey, Input Costs given by NABARD. It has considered specific contexts and logical validations. The value could be calibrated with further strengthening logical validations.

2. PURPOSE AND APPROACH TO THE ANALYSIS

2.1 PURPOSE OF THE SROI

Every day our actions and activities create and destroy value; they change the world around us. Although the value we create goes far beyond what can be captured in financial terms, this is, for the most part, the only type of value that is measured and accounted for. Social Return on Investment (SROI) is a framework for measuring and accounting for a broad concept of value, taking into account social, economic and environmental factors. It is recognised as a leading method of measuring impact.

SROI allows us to compare the amount invested in a particular project with the value created, by valuing the different outcomes that have occurred. The SROI framework uses monetary values to represent outcomes. Once these monetary values have been established, a cost: benefit analysis is conducted that includes the notion of social value. Finally, a SROI ratio is produced that shows the social value in Indian Rupee terms, against money spent on the project or programme.

2.2 SROI APPROACH

To frame the evaluation of impact SROI used a 'theory of change', which sets out the relationship between the situation (the problem the initiative is trying to address), the inputs (the investment), the outputs (what has happened) and the outcomes (what has changed), in order to help us understand the impacts (what has changed that would not have happened anyway).

The methodology takes into account and values the full range of social value benefits (or dis-benefit) to all stakeholders who are deemed to experience material change. It follows a set of agreed principles and stages:

- ◆ Establishing scope and identifying stakeholders
- ◆ Mapping outcomes
- ◆ Evidencing outcomes and giving them a value
- ◆ Establishing impact
- ◆ Calculating the SROI
- ◆ Reporting, using, and embedding

Impact Map

A detailed impact map has been included with this evaluation. The impact map is essentially a spreadsheet that includes all the values for input and outcome calculations. The impact map also takes into account any change which would have happened anyway or is the result of the work of others. This report aims to explain in an accessible narrative, the story contained within the spreadsheet. This is not just a story of numbers and costs, but a story of how much each stakeholder valued the change that occurred for them as a result of engaging with the programme. [IMPACT MAP-WEBLINK](#) (Please refer section 9.2 ANNEXES 1: REFERENCES).

2.3 OBJECTIVE OF THE ANALYSIS

We are conducting an SROI evaluation analysis to measure the value of the impact created by Daseran Watershed project in 18 villages in the project.

The objective of this analysis is as follows:

- ◆ Assess the ongoing DW projects with the intent of establishing an impact study
- ◆ Stakeholder Evaluation of the aforementioned programmes

2.4 MATERIALITY

We identified stakeholders who play key roles in decision making on the interventions and who have significant impact upon the interventions. The material issues of the key stakeholders are decided upon the reconnaissance visit with the local community, schools, Primary Healthcare Centre, Gram-Panchayats, Partnership institutions Krishi Vigyan Kendra and ACF Team.

DASERAN WATERSHED (DW) PROJECT -INTERVENTIONS	STAKEHOLDER MATERIAL ISSUES	KEY MATERIAL ISSUES
<u>DIRECT STAKEHOLDERS</u>	<u>Socio-Economic issues addressed by Watershed</u>	
ACF-IMPLEMENTATION AGENCY		
NABARD-FUNDING AGENCY		
COMMUNITY BASED ORGANIZATION-CBOs		
MILK CO-OP SOCIETY		Common socio-economic issues addressed by Watershed and Local Community
<u>INDIRECT STAKEHOLDERS</u>	<u>Social Issues within the local community</u>	
SEED SELLING COMPANY		
MILK COOP SOCIETY		
NABARD-FUNDING AGENCY		
<u>LOCAL COMMUNITY</u>		

The significant social issues that have greater impact were critical criteria in selecting the boundaries of the villages to be surveyed.

Table 2.1 Identified key stakeholders through recon-visits and secondary data

Decision making	Decision making	Decision making
Direct Influence	Direct Impacts	Direct Beneficiary-Households
Direct Influence	Direct Impacts	Direct and Indirect Beneficiary-Animal Husbandry
Direct Influence	Direct Impacts	Direct Beneficiary-Farmers
Indirect Influence	Indirect Impact	Forest Department
Direct Influence	Indirect Impact	Agricultural/Horticulture Institutions
Indirect Influence	Direct Impact	Healthcare Institutions and Veterinarians
Direct Influence	Indirect Impact	Gram-Panchayats
Direct Influence	Direct Impact	Women Associations and SHGs
Direct Influence	Direct Impact	Govt. Institutions-Funding and Implementation partners
Direct Influence	Direct Impact	NABARD and ACF Team
Indirect Influence	Indirect Impact	Ambuja Cements Limited Team

Table 2.2 Identified Social contexts through recon-visits and secondary data

Social Contexts	
Employment and livelihoods	Farmers' Health and Safety
Women's education	Cattle and Livestock Management
Women's safety	Community Spirit
Women's empowerment	Seasonal Migration and Immigration
Health and Hygiene	Value of Water Impact over years
Children's Education	Resilience-Drought and Flood management

2.5 SCOPE AND THE PERIOD OF THE ANALYSIS

Baseline

Socio-economic survey was conducted in the Daseran Watershed area across 182 households in 2010. Accordingly, we took the baseline data for 112 households, 4 years ago. The investments made earlier to the baseline are accounted with the principles of straight line depreciation.

