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**AN
EVALUATION STUDY
ON
MINOR IRRIGATION PROJECTS
UNDER R.I.D.F.**

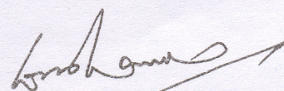
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PREFACE

Successful implementation of any development programme certainly requires adequate funds but in recent years the State finances have been under stress. In such a situation the RIDF facility created by the Central Government has proved extremely useful for earmarked infrastructural development. Himachal Pradesh is one of the States which has availed this facility from the National Agriculture and Rural Development Bank for creation of rural infrastructure such as Irrigation Projects, Watershed Management, construction of Rural Roads & Bridges, Primary school buildings etc.

During the last seven years of the implementation of this programme in Himachal Pradesh, 2457 projects were sanctioned by the NABARD involving an investment of about Rs. 532.20 crore. Last year, the State Government took a decision to conduct an Evaluation Study on Minor Irrigation Schemes constructed under the RIDF, especially focusing on impact in terms of financial viability and to make an assessment as to what extent the needs of the farmers have been realised. The study was entrusted to the Planning Department. With the active co-operation of the field staff and Engineers of Irrigation & Public Health Department and Agriculture Department, this assignment was accomplished by the Evaluation Division of Planning Department and after having it discussed in the High Powered Committee on R.I.D.F. it has been approved for publication and follow up by the all concerned departments and agencies.

I hope that readers and implementors will find this publication very useful for their research and planning purpose. I also hope that Irrigation & Public Health Department and Agriculture Department would make a critical analysis of this study and take appropriate steps towards implementing the recommendations of this report.



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CHAPTER-1

INTRODUCTORY

1.1.1 Eighth Five Year Plan period witnessed a deceleration in public sector investment in agriculture and rural infrastructure development. One of the basic limitations to develop rural infrastructure was lack of resources. State Governments which needed to develop and maintain rural infrastructure were experiencing severe resource crunch. This apart, the commercial banks which were to channelise atleast 18 percent of their total lending to agriculture were unable to fulfil their commitments. In this background, the Hon'ble Finance Minister while presenting the Union Budget for 1995-96 on 15th March, 1995 had inter- alia indicated:

" Inadequacy of public investment in agriculture is today a matter of general concern. This is an area which is the responsibility of the States but many States have neglected investments in infrastructure for agriculture. There are many rural infrastructure projects which have been started but are lying incomplete for want of resources. They represent major loss of potential income and employment to the rural population."

1.1.2 In order to hasten the process for the completion of projects Union Finance Minister had indicated setting up of Rural Infrastructure Development Fund (RIDF) in NABARD from April, 1995. Initially Rural Infrastructure Development Fund (RIDF) was created with a corpus of Rs.2,000 crores.

2. Main Features:

1.2. Contributions to RIDF:

The contributions to R.I.D.F were to be received from scheduled commercial banks, excluding foreign banks, operating in India, to the extent of shortfall in agricultural lending in the priority sector target, subject to a maximum of 1.5 percent of the net bank credit. Since then, the scheme has been continued with the announcements in the successive Union Budgets with enhanced committed contributions of Rs.2500 crore, Rs. 2500 crore, Rs.3000 crore and Rs. 3500 crore for the years 1996-97, 1997-98, 1998-99 and 1999-2000 as RIDF-II, RIDF-III, RIDF-IV and RIDF-V respectively. By 1999-2000, such committed contributions aggregated to Rs. 13,500 crore. The tenure of such contribution to the fund was 5 years which has been increased to 7 years under RIDF-V.

1.3 Eligible Purposes:

1.3.1 Under RIDF-I, incomplete or on-going projects in minor, medium and major irrigation alongwith projects in flood protection, watershed management and soil conservation were accorded priority. Projects on rural roads and bridges for connecting rural areas with urban marketing centres / highways / rail heads and facilitating inter-connectivity of villages became a major component for support under RIDF-II and thereafter. Development of integrated market yards, modernisation of existing inland waterways for transportation of agricultural produce were also made eligible purposes under RIDF-II.

1.3.2 Projects relating to (a) harvesting of rain water to reduce the runoff and salinity ingress in coastal areas, (b) irrigation projects that were already completed and not

operationalised and could be made functional after some renovation and (c) construction of terminal and rural markets to facilitate marketing of agriculture and horticulture produce were also considered as eligible for support since RIDF-III.

1.3.3 Under RIDF-IV, projects relating to construction of fish jetties have been included in the existing purposes. Under RIDF-V, primary school buildings, rural drinking water works, drainage, primary health centres, village haats, forest development etc. have also been made eligible if they are taken up by Panchayati Raj Institutions, Self Help Groups, Non-Governmental Organizations etc.

1.4 Rates of Interest:

On the contributions to the Fund, NABARD pays interest @ 11.5% p.a. (12.5% in RIDF) to commercial banks and on loans out of this Fund, it receives an interest of 12% p.a. (13% in RIDF-I).

3. Other Features:

- i) Under the first four tranches of RIDF, loans were advanced to State Governments and Government owned Corporations. In fifth tranche of RIDF, the scope of the Fund has also been extended to cover Gram Panchayats, Self Help Groups (SHGs) and Non-Governmental Organisations (NGOs).
- ii) All loans from the Fund are project based. The project proposals received from the State Government are appraised for technical feasibility, financial viability and economic benefit.
- iii) While ongoing incomplete projects were accorded priority under RIDF-I, new projects have also been made eligible for support under the subsequent four tranches of the Fund.
- iv) Projects with shorter gestation period are given priority under the RIDF. State Governments are required to complete the execution of the projects within a maximum period of three years.
- v) Under RIDF-V, the period of repayment has also been increased from 5 to 7 years.
- vi) Loans under RIDF are sanctioned by a Project Sanctioning Committee (PSC) which is a sub-committee of the Board of Directors of NABARD.
- vii) The implementation of projects sanctioned is subjected to close monitoring. For this purpose, a high powered committee chaired by Chief Secretary/Agriculture Production Commissioner is constituted. In West Bengal, the Finance Minister of State chairs some of the meetings. The committee ensures proper coordination among different implementing agencies of the State Government.
- viii) The progress in implementation is also assessed by NABARD through a set of specially designed formats and field visits. Periodical discussions are held with officials concerned of the State Governments to sort out identified problems.

