Impact Assessment Report

DROUGHT PRONE AREA PROGRAMME (DPAP)

DPAP-BATCH-I

Medak District, Andhra Pradesh

By

Resilient Dryland Systems

ICRISAT
Science with a human face

International Crops Research Institute
for the Semi-Arid Tropics

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Contents

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We sincerely acknowledge the support and guidance of Project Director, DWMA for providing all support with active participation and getting required support from his project staff. We record our profound thanks to Mr. Mangaiah Sarma, Additional Project Director, DWMA, and Assistant Project Director of Narayankhed, Sangareddy and Zaheerabad mandals for their untiring support and help touring along with us every day and organizing *gram sabhas* and field visits in all watersheds, which was most crucial in our efforts.

We profusely thank Dr. William D. Dar, Director General of ICRISAT for his approval to undertake this study and encouragement for a good analysis of the study.

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ABBREVIATIONS

APD:	Assistant Project Director
CJFS:	Co-operative Joint Farming Societies
DWMA:	District Water Management Agency
EAS:	Employment Assurance Scheme
FD:	Forest Department
IWDP:	Integrated Watershed Development Programme
MDT:	Multi Disciplinary Team
NGO:	Non-governmental Organization
NWDP:	National Waste land development Board
PD:	Project Director
PIA:	Project Implementing Agency
PRA:	Participatory Rural Appraisal
PT:	Percolation Tank
RFDs:	Rock Filled Dams
SF:	Social Forestry
SPW:	Silt Protection Wall
SHGs:	Self-Help Groups
SMC:	Soil moisture conservation
UGs:	User Groups
VSS:	Vana Samrakshana Samithi
WA:	Watershed Association
WDC:	Watershed Development Committee
WDF:	Watershed Development Fund
WDT:	Watershed Development Team

EXECUTIVE SUMMARY OF IMPACT ASSESSMENT

1. Farmers in different villages confirmed that water level in open wells increased on an average in the range of 3 to 10 feet during the SW monsoon rainy season and water availability is extended by about two months in the dry season during summer. Farmers mentioned that period of water availability in wells for irrigation extended from January/February before the DPAP initiative to end of March/April after the watershed development. This situation favored a change to double cropping with three to five supplemental irrigations for second crop during post rainy season. All this impact was felt by the beneficiaries because of good quality soil and water conservation structures at right location developed through this project. Commendable efforts by the project managers, staff, as well as WC were responsible for these positive impacts in these watersheds.

2. Drinking water is available sufficiently in all the villages round the year for human and cattle requirements as was observed by us and acknowledged by beneficiaries.

3. Appropriate and more trainings on productivity enhancement technology to WC members, farmers, and establishment of linkages to technology centers through farmers' visits in this project would have benefitted farmers and rural poor and created more impact on their incomes, as there were no new cropping technologies or new livelihood activities significantly adopted by farmers and rural poor. Over all training component target was not achieved.

4. Variability exists in reported increase in crop productivity across watersheds from as low as 10% to more than 30% in main crop season as well as second crop season in some watersheds. Farmers could cultivate commercial crops like vegetables and getting good income from the high value crops.

5. It was revealed in our assessment that the concept of community participation was given low priority during the implementation phase as evidenced by non-existence of Self help groups and their functioning for income generation among rural poor.

6. In some of the watersheds, we did not observe formation or functioning of self help groups (SHGs) since the implementation phase of the project. Some SHGs currently

functioning in the watersheds did not receive any assistance in the form of revolving fund from this project. Training of rural poor on livelihood activities did not receive much attention for sustainability income of these groups in the watersheds.

7. Employment opportunities increased and migration reduced completely or restricted to 10-20%, and this migration was mainly confined to semi skilled or skilled laborers migration for gainful employment in the nearby towns.

8. WDF funds collected were about Rs.17 lakhs with interest on principle amount in 15 watersheds under DPAP I. If these funds were made available for repair and maintenance of soil & water conservation as well as water harvesting structures which are of good quality and rightly placed, their impact would have been felt much better by the beneficiary farmers in the watersheds.

9. Project has partially achieved its objectives of bringing up the tree culture in some of the watersheds by concentrating on horticulture plantation which is of interest to farmers, and also by promoting different activities like avenue plantation, social forestry, farm forestry, peripheral planting and agro-forestry. This was a commendable effort by project implementing agencies in popularizing the tree plantation.

BACKGROUND

Department of Land Resources, Ministry of Rural Development of the Government of India sanctioned Drought Prone Area Programme aiming (1) to minimize the adverse effects of drought on production of crops and livestock and productivity of land, water and human resources ultimately leading to drought proofing of the affected areas. (2) The programme also aims to promote overall economic development and improving the socio-economic conditions of the resource poor and disadvantaged sections inhabiting the programme areas. In Medak district, the project encompassed treatment of 14000 ha of wastelands in 28 watersheds covering 18 mandals of Medak district. The objectives of this project were; 1) To integrate land and water management practices in the watershed development through village micro-watershed plans; 2) To enhance peoples participation in the watershed development program at all stages. This project was sanctioned for implementation with a project budget outlay of Rs. 560 lakhs (Table 1), and to accomplish over a period of 4 years from 1995-96 to 1998-99.

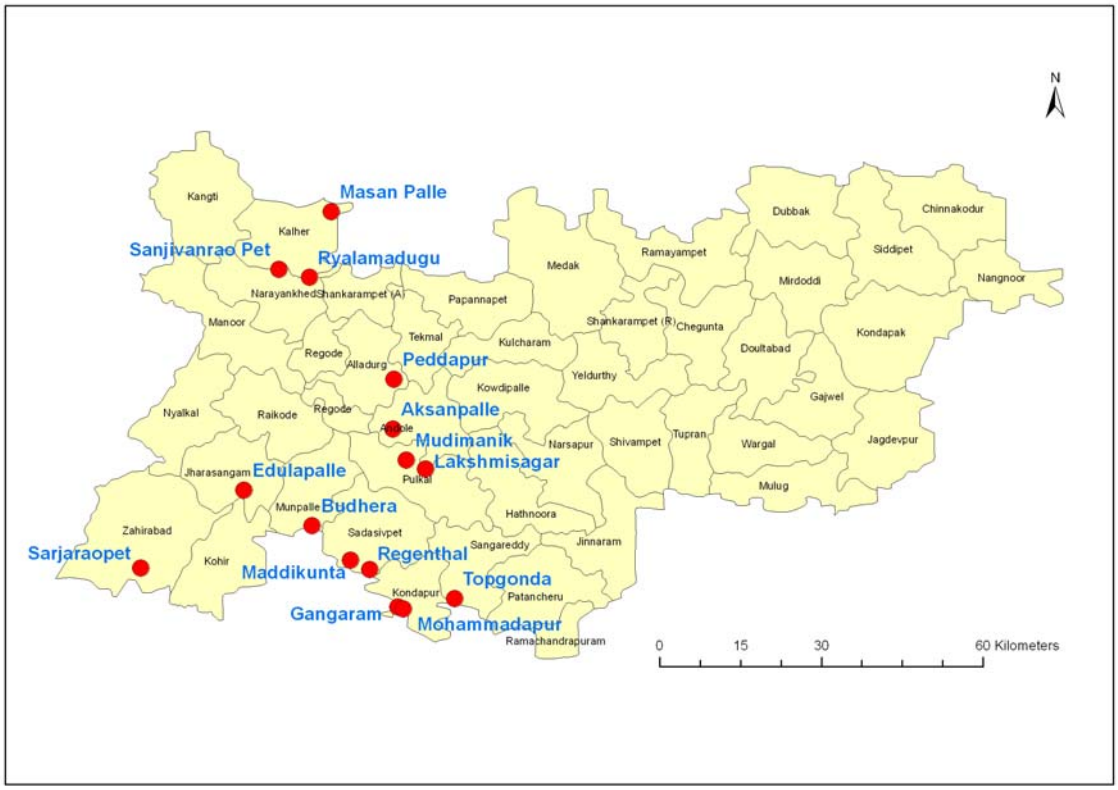
Table 1. Development activity component-wise approved targets and financial allocation in the project.

Components of Developmental activities	**Total target/allocation**	
	Physical (Nos. ha^{-1})	**Financial (Rs. lakhs)**
Community organizations	-	28
Training	-	28
Administrative Overheads	4 years	56
Area to be treated (works)	14000	448
Total	**14000**	**560**

District Rural Development Agency (DRDA) Medak, now designated as District Water Management Agency (DWMA) was assigned the responsibility of providing infrastructure for implementation, management of the project through project implementing agency and financial supervision of the project. DRDA-Medak selected the Multi Disciplinary Teams (MDTs) of all Mandal level governmental agencies for project implementation through watershed committees during 1995-96 to 1998-99 and the project implementation overrun up to 2002-03. The list of 28 watersheds selected in respective mandals and area targeted for treatment is given in Table 2 below.