Scope

This research has concentrated only upon the interventions of DW Project across 18 villages as prescribed by the Detailed Project Report document. We carefully accounted the attribution of NABARD's other interventions and other external factors attributing the social change. Accordingly, we have developed the questionnaire for surveying the beneficiaries, focus group interviews and verified and validated in every part and process of research.

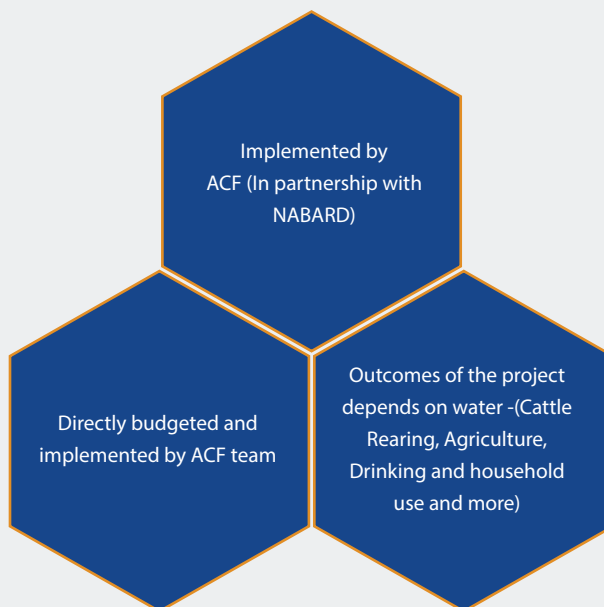


Figure 2.1 Scope of DASERAN WATERSHED SROI

DW has a set of operating villages in the project. All the villages were selected in addressing the sample population. The following villages were taken:

Table 2.1 Identified key stakeholders through recon-visits and secondary data

Treatment group = 570 Households				
1 Bhurjani	5 Kallerjeri	9 Kund	13 Daseranwala	17 Gathed
2 Nalag	6 Kadaunjeri	10 Kyard	14 Dinda	18 Aali
3 Harda	7 Kadaunwala	11 Daseranjeri	15 Gaana	
4 Kallerwala	8 Chanardi	12 Thach	16 Rawat	

Control group = 770 Households			
1 Banli	5 Kashyaloo	9 Samana	13 Sewra Chandi
2 Ghumaro	6 Malogda	10 Sera	
3 Kararaghat	7 Neowri	11 Serjeri	
4 Kashlog	8 Patti	12 Serwala	



Selection Criteria for the survey village

- ◆ Demographics-Population by community, socio-economically diverse, occupation and gender
- ◆ 18 Villages that have a mix of most number interventions, longer timeline of interventions and recent interventions
- ◆ Geography-Villages with different water accessibility and availability natural vegetation and resources. Villages in the perimeters of DW boundary such as the hill side villages and others are appropriately taken care

3. OVERVIEW OF DASERAN WATERSHED PROGRAM

This is an evaluative Social Return on Investment (SROI) analysis on DW. In a broader sense, ACF exists to support the local community in their irrigation, water harvesting, farming practices and livestock management. Prior to the SROI exercise, ACF has conducted a baseline research on socio-economic profile of the local community across the villages in Daseran Watershed. The positive findings from that study led to revalidate the progress and have sparked this research in social contexts-healthcare, sanitation, hygiene, wellbeing and others.

Watershed development leads to the conservation, regeneration, and the judicious use of human and natural (like land, water, plants, animals) resources within a particular watershed. It attempts to reach the best possible balance in the environment between natural resources on one side and man and grazing animals on the other. It takes people's participation because conservation is possible only through the whole hearted involvement of the entire community.

Why Watershed Development?

The consequences of environmental degradation - deforestation, wrong farming techniques, livestock over-grazing and faulty land use lead to the destruction of plant and tree cover exposing the earth to natural forces like heavy rains, direct sunshine and high velocity winds. They lead to soil erosion, floods, or water scarcity. Further, agricultural yields are lowered resulting in decline in the income levels of the community and eventually leading to migration of labour from rural to urban areas in search of livelihood.

DASERAN WATERSHED

Daseran is in Kunihar block, Solan District of Himachal Pradesh, and ACF implemented the DW project across 18 villages. Rainfall in the region is erratic, adversely affecting households and agricultural activities. When Solan receives good rainfall, the water resource management structures built over the past few years, helped to conserve and save rainwater. The scope of work is to capture information from all 18 villages, the interventions implemented, fitting into the timeline of baseline year and activities accomplished, and meeting the project sample size and budgets.

Figure 3.1 Background of DW villages



3.1 WHY SROI FOR DW?

Involving Stakeholders

In consultation with ACF and NABARD Team, we started with a longlist of stakeholders. Stakeholders are defined as people or organizations that affect or are affected by the programme (positive or negative). To decide which stakeholders to include in this analysis, we began with a brainstorming session about what we think did change for the stakeholders as a result of the programme.

During the involvement process of stakeholders, it became clear that the stakeholders we considered material in the first place, because of their direct involvement in the programme (Farmers, Women federations, NGOs, ACF-NABARD Team, Local Authorities and government), seemed to be material stakeholders. For other stakeholders-PHC, Forest department and others, it was more difficult to decide whether they were material or not. Decisions to include or exclude them from the analysis were based on their potential (or actual where known) outcomes.