4. Projects Sanctioned to H.P:

1.4.1 In so far as Himachal Pradesh is concerned RIDF assistance proved to be tremendously useful in the creation of rural infrastructure facilities viz. construction of Rural Roads, Minor Irrigation schemes, Bridges and Primary School Buildings. The details of projects sanctioned under RIDF-I to VII alongwith the loan sanctioned by NABARD are depicted in the following table:-

Table-1

(Rs. in Lakh)

Tranches of RIDF	Category of Projects	No. of Projects Sanctioned	Amount of Loan Sanctioned
1.	2.	3.	4.
I	Minor Irrigation Projects	77	1422.71
II	1.Minor Irrigation Projects	64	}
			}
	2.Rural Roads	2	}
			}
III	1.Minor Irrigation Projects	18	}
	2.Rural Roads	8	}
	3.Bridges	2	}
IV	1.Minor Irrigation Projects	34	}
	2.Rural Roads	19	}
	3.Bridges	14	}
V.	1.Minor Irrigation Projects	44	}
	2.Rural Roads	22	}
	3.Bridges	7	}
	4.Minor Irrigation(Agri.)	160	}
	5.Pry. School Buildings	500	}
VI.	1.Minor Irrigation Projects	75	}
	2.Flow Irrigation Projects	168	}
	3.Rural Roads	30	}
	4.Bridges	21	}
	5.Pry. School Buildings	984	}
	6.IT	1	}
VII.	1.Minor Irrigation Projects	1	}
	2.Rural Roads	62	}
	3.Bridges	10	}
	4.IWDP	133	}
	5.IT	1	}
	Total-I to VII	2457	53220.29

1.4.2 The terms and conditions set for the availment of NABARD assistance provided that the nodal department for raising of demands for release of funds would be the Finance Department of State Government which in turn would establish satisfactory arrangements for channeling the funds to the concerned departments for executing the works but in the case of Himachal Pradesh, Planning Department of the State Government was declared as the nodal department keeping in view its past record in effective co-ordination and monitoring of similar projects year after year. With a view to evolve an effective mechanism for quarterly monitoring of the projects sanctioned under RIDF Programme, a High Powered Committee under the chairmanship of Chief Secretary, of the State Government was constituted. The Secretaries and Heads of the concerned departments were made members of this Committee.

CHAPTER-II

OBJECTIVES, METHODOLOGY AND SCOPE OF THE STUDY

1. Objectives of the Study:

During the course of seven years, 2457 projects of different categories viz .Minor Irrigation, Rural Roads, Bridges, Primary Education School Buildings etc. with an estimated cost of Rs. 532.20 crores were sanctioned to Himachal Pradesh. In 14th meeting of the High Powered Committee held under the chairmanship of Chief Secretary, Himachal Pradesh on 4th July, 2001, a decision was taken to conduct a quick evaluation study of the Minor Irrigation projects sanctioned under RIDF-I & II with an objective to make an assessment of the irrigation potential created and potential utilised by the benefitted farmers.

2. Methodology:

2.2.1 The data of projects completed was obtained from the RIDF Division of the Planning Department. According to these details, 140 Irrigation works were sanctioned and completed under RIDF-I & II. All these projects constituted universe for the conduct of this study. Keeping in view the small size of the universe and time constraints, it was thought prudent to draw a small sample of the size of 5%. While applying stratified random sampling technique and making proportionate allocation to each stratum (LIS, FIS and Tube-wells) 3 Lift Irrigation Schemes, 1 Flow Irrigation Scheme and 3 Tube-wells were chosen for the conduct of this study covering all the 10 districts of the state.

2.2.2 The secondary data was collected by Sh. S.L. Sharma, Deputy Director, Evaluation Division of the Planning Department who visited all the concerned S.E.s/ Executive Engineers in the selected area and collected the relevant data on the status of the Projects, List of Beneficiaries, functioning of the Water Users Associations/ Kisan Vikas Sanghs and Potential Created. During this tour, he also collected Primary Data on the schedules canvassed for the conduct of this study by holding interviews with members of the Kisan Vikas Sanghs and the beneficiaries. For selection of beneficiaries, judgement sampling method technique was used. It was also kept in view that atleast 5 percent beneficiaries of the selected projects were covered under the study.

3. Scope and Coverage :

After the implementation of RIDF-I & II, 140 Irrigation Projects (46 Lift Irrigation Schemes, 20 Flow Irrigation Schemes and 74 Tubewells) pertaining to 10 non-tribal districts were completed by the end of March, 1999. In order to draw a sample size of 5%, all category of schemes viz. LIS, FIS and Tubewells, were arranged stratum-wise and after consultation of relevant random number table, 7 schemes (3 LIS, 1 FIS and 3 T/Wells) pertaining to four districts namely Bilaspur, Mandi, Kangra and Una were chosen for the conduct of this study.

4. Schedule:

For field survey, a schedule as appended at Annexure "A" was canvassed which contained following information:-

1. Household data on the name, address, sex ,age, caste, occupation and size of landholdings of the beneficiaries.
2. Details of existing irrigation sources.
3. Land use pattern prior and after construction of the scheme.
4. Details on the production of the important crops, before and after the construction of irrigation scheme.
5. Details on the consumption of seeds, chemical fertilizers, manure and pesticides.
6. Details on household income of the beneficiaries.
7. Views of the beneficiaries about the functioning of the scheme.

5. Field Work:

The concerned Executive Engineers of the I &PH Department were requested to ask all the beneficiaries as well as the members of the Water Users Associations/ Kisan Vikas Sanghs to be present on the spot at the time of the field visit of the Dy. Director, Planning Department. Since, 5% beneficiaries were to be interviewed for the collection of primary data , the selection of the beneficiaries was made by judgement sampling method and keeping in view the local conditions of the area.

6. Compilation and Analysis of the Data:

The compilation of Primary and Secondary data was done by the Statistical Assistant of the Evaluation Division where as analysis and report writing was done by Sh. S.L. Sharma ,Deputy Director, Planning Department.

7. Reference Period:

The study covered two tranches of RIDF-I and RIDF-II, related to the year 1995-96 to 1996-97 and schemes sanctioned thereunder and completed upto 31st March,1999.

CHAPTER-III

ANALYSIS OF DATA

3.1.1 To fulfil the outlined objectives of the study, data on the various aspects of schemes was collected by holding interviews with selected beneficiaries. Textual presentation of data collected from four districts under the study is given in the following tables:-

2. Classification of Beneficiaries:

3.2.1 The data collected on Sex and Age-wise classification of the beneficiaries is presented in the following table:-

Table-2
Sex and Agewise Classification

Category-wise Details of Schemes	No. of Beneficiaries Interviewed	Upto 20 years		21 to 40 years		41 to 60 years		Above 60 years		Total	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
A. LIFT IRRIGATION SCHEMES											
Bard Uparla Har	3	-	-	1	-	2	-	-	-	3	-
Hukkal	3	-	-	-	-	1	-	2	-	3	-
Soldha	5	-	-	-	-	-	-	5	-	5	-
B. FLOW IRRIGATION SCHEME											
Talai	1	-	-	-	-	1	-	-	-	1	-
C. TUBE-WELLS											
Lachho-Ka-Talab	3	-	-	-	-	-	-	3	-	3	-
Upper-Mehra	4	-	-	2	-	1	1	-	-	3	1
Deoli	3	-	-	-	-	2	-	1	-	3	-
Total (A+B+C)	22	-	-	3 (13.63)	-	7 (31.82)	1 (4.55)	11 (50.00)	-	21 (95.45)	1 (4.55)

(Figures in Brackets are Percentage)

3.2.2 The above table shows that out of 22 beneficiaries selected for the supply of information 21 (95.45 percent) were males and one (4.55 percent) female. Of the males, 3 (13.63 percent) belonged to age group of 21 to 40 years and 7 (31.82 percent) were in the age group of 41 to 60 years, while 11, 50 percent interviewed were of the age above 60 years. The only female selected for the study was in the age group of 41 to 60 years.