Table 2. Details of watersheds targeted for watershed development under DPAP-I. project in Medak district.

S No.	Name of the watershed	Villages in watershed	Mandal	Treatment Area (ha)
1	Aksanpally	Aksanpally	Andole	500
2	Budhera	Budhera	Munipally	500
3	Dosapally	Dosapally	Regode	500
4	Edulanagulapally	Edulanagulapally	Ramachandrapuram	500
5	Edulapally	Edulapally	Jarasangam	500
6	Enkapally	Enkapally	Manoor	500
7	Gadipeddapur	Gadipeddapur	Alladurg	500
8	Ganeshpur	Ganeshpur	Nyalkal	500
9	Gangaram	Gangaram	Kondapur	500
10	Gardegoan	Gardegoan	Kangi	500
11	Kalher	Kalher	Kalher	500
12	Laxmisagar	Laxmisagar	Pulkal	500
13	Machapally	Machapally	Kondapur	500
14	Maddikunta	Maddikunta	Kondapur	500
15	Mamdapur	Mamdapur	Kondapur	500
16	Mamdigi	Mamdigi	Nyalkal	500
17	Moosapet	Moosapet	Shankarampet	500
18	Mudinanik	Mudinanik	Nyalkal	500
19	Naganpally	Naganpally	Kangi	500
20	Nagdhar	Nagdhar	Kalher	500
21	Nagwar	Nagwar	Raikode	500
22	Rayalamadugu	Rayalamadugu	Narayankhed	500
23	Rejinthal	Rejinthal	Kondapur	500
24	Sanjeevaraopet	Sanjeevaraopet	Narayankhed	500
25	Sarjaraopeta	Sarjaraopeta	Zaheerabad	500
26	Topugonda	Topugonda, Chirtagudam	Sangareddy	500
27	Uatpally	Uatpally	Manoor	500
28	Velimala	Velimala	Ramachandrapuram	500
Total				**14000**



Map 1. Geographical map of Medak district with selected watershed villages for impact assessment study marked in their respective mandals.

The project implementation started in the year 1995-96 and works were implemented in 28 watersheds as per approval. However project was implemented in 28 watersheds each comprised of two or three villages as a cluster selected based on 1. Availability of lands those form part of the area of watershed draining to a river/stream/local tank.

METHOD OF IMPACT ASSESSMENT

Multi-disciplinary impact assessment team

Dr. S. P. Wani, Principal Scientist (Watersheds) and Regional Theme Co-coordinator (Asia), Research Program 1: Resilient Dryland Systems

Mr. Ch. Srinivasa Rao, Senior Scientific Officer, Soil Science

Mr. V. Nageswara Rao, Lead Scientific Officer, Agronomy

Mr. L. S. Jangawad, Lead Scientific Officer, Agricultural Engineering

ICRISAT's research program on Resilient Dryland Systems, which was responsible for the impact evaluation of the DPAP I watershed projects in Medak district, consists of scientists from various professional backgrounds: soil science, hydrology and agricultural

engineering, and agronomy. To undertake the impact assessment of watershed projects, multi-disciplinary team was formed that consisted of (at least) three researchers with different areas of expertise and (at least) one scientific officer who was responsible for the technical inspection and evaluation of the constructed structures in the watershed. To assess the different aspects of watershed development projects, the scientists in each team had scientific expertise in Agronomy and soil science/ hydrology, engineering/technical aspects and social aspects/institutions.

Table 3. List of selected DPAP I watersheds and concerned APDs for impact assessment.

S.No.	Name of the watershed	Mandal	Name of the PIA
1.	Aksanpalli	Andole	MDT-Sangareddy
2.	Budera	Munipally	MDT- Narayankhed
3.	Edulapally	Jarasangam	KVK- Zaheerabad
4.	Gadipeddapur	Alladurg	MDT-Sangareddy
5.	Lakshmi sagar	Pulkal	MDT-Sangareddy
6.	Maddikunta	Sadasivapeta	MDT-Sangareddy
7.	Mahammadapur	Kondapur	MDT-Sangareddy
8.	Masanpally	Kalher	MDT- Narayankhed
9.	Gangaram	Kondapur	MDT-Sangareddy
10.	Mudimanikyam	Pulkal	MDT-Sangareddy
11.	Rayalamadugu	Narayankhed	MDT- Narayankhed
12	Sajjaraopet	Zaheerabad	KVK- Zaheerabad
13.	Sanjeevanraopet	Narayankhed	MDT- Narayankhed
14.	Siddapur-Rejinthala	Sadasivapeta	MDT-Sangareddy
15.	Topugonda	Kondapur	MDT-Sangareddy

As a first step, ICRISAT's Resilient Dryland Systems discussed the "terms of references" from the Government of India and shared the experiences from previous impact and midterm assessments. The division of tasks was undertaken in a participatory manner depending on the professional expertise and the local knowledge of the scientists and scientific officers. We had divided tasks of the impact assessment in two parts: (1) Focused Group discussions, with participation of the local population, a crucial factor of a successful impact assessment; and (2) Field visits, to ensure verification of watershed structures, their maintenance and assess their use.

DISCUSSIONS WITH DWMA OFFICIALS

ICRISAT undertook the assessment with an open and participatory approach with the staff of the DWMA and village level staff. The involvement of the program staff of the respective watershed projects at various stages of the assessment aimed at enhancing the ownership of the results among the extension personnel. Impact assessments in Medak started with a meeting of the ICRISAT team with three of the Assistant Project Directors (APDs) of DWMA and their staff under the instruction of Project Director of the District Water Management Agency, Medak.

Meeting with project staff helped us to finalize the list of watershed villages (Table 3) evenly spread across 12 mandals in Medak district (Map 1, Medak district) for impact assessment and scheduled our visit. We also ensured accompanying and participation of concerned APDs in FGD in watersheds in their respective mandals, and their presence was quite helpful in calling the *gram sabha* and field visits to watershed structures.

FOCUSSED GROUP DISCUSSIONS

The focused-group-discussions were held with members of the watershed development team, the watershed committee, farmers/beneficiaries and when possible with the Gram Panchayat president. Focused-group-discussions enabled us to elicit valuable information in short time and to include the community in the process. It is important to check, however, the participation of a representative sample of the local population in order to extract meaningful information that helps to draw conclusions of the whole picture. We standardized a comprehensive version of focused group discussion format which is used for this assessment. ICRISAT ensured the participation of majority local language speakers in the multidisciplinary team and structured the focused-group-discussions according to the guidelines and the specific local context. The meetings focused on the community's knowledge of the watershed program, their personal benefits as well as their assessment of the impacts for the whole community. In villages where women Self-Help-Groups (SHG's) were formed under the watershed project, a special focus was laid on discussions with the SHG members and the impacts upon women's lives of the watershed project.

Meetings also served as an opportunity to verify the records of the watershed development team where ever available and to discuss aspects such as maintenance of the structures, sustainability and other schemes implemented in the village.

Picture 1. Focused Group Discussion with farmers and committee members at Aksanpally watershed village.

Picture 2. Focused Group Discussion with farmers and committee members at Sajjaraopet watershed village.

FIELD VISITS

While the focused-group-discussions were held in the village, other member(s) of the team inspected a minimum of two structures considering them as sample of the physical structures such as check-dams, percolation tanks, RFDs, LBS and field bunding, assessed their quality of construction and selection of location and measured structures on a random basis and assessed their potential impacts for number beneficiaries, and extent area and on the community well-being. Individual farmers were interviewed for their gains by watershed interventions when they were spotted in the fields nearby the structures wherever possible.

After completing the field visits, the observations were openly shared with the participating program staff. Their comments and feedback were also included in the assessment of the watersheds.

PERIOD OF EVALUATION

Impact assessment of watersheds in Medak district was done in 3rd and 4th weeks of October and 1st week of November 2009 and actual field visits took place for six days during the period in Medak district with the help of project staff of DWMA, Medak.

WATERSHED-WISE IMPACT ASSESSMENT

The details of focused group discussions, assessment of watershed interventions including our observations of soil and water conservation structures (pictures) and watershed-wise

impacts on watershed communities were provided here under in the suggested format for all 15 watersheds assessed during October –November 2009.

Impact Assessment Report
AKSANPALLY Watershed, DPAP – I batch
ANDOLE Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 30th October 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Aksanpally
iii. Names of villages in the Watershed:	Aksanpally
iv. Villages/Mandal/District:	Aksanpally/Andole/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	300
ii. Non arable land (ha)	200
iii. Government land/ Community land (ha)	20
iv. Private land (ha)	180
v. Treated arable	340
vi. Treated non-arable	150

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, Check dams: 7, WHS: 7, RFDs: 52, Earthen bunding: 211 ha.	
iv. Whether watershed committees exits	Yes, Chairman: S. Janardhan, President: G. Raghavulu, Secretary: Narasimha Reddy.	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing WDF to repair and maintain structures.	