Sample size

We planned for 220 surveys, they seem to be fine with the targeted and control group population for DW=112 households in the villages and 112 for the Control Group population in the villages.

Table 3- Population and sample of treatment group and control

Total households in treatment = 570		Sampled =112			
1 Bhurjani	5 Kallerjeri	9 Kund	13 Daseranwala	17 Gathed	
2 Nalag	6 Kadaunjeri	10 Kyard	14 Dinda	18 Aali	
3 Harda	7 Kadaunwala	11 Daseranjeri	15 Gaana		
4 Kallerwala	8 Chanardi	12 Thach	16 Rawat		

Total households in control group = 770		Sampled =112		
1 Banli	5 Kashyaloo	9 Samana	13 Sewra Chandi	
2 Ghumaro	6 Malogda	10 Sera		
3 Kararaghat	7 Neowri	11 Serjeri		
4 Kashlog	8 Patti	12 Serwala		

CONFIDENCE LEVEL = 95 % AND MARGIN OF ERROR = 8.2% FOR BOTH THE TREATMENT AND CONTROL GROUP

Confidence level informs how sure you can be. It represents how often the true percentage of the population who would pick an answer lies within the margin of error. The 95% confidence level means you can be 95% certain; Most researchers use the 95% confidence level.

Margin of Error is a measure of sampling uncertainty most commonly reported as a plus-or-minus figure in newspaper or television opinion poll results. For example, if you use a margin of error of 4 and 47% percent of your sample picks an answer you can be reasonably sure that if you had asked the question of the entire relevant population between 43% (47-4) and 51% (47+4) would have picked that answer.

The following table presents our rational decision behind inclusion of stakeholders in this analysis: DASERAN WATERSHED

Table 3.1a Rationale for Stakeholders Selection in DW villages

Stakeholder	Primary Role	Method of Data Collection	Rationale for inclusion
ACF and NABARD	Initiator	Interviews with Staff	Direct Influencer and Impactful
Community/Families	Beneficiary	Stakeholder Interviews	Direct Influencer and Impactful
Village Watershed Committee	Beneficiary	Stakeholder Interviews	Direct Influencer and Impactful
SHGs	Beneficiary	Stakeholder Interviews	Direct Influencer and Impactful
Local Co-operative bank	Influencer	Stakeholder Interviews	Direct Influencer and Impactful
Kaamadhenu-Milk Co-operative society	Influencer	Stakeholder Interviews	Direct Influencer and Impactful
Agriculture, Horticulture and Forest Dep	Influencer	Stakeholder Interviews	Direct Influencer and Impactful

Table 3.1b Stakeholders interacted in DW villages

Stakeholder	Total Number=112	Interviewed	Percentage
ACF and NABARD	12	12	100%
Community/Families	112	112	100%
Village Watershed Committee	26	26	100%
SHGs	(part as a FGD)	2	100%
Local Coop bank	2	2	100%
Kaamadhenu-Milk Co-operative society	(part as a FGD)	2	100%

3.2 DATA COLLECTION

Our interviews with the identified stakeholders focused on understanding each stakeholder's objectives, what they contribute (inputs), what activities they perform (outputs), and what changed for them (outcomes, intended or unintended) as a result of their involvement in DW and CG villages. This analysis has been carried out based on the global SROI framework. Sustainable Square conducted the exercise and it has no links or interests with ACF and NABARD outside the piece of work.

The qualitative methods used in evaluation are classified in three broad categories that are, in-depth interviews observation methods and document review. Face -to -face interviews were arranged by ACF staff where representatives of Sustainable Square have met the above stakeholders. These interviews enabled the researchers to establish rapport with stakeholders and therefore gain their cooperation. These interviews yield highest response rates in survey research. They also allowed the researcher to clarify ambiguous answers and when appropriate, seek follow-up information. Please find the questionnaire attached in annex 1 for reference.



4. UNDERSTANDING CHANGE - OUTCOMES

In the context of SROI, the research should consider both the positive and negative consequences of the project actions, as well as intended and unintended consequences and outcomes. To support this all stakeholders were asked what changed for them, considering both negative and positive factors. All findings, positive and negative, and intended and unintended are taken into account, as well the amount of change that might have happened anyway/and/or is down to others.

This research includes information on the intended outcomes of the DW for the stakeholders involved such as increase in income generation, empowerment of social status and learning new skills and acquired experiences. The research also reviewed the unintended outcomes of the process, which included improvements for whole stakeholder groups such as families of the beneficiaries.

While DW programme was intended to create socio-economic changes, the direct beneficiaries consequently produce unintended outcomes. These unintended outcomes are also explored in relation to the benefits received by the social change to the local community.

Table 4.1 Social Changes Captured in the SROI exercise

Stakeholder Group	Intended Change	Unintended Change
Direct Beneficiaries	<ul style="list-style-type: none"> - Improve water harvesting and agricultural productivity - Introducing micro-irrigation practices and to improve yield 	<ul style="list-style-type: none"> - Increased in financial access to loans - Self Governance is well established with the level of accountability and transparency
Beneficiaries Leading the groups	<ul style="list-style-type: none"> - Women Federations/SHGs 	<ul style="list-style-type: none"> - Mindset change on self-belief through SHG interventions and livelihood programs

INPUTS, VALUES AND OUTPUTS

The work with the impact map commenced in this part. Working with the impact map is a process that takes time, and will be continued until the ratio is calculated. The stakeholders were involved in this step of the analysis to make sure that the relevant outcomes were included.