3.2.3 On the basis of information on age group we arrive on to a conclusion that all the beneficiaries were mature enough to understand the queries of the investigator and the information supplied by them is worth while to be relied upon.

3.Caste-wise Classification :

3.3.1 The caste-wise distribution of the selected beneficiaries is given in the table below:-

Table-3
Caste-wise Classification of Beneficiaries

Sr.No.	Category-wise Details of Schemes	No. of Beneficiaries Interviewed	Scheduled Castes	Scheduled Tribes	Other Backward Classes	Others
1.	2.	3.	4.	5.	6.	7.
A. LIFT IRRIGATION SCHEMES						
1.	Bard Uparla Har	3	-	-	-	3
2.	Hukkal	3	-	-	-	3
3.	Soldha	5	2	-	-	3
B. FLOW IRRIGATION SCHEME						
1.	Talai	1	-	-	-	1
C. TUBE-WELLS						
1.	Lachho-Ka-Talab	3	-	-	3	-
2.	Upper-Mehra	4	1	-	3	-
3.	Deoli	3	-	-	-	3
	Total	22	3 (13.64)	-	6 (27.27)	13 (59.09)

(Figures in Brackets are Percentages)

3.3.2 It is seen from the above table that of the 22 beneficiaries 3 (13.64 percent) belonged to Scheduled Castes, 6 (27.27 percent) to Backward Classes and rest 13 (59.09 percent) to General categories.

4. Occupation of the Beneficiaries:

3.4.1 The details about the principal and subsidiary occupation of the beneficiaries were gathered and displayed in the following table:-

Table-4
Occupation of the Beneficiaries

Category-wise Details of Schemes	No. of Beneficiaries Interviewed	Principal Occupation			Subsidiary Occupation			
		Agriculture	Govt. Job	Labour	Agriculture	Pension after Retirement	Labour	No Occupation
1.	2.	3.	4.	5.	6.	7.	8.	9.
A. LIFT IRRIGATION SCHEMES								
1. Bard Uparla Har	3	3	-	-	-	2	1	-
2. Hukkal	3	2	-	1	1	1	-	1
3. Soldha	5	5	-	-	-	1	-	4
B. FLOW IRRIGATION SCHEME								
1. Talai	1	1	-	-	-	-	-	1
C. TUBE-WELLS								
1. Lachho-ka-Talab	3	3	-	-	-	-	1	2
2. Upper-Mehra	4	3	1	-	1	-	1	2
3. Deoli	3	2	1	-	1	-	-	2
TOTAL	22	19 (86.36)	2 (9.09)	1 (4.55)	3 (13.64)	4 (18.18)	3 (13.64)	12 (54.54)

(Figures in Brackets are Percentages)

3.4.2 It is revealed from the above table that 19 (86.36 percent) beneficiaries were having Agriculture as their main occupation, 2 (9.09 percent) were in the Government jobs and one (4.55 percent) earned his livelihood by working as a labourer. In so far as subsidiary occupation is concerned, 12 beneficiaries (54.54 percent) were not having any occupation as a secondary occupation while 4 (18.18 percent) were having pension as source of their income after retirement from government service.

5. Size of Land Holdings:

3.5.1 The data obtained on the size of Land Holdings of the beneficiaries given in the following table:-

Table-5
Size of Land Holdings

(Land in Bighas)

Category-wise Details of Schemes	No. of Beneficiaries Interviewed	Irrigated Land	Un-irrigated Land	Total
1.	2.	3.	4.	5
A. LIFT IRRIGATION SCHEMES				
1. Bard Uparla Har	3	25	16	41
2. Hukkal	3	26	26	52
3. Soldha	5	34.10	34.10	69
B. FLOW IRRIGATION SCHEME				
1. Talai	1	10	20	30
C. TUBE-WELLS				
1. Lachho-ka-Talab	3	29.05	4	33.05
2. Upper-Mehra	4	7	2.10	9.10
3. Deoli	3	7.10	74.10	82
TOTAL	22	139.05 (43..98)	177.10 (56.02)	316.15

(Figures in Brackets are Percentages)

3.5.2 As would be evident from the data given above, the selected 22 beneficiaries were having 316.15 bighas as cultivated land in their possession of which 139.05 bighas was under(43.98 percent) irrigation whereas 177.10 (56.02 percent) as un-irrigated. It means that the selected farmers were not able to take full advantage of the irrigation potential created as more than 50% cultivated land of the beneficiaries was still un-irrigated.

6. Existing Irrigation Sources:

3.6.1 With a view to know as to whether the beneficiaries were already having other sources of irrigation prior to the construction of new schemes under the RIDF, the details were obtained from the beneficiaries and presented in the following table:-

Table-6
Existing Irrigation Sources

Category-wise Details of Schemes	No. of Beneficiaries Interviewed	Existing Irrigation Sources					
		Kuhl	Tube-well	GIS	LIS	Any other source	Nil
1.	2.	3.	4.	5.	6.	7.	8.
A. LIFT IRRIGATION SCHEMES							
1. Bard Uparla Har	3	-	-	-	-	-	3
2. Hukkal	3	-	-	-	-	-	3
3. Soldha	5	-	-	-	-	-	5
B. FLOW IRRIGATION SCHEME							
1. Talai	1	-	-	-	-	-	1
C. TUBE-WELLS							
1. Lachho-ka-Talab	3	-	-	-	-	-	3
2. Upper-Mehra	4	-	-	-	-	-	4
3. Deoli	3	-	-	-	-	-	3
TOTAL	22	-	-	-	-	-	22

3.6.2 The above table shows that no other sources of Irrigation were available to the beneficiaries prior to the construction of these schemes.