4. Community participation (how community participation has been ensured and what EPA have been taken up, inputs of details of beneficiaries)

As entry point activity (EPA) a culvert was constructed near Scheduled Castes housing colony to make a walk-over for villagers.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 9
	Before	After	Before	After	Male: 7
	-	60	-	10	Female: 2
Describe					
ii. Records of meetings properly updated	Watershed Committee met as and when required to discuss new works. Watershed Association met once in 3 months.				
iii. Liaison with scientific institutions established	Members visited Ralegaon Siddi and interacted with Sri. Anna Hajare. Also visited ICRISAT to learn about productivity enhancement initiatives in watersheds.				
iv. Watershed Development Fund collected?, and its utilization	Yes, collected according to guidelines, deposited in Manjeera Grameena Bank, Jogipet and spent Rs. 90000 for maintenance of the structures.				
v. Self Help Groups	No: 10		Revolving fund: Rs. NA		
V.O functioning:	NA		Savings: NA		
Utilization of loans:					
Bank linkages established:	Established				
vi. Planned CPRs sustainable & equitable development	All CPRs are distributed to scheduled caste individual poor farmers.				
vii. Benefits to weaker sections (women, dalits and landless)	Watershed developed land was provided to farmers for cultivation				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 20 (all dried up) ; Bore wells: 80 Soil erosion reduced, helped in improving the water levels in bore wells with construction of check dams.
ii. Additional area under cultivation/horticulture/ afforestation	15 ha mango plantation with drip irrigation facility; toddy trees were planted up to 3000 (500 survived), 10000 teak and eucalyptus plants were grown after raising them in nursery.
iii. Changes in cropping pattern and intensity	200 acres irrigated, 100% increase in cropping intensity.
iv. Changes in agricultural productivity	Green gram, black gram, sorghum, pigeonpea are dryland crops grown, sugarcane, paddy, Sunflower are newly introduced crops. Pigeonpea yields increased with introduction of LRG 41 cultivar.
v. Changes in fodder & fuel wood availability	16 ha area is under forage crops.
vi. Changes in size and character of livestock holdings	Milch cattle increased by about 50 numbers and milk production increased by about 20%.

vii. Status of grazing land & their carrying capacity	Grazing lands are available in the village and they supporting to some extent.
viii. Employment generated due to implementation of project	It was during the implementation of watershed project, but reduced later.
ix. Change in household category, total, & source-	About 50 families are benefited from this project and their incomes are increased by about 30%.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Bank loans are available for agriculture to buy crop inputs
xi. Reduction in out-migration (case studies)	Labor migration is reduced by about 50%, and NREGs helped to increase rural incomes but farmers complain that agriculture was affected due to shortage of labor to farm operations.
xii. Reduction in drought vulnerability of the watershed	Some farmers agreed while some disagreed.
xiii. Detailed case studies of specific farmers impacted by the project	1.Narsimha Reddy, Mango plantation for 1.6 ha 2.Rajaiah, Mango orchards 1.6 ha 3.Vijaya Bhaskar, Mango orchard 1.6 ha 4.Chandramma, mango orchards 1.2 ha Income from Mango orchards ranges from Rs.30000-50000/ha/year depending on season and age of crop.
xiv. Photographs showing work + its impact	See attached pictures of the watershed structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. Soil erosion was controlled because of earthen bunding for 211 ha.

   ii. Tree plantation improved greenery (Teak, bamboo, date toddy)

   iii. Water improved even probably due to good tanks (15)

   iv. Feeder Channel breached needs to be repaired and strengthened to fill the water tank in the village (Ekka Kunta Tank).

8. Observations and Comments by Evaluators:

- Masonry check dam with 12 m body wall length, 1 m height was seen with storage capacity of about 350 m^3 but no wells and beneficiary farmers exist in the vicinity.

- A small check wall was inspected which has was constructed for people movement to near by fields over a small stream is also storing some water.

- No wells exist in the down stream area of the structures as the soils are black and water is useful for cattle drinking & pesticide sprays.

Picture 3. A masonry check dam with Good storage of water at Aksanpally

Picture 4. A check wall across a drain to store water and people to cross over it.

Impact Assessment Report
BUDERA Watershed, DPAP – I batch
MUNIPALLY Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 26th October 2009

1. **Details of watershed:**

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Budera
iii. Names of villages in the Watershed:	Budera
iv. Villages/Mandal/District:	Budera/Munipally/Medak
v. Name and Address of PIA:	MDT, Narayankhed
vi. Total area of the watershed:	500 ha

2. **Ownership pattern of land:**

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated areable	
vi. Treated non-arable	

3. **Verification financial and other Records**

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, Check Dams: 8, Percolation Tanks: 1, Earthen Bunding = 280 ha, Rock Filled Dams: 25, Loose Boulder Structures: 20	
iv. Whether watershed committees exits	Yes, Chairman: Rajalingam, President: Srisailam, Secretary: Narasimha Reddy	
v. if exists, activities of the committees	No activities as revolving fund was not released for repairs and maintenance as indicated.	

4. **Community participation (how community participation has been ensured and what EPA have been taken up, inputs of details of beneficiaries)**
   Temple constructions (roofing)

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members:11
	Before	After	Before	After	Male: 7
	---	10	---	10	Female:4
Describe:					
ii. Records of meetings properly updated	Yes				
iii. Liaison with scientific institutions established	A visit to Ralegaon Siddhi in Maharashtra, Komalapur to understand Self Help Groups, ICRISAT& CRIDA to learn holistic approach of natural resource management in dryland agriculture.				
iv. Watershed Development Fund collected?, and its utilization	A sum of Rs.1,00,000 was collected from the beneficiaries as contribution.				
v. Self Help Groups	No: 10		Revolving fund: Rs. 50,000		
V.O functioning:	Budera Gramaikya Sangam		Savings:		
Utilization of loans:	For purchasing of agricultural inputs, livelihood activities like milk production & vegetable vending.				
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Nil				
vii. Benefits to weaker sections (women, dalits and landless)	Employment provided and incomes increased among rural poor.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 15; Bore wells: 18 Depth of wells: 40 to 60 feet ; Raise in water table by about 10 feet and 25% increase in water availability.
ii. Additional area under cultivation/horticulture/ afforestation	Teak & Mango plantation work was done on field bunds; no additional area brought under cultivation.
iii. Changes in cropping pattern and intensity	Cotton, Sugarcane, Maize, Sorghum. Cotton area increased due to water scarcity because of electricity supply problem
iv. Changes in agricultural productivity	Maize: 30% increase in grain yield; Sugarcane yield increased from 75 t/ha to 90 t/ha.
v. Changes in fodder & fuel wood availability	Not much change
vi. Changes in size and character of livestock	Milch animals increased.

holdings	
vii. Status of grazing land & their carrying capacity	No change in grazing land status.
viii. Employment generated due to implementation of project	During project implementation phase labor got good employment for taking up soil and water conservation activities.
ix. Change in household category, total, & source-	Farmers got better yields and incomes due to increased water availability.
x. Freedom from Debt and reduction in degree of dependence on money lenders (case studies)	Bank loans as crop loans and micro finance are the sources for investments in agriculture and less dependence on private money lenders.
xi. Reduction in out-migration (case studies)	100 to 150 people used to go regularly: 50 % reduction in out-migration.
xii. Reduction in drought vulnerability of the watershed	Not increased
xiii. Detailed case studies of specific farmers impacted by the project	1.Pedda Sura Reddy 2.Kankala Bagaiah These farmers planted mango and got good yield and incomes in the range of Rs. to 50 thousand/ha.
xiv. Photographs showing work + its impact	See attached pictures of the watershed structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. Watershed structures need to be improved to enhance water availability.

   ii. Mango plantation required for long term benefit and sustainability.

8. **Observations and Comments by Evaluators:**

   - Masonry check dam with 12 m body wall length, 1 m height was seen with storage capacity of about 600 m^3 but no wells and beneficiary farmers exist in the vicinity.
   - Gully control structures are damaged and no maintenance of the structures.
   - Mango orchard, backside of Dhaba on Mumbai national highway was seen and it was mixed plantation with teak and other plants with irregular spacing.
   - Side by land near check dam is converted into residential plots.

	
Picture 5. A masonry check dam in Budera watershed along with converted land in to residential plots.	*Picture 6. Damaged loose boulder structure in Budera watershed.*

Impact Assessment Report

EDULAPALLY Watershed, DPAP – I batch
JARASANGAM Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 26th October 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Edulapally
iii. Names of villages in the Watershed:	Edulapally
iv. Villages/Mandal/District:	Edulapally/Jarasangam/Medak
v. Name and Address of PIA:	Krishi Vigyan Kendra, Zaheerabad
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	360
ii. Non arable land (ha)	140
iii. Government land/ Community land (ha)	20
iv. Private land (ha)	120
v. Treated arable	360
vi. Treated non-arable	140

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs : 5, RFDs: 25, LBS: 30, Earthen Bunding : 350 ha	
iv. Whether watershed committees exits	Yes, Chairman: Veeranna Patel P, President: Veeranna Master M, Secretary: Moulana Md	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing WDF to repair and maintain structures.	