During the stakeholder engagement with direct beneficiaries of DW as well as the rest of included stakeholders a number of investments and resources (inputs) were identified. Additional engagements were conducted to identify the estimated resources invested in both programmes, describe the resources that have been used in greater detail, as well as attribute a financial value to the identified inputs (valuation).



The following table provides a detailed calculation of the total investments/inputs for both programmes:

Table 4.2 Social Contexts and Inputs in the SROI exercise

Stakeholders	Key social contexts that have impact	Decision making
Direct Influence	Empowerment	Efforts, Resources, Time and Money
	Crop Yield	Efforts, Resources, Time and Money
	Cattle Yield	Efforts, Resources, Time and Money
Indirect Influence	Women Empowerment	Efforts, Resources, Time and Money
	Societal -well being	Efforts, Resources, Time and Money
	Self-governance	Efforts, Resources, Time and Money
Indirect Influence	Community Trust	Efforts, Resources, Time and Money
	Technical Knowledge	Efforts, Resources, Time and Money
	Credit availability and linkage	Efforts, Resources, Time and Money

The full cost provided by NABARD and ACF-WRM to set-up watershed works in DW is ₹17,64,480. For further information please visit Impact Map as mentioned in the Annex-2 References, Chapter 9.

5 OUTCOMES AND EVIDENCE

IDENTIFYING OUTCOMES & INDICATORS OF CHANGE

Having explored and mapped the various material outcomes, the next stage involved identifying appropriate ways of measuring whether change had taken place in the respective outcomes. For each material outcome, indicators of change were developed and then data was collected or existing data was used to quantify outcomes if found appropriate. Each indicator of change initiated the development of an appropriate survey questions through which change in the observed outcomes could be evidenced.

Table 5.1 Social Outcomes and Indicators in the SROI exercise

Stakeholders	Outcomes	Indicators
FARMERS	Direct progress resulted in agricultural land and production would be captured after the Daseran Watershed Program.	<p>Increase in agricultural income and informed that DW supported the increased production</p> <p>Increase in agricultural land availability/irrigated land</p>
	Direct progress resulted in milk and milk related produce would be captured after the Daseran Watershed Program.	<p>Income change in the sale of milk and milk products-Butter/Curd/Paneer among the surveyed farmers</p> <p>Increase in Dairy production among the farmers who received support and training from DW</p>
	Financial Empowerment	<p>The farmers' credit limit has increased from ₹ 1L to 3L but their vital savings is in the availability of lower interest compared to local lenders. 6 to 11% the average EMI paid by a farmer is ₹ 2234 and 43 farmers have access to KCC from NABARD.</p> <p>On an average, 8kg of fodder seeds and Napier Green saplings were given. By-products of paddy, grains and other produce are regularly offered as feedstock to the cattle along with the above. The annual savings due to the additional feedstock led to an annual savings of ₹ 25,000 to ₹ 27,000/Biga as per the cost to benefit analysis</p> <p>FPOs avail seeds at cheaper rate so there is saving of 30 to 40% in that</p>
LOCAL COMMUNITY	The availability of better drinking water, health and hygienic conditions and instrumental changes to focus on better education, healthcare and livelihood	<p>Giving tap connectivity and pipelines have led to reduction in drudgery by the water fetching population, especially women and school going children. The quality of water was well maintained as they controlled the quality in the water source. Accordingly the value of costs and benefits analysis was calculated</p> <p>41 families reported as a reduction in drudgery</p>
	One of the major outcomes is community spirit. It helps them to work together, resolve crisis as an unit, encouraging to attend training course and enhance their knowledge and resources. Another key example of the outcome is witnessed in the transparency of strong record keeping	There are multiple values accounted here. The costs to save a minimal agricultural crisis, in a scenario of 40% production loss-production costs of Arbi and Ginger were accounted and the value was accordingly obtained. Sustainable farming techniques-drip irrigation, mulching and fencing to prevent animal attacks would boost the production by 40% and their value of cost-benefit analysis was calculated.

ACF	The goodwill and credibility built by ACF helped to launch environmental, agricultural and livelihood programs with minimal or no costs on community outreach and community mobilization.	The cost to build awareness, community outreach and community mobilization and accordingly launch a program was calculated. Consultant day rate is Rs1000 to 1200 to work on the above activities in such villages and for 3 to 5 years project they will spend 90 to 120 days= 1000*120=120000 for 5years it will be 5X120000=6,00,000
	Technical knowledge about the agro-economy and market linkages and licensing, etc.	The cost to train a team, get access to the technical knowledge for the 3 member team in ACF would cost a min of ₹ 81,737 based on the number of days to be spent in the field
NABARD	The amount of financial exposure obtained after implementing such projects.	The potential amount of increase in funding or additional credit to NABARD in future such as the upcoming Green Climate Fund. In other words, if NABARD has invested in resources and labour to implement directly instead of ACF and still achieve same success and how much additional credit would be availed? An agreeable measure on the cost savings as 2% of project cost(2Lakh approximately-2% of 1Crore+) if NABARD has done on its own. The farmers and local community strongly attributed (50%) that increase in Kisan Credit Card value is attributed to NABARD. We found the indirect beneficial value as huge so we went with the conservative estimate of 50(50% of lowest increase 1Lakh is 50,000).