7. Land Use Pattern:

3.7.1 Land use pattern of the selected beneficiaries in respect of Rabi and Kharif season is given in the following tables:-

Table-7(a)
Land Use Pattern (Rabi Season)

(Area in Bighas)

Category-wise Details of Schemes	Area under Wheat		Area under Barley		Area under Gram / other Pulses		Area under Mustard / Toria or other Oil Seeds	
	Prior	After	Prior	After	Prior	After	Prior	After
1.	2.	3.	4.	5.	6.	7.	8.	9.
A. LIFT IRRIGATION SCHEMES								
1. Bard Uparla Har	22	18	2	2	1	0.05	-	-
2. Hukkal	22	22	2	1	2.04	2.04	-	-
3. Soldha	36.10	36.10	-	-	-	-	-	-
B. FLOW IRRIGATION SCHEME								
1. Talai	15	15	-	-	-	-	-	-
C. TUBE-WELLS								
1. Lachho-ka-Talab	30.00	15.10	5	1	-	1.10	-	-
2. Upper-Mehra	9.10	9.10	-	-	-	-	-	-
3. Deoli	6	7.10	-	-	0.10	-	0.10	-
TOTAL	141	124	9	4	3.14	3.19	0.10	-

Table-7(b)
Land Use Pattern (Rabi Season)

(Area in Bighas)

Category-wise Details of Schemes	Area under Vegetables		Area under Horticulture		Area under Other Crops		Total Area under Crops	
	Prior	After	Prior	After	Prior	After	Prior	After
1.	2.	3.	4.	5.	6.	7.	8.	9.
A. LIFT IRRIGATION SCHEMES								
1. Bard Uparla Har	-	-	1	3.05	-	1	26	24.10
2. Hukkal	0.10	0.10	0.10	0.10	-	-	27.04	26.04
3. Soldha	-	-	3	3.10	-	-	39.10	40.00
B. FLOW IRRIGATION SCHEME								
1. Talai	-	1	1	1	-	-	16.00	17.00
C. TUBE-WELLS								
1. Lachho-ka- Talab	-	3.00	-	13.15	-	-	35.00	34.15
2. Upper-Mehra	-	-	-	-	-	-	9.10	9.10
3. Deoli	-	-	1	1	-	-	8	8.10
TOTAL	0.10	4.10	6.10	23.00	-	1	161.04	160.09

3.7.2 As would be evident from the above tables, the cropping pattern has undergone few changes. The selected beneficiaries who were earlier growing traditional crops, have started growing vegetables and to some extent have also started growing citrus fruits. The above table 7(a) shows that during Rabi season the selected farmers were sowing wheat in an area of 141 bighas but after the construction of these irrigation schemes the area under wheat has decreased by 17 Bighas (12.06 percent). Similarly the area under barley has decreased by more than 50%. On the other side the area under vegetables has increased from 10 Biswas to 4 Bighas and 10 Biswas. Thus an increase of 4 Bighas in area under vegetables has been noticed as would reveal from the above table 7(b). Similarly near 4 times increase has also been noticed in the cultivation of Horticultural crops. Nevertheless, the diversification has not reached to an optimum level.

Table-8(a)
Land Use Pattern (Kharif Season)

(Area in Bighas)

Category-wise Details of Schemes	Area under Maize		Area under Paddy		Area under Pulses		Area under Vegetables	
	Prior	After	Prior	After	Prior	After	Prior	After
1.	2.	3.	4.	5.	6.	7.	8.	9.
A. LIFT IRRIGATION SCHEMES								
1. Bard Uparla Har	18	15	2	2	-	-	-	4
2. Hukkal	16	16	8	8	2.04	2.04	0.10	0.10
3. Soldha	30.10	30.10	27	26	-	-	-	-
B. FLOW IRRIGATION SCHEME								
1. Talai	15	9	-	-	-	-	-	1
C. TUBE-WELLS								
1. Lachho-ka- Talab	26.05	9	-	3	-	1.10	-	2.05
2. Upper-Mehra	5.10	5.10	3	3.10	-	-	-	-
3. Deoli	5.10	4.10	-	2	-	0.05	-	-
TOTAL	116.15	89.10	40	44.10	2.04	3.19	0.10	7.15

Table-8(b)
Land Use Pattern (Kharif Season)

(Area in Bighas)

Category-wise Details of Schemes	Area under Horticul- ture		Area under Other Crops		Total Area under Crops	
	Prior	After	Prior	After	Prior	After
1.	2.	3.	4.	5.	6.	7.
A. LIFT IRRIGATION SCHEMES						
1. Bard Uparla Har	1	3.05	-	-	21	24.05
2. Hukkal	0.10	0.10	-	-	27.04	27.04
3. Soldha	3	3.10	-	-	60.10	60
B. FLOW IRRIGATION SCHEME						
1. Talai	1	1	-	-	16	11
C. TUBE-WELLS						
1. Lachho-ka- Talab	-	13.15	-	-	26.05	29.10
2. Upper-Mehra	-	-	-	-	8.10	9
3. Deoli	1	1	0.10	-	7	7.15
TOTAL	6.10	23.00	0.10	-	166.09	168.14

3.7.3 As would reveal from table 8 (a) above, the selected farmers have started growing more Paddy during the Kharif season. We can notice an increase of about 10.25 percent in the cultivation of Paddy crop. An additional area of more than 2 Bighas has also been covered for cultivation.

8. Production of Main Cereals:

3.8.1 In order to obtain net increases in the annual production of main cereals and its sale value before and after the availability of irrigation facilities, all the 22 selected beneficiaries were interviewed for this purpose. The data collected is displayed in the following tables:-

Table-9(a)
Production of Important Cereals

Category-wise Details of Schemes	Wheat		Barley		Paddy		Maize		Pulses	
	Annual Production (Qtls.)	Sale Value (Rs.)	Annual Production (Qtls.)	Sale Value (Rs.)	Annual Production (Qtls.)	Sale Value (Rs.)	Annual Production (Qtls.)	Sale Value (Rs.)	Annual Production (Qtls.)	Sale Value (Rs.)
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
A. LIFT IRRIGATION SCHEMES										
1. Bard Uparla Har (B)	17	8250	-	-	2	900	21	8150	0.25	700
(A)	27	16200	1	300	4	2400	25	11250	0.40	1200
2. Hukkal (B)	19	15850	0.50	150	2	1000	7.80	2830	0.30	750
(A)	19	15950	0.50	150	2	1100	7.80	3010		
3. Soldha (B)	43	18700	-	-	55	20250	28	7200	-	-
(A)	50.50	32600	-	-	56	26000	35.50	15600	-	-
B. FLOW IRRIGATION SCHEME										
1. Talai (B)	10	5000	-	-	-	-	8	2700	-	-
(A)	15	9750	-	-	-	-	10	4500	-	-
C. TUBE-WELLS										
1. Lachho-ka-Talab (B)	7	3300	1	350	-	-	5	1600	1	3500
(A)	37	24050	2	700	8	4000	8.50	3550	2.50	6500
2. Upper Mehra (B)	24.50	9800	-	-	7	2100	17	5100	-	-
(A)	31	20150	-	-	10	5000	25.50	10200	-	-
3. Deoli (B)	18	8200	-	-	-	-	15.50	5425	0.30	750
(A)	36	21900	-	-	17	9600	19	8550	0.20	500
TOTAL (B)	138.50	69100	1.50	500	66	24250	102.30	33005	1.85	5700
(A)	215.50	140600	3.50	1150	97	48100	131.30	56660	3.10	8200