4. Community participation (how community participation has been ensured and what EPA have been taken up, inputs of details of beneficiaries)
EPA: Earthen roads were done

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 11
	Before	After	Before	After	Male: 8
	---	20	---	21	Female 3:
Describe					
ii. Records of meetings properly updated	WC: Once in a month WA: Once in three months				
iii. Liaison with scientific institutions established	Visited Kamalapuram to know SHGs success, Ralegaon Siddi, Maharashtra to see model watershed.				
iv. Watershed Development Fund collected?, and its utilization	Rs.1,00,000 Approximately and deposited in SBI, Sadashivapet.				
v. Self Help Groups	No:		Revolving fund: Rs.		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Teak planting along the bund, mango as block plantations.				
vii. Benefits to weaker sections (women, dalits and landless)					

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Water table increased by about 6 feet. Number of open wells: 87; Bore wells: 1. Water in the wells will be available up to February/March month
ii. Additional area under cultivation/horticulture/ afforestation	Mango plantations were done in 10 ha. Chillies, potato are commercial crops grown under irrigation. Afforestation was done in 48 ha.
iii. Changes in cropping pattern and intensity	About 40 ha rainfed area brought under irrigation for second crop and cropping intensity is increased.
iv. Changes in agricultural productivity	Yields of cotton, potato, chillies, sorghum, green gram and onion are increased by about 10-20%.
v. Changes in fodder & fuel wood availability	Grass is grown around water harvesting structures & field bunds; hence increase in variability of fodder.
vi. Changes in size and character of livestock holdings	Milch animals increased from 677 to 693 and milk production increased by about 10%.
vii. Status of grazing land & their carrying capacity	Grazing lands are available in the village and supporting considerably.
viii. Employment	During implementation of watershed activities, about

generated due to implementation of project	23,000 person days employment was created.
ix. Change in household category, total, & source-	About 45 families got benefited from the project
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Majority of the farmers are taking loans from Banks, less people depend on local money lenders.
xi. Reduction in out-migration (case studies)	30% reduction is quantified, but migration is still continuing to Hyderabad for better employment.
xii. Reduction in drought vulnerability of the watershed	Increased groundwater availability has reduced the vulnerability to drought.
xiii. Detailed case studies of specific farmers impacted by the project	Bagarappa, Bandi and Anji Reddy, Kompalli – Both the farmers got benefited due to increased water availability in open wells; facilitated double cropping and increased incomes by growing Chilli and Potato.
xiv. Photographs showing work + its impact	See attached pictures of the watershed structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   - Construction of one big tank on *vusika vagu* will help farmers in long run.
   - *Narinja vagu* diversion to *Kappala cheruvu* will be useful for a perennial solution.

8. **Observations and Comments by Evaluators:**

   - Masonry check dam with 5 m body wall length, 1.25 m height was seen with storage capacity of about 400 m^3. It is a good structure with full of overflowing water. Apron wall is damaged. There are about five wells with five beneficiary farmers and area benefited is about 8 ha. GWL is increased by about three feet and farmers are growing curry leaf, onion, chillies and turmeric crops under irrigation.

   - Another check dam was constructed on the same drain upside and benefiting the nearby farmers.

   - Another check dam seen was breached away and not serving any purpose.

   - Another check dam with gate was constructed (about 300 m^3) and diverting excess water for irrigation through a small canal. Four wells with five farmers are benefiting and area irrigated is about 10 ha. GWL is increased by about four feet.

Picture 7. Check dam with full of water in Edulapally watershed.

Picture 8. Damaged apron wall of the left side masonry check dam.

Picture 9. Breached away check dam in Edulapally watershed.

Picture 10. Masonry check dam with a gate to regulate the water release.

Impact Assessment Report
GADIPEDDAPUR Watershed, DPAP – I batch
ALLADURG Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 30th October 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Gadipeddapur
iii. Names of villages in the Watershed:	Gadipeddapur
iv. Villages/Mandal/District:	Gadipeddapur/Alladurg/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	340
ii. Non arable land (ha)	160
iii. Government land/ Community land (ha)	15
iv. Private land (ha)	145
v. Treated areable	330
vi. Treated non-arable	150

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs: 6, RFDs/LBS: 70, Earthern Bunding = 190 ha	
iv. Whether watershed committees exits	Yes, Chairman: Late Jallur Rehman, Secretary: Satyanarayana	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing WDF to repair and maintain structures.	

4. Community participation (how community participation has been ensured and what EPA have been taken up, inputs of details of beneficiaries)
EPA: School building extension was done with a funding of Rs.50, 000.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members:10
	Before	After	Before	After	Male: 9
	---	65	---	12	Female:1
Description					
ii. Records of meetings properly updated	WC: As and when required but surely monthly WA: once in 3 months				
iii. Liaison with scientific institutions established	Ralegaon Siddi, Maharashtra, Exposure meeting at Mahboobnagar horticulture dept.				
iv. Watershed Development Fund collected? and its utilization	Collected Rs. 86,948/- and deposited in Central Bank of India, Gadipeddapur branch.				
v. Self Help Groups	No:		Revolving fund: Rs.Rs.50,000		
V.O functioning:			Savings:		
Utilization of loans:	Loans were used for procuring the inputs for agriculture, vegetables business and grocery business.				
Bank linkages established:	Yes, established and functioning well (65 groups).				
vi. Planned CPRs sustainable & equitable development	No CPRs in the village for development.				
vii. Benefits to weaker sections (women, dalits and landless)	Sixty families got benefited.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 40 (30 feet deep); Bore wells: 250 Nos. Bore wells number increased due to increased water table by about 6 feet. Water is available in bore wells even after March due to check dams construction but open wells dried up.
ii. Additional area under cultivation/horticulture/ afforestation	32 ha additional area brought under cultivation/ 5 ha horticulture/ 2km length road sides were planted with eucalyptus, *Pongamia* and teak plants.
iii. Changes in cropping pattern and intensity	Area under irrigation is doubled and increase in cropping intensity due to growing of second crop.
iv. Changes in agricultural productivity	Productivity of sorghum, chickpea, pigeonpea, paddy, sugarcane, greengram, cotton & other crops increased.
v. Changes in fodder & fuel wood availability	Grass seeding on earthen bunds of fields increased the fodder availability in village.
vi. Changes in size and character of livestock	Milch cattle number increased by about 50 and milk production is increased by about 20%.

holdings	
vii. Status of grazing land & their carrying capacity	Not much change.
viii. Employment generated due to implementation of project	Employment generation was good during implementation of the project.
ix. Change in household category, total, & source-	Incomes of all beneficiary farmers increased.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Bank loans are taken, and no private money lending as central bank of India branch is located in the village it self.
xi. Reduction in out-migration (case studies)	20% reduced; and still 10% people are migrating for skilled works.
xii. Reduction in drought vulnerability of the watershed	Can with stand at least for one season as the crop productivity increased and commercial cropping increased.
xiii. Detailed case studies of specific farmers impacted by the project	1. Itikala Krishnaiah one of the beneficiary farmers of a check dam developed 2.4 ha wasteland and growing good paddy crop. 2. Chokka Krishna also developed 1 ha wasteland and brought into cultivation.
xiv. Photographs showing work + its impact	See attached pictures of the watershed structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

- Instead of small check dams, there should have been a big tank constructed in two acres of the village land so that it could have brought 40 to 80 ha of land under irrigation.

- Other untreated area of more than 1000 ha should have been taken up under watershed schemes for field bunding to increase *in-situ* soil moisture conservation.

8. **Observations and Comments by Evaluators:**

- Masonry check dam with 12 m body wall length, 1.0 m height was seen with storage capacity of about 300 m^3 near a tribal hamlet. It is a good structure and serving the purpose. There are about five wells with eight beneficiary farmers and area benefited is about 8 ha. GWL is increased by about two feet and farmers are growing paddy and sugarcane crops under irrigation.

- Another masonry check dam with 12 m body wall length, 1.0 m height with storage capacity of about 800 m^3 was visited. It is a good structure with full of

overflowing water but no wells around because of any power supply to that area. Direct pumping with oil engines is done by few nearby farmers to irrigate their crops during moisture stress conditions.

Picture 11. Masonry check dam with accumulated silt in Gadipeddapur watershed.

Picture 12. Masonry check dam with overflowing water and grown up bushes in Gadipeddapur watershed.