IDENTIFYING QUANTITY & DURATION OF CHANGE

In the below table we outline how many (Quantity) of the stakeholders have lived that change (indicator), for how long they are likely to be impacted after the end of DW and when does the impact start.

Table 5.2 Quantity of change in the SROI exercise

Stakeholders	Outcomes	Quantity	Explanation
FARMERS	“Income change in agricultural produce among the surveyed farmers, Increase in agricultural production among the farmers who received support and training from DW , Increase in agricultural land produce”	17	The direct increase in landholding area-yield, production, irrigated land and income change have resulted a significant positive
	Increase in milk sold on an average Litres per house per day	49	Milk production and yield per cow has increased with the availability more NABARD supported projects on vet health, free supply of fodder plants and role of the Milk Co-op society, Kamadhenu
	Number of positive instances on vet health check-ups		
	Number of farmers received KCC, repaid completely and increased their credit limit	43	Financial access due to increase in agriculture income and access to Kisan Credit Card as a part of NABARD project has been awarded
LOCAL COMMUNITY	Number of additional income earning opportunities availed after training by women	49	Mushroom cultivation, Hoseiry, Pickle making and other earning opportunities
	Additional income generated in positive value with SHGs support or without		8 families reported an increase of income of INR 5000 with the availability to earn interest from microfinance, additional earnings
	Reduction in drudgery from water procuring, amount of additional time that helps to capitalise income earning	41	The availability of better drinking water, health and hygienic conditions and instrumental changes to focus better on education, healthcare and livelihood

Stakeholders	Outcomes	Quantity	Explanation
LOCAL COMMUNITY	Increased number of learned and trained individuals who believe that they can prepare for a minimal agricultural crisis or to improve production	12	Community spirit to work together, resolve crisis, set up training and knowledge resources and maintain transparency in strong record keeping.
ACF	Increased number of instances and VWC and ACF team members who can introduce initiative	6	The level of costs for an external consultants to come and build awareness, win community trust and launch would cost ₹1000 to 1200 per day in such villages and for 3 to 5 years project they will spend 90 to 120 days= 1000*120=120000 5 years, it is 18 Lakhs(remove the agreed cost of project per HA(6000/HA)
	Increased number of instances that ensured to guarantee on agri-input cost savings, boost in yield and others	6	Technical knowledge about the agro-economy and market linkages and delivering positive outcomes-cost savings and a quality product
NABARD	Increase in percentage of financial exposure to implement higher value of projects or multiple projects	17	Data provided by NABARD team-Shimla. It was informed by NABARD. 50 to 60% of credit availability increased. From 1L to 3L. 50%of credit limit has been increased in time(30 families availed KCC)

For further information please visit Impact Map as mentioned in the Annex-2 References.

6. FINANCIAL PROXIES

6.1 EVIDENCING IMPACT

Central to the SROI methodology is the monetisation of outcomes in order that they can be measured in a consistent way using a common currency. This of course allows computation of a ratio of benefits to costs as the measure of impact which, expressed in monetary terms, can be set against the initial financial investment.

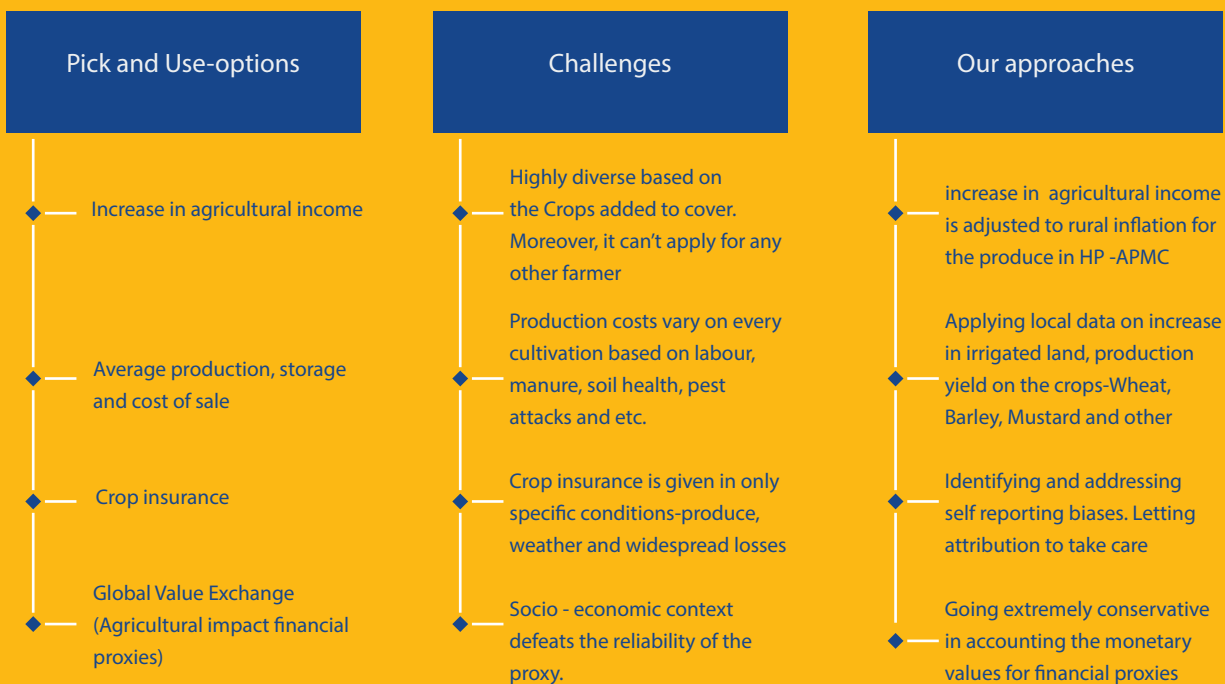
The process of monetising the relevant outcomes involves identifying financial proxies for each separate outcome. In other words, approximations of value were sought for each outcome, which in some cases may not be wholly representative of the specific outcome in question. The financial proxy would be chosen among various options that would be compared in various socio-economic contexts, accordingly the best financial proxy would be chosen. It would help to understand the valuation of the outcomes in individual valuation perspective-willingness to pay for an outcome, institutional valuation perspective-e.g insurance premium, cost-benefit valuation perspective and others.