(B) = Before the construction of scheme

(A) = After the construction of scheme

Table-9(b)
Production of Important Fruits & Vegetables

Category-wise Details of Schemes	Mangoes / Other Citrus Fruits		Vegetables	
	Annual Production (Qtls.)	Sale Value (Rs.)	Annual Production (Qtls.)	Sale Value (Rs.)
1.	2.	3.	4.	5.
A. LIFT IRRIGATION SCHEMES				
1. Bard Uparla Har (B)	4.40	2120	2.5	1350
(A)	6.40	6800	3.5	2550
2. Hukkal (B)	0.20	160	1.90	2300
(A)	0.20	200	1.90	2400
3. Soldha (B)	10.00	10000	-	-
(A)	10.00	11000	-	-
B. FLOW IRRIGATION SCHEME				
1. Talai (B)	0.40	320	-	-
(A)	0.40	400	-	-
C. TUBE-WELLS				
1. Lachho-ka- Talab (B)	2	1000	-	-
(A)	140	79000	15.50	75150
2. Upper Mehra (B)	-	-	-	-
(A)	-	-	-	-
3. Deoli (B)	-	-	-	-
(A)	-	-	-	-
TOTAL (B)	17	13600	4.40	3650
(A)	157	97400	20.90	80100

3.8.2 As would be seen from Table No.9(a) above, the production of all important cereals has not only increased but has been doubled. The significant increase has been noticed in the production of wheat which has increased by 55.60 percent over a period of one year. Marginal increases have also been noticed in the production of other cereals including maize and pulses.

3.8.3 If we look at Table No. 9 (b), we find that the production of mango fruits have increased considerably particularly by the construction of tubewell at Lachho-Ka-Talab where the beneficiaries have diversified their traditional agriculture by growing improved quality mangoes.

3.8.4 As may be seen from table 9(b) above, some attempts have been made to grow vegetables after the availability of irrigation facility, yet the results do not appear to be satisfactory unless the farmers are encouraged to diversify agriculture on scientific lines.

9. Consumption of Seeds:

3.9.1 With a view to know as to whether the consumption of seeds has undergone any change after providing of irrigation facility or not, the data collected in this regard is displayed in the following table:-

Table-10
Consumption of Important Seeds

(In Kgs.)

Category-wise Details of Schemes	Wheat		Barley		Paddy		Maize		Pulses	
	Before	After	Before	After	Before	After	Before	After	Before	After
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
A. LIFT IRRIGATION SCHEMES										
1. Bard Uparla Har	160	155	75	85	20	20	1	1	1	1
2. Hukkal	185	185	25	25	60	60	5	5	2	2
3. Soldha	494	580	134	154	365	590	-	-	-	-
B. FLOW IRRIGATION SCHEME										
1. Talai	80	80	30	30	-	-	-	-	-	-
C. TUBE-WELLS										
1. Lachho-ka-Talab	375	375	35	35	-	25	5	5	6	16
2. Upper Mehra	340	372	94	108	55	58	-	-	-	-
3. Deoli	140	190	42	32	0.500	7.500	-	-	0.500	-
TOTAL	1774	1937	435	469	500.500	760.500	11	11	9.500	19

3.9.2 As would be evident from the table above, considerable enhancement has been noticed in the consumption of seeds particularly paddy and pulses. This has resulted due to coverage of additional area under irrigation.

10. Consumption of Fertilizers:

3.10.1 In order to assess the consumption of chemical fertilizers, organic manure and pesticides after providing of irrigation facility the data was gathered from the selected beneficiaries and displayed in the following table:-

Table-11
Consumption of Chemical Fertilizers, Manure and Pesticides

(In Kgs. / Ltrs.)

Category-wise Details of Schemes	Chemical Fertilizers		Manure		Pesticides	
	Before	After	Before	After	Before	After
1.	2.	3.	4.	5.	6.	7.
A. LIFT IRRIGATION SCHEMES						
1. Bard Uparla Har	275	275	6500	6500	-	-
2. Hukkal	150	150	5000	5000	-	-
3. Soldha	400	950	45000	58000	2	10
B. FLOW IRRIGATION SCHEME						
1. Talai	150	150	3000	3000	-	-
C. TUBE-WELLS						
1. Lachho-ka-Talab	900	900	8000	8000	-	15
2. Upper-Mehra	700	1050	8000	11000	4.500	4.500
3. Deoli	250	450	6000	6000	-	2
TOTAL	2825	3925	81500	97500	6.500	31.500

3.10.2 The above table shows that the use of chemical fertilizers and organic manure has increased by 38.94 and 19.63 percent respectively while the use of pesticides has gone

up by 4 times. This shows that the farmers have become more conscious of new farm practices and they have been experimenting with all possible measures to increase production.

11. Household Income:

3.11.1 Income details particularly the income realised by the sale of produce prior to the construction of schemes and after the availability of irrigation facility were obtained from all the 22 selected beneficiaries and depicted in the following table:-

Table-12
Household Income of Beneficiaries

(Rs. in lakh)

Category-wise	No. of Beneficiaries	Income from Main Occupation		Income from Subsidiary Occupation		Income from Other Sources	
Details of Schemes	Interviewed	(Before)	(After)	(Before)	(After)	(Before)	(After)
1.	2.	3.	4.	5.	6.	7.	8.
A. LIFT IRRIGATION SCHEMES							
1. Bard Uparla Har	3	-	500	90900	93000	-	-
2. Hukkal	3	4000	5000	43200	43700	-	-
3. Soldha	5	22100	48600	60000	65000	-	-
B. FLOW IRRIGATION SCHEMES							
1. Talai		5000	10000	-	-	36000	36000
C. TUBE-WELLS							
1. Lachho-Ka-Talab	4	4000	147600	24000	24800	19000	19000
2. Upper- Mehra	3	72000	76100	-	-	48000	50000
3. Deoli	3	16400	23300	92000	93000	-	-
Total	22	123500	311100 (151.90)	310100	319500 (3.03)	103000	105000 (1.94)

(Figures in Brackets are Percentages)

3.11.2 As would be evident from the table given above the household income of the beneficiaries has increased by 151.90 percent after they were provided with irrigation facilities. There is every likelihood that this may further increase if the beneficiaries are properly guided to change their cropping pattern. However, no significant changes have been observed in the annual income from their subsidiary occupation or income from other sources.