Impact Assessment Report
LAKSHMISAGAR Watershed, DPAP – I batch
PULKAL Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 30th October 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Lakshmisagar
iii. Names of villages in the Watershed:	Lakshmisagar
iv. Villages/Mandal/District:	Lakshmisagar/Pulkal/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated arable	
vi. Treated non-arable	

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs: 4, RFDs:160; LBS:200, Earthen bunding = 16 ha.	
iv. Whether watershed committees exits	Yes, Chairman: Mallesh Vadla, Secretary: U.Vittal	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA have been taken up, inputs of details of beneficiaries)
EPA: To ensure community participation in the village school building roofing has been done by spending Rs. 50, 000/-

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 9
	Before	After	Before	After	Male: 7

	---	4	---	3	Female: 2
Describe					
ii. Records of meetings properly updated	Yes, WC is used meet once in a month and WA used meet once in 3 months				
iii. Liaison with scientific institutions established	Scientific institutions were not involved but farmers were taken on exposure visit to Ralegaon siddhi.				
iv. Watershed Development Fund collected?, and its utilization	RS. 1,10,000 was collected as WDF but not spent for repair and maintenance of the structures due lack of clear guidelines for using it.				
v. Self Help Groups	No:		Revolving fund: Rs. 20,000		
V.O functioning:			Savings:		
Utilization of loans:	Loans were used for procuring agricultural inputs, vegetable business and general household usage.				
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Bunding, land development and bush clearing was done along with mango plantation in 0.8 ha assigned land.				
vii. Benefits to weaker sections (women, dalits and landless)	Provided employment during implementation of soil and water conservation activities and construction of water harvesting structures.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 100 (30-40 feet deep, but dried up now); Bore wells: 300 numbers (about 150-200 feet deep) Water availability in bore wells increases when water is stored in the nearby check dams.
ii. Additional area under cultivation/horticulture/ afforestation	No additional area brought under cultivation; mango plantation was done 3.2 ha and no afforestation activity was taken up.
iii. Changes in cropping pattern and intensity	Irrigated area under sugarcane, paddy, groundnut and wheat crops increased after implementation of the watershed program. Cropping intensity also increased due to water availability during post rainy season.
iv. Changes in agricultural productivity	Paddy productivity increased from 2.5 t to 2.8 t/acre, Sugarcane productivity increased by about 30 t/ha.
v. Changes in fodder & fuel wood availability	Not much change in fodder and fuel wood availability.
vi. Changes in size and character of livestock holdings	Milch animals are increasing where as other livestock is decreasing year after year due to increased maintenance cost.
vii. Status of grazing land & their carrying capacity	Not much change.

viii. Employment generated due to implementation of project	Employment opportunities increased during implementation of watershed activities.
ix. Change in household category, total, & source-	Incomes of all beneficiary farmers are increased.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Bank loans availability increased from nationalized banks as well as APGV Bank and farmers are depending more on bank loans and less on private money lenders.
xi. Reduction in out-migration (case studies)	No seasonal out migration but migration is still continuing on daily basis.
xii. Reduction in drought vulnerability of the watershed	As area under commercial crops increased due to increased water availability, drought vulnerability considerably reduced.
xiii. Detailed case studies of specific farmers impacted by the project	Mr. Shabuddin got benefited due to mango plantation done in his 0.4 ha land under watershed program.
xiv. Photographs showing work + its impact	See attached pictures of the watershed structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. Bunding work was done in 16 ha only and still lot of area need to be covered under bunding.

   ii. Now farmers have realized the importance of orchard development and looking for a project support for taking up further plantations.

8. **Observations and Comments by Evaluators:**

   A masonry check dam was constructed in the border of reserve forest land and forest department is not allowing water to store in the structure and no use of it. Body wall of the check dam has become like a bund and soil was put on it and about 3 m body wall only is seen outside. A diversion drain was made to drain out the water from the check dam. This is not at all a suitable location for construction and money is being wasted.

	
Picture 13. Discussions with the farmers to know the impacts in Lakshmisagar watershed.	*Picture 14. Condition of the masonry check dam constructed in forest land in Lakshmisagar watershed*

Impact Assessment Report

MADDIKUNTA Watershed, DPAP – I batch
SADASIVAPET Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 5th November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Maddikunta watershed
iii. Names of villages in the Watershed:	Maddikunta
iv. Villages/Mandal/District:	Maddikunta/Sadasivapet/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated areable	
vi. Treated non-arable	

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs: 2, PTs: Distilling of water tank, Field Bunding = 180 ha, RFDs/LBS: 50-60	
iv. Whether watershed committees exits	Yes, Chairman: K. Narasimha Reddy, President: Late Mohan Reddy, Secretary: A. Narasimha Reddy,	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA have been taken up, inputs of details of beneficiaries)

EPA: not attempted.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 11
	Before	After	Before	After	Male: 9
	---	---	---	---	Female: 2
Describe:					
ii. Records of meetings properly updated	WC: Once in 15 days or as and when required. WA: never done				
iii. Liaison with scientific institutions established	Farmers were taken on an exposure visit to watershed in Ralegaon siddhi.				
iv. Watershed Development Fund collected?, and its utilization	RS. 60,000 was collected as WDF but not spent for repair and maintenance of the structures due lack of clear guidelines for using it.				
v. Self Help Groups	No:		Revolving fund:		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Field Bunding was done in CPRs to conserve natural resources as well as to improve greenery.				
vii. Benefits to weaker sections (women, dalits and landless)	Weaker sections were provided employment while implementing the watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Groundwater availability has been increased by about 20% and water in the bore wells is available up to may month.
ii. Additional area under cultivation/horticulture/ afforestation	No additional area brought under cultivation. Teak plants were supplied to farmer to plant in their land.
iii. Changes in cropping pattern and intensity	Sugarcane, paddy, cotton, chickpea, tomato, okra, and chilli crops are grown.
iv. Changes in agricultural productivity	Cotton yields increased from 1.8 t to 2.5 t/ha, chickpea yields increased by about 0.5 t/ha and Paddy yields increased by about 0.8 t/ha.
v. Changes in fodder & fuel wood availability	Field bunding has increased fodder and fuel wood availability in the watershed.
vi. Changes in size and character of livestock holdings	Milch animals are increased and other livestock is decreasing year after year.
vii. Status of grazing land & their carrying capacity	No change.
viii. Employment generated due to	Around 300 laborers used to work during implementation of watershed activities and

implementation of project	construction of water harvesting structures for about 2 years.
ix. Change in household category, total, & source-	Incomes of all beneficiary farmers are increased.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Farmers are mostly depending on bank loans and less dependence on private money lenders.
xi. Reduction in out-migration (case studies)	No out migration at present due to NREGS but earlier about 20% out migration was there.
xii. Reduction in drought vulnerability of the watershed	Increased water availability has decreased drought vulnerability.
xiii. Detailed case studies of specific farmers impacted by the project	1. Sabat Hari Nayak and 2. S. Krishna These farmers are growing paddy in the first season and vegetables in the second season and getting good incomes and livelihoods.
xiv. Photographs showing work + its impact	See attached pictures of the watershed structures below.

7. Learnings and process documentation (how the program could be implemented better; constraints, improvements possible, changes made etc.)

i. Repair and maintenance of the structures can improve the water availability further in the watershed.
ii. Promotion of horticultural plantations could have been the better option in long run.

8. Observations and Comments by Evaluators:

- A masonry check dam with 10 m body wall length and 1.5m height was seen with about 1000 m^3 capacity. There are about 7 bore wells with 12 beneficiary farmers around it and about 12 ha area got benefited. Paddy and vegetable crops are grown under irrigation. Good structure, strongly built & no leakages found. Silt accumulation was observed.

- Two numbers of loose boulder structures were seen in the feeder drain of check dam, one structure is slightly damaged and no maintenance of it.

- Two new bore wells were dug near the check dam and good amount of water available in the wells. Pumps are yet to be fixed.