The idea of financial proxies is evolutionary and we did not take the least resistance path but we did take utmost care in applying the right information. Most of the financial proxies utilised in the global markets are from Europe, Canada, US and UK which are alien to India's socio-economic characters. We attempted to tell the story of change in their own language of socio-economics. We may have not found the ultimate financial value of social but we have made a strong beginning. Moreover we are courageous to learn, unlearn and revive the financial value to calculate the appropriate financial proxy for a social change.



Financial Proxy-1 Improvement in Agriculture production.

Figure 6.1 Broader perspective of Financial Proxy



6.2 Financial Value of Agriculture Progress

Watershed Villages- Agricultural Income-2014	Watershed Villages- Agricultural Income-Now	Readjusted Income-Now at 35% cumulative Rural CPI-Himachal Pradesh	Control group Villages- Agricultural Income-2014	Control Group Villages- Agricultural Income-Now	Control Group Villages-Agricultural Income-Now
₹ 2,02,024	₹ 4,67,317	= (1-0.35) X ₹ 4,67,317 ₹ 3,03,756	₹ 33,662	₹ 45,444	= (1-0.35) X ₹45,444 = ₹ 29,538
Change in agri-income = Readjusted income for 2017 – income for 2014		= ₹303,756 - ₹202,024 = ₹1,01,732	Change in agri-income= Readjusted income for 2017 – income for 2014		= ₹ 29,538 - ₹ 33,662 = -₹ 4,123

Note: If CG villages witnessed a positive change value then that could be also deducted to see it as a true financial proxy, but it came as a negative value.

Table 6.2 Families reported YES to the support of NABARD

Number of families reported Yes that Watershed project contributed to Agriculture production	17
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The above 17 families have achieved progress in agriculture and they have answered that Daseran Watershed has directly contributed in the agriculture production, cattle health, milk productivity, seeds and cattle feed. They have mostly integrated the change not only in their agriculture and cattle management but also received training in leading Self Help Groups, Income earning opportunities, marketing produce, built polyhouses and sold their produce to markets to even Delhi and Chandigarh.

7. VALUING THINGS THAT MATTER

Deadweight, attribution and displacement

It is important in any economic evaluation to consider whether an outcome would have been achieved anyway regardless of the intervention assessed (deadweight) or how much of the outcome seen is down to the intervention (attribution). Accounting for deadweight and attribution is an important element of the SROI methodology. Deadweight relates to the extent to which outcomes would have happened anyway without the project while Attribution refers to the extent to which observed and anticipated outcomes can be attributed to DASERAN Watershed project as opposed to other programmes, activities or initiatives. Both measures are represented as proportions in the SROI model and were informed through the collection of data, and in the case of deadweight, a cross check against equivalent social and environmental trends identified through secondary data sources.

Drop-off

This SROI analysis has demonstrated that the value of some of the outcomes will continue to have an impact over five years. However an acknowledgement that the impact may for drop off over years has been made.

It was also important for the SROI ratios to account for diminishing impacts of the project over time, and for the value of money to change over time, and these were accounted for by the inclusion of estimates for drop-off and discount rate. In this study all the financial values in year two and three have been calculated using a discount rate of 2%. This figure appears in the top left of the impact map.

Table 7.1 Valuing that matters

Stakeholders	Outcomes - Indicators of change	Deadweight	Attribution	Displacement	Drop-off	Explanation
FARMERS	Agriculture and Horticulture	13%	25%	50%	5%	The deadweight here was foremost considered with Control Group Villages but their performance was negative so the deadweight reported by the local community was taken. Without ACF, 87% of change of would have not occurred but their role of 50% in attribution played a role. 25% displacement was given due to non-availability of native breeds of crops and disappearance of native cows. Human and Animal conflict occur and it could displace almost 20 to 25 % crop production. 5% drop off is mostly due to depreciation of water structures and their dependencies
	Dairy	13%	25%	50%	5%	
	Financial Empowerment	13%	25%	50%	5%	
	Average	13%	25%	50%	10%	
COMMUNITY	Women Empowerment	16%	5%	60%	5%	The deadweight here was considered with Control Group Villages but their performance was negative so the deadweight reported by the local community was taken. Without ACF, major change would have not occurred but their role in attribution played less in Self Governance and more in Women empowerment. 5% displacement was given due to the cascading effect of Farmer stakeholders' displacement and any socio-political conflicts in human interactions. Drop off was considered high as there is regular need to update with technical institutions both for SHGs, Village Watershed Committees and farmers individually in terms of training, insurance, technology and support
	Societal -well being	16%	5%	35%	5%	
	Self Governance	16%	5%	25%	5%	
	Average	16%	0%	40%	1%	