12. Views of Beneficiaries:

3.12.1 With regard to proper functioning of the schemes, the views of all the 22 beneficiaries were taken and displayed in the table below:-

Table-13
Views of Beneficiaries

Category-wise Details of Schemes	No. of Beneficiaries Interviewed	If Beneficiaries were aware about the Irri. Potential Created		For how many hours they get un-interrupted water supply in a day	Who manages the distribution affair?	Whether any Water Association has been formed	If Beneficiaries are satisfied with the present system of Distribution		If not, Reasons
		Yes	No				Yes	No	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
A. LIFT IRRIGATION SCHEMES									
1. Bard Uparla Har	3	3	-	On Demand	I&PH	Yes	3	-	-
2. Hukkal	3	3	-	On Demand	I&PH	Yes	2	1	
5	5		-	On Demand	I&PH	Yes	1	4	
B.FLOW IRRIGATION SCHEMES									
1. Talai	1	1	-	On Demand	I&PH	Yes	-	1	
C. TUBE-WELLS									
1. Lachho-Ka-Talab	4	4	-	On Demand	I&PH	Yes	4	-	
2. Upper-Mehra	3	3	-	On Demand	I&PH	Yes	2	1	
3. Deoli	3	3	-	On Demand	I&PH	Yes	3	-	
Total	22	22					15 (68.18)	7 (31.82)	

(Figures in Brackets are Percentages)

3.12.2 As would be clear from the table above, all the selected beneficiaries were getting water supply on their demand. The schemes are being maintained by I&PH Department and Water User Associations have been formed in all cases. When beneficiaries were queried as to whether they were satisfied with the functioning of schemes or not, as many as 15 (68.18 percent) beneficiaries replied in affirmative and 7 (31.82 percent) in negative. It means that more than 50% beneficiaries were completely satisfied with the functioning of the schemes.

13. Analysis of Secondary Data:

3.13.1 To elicit vital information on the status of schemes chosen for the conduct of this study, Secondary Data was obtained from all the Executive Engineers of the respective divisions of I &PH Department. The details so gathered are displayed as under:-

Table-14

Name of the scheme	Original Estimated Cost (Rs. in lakh)	Revised Cost (Rs. in lakh)	Month and Year of Completion	Date of Commissioning	No. of Beneficiaries	Whether Water User Association formed or not Yes/No	Irrigation Potential	
							Created (Hect.)	Utilised (Hect.)
1.	2.	3.	4.	5.	6.	7.	8.	9.
1.LIS Bard Uparla Har	16.46	22.24	3/1997	3/1997	170	Yes	44.12	15.65
2.LIS Hukkal	17.75	51.86	3/2000	3/2000	92	Yes	40.97	3.88.32
3. LIS Soldha	121.43	121.43	1/1999	1/1999	72	Yes	192.10	48.50
4. FIS Talai	2.76	9.43	3/2001	3/2001	445	Yes	17.58	5.00
5. T/Well Lachho-Ka-Talab	17.50	20.84	3/1998	4/1998	35	Yes	43.50	38.00
6. T/Well Upper Mehra	27.82	22.86	3/2000	4/2000	46	Yes	40.00	37.00
7. T/Well Deoli	7.01	16.11	3/1997	3/1997	76	Yes	25.00	25.00
Total	210.73	264.77			936		403.27 (99.40%)	173.03 (42.91%)

3.13.2 As would reveal from the table given above, seven sampled schemes of Minor Irrigation (3 LIS, 1 FIS and 3 T/Wells) were sanctioned by NABARD with revised cost estimates of Rs. 264.77 lakh. All these schemes have been completed and commissioned. Irrigation potential of 403.27 hectares CCA has been created of which only 173.03 hectares(42.91 percent) has been utilised. In all seven cases, Water Users Associations/ Kisan Vikas Sanghs have been formed to manage the functioning of these projects.

CHAPTER-IV

OBSERVATIONS AND RECOMMENDATIONS

The Investigating Officer also sought views of the members of the Water User Associations/Kisan Vikas Sanghs on the overall functioning of the schemes. Besides, the Officer also made some on spot observations. The schemewise summary of the observations is given as under:-

4.1 Observations:

1. LIS BARD UPARLA HAR:

1. Some farmers contended that they got deprived of the benefits of this scheme due to the reason that few land owners were not allowing the water to cross through their fields. Due to this village rivalry the farmers, who could otherwise be got benefited have been left out from being covered under the scheme. To bring out a solution to this problem Consolidation of Holdings may be done for which a fresh initiative will have to be taken by the Government.

The other solution could be that the I & PH Department is directed to obtain willingness from all the prospective beneficiaries in the form of affidavits that they won't create any hurdles in the smooth channelisation of water upto the tail end of the command area.

2. It was observed on the spot that cement-concrete/pucca channels have not been provided and the water is running through kachhi-kuhl. In this process water is being wasted. In case, proper channel is constructed, optimal use of the potential created can be ensured.

3. There is an acute shortage of adequate distribution tanks. As a result, many farmers have been deprived of the benefits of the scheme.

4. Water User Association has been formed but it was reported to be non-functional. In case, it becomes functional all petty matters and grievances can be resolved at the beneficiary level.

5. The distribution lines which have been damaged and are not being repaired by the I & PH Department due to non-availability of funds. This has also resulted in wastage of precious water.

II. LIS HUKKAL:

1. The scheme has been commissioned but has not become functional. As a matter of fact the command area is comprised of small holdings on sloppy hills and fields lying in stairs. When the scheme was commissioned, the flow of water washed away their fields and fertile soil and other nutrients. Due to this bad experience, the beneficiaries appear to be a feared lot. They expressed their un-willingness to take advantage of this facility in case devices like sprinklers are not provided to them.

2. It was also noticed that the beneficiaries were not aware of new farm practices and diversification of Agriculture. Such lacklustre attitude at the part of farmers has in fact created no demand for irrigation water. The concerned Assistant Executive Engineer told the investigating officer that there was no demand for water from the farmers to whom this facility has been created.

3. The functionaries of I & PH Department told that they were running the pump so as to keep the machinery in order and the water has to be drained out in the river/khud.
4. The staff engaged for this purpose are getting wages without any work.
5. There is an immediate need to motivate the farmers of the area in order to bring changes in their mindset attitude. The Extension Officers of Agriculture and Horticulture Department, who are otherwise supposed to take new programmes and techniques to the doors of the farmers may organise training camps so as to persuade them to adopt new farm practices requiring irrigation.

III. LIS SOLDHA:

1. An area of 192.60 hectares CCA is envisaged to be covered by the creation of this scheme whereas potential utilised comes to only 48.50 hectares, benefiting 72 families as per information made available by the concerned Executive Engineer.
2. One of the major constraint is the insufficient provision of distribution tanks which has hampered the process of irrigation. As of today, 60 distribution tanks have been constructed as against the requirement of 192 tanks as per statement of the concerned Executive Engineer. It appears to be a stumbling block in the utilisation of irrigation facility created to them.
3. The problem of not allowing the water channel to cross over the boundary also persists at Soldha. Unless land reforms like consolidation of holdings or agreements with farmers that they will not create problems in the smooth functioning of the scheme are not done, majority of farmers will be deprived of the benefits of this scheme.
4. The Research Wings of the two universities Himachal Pradesh Krishi Vishwa Vidyalaya Palampur and the Horticulture University, Nauni, Solan may also be involved in imparting trainings to the farmers.