	
Picture 15. Masonry check dam with stored water and silt accumulation in Maddikunta watershed.	*Picture 16. Condition of the damaged loose boulder structure in Maddikunta watershed.*

Impact Assessment Report

MAHAMMADPUR Watershed, DPAP – I batch
KONDAPUR Mandal, MEDAK district, Andhra Pradesh

Date of assessment: 5th November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Mahammadapur watershed
iii. Names of villages in the Watershed:	Mahammadapur
iv. Villages/Mandal/District:	Mahammadapur/Kondapur/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated areable	
vi. Treated non-arable	

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs: 2 (in good condition), PTs: 3 (2 in good condition, 1 PT is not good), RFDs/LBS: more than 100, Field Bunding = 340 ha	
iv. Whether watershed committees exits	Yes, Chairman: Chandra Reddy, President: Balaiah, Secretary: Ram Reddy,	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA have been taken up, inputs of details of beneficiaries)
EPA: Hanuman temple was constructed by spending Rs.50,000/- to ensure community participation in the village.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 8
	Before	After	Before	After	Male: 7
	---	---	---	---	Female: 1
Describe:					
ii. Records of meetings properly updated	Yes				
iii. Liaison with scientific institutions established	Farmers were taken on exposure visit to watershed in Ralegaon siddhi and CRIDA farm in Hyderabad.				
iv. Watershed Development Fund collected?, and its utilization	Rs. 2,00,000 was collected as WDF and not spent on repair and maintenance of the structures due to lack of clear guidelines to utilize the fund.				
v. Self Help Groups	No:		Revolving fund:		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	No CPRs were developed. Avenue plantation was done all along the roadside for about 3 km distance but maintenance is poor.				
vii. Benefits to weaker sections (women, dalits and landless)	Weaker sections were provided employment while implementing the watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 30, depth 10-15 m; Bore wells: 20 plus, depth 400 feet. Water availability increased after watershed interventions and bore wells were dug only after implementing watershed activities.
ii. Additional area under cultivation/horticulture/ afforestation	About 60 ha additional area brought under cultivation.
iii. Changes in cropping pattern and intensity	Maize, Sorghum, Cotton, Paddy, Wheat, Turmeric, and Pigeonpea crops are grown.
iv. Changes in agricultural productivity	Cotton area and productivity increased from 1.2 t to 1.5 t/ha; Paddy from 6 t to 7 t/ha; Maize from 3 t to 4 t/ha and Sorghum: from 2 t to 2.5 t/ha.
v. Changes in fodder & fuel wood availability	Field bunding and increased water availability has increased the fodder and fuel wood availability.
vi. Changes in size and character of livestock holdings	Not much change.
vii. Status of grazing land & their carrying capacity	No change
viii. Employment generated due to	Employment opportunities increased during implementation of the watershed activities.

implementation of project	
ix. Change in household category, total, & source-	Income levels of beneficiary farmers have gone up after completion of watershed activities.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Farmers are taking crop loans from AP Grameen Vikas bank, Ananthasagar and still some farmers are depending on money lenders and paying high interest rates.
xi. Reduction in out-migration (case studies)	Out migration reduced from 40% to 20%.
xii. Reduction in drought vulnerability of the watershed	They are in better position to cope up with drought conditions.
xiii. Detailed case studies of specific farmers impacted by the project	No specific case studies.
xiv. Photographs showing work + its impact	See the attached picture of the water harvesting structure below.

7. Learnings and process documentation (how the program could be implemented better; constraints, improvements possible, changes made etc.)

Construction of more number of water harvesting structures in the watershed would have benefited more number of farmers.

8. Observations and Comments by Evaluators:

- A percolation tank with about 8000 m^3 capacity was seen with about 3000 m^3 water stored in it during the field visit. There are three bore wells with three beneficiary farmers and about 3 ha area got benefited. There is considerable rocky area in the down side with less number of wells and less irrigated area in the zone of its influence.

Picture 17. Percolation tank with stored water in it in Mahammadapur watershed.

Impact Assessment Report

MASANPALLY Watershed, DPAP – I batch
KALHER Mandal, MEDAK district, Andhra Pradesh

Date of assessment: 2nd November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Masanpally
iii. Names of villages in the Watershed:	Masanpally
iv. Villages/Mandal/District:	Masanapally/Kalher/Medak
v. Name and Address of PIA:	MDT, Narayankhed
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated areable	
vi. Treated non-arable	

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs: 3; Field bunding: 60 ha; No PTs constructed. Public awareness was not created in two village hamlets (Masanapally, Devunipally, Kalheri)	
iv. Whether watershed committees exits	Yes, Chairman: K. Narayana, President: Narasimha Rao, Secretary: M. Hanumanndlu	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)
EPA: Bus shelter was construction by spending Rs. 50,000/- on main roadside and community expressed that this is a good work done for the village.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 12
	Before	After	Before	After	Male: 8
	---	3	---	3	Female: 4
Describe:					
ii. Records of meetings properly updated	Yes.				
iii. Liaison with scientific institutions established	Farmers were taken on exposure visits to Ralegaon siddhi, Maharashtra; ICRISAT and CRIDA farms in Hyderabad icluding visit to Nagarjunasagar dam.				
iv. Watershed Development Fund collected?, and its utilization	Yes, approximately RS. 80,000/- was collected as WDF and deposited in SBI, Kalher branch and not spent on repair and maintenance of the structures due to lack of clear guidelines to utilize the fund.				
v. Self Help Groups	No:		Revolving fund: Rs. 20,000		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Land development and field bunding was done in 20 ha of assigned land given to weaker sections.				
vii. Benefits to weaker sections (women, dalits and landless)	Weaker sections were provided employment while implementing the watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 100; Bore wells more than 300 exist in the village. Water availability/ pumping duration increased by about 2 hours from 4 h to 6 h in a day and water availability increased by 1 month from February to March after watershed interventions.
ii. Additional area under cultivation/horticulture/ afforestation.	About 30 ha additional area brought under cultivation. Mango and teak plants numbering 4 to 5 per each farmer are given to plant them in their land.
iii. Changes in cropping pattern and intensity	Paddy, sugarcane, maize, black gram, green gram, and sunflower crops are grown. CI increased by 50%.
iv. Changes in agricultural productivity	Paddy productivity increased from 4.5 t to 5.5 t/ha; Sunflower 2 t/ha; and Maize productivity increased from 4.0 t to 5.0 t/ha.
v. Changes in fodder & fuel wood availability	Increased water availability increased the fodder and fuel wood availability in the village.
vi. Changes in size and character of livestock holdings	Not much change.

vii. Status of grazing land & their carrying capacity	Grazing lands are available in the village and they are supporting the livestock to some extent.
viii. Employment generated due to implementation of project	Employment opportunities increased during implementation of the watershed activities.
ix. Change in household category, total, & source-	Income levels of beneficiary farmers have gone up after completion of watershed activities.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Farmers are taking crop loans from the banks and less dependence on private money lenders.
xi. Reduction in out-migration (case studies)	About 20 to 30% laborers are still migrating in search of better employment; when watershed works were in progress labor migration was less.
xii. Reduction in drought vulnerability of the watershed	Increased water availability has reduced the risk of drought vulnerability.
xiii. Detailed case studies of specific farmers impacted by the project	Kurma Beerappa is one of the beneficiaries of watershed project. Two acres of waste land was developed newly along with a bore well. Paddy crop is grown in 1.5 to 2 acres during rainy season and either paddy or groundnut is grown as second crop.
xiv. Photographs showing work + its impact	See the attached pictures of the development below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. Renovation of old percolation tanks (4nos.) should have been done to improve the water availability in the bore wells.

   ii. More number of check dams could have been constructed at 4 places across the Dayyala Mathadi Vagu.

   iii. Horticulture requirement was felt by all farmers for not being promoted.

   iv. Desilting of Devunicheru could have increased the storage capacity of the tank and water availability in the bore wells.

   v. Drinking water problem still persists in the village during summer.

8. **Observations and Comments by Evaluators:**

   i. Field bunding along with established *Stylo* fodder and teak plants on the bunds was seen. Teak plants are growing well and will fetch additional income in the form of timber to the farmers after few years.

ii. A masonry check dam with 10 m body wall length and 1 m height with about 400 m^3 capacity was inspected. There are eight bore wells with 10 beneficiary farmers and area benefited is about 20 ha. It is effective in recharging the GWL but due to continuous droplets GWL is going down. Farmers felt that field bunding and check dams are effective in recharging groundwater.

Picture 18. Stabilized field bunds in the Masanapally watershed.

Picture 19. Masonry check dam in the Masanapally watershed.

Picture 20. Established Stylo fodder on field bunds in Masanapally watershed.

Picture 21. Established teak plants on field bunds in Masanapally watershed.

Impact Assessment Report

GANGARAM Watershed, DPAP – I batch
KONDAPUR Mandal, MEDAK district, Andhra Pradesh

Date of assessment: 5th November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Gangaram watershed
iii. Names of villages in the Watershed:	Gangaram
iv. Villages/Mandal/District:	Gangaram/Kondapur/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated areable	
vi. Treated non-arable	

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs: 12 (6 damaged), PTs: 2, Field Bunding: 80 ha, RFDs/LBS: 200, Sunken pits: 2	
iv. Whether watershed committee exits	Yes, Chairman: Anjan Goud, President: N. Narsimha Reddy, Secretary: Anji Reddy	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)