Table 7.1 Valuing that matters

Stakeholders	Outcomes - Indicators of change	Deadweight	Attribution	Displacement	Drop-off	Explanation
ACF and NABARD	Community trust and outreach	60%	0%	80%	2%	The deadweight is entered with the key role played by the community, subject matter experts-Engineering and other institutions. 80% attribution was informed by NABARD that without the maximum support of people this project can't be implemented. Similarly the technical knowledge for ACF or NABARD would be available in a similar geography to Daseran and similar demographics-socio-economic context of 30% chance. 2% was given by ACF and team that constant update and interaction with the community is needed.
	Technical knowledge	30%	0%	35%	2%	
	Credit availability and linkage	40%	0%	35%	2%	
	Average	45.5%	0%	50%	0%	

8. CALCULATING SROI

SROI CALCULATION

The calculation for the SROI is described in this section. Expressed as a ratio of return, it is derived from dividing the impact value by the value of the investment. However, before the calculation is made, the impact value is adjusted to reflect the present value of the projected outcome values. This is to reflect the present day value of benefits projected into the future. In this social value account, some outcomes are projected for a period of 1 year and so the effect of discounting for this is limited.

The ratio of return for SROI calculates the net present value of benefits created, based upon the net present value of investment required to deliver such benefits.

	Year 1 (after activity)	Year 2	Year 3	Year 4	Year 5
Total	₹ 40,82,172	₹ 39,02,238	₹ 37,31,751	₹ 35,70,207	₹ 34,17,130
Present Value (Per Year)	₹ 37,11,065	₹ 32,24,990	₹ 28,03,719	₹ 24,38,499	₹ 21,21,769
Total Present Value(Per Year)					₹ 1,43,00,043

The SROI calculation is expressed as a ratio of return from investment. It is derived from dividing the monetized value of the sum of all the benefits by the total cost of the investment;

The Net Present Value (PV): Present Value / Value of Input

In the case of Conversations the following figures were used to calculate the social return on investment:

The Net Present Value (PV) is ₹1,43,00,043

- The Total Investment figure in the same period to generate this value is ₹ 16,93,901
- The SROI ratio is calculated by dividing the total present value by the investment. Therefore, the social return from investing in DW is predicted to be ₹ 8.44 for every ₹ 1 invested.

For further information, please visit Impact Map as mentioned in the Annex-2 References.

9. ANNEXURE

9.1 ANNEXES 1: Glossary of SROI terms

- ◆ Attribution: Attribution is an assessment of how much of the outcomes was caused by the contribution of other organizations or people.
- ◆ Deadweight: This is an estimation of the amount of change that would have occurred without the intervention.
- ◆ Displacement: Some value that is created may merely displace the same value for other stakeholders. Displacement is an assessment of how much of the outcome has displaced other outcomes.
- ◆ Drop-off: As time passes after an initial intervention, the causality between the initial intervention and the continued outcome will lessen; drop-off describes this relationship.
- ◆ Duration: Length of the effect of an outcome following the initial intervention. Financial proxy: This is an estimation of a financial value for the outcome when a market value does not exist.
- ◆ Impact map: This is a spreadsheet which accompanies an SROI report and which contains all the information and calculations that result in the final SROI assessment.
- ◆ Inputs: The resources that are used to create the intervention by each stakeholder group.
- ◆ Materiality: in an SROI, if information is material, this means that its inclusion will affect the final valuation within an SROI, and therefore affect decision making. If a piece of information or a stakeholder group will have an effect on the SROI then this needs to be included in the process.
- ◆ Outcomes: The changes that occur as a result of the intervention. In an SROI, outcomes include planned and unplanned, as well as positive and negative changes.
- ◆ Stakeholders: People and organizations that are affected by the activity.
- ◆ Transparency SROI Definition: Each decision relating to stakeholders, outcomes, indicators and benchmarks; the sources and methods of information collection; the different scenarios considered and the communication of the results to stakeholders, should be explained and documented.
- ◆ Springboard: springboard is a leading UK-based Women's Personal Leadership programme designed by women, for women. It is the premier personal and work development programme for both individuals and organizations. The objective of the Springboard Programme is to enable women to take clear, practical, realistic steps to take more control over their lives (whatever that means to them).