IV. FIS TALAI:

1. The scheme has been constructed with an expenditure of Rs. 9.43 lakh, and has provided irrigation facilities to about 75 families. The source of the scheme is Saryali Khud which lie in Maslanu Khurd village in Hamirpur District. The pucca headbear constructed at the source has been damaged during floods. The people of the Maslanu Khurd village, who enjoy the ownership rights of adjoining land near the headbear are not allowing to reconstruct the headbear. They are also not allowing the water to flow through kachha headbear as a result of which the scheme has become non-functional. The investment has therefore been wasted. The I & PH Department is also not taking any effective steps to prevent the interference by the miscreants. An enquiry is said to have been ordered to be conducted by Superintending Engineer Kullu, but without visible results.
2. The I & PH Department may be directed to bring about some amicable solution to this problem at the earliest so that heavy investment done could be put to some use.

V. TUBE-WELL LACHHO-KA-TALAB:

1. There is a shortage of water distribution tanks in this scheme also which has hampered the supply of irrigation water to the spread out fields under the CCA.
2. Some of the farmers were having uneven land holdings which have prevented the supply of water to the fields lying in stairs. The villagers demanded the levelling of such holdings and expressed their willingness to make personal contributions for this purpose.
3. The field channels have not been constructed and the water is flowing through kachhi kuhls. In this process the water is not being used properly.
4. The farmers were not aware about the diversification of Agriculture. They demanded that proper guidance may be given to them to make them to effect changes in the cropping pattern and they may also be imparted training to put agriculture on scientific lines.

VI. TUBE-WELL UPPER MEHRA:

1. Cement-concrete pucca field channels have not been provided by the Agriculture Department. This becomes a stumbling block in the smooth supply of irrigation water to the spread out fields.
2. The maintenance of tubewell has been assigned to the I & PH Department. But according to the version of beneficiaries, the I & PH Department is not looking after this scheme properly. No maintenance has so far been done.
3. There is a shortage of distribution tanks. Atleast 10 additional distribution tanks need to be constructed so as to cover the entire CCA.
4. The farmers are curious to go in for the cultivation of cash crops but in the absence of any proper guidance either from Agriculture Department or from Horticulture Department they are unable to proceed further.
5. It was also brought to the notice that about 10 acre of land which can easily be covered under potential created has been left out due to the reason that at the time of pipes laying the fields were under crops and the farmers objected to digging of fields. Later on, the contractor engaged for this work did not resume the work as a result some farmers were left out. It was also told that the contractor has been paid fully for the entire work. Now the scheme lie in the charge of I & PH Department but they are also not taking care to cover the left out farmers.

4.2 Recommendations :

To bring in dimensional changes in agricultural production and to strengthen the rural infrastructure system the resources raised through RIDF could have changed the scene of rural agrarian economy but due to lack of co-ordination among different department and research institutions the results were not quite satisfactory. The conclusions evidenced through this study make it amply clear that outputs are far below the level of inputs. The huge investment on Minor Irrigation Schemes have not either helped the beneficiaries to a greater extent or generated revenue by levying taxes/user charges. At the moment the programme appears to be a debt burden on the State exchequer unless some remedial measures are enforced to improve the functioning of the projects. Keeping the findings of this study in view following recommendations are given:-

1. To improve the efficiencies in the public irrigation system price of irrigation should be recovered from the beneficiaries. In our case, though some user charges have been levied, yet the collection does not seem to be operative as would reveal from the views of the sample beneficiaries. In order to make a system viable, economical price of water should be charged and subsidies should be dispensed with. It is only possible when water is supplied on a volumetric basis instead of an area basis as is being done now. The meter can be supplied to a group of farmers or Water User Association / Kisan Vikas Sangh and measurement can be done for a society as a whole. By adopting such methods we can expect economic returns otherwise there appears to be an impending danger of never ending debt trap.
2. It is true that Water User Associations / Kisan Vikas Sanghs have been formed in all cases but constitution of these bodies appear to be only a formality. These bodies need to be made functional as without them the schemes may become redundant due to local disputes. Needless to emphasise that the Kisan Vikas Sanghs/ WUO's can play a pivotal role in resolving local conflicts as well as ensuring smooth supply of water to each and every one. It would be too much to expect from the individuals that they will voluntarily obey the organisational discipline. Kisan Vikas Sanghs can draw roster for distribution of water among farmers. They can also decide about the deterrence otherwise the powerful would not, until their perceived needs are fully met, allow the less powerful access to the supply of water to his field, which leads to inequality of distribution and denial to some others.
3. The average Holdings in Himachal Pradesh are small and scattered. This becomes an impediment in the utilisation of potential created. It would therefore be essential that land reforms like Consolidation of Holdings are initiated in all such areas where irrigation schemes with high order of investment have been constructed.
4. As pointed out in previous chapters, field channels have not been provided in any scheme. This leads to lesser utilisation and greater wastage of water, besides preventing many farmers from irrigable water to their fields. It would therefore be in the public interest as well as in the interest of the State Govt. to provide cement- concrete channels under every scheme. However, this is only possible if beneficiaries come forward to share the cost of construction. Sharing of cost will also make them to realize the utility of the scheme and they will definitely take more and more interest to make the scheme successful. The other option left with the Government is to seek financial assistance under Command Area Development Programme (CAD) after obtaining complete guidelines of the programme from the concerned Central Ministry.

5. Shortage of distribution tanks has also been noticed which has prevented many farmers from getting the fruits of irrigation reaped. There is an emergent need to provide some additional distribution tanks which need to be built at the earliest so as to minimise the gap between potential created and potential utilised.
6. The study has thrown up an interesting result that without active co-ordination between Agriculture, Horticulture and Irrigation & Public Health Departments, dividends will not be forthcoming. The beneficiary farmers appear to be in a state of confusion as to what should be done with the irrigable water. Should they stick to their traditional cropping pattern or something new can happen? There seems to be no one to guide them about the befitting options. Contrary to this, Agriculture and Horticulture Departments have more than adequate staff of specialised field which even otherwise is supposed to guide the farmers about the latest scientific techniques of cultivation. It is therefore, suggested that this matter may be discussed in the High Powered Committee Meeting of RIDF Programme and directions may be issued to all the three agencies to have an effective co-ordination so as to chalk out a programme of Awareness & Trainings, where the beneficiary farmers could be trained in new farm practices. Such experiments can only be successful if field demonstration and continuous guidance is provided to the beneficiaries at regular intervals.