EPA: In Sivannagudem, Hanuman temple was constructed along with the donations amount from the villagers.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 11
	Before	After	Before	After	Male: 8
	---	---	---	14	Female: 3
Describe:	Not functioning any more.				
ii. Records of meetings properly updated	Yes, WC used to meet once in a month and WA once in 3 months.				
iii. Liaison with scientific institutions established	Farmers were taken on exposure visits to Ralegaon siddhi in Maharashtra; ICRISAT and CRIDA farms.				
iv. Watershed Development Fund collected?, and its utilization	Yes, around RS. 70,000/- was collected as WDF and not spent on repair and maintenance of the structures due to lack of clear guidelines to utilize the fund.				
v. Self Help Groups	No:		Revolving fund: Rs.5000/-		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Field bunding was done in about 80 ha area; Mango, guava and teak plants were supplied to the farmers to plant them in their land.				
vii. Benefits to weaker sections (women, dalits and landless)	Weaker sections were provided employment while implementing the watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 30; Bore wells: 70 and groundwater level has been increased by about 1 m. Water availability increased in bore wells after watershed interventions and water is available in bore wells up to may month.
ii. Additional area under cultivation/horticulture/ afforestation	About 100 ha additional area brought into cultivation and 4 ha mango plantation was established. Each farmer is supplied with mango, guava & teak plants.
iii. Changes in cropping pattern and intensity	Paddy, turmeric and vegetable crops are grown under irrigation.
iv. Changes in agricultural productivity	Sorghum yields about 1.5 t/ha, maize yields about 4 t/ha, pigeonpea and chickpea yields about 0.5 t/ha. Farmers said that not much change in productivity.
v. Changes in fodder & fuel wood availability	Not much change in fodder and fuel wood availability.
vi. Changes in size and character of livestock holdings	Increase in milch cattle and no change in other livestock.
vii. Status of grazing land & their carrying capacity	Grazing lands are available in the village and they are supporting the livestock to some extent.

viii. Employment generated due to implementation of project	Employment opportunities increased during implementation of the watershed activities for about 3 years.
ix. Change in household category, total, & source-	Income levels of beneficiary farmers have gone up after completion of watershed activities.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Farmers are taking crop loans from the banks and less dependence on private money lenders.
xi. Reduction in out-migration (case studies)	About 10% laborers are still migrating in search of better employment.
xii. Reduction in drought vulnerability of the watershed	Increased water availability has reduced the risk of drought vulnerability.
xiii. Detailed case studies of specific farmers impacted by the project	Mr. Anjan Goud is one of the beneficiaries of mango plantation in about 0.6 ha area and getting good income from the plantation.
xiv. Photographs showing work + its impact	Please see the attached picture of water harvesting structure below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

    i. Horticulture plantations in larger area could have given better income to the farmers.
    ii. Desilting, repair and maintenance of the water harvesting structures can increase water storage and water availability in the bore wells.

8. **Observations and Comments by Evaluators:**

- A percolation tank of about 8000 m^3 capacity was seen with about 1000 m^3 water stored in it. There are eight bore wells with 15 beneficiary farmers and area benefited is about 12 ha. Good location and good groundwater availability in the wells when there is water stored in the percolation tank.

Picture 22. Good percolation tank with stored water in Gangaram watershed, Medak district.

Impact Assessment Report

MUDIMANIKYAM Watershed, DPAP – I batch
PULKAL Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 30th October 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Mudimanikyam watershed
iii. Names of villages in the Watershed:	Mudimanikyam
iv. Villages/Mandal/District:	Mudimanikyam/Pulkal/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	360
ii. Non arable land (ha)	140
iii. Government land/ Community land (ha)	16
iv. Private land (ha)	124
v. Treated areable	350
vi. Treated non-arable	110

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes.	
iii. Works executed as per Records	Yes, CDs: 7, RFDs: 140, LBS: 43, Field bunding: 180 ha.	
iv. Whether watershed committees exits	Yes, Chairman & President: B. Pratap Reddy, Secretary: Ch. Ramulu	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)
EPA: Drinking water bore well was dug and laid out pipe line to supply water in the street corners at cost of Rs. one lakh.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 14
	Before	After	Before	After	Male: 9
	---	6	---	15 (Now increased to 50)	Female: 5
Describe					
ii. Records of meetings properly updated	Yes, WC used to meet once in a month and WA once or twice in a year.				
iii. Liaison with scientific institutions established	Farmers were taken to Ralegaon siddhi, Maharashtra to see watershed activities and Tepole watershed, in Medak district to see water harvesting structures.				
iv. Watershed Development Fund collected?, and its utilization	Yes, RS. 90,000 was collected as WDF and deposited in Manjeera Grameen Bank, Pulkal branch and not spent on repair and maintenance of the structures due to lack of clear guidelines to use it.				
v. Self Help Groups	No:		Revolving fund: Rs. 75,000		
V.O functioning:			Savings:		
Utilization of loans:	Used for livelihood activities like leaf plates making, neem seed business, tailoring, compressed cement bricks.				
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Rain trees/Acacia plantation was done in 3 ha area and survived fully. Teak stump were also distributed for planting on field bunds.				
vii. Benefits to weaker sections (women, dalits and landless)	Weaker sections were provided employment while implementing the watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 150 (all dead now); Bore wells: about 200. About 8 feet raise of water table in bore wells.
ii. Additional area under cultivation/horticulture/ afforestation	About 20 ha additional area brought into cultivation. 4000 mango samplings were planted either as block plantations or on field bunds and afforestation was done in about 12 ha area.
iii. Changes in cropping pattern and intensity	Sugarcane, Paddy, Chillies and Cotton crops are grown in the watershed.
iv. Changes in agricultural productivity	Paddy yields increased from 5 t to 6 t/ha; Chillies from 1.2 t to 1.5 t/ha; Sugarcane yields from 100 t to 120 t/ha.
v. Changes in fodder & fuel wood availability	Forage crops are grown in about 15 ha area and fuel wood availability is also increased.
vi. Changes in size and character of livestock holdings	Milch animals are increased by 18 numbers and other livestock is reduced because of increased maintenance cost.

vii. Status of grazing land & their carrying capacity	Grazing lands are available in the watershed and supporting the livestock for open grazing.
viii. Employment generated due to implementation of project	Employment opportunities increased during implementation of the watershed activities.
ix. Change in household category, total, & source-	Income levels of beneficiary farmers have gone up after completion of watershed activities.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Farmers are taking crop loans from the banks and less dependence on private money lenders.
xi. Reduction in out-migration (case studies)	No migration of agricultural laborers. Only construction workers are migrating (about 50 members) in search of work and better wages.
xii. Reduction in drought vulnerability of the watershed	Increased water availability has reduced the risk of drought vulnerability in the watershed.
xiii. Detailed case studies of specific farmers impacted by the project	1. Mr. A Sangaiah had planted mango in 0.4 ha and getting good crop for the last three years. 2. Mr. P Narasimha Reddy planted mango in 2 ha during 2002 and started getting yields.
xiv. Photographs showing work + its impact	Please see the attached pictures of water harvesting structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. CPR development to large number of farmers would have helped them.

   ii. WDF can be utilized for repair and of the structures and watershed works as informed by watershed Chairman.

8. **Observations and Comments by Evaluators:**

   - A masonry check dam of about 400 m^3 capacity was seen near school building in the village. It was constructed to recharge groundwater in nearby community bore well for village water supply.

   - A masonry check dam of about 800 m^3 was seen in the fields near Tummala gadda area. There are four wells with 6 beneficiary farmers and area benefited is about 16 ha. Sugarcane and paddy crops are grown under irrigation and groundnut is grown during rabi after paddy crop. This structure is effective in recharging the groundwater.

	
Picture 23. Masonry check dam in the Mudimanikyam village constructed for recharging the community bore well.	*Picture 24. Masonry check dam in the Mudimanikyam watershed effectively recharging the groundwater.*

Impact Assessment Report

RAYALAMADUGU Watershed, DPAP – I batch
NARAYAMKHED Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 2nd November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Rayalamadugu watershed
iii. Names of villages in the Watershed:	Rayalamadugu
iv. Villages/Mandal/District:	Rayalamadugu/Narayankhed/Medak
v. Name and Address of PIA:	MDT, Narayankhed
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	380
ii. Non arable land (ha)	120
iii. Government land/ Community land (ha)	15
iv. Private land (ha)	115
v. Treated arable	380
vi. Treated non-arable	120

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes	
iii. Works executed as per Records	Yes, CDs: 4, PTs: 4, Earthern Bunding: 280 ha, RFDs/LBS: 98, 3 Feeder channels renovated.	
iv. Whether watershed committees exits	Yes, Chairman: P. Kista Reddy, President: Lakshman Naik, Secretary: P. Papi Reddy, Volunteers: B. Sailu, B. Mallaiah; Sarpanch: P. Manikya Reddy	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)
EPA: School compound wall was constructed in the village as per the decision of WA/villagers.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 11
	Before	After	Before	After	Male: 9
	---	35	---	10	Female: 2
Describe:					
ii. Records of meetings properly updated	Yes.				
iii. Liaison with scientific institutions established	WC members visited Ralegaon siddhi, Maharashtra and CRIDA, Hyderabad for 3 days training.				
iv. Watershed Development Fund collected?, and its utilization	Committee collected double the mandatory amount totaling Rs. 2,40,000 with an objective of proper maintenance of the structures, but the amount is unavailable to the committee for the purpose, and controlled by DRDA/DWMA.				
v. Self Help Groups	No:		Revolving fund: Rs. 50,000		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	1. Avenue plantation was done along the roadside for about 3 km distance, but failed. 2. Bunding was done in CPRs which were assigned to SC and ST farmers.				
vii. Benefits to weaker sections (women, dalits and landless)	Employment was provided to weaker sections during implementation of watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 6, about 30 feet deep; Bore wells: 500 Water availability is increased up to April at a depth of 70 to 80 feet in more than 300 feet deep wells.
ii. Additional area under cultivation/horticulture/ afforestation	About 35 ha additional area brought into cultivation/27 ha area covered under horticulture/ Social forestry and teak plantation on field bunds.
iii. Changes in cropping pattern and intensity	Area under irrigated crops increased and cropping intensity increased to 1.5 as water is available in bores wells for two crops.
iv. Changes in agricultural productivity	Paddy 5 t/ha; Sunflower: 1.5 t/ha; Groundnut: 1.5 t/ha; Maize: 3 t/ha and productivity enhanced by about 20-25% in all crops.
v. Changes in fodder & fuel wood availability	Forage crops are grown in about 10 ha in the village. No change in fuel wood availability.
vi. Changes in size and character of livestock holdings	Milch cattle increased by 40 numbers and milk yield increased by about 12%.