9. 2 ANNEXES 1: REFERENCES

REFERENCES HYPERLINKS

- 1 Impact Map https://drive.google.com/file/d/1bVeEFceynZ_YkAYJ8z2A_pDQzROdRItW/view?usp=sharing
ACF Impact Map
SROI_FP

- 2 Financial Proxies <https://drive.google.com/open?id=1-lfOltuDtL6AiwGTTZkbl-nKObYLZ26S>

- 3 Questionnaire <https://drive.google.com/open?id=14AMHQIzoyF2Wygq2RXkfPBwLCiDyHHQd>

- 4 External Sources
1) Discount Rate-Interbank Lending rate for India, last 10 years average
<http://www.tradingeconomics.com/india/interest-rate/forecast>

2) Other allied documents
https://drive.google.com/open?id=1f3jyuHnutd6d2Tv_l41YYyz45n7yP-W_
https://drive.google.com/file/d/1-d5MkzCzqXvHMnliJWXm_Oq-Dojfa-oG/view?usp=sharing

9.3 ACRONYMS

	Acronym	Terminology	Definitions
1	FGD	Focus Group Discussions	A focus group discussion (FGD) is an information collection approach by bringing people together to discuss a specific topic of interest.
2	SROI	Social Return on Investment	Social Return on Investment is the principles-based analytic tool for measuring and accounting the social value created. It accounts a much broader concept of value, taking into account social, economic and environmental factor relative to resources invested
3	SHG	Self Help Group	Self-Help Group (SHG) is a small voluntary association of poor people, preferably from the same socio-economic background. They come together for the purpose of solving their common problems through self-help and mutual help.
4	SEDI	Skill and Entrepreneurship Development Institute	SEDI is a functional structure to promote productive employment and micro-enterprise. SEDI offers short, intensive courses in various trades that aim to achieve sustainable livelihood by strengthening youth's technical and functional skills.
5	BCI	Better Cotton Initiative (ACF and other institutions and individuals)	The Better Cotton Initiative is a program that exists to make global cotton production better for the people who produce it, better for the environment it grows in and better for the sector's future. BCI aims to transform cotton production worldwide by de
6	IFC	International Finance Corporation	The International Finance Corporation is an international financial institution that offers investment, advisory, and asset management services to encourage private sector development in developing countries.
7	HGM	Hydro Geo-Morphology or HGM Maps	Hydro Geo-Morphological (HGM) Maps using satellite data for facilitating the State Governments to show the locations of siting sustainability structures and also to locate high yielding/sustainable borewell/tubewell locations
8	IRAP	Institute for Resource Analysis and Policy	IRAP is a non-profit research organization, promotes sustainable systems for management of natural resources and the related services, particularly land and water resources, for improved food security, livelihoods and environment.
9	NSC	National Seeds Corporation	National Seeds Corporation (NSC) is a Schedule 'B'-Miniratna Category-I company wholly owned by Government of India under the administrative control of Ministry of Agriculture and Farmers Welfare.
10	RFR	Risk Free Rate	Risk-free interest rate is the rate of return of an investment with no risk of financial loss. It represents the interest rate that an investor would expect from an absolutely risk-free investment over a given period of time.
11	NPV	Net Present Value	Net Present Value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows. It applies the costs (negative cash flows) and benefits (positive cash flows) for each period of an investment.
12	WTP	Willingness To Pay	Willingness to pay (WTP) is the maximum amount or money an individual is willing to spend to procure or consume a good or service. Here the WTP is applied in the desirable social change context, the maximum financial value an individual is ready to commit for the desirable social change.

	Acronym	Terminology	Definitions
13	RRWHS	Rooftop Rain Water Harvesting System	Rooftop rainwater harvesting System (RRWHS) is a simple, low-cost technique through which rainwater is collected on the roof and transported with gutters to a storage reservoir, where it provides water at the point of consumption or can be used for recharging a well or the aquifer.
14	PHC	Primary Healthcare Centre	Primary Health Centres (PHC) are part of rural healthcare to meet the health care needs of rural population. Each primary health centre covers a population of 1,00,000 and is spread over about 100 villages.
15	WASMO	Water and Sanitation Management Organization	WASMO is a facilitating organisation working towards drinking water security and habitat improvement by empowering communities to manage their local water sources and village drinking water supply system and services.
16	WBCSD	World Business Council for Sustainable Development	World Business Council for Sustainable Development is a CEO-led, global advocacy association of some 200 international companies dealing exclusively with business and sustainable development.
17	SEEA	System of Environmental-Economic Accounting	System of Environmental-Economic Accounting (SEEA) contains the internationally agreed standard concepts, definitions, classifications, accounting rules and tables for producing internationally comparable statistics on the environment and its relationship with the economy.
18	CBA	Cost/Benefit analysis	Cost-benefit analysis is the exercise of evaluating a planned action by determining what net value it will have for the project or business activity. The exercise quantifies, and adds all the positive factor as benefits and subtracts all the negatives, the costs and the net value is determined to influence business investment decisions.
19	CEA	Cost Effective Analysis	Cost-effectiveness analysis (CEA) is an economic analysis that compares the relative costs and outcomes (effects) of two or more courses of action. It assigns a monetary value to the measure of effect.
20	QALY	Quality Adjusted Live Years	A quality-adjusted life-year (QALY) takes into account both the quantity and quality of life generated by healthcare interventions. It is the arithmetic product of life expectancy and a measure of the quality of the remaining life-years.
21	DALY	Disability Adjusted Live Years	DALY for a disease or health condition is calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for people living with the health condition or its consequences.
22	HYE	Health Years Equivalent	The conjectured number of years lived in perfect health that could be regarded as equivalent to the precise number of years spent in a specific imperfect state of health.
23	PIM	Participatory Irrigation Management	Participatory Irrigation Management Project has involved communities to manage their own water resources and helped farmers to diversify their produce.
24	WUA	Water User Associations	WUAs are responsible to ensure that farmers in their region have access to water. Regular training with WUA groups has ensured that they follow agreed procedures and distribution methods to avail of water under the project.



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