Annexure-A

SCHEDULE

GOVERNMENT OF HIMACHAL PRADESH PLANNING DEPARTMENT

EVALUATION STUDY OF IRRIGATION SCHEMES CONSTRUCTED UNDER RIDF

(A) HOUSEHOLD SCHEDULE

1. Name and Address of the beneficiary
 1. Name-----
 2. Village-----
 3. G.P.-----
 4. Development Block-----
 5. Tehsil-----
 6. District-----
2. Sex and Age(Tick Mark in the relevant column)

	Male	Female
1. Upto 20 years	1. Upto 20 years	
2. 21 to 40 years	2. 21 to 40 years	
3. 41 to 60 years	3. 41 to 60 years	
4. Above 60 years	4. Above 60 years	
3. Castewise classification (Tick Mark in the relevant column)
 1. S.C.-----
 2. S.T.-----
 3. Others-----
4. Occupation
 1. Principal Occupation-----
 2. Subsidiary Occupation-----
5. Size of Land Holdings

i) Irrigated	-----Acre or-----Bighas
ii) Un-irrigated	-----Acre or-----Bighas

(B) DETAILS OF THE EXISTING IRRIGATION SOURCES

1. Which of the following sources of Irrigation existed prior to the construction of scheme under RIDF Programme?
 - a. Kuhl
 - b. Tubewell
 - c. Gravity Irrigation scheme
 - d. Lift Irrigation scheme
 - e. Any other source

2. Who got it constructed?
- Government Department or any other agency
(Specify the Department/Agency)
 - All Villagers and the Household
 - Only the Household
3. Who maintains it?
- Government Department or any other Agency
(Specify the Department/Agency)
 - Jointly by the Villagers/Household
 - Only by the Household

(C) LAND USE PATTERN

Sr. No.	Name of the crop	Area under different crops (In Bighas)	
		Prior to the construction of new scheme	After the construction of new scheme
1.	2.	3.	4.
1.	Area sown under cereals		
	A. Rabi Season		
	a) Wheat		
	i) Irrigated	-----	-----
	ii) Un-irrigated	-----	-----
	Total	-----	-----
	b) Barley		
	i) Irrigated	-----	-----
	ii) Un-irrigated	-----	-----
	Total	-----	-----
	c) Gram/Other Pulses		
	i) Irrigated	-----	-----
	ii) Un-irrigated	-----	-----
	Total	-----	-----
	d) Mustard (Toria) or other oil seeds		
	i) Irrigated	-----	-----
	ii) Un-irrigated	-----	-----
	Total	-----	-----
	e) Vegetables		
	i) Irrigated	-----	-----
	ii) Un-irrigated	-----	-----
	Total	-----	-----

f) Others

i) Irrigated
ii) Un-irrigated
Total

B. Kharif Season

a) Maize

i) Irrigated
ii) Un-irrigated
Total

b) Paddy

i) Irrigated
ii) Un-irrigated
Total

c) Pulses

i) Irrigated
ii) Un-irrigated
Total

d) Vegetables

i) Irrigated
ii) Un-irrigated
Total

e) Others

i) Irrigated
ii) Un-irrigated
Total

(D) PRODUCTION OF IMPORTANT CROPS BEFORE AND
AFTER THE CONSTRUCTION OF IRRIGATION SCHEME

Sr. No.	Items	Quantity Produced					
		Before Irrigation Scheme			After Irrigation Scheme		
		Annual Production (In Quintal)	Sale Value per Quintal (In Rs.)	Total Value of the Produce (In Rs.)	Annual Production (In Quintal)	Sale Value per Quintal (In Rs.)	Total Value of the Produce (In Rs.)
1.	2.	3.	4.	5.	6.	7.	8.
1.	Cereals						
	a) Wheat						
	b) Maize						
	c) Paddy						
	d) Barley						

2. Pulses		
3. Fruits		
a) Apples		
b) Plum		
c) Pears		
d) Mango		
e) Citrus fruits		
f) Others (Specify)		
4. Vegetables		
a) Tomato		
b) Cauliflower		
c) Cabbage		
d) Green Peas		
e) Capsicum		
f) Potatoes		
g) Others (Specify)		
Total:		

**(E) CONSUMPTION OF SEEDS, CHEMICAL
FERTILIZERS, MANURES AND PESTICIDES**

Sr. No.	Item	Unit	Quantity Used		Difference
			Before Irrigation Scheme	After Irrigation Scheme	
1.	2.	3.	4.	5.	6.
1.	Seeds				
a)	Wheat	Kgs.			
b)	Maize	Kgs.			
c)	Paddy	Kgs.			
d)	Barley	Kgs.			
e)	Pulses	Kgs.			
2.	Chemical Fertilizers	Kgs.			
3.	Manure Organic	Kgs.			

4. Pesticides Kgs./Liters

(F) HOUSEHOLD INCOME

1. Annual Income from the sale of the produce before the construction of new Irrigation scheme
2. Annual Income from the sale of the produce after construction of new Irrigation scheme
3. Annual Income from Subsidiary Occupation before new Irrigation scheme
4. Annual Income from Subsidiary Occupation after Construction of new Irrigation scheme
5. Annual Income from other Sources before construction of new Irrigation scheme
6. Annual Income from other sources after construction of new Irrigation scheme

Rs.-----

Rs.-----

Rs.-----

Rs.-----

Rs.-----

(G) VIEWS OF THE HOUSEHOLD/BENEFICIARY ABOUT THE FUNCTIONING OF THE SCHEME

1. Are you aware about the irrigation potential created by the construction of irrigation scheme (MIS/Tubewell/LIS etc.) under RIDF Programme.
2. For how many hours in a day do you get uninterrupted water supply from the new scheme?
3. Who manages the distribution affair
4. Whether any Water User Association has been formed
5. Are you satisfied with the present system of distribution of water among all beneficiaries?
(Tick mark the relevant column)
6. If not, what are the reasons of dissatisfaction?
 - 1)
 - 2)
 - 3)
 - 4)

Yes No

Yes No

- 5)
- 6)
7. User charges paid (In Rs.)

1. Name of the Investigator
2. Designation
3. Date of field survey
4. Time taken
5. Signature of the Investigator

Supervisor's Report

1. Name of the Supervisor
2. Designation
3. Date of Visit
4. Discrepancy observed/report
5. Signature of the Supervisor

Data to be obtained from the Implementing Departments

1. Name of the scheme -----
2. Original estimated cost -----
3. Revised estimated cost -----
4. Actual expenditure incurred on
the completion of the scheme -----
5. Month & Year of completion -----
6. Date of commissioning -----
7. Complete list of families benefitted
under the programme along with
complete address -----
8. Irrigation potential created
(Area covered)
9. Irrigation potential utilised
(Area covered)
10. Reason for under utilisation
of irrigation potential

Name of Officer/Official

Designation

Name of Department

Signature