vii. Status of grazing land & their carrying capacity	Grazing lands are available and supporting the livestock.
viii. Employment generated due to implementation of project	Labors got good employment during implementation period.
ix. Change in household category, total, & source-	About 60 families got benefited with the watershed project.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	APGV Bank and microfinance are the main source of loans and less dependence private money lenders.
xi. Reduction in out-migration (case studies)	Duration of migration reduced from 4 months to 1 month.
xii. Reduction in drought vulnerability of the watershed	Increased water availability has reduced drought vulnerability.
xiii. Detailed case studies of specific farmers impacted by the project	No specific case studies.
xiv. Photographs showing work + its impact	Please see the attached pictures of water harvesting structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. PTs would improve the water availability and drinking water.
   ii. Feeder canals maintenance will improve water availability in the tanks.

8. **Observations and Comments by Evaluators:**

   i. Field bunding is good.

   ii. RFDs are not intact and no maintenance of these structures.

   iii. Masonry check dam was seen with a body wall length of 10m; height of 1 m and size about 400m^3. There are five bore wells, five beneficiary farmers and area benefited is about 8 ha. Lot of leakages are observed and no maintenance of the structure.

   iv. A percolation tank of about 1200m^3 was seen. There are five bore wells, eight beneficiary farmers and area benefited is about 12 ha. Paddy is grown under irrigation about 100 m away from the pond. Good PT near small hillock and rocky area. About 200 m^3 water was stored in it. Serving for cattle drinking. Bore wells are there just after 100 m away from the pond.

Picture 25. Good percolation tank in the Rayalamadugu watershed.

Picture 26. Masonry check dam in the Rayalamadugu watershed.

Picture 27. Leakages/damages on masonry check dam in Rayalamadugu watershed.

Picture 28. Condition of rock fill dam in the Rayalamadugu watershed.

Impact Assessment Report

SAJJARAOPET Watershed, DPAP – I batch
ZAHEERABAD Mandal, MEDAK district, Andhra Pradesh

Date of Assessment: 23rd October 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Sajjaraopet watershed
iii. Names of villages in the Watershed:	Sajjaraopet Thanda
iv. Villages/Mandal/District:	Sajjaraopet Thanda/Zaheerabad/Medak
v. Name and Address of PIA:	KVK, Zaheerabad
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	380
ii. Non arable land (ha)	120
iii. Government land/ Community land (ha)	120
iv. Private land (ha)	-
v. Treated areable	380
vi. Treated non-arable	120

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes.	
iii. Works executed as per Records	Yes, CDs: 5, PTs: 3, RFDs: 30, LBS: 38, Bunding: 324 ha.	
iv. Whether watershed committees exits	Yes, Chairman: Sreenivasa Reddy, President: Kishan, Secretary: Bhaganna	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)

EPA: Road formation between Jadimalkapur to Sajjaraopet for about 4 km distance.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 13
	Before	After	Before	After	Male: 9
	---	18	---	22	Female: 2
Describe					
ii. Records of meetings properly updated	Yes, WC used to meet once in a month or as necessary WA: Once in a month				
iii. Liaison with scientific institutions established	Farmers were taken on exposure visits to Komalapur, near Gulbarga; ICRISAT; Ralegaon Siddi, Maharashtra.				
iv. Watershed Development Fund collected?, and its utilization	Yes, Rs. 1,28,000 was collected as WDF, deposited in SBI, Zaheerabad branch and not spent on repair and maintenance of the structures due to lack of clear guidelines.				
v. Self Help Groups	No:		Revolving fund: Rs.50,000		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Bunding was done in 324 ha area.				
vii. Benefits to weaker sections (women, dalits and landless)	Provided employment during implementation of watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	About 5 to 6 feet water level was increased and availability also extended up to March – April months. No problem for drinking water.
ii. Additional area under cultivation/horticulture/ afforestation	About 50 ha additional area brought under cultivation/23 ha area covered under horticulture with mango and cashew plantations.
iii. Changes in cropping pattern and intensity	New crops like sugarcane and potato were introduced.
iv. Changes in agricultural productivity	Productivity of pigeonpea crop increased from 0.8 t to 1.2 t/ha after watershed interventions.
v. Changes in fodder & fuel wood availability	Not much change.
vi. Changes in size and character of livestock holdings	Milch cattle increased and no change in other livestock.
vii. Status of grazing land & their carrying capacity	Grazing lands are available and supporting the livestock for open grazing.
viii. Employment generated due to implementation of project	Yes, employment generated during implementation of the project activities.

ix. Change in household category, total, & source-	About 40 families got benefited from the project.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Bank loaning increased and no loaning from village money lenders.
xi. Reduction in out-migration (case studies)	About 40 to 50 families used to migrate before watershed project started and about 10 families are still migrating out of 150 families in the village.
xii. Reduction in drought vulnerability of the watershed	Increased dependence on bank loans and no migration due to drought.
xiii. Detailed case studies of specific farmers impacted by the project	No specific case studies.
xiv. Photographs showing work + its impact	Please see the attached pictures of water harvesting structures below.

7. Learnings and process documentation (how the program could be implemented better; constraints, improvements possible, changes made etc.)

Maintenance of all watershed structures by using WDF if allowed would give better results.

8. Observations and Comments by Evaluators:

- A masonry check dam with about 200 m^3 capacity was seen with full of water. Good structure but no wells and no beneficiary farmers around. Water is useful for cattle drinking and for pesticide sprays on dry land crops. Major dry land crop is pigeonpea in the watershed.

- A percolation tank with about 300 m^3 size was seen on the foot of hillock. It is very effective in reducing the soil erosion and recharging the wells in the hamlet.

Picture 29. Masonry check dam in the Sajjaraopet watershed.

Picture 30. Percolation tank in the Sajjaraopet watershed.

Picture 31. Good pigeonpea crop stand in Sajjaraopet watershed.

Impact Assessment Report

SANJEEVANRAOPET Watershed, DPAP – I batch
NARAYANKHED Mandal, MEDAK district, Andhra Pradesh

Date of assessment: 2nd November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Sanjeevanraopet watershed
iii. Names of villages in the Watershed:	Sanjeevanraopet
iv. Villages/Mandal/District:	Sanjeevanraopet/Narayankhed/Medak
v. Name and Address of PIA:	MDT, Narayankhed
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated arable	
vi. Treated non-arable	

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes.	
iii. Works executed as per Records	Yes, CDs: 2, PTs: 1, Bunding: 300 ha, RFDs: 70 and LBS: 30	
iv. Whether watershed committees exits	Yes, Chairman: G. Bal Reddy, President: Y. Papi Reddy, Secretary: P. Kistaiah	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)
Veterinary hospital was constructed with Rs. 50,000 adding with Janmabhoomi funds.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 12
	Before	After	Before	After	Male: 8
	---	40	---	15	Female: 4
Describe:					
ii. Records of meetings properly updated	Yes, WC used to meet once in a month or as and when requested and WA used to meet once in 6 months.				
iii. Liaison with scientific institutions established	Farmers were taken on exposure visits to Ralegaon Siddi and Sangareddy to see developed watersheds.				
iv. Watershed Development Fund collected, and its utilization	Yes, collected Rs. 1,40,000 towards WDF and not spent the amount on repair and maintenance of the structures due to lack of clear guidelines.				
v. Self Help Groups	No:		Revolving fund: Rs. 50,000		
V.O functioning:	Yes		Savings:		
Utilization of loans:	Nurseries were raised and supplied saplings to watershed project for planting.				
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	Bunding was done in wastelands in about 80 ha area.				
vii. Benefits to weaker sections (women, dalits and landless)	Employment was provided during implementation of watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 100 (all dry); Bore wells: 300. Before watershed interventions success rate of bore wells was less. After watershed project water is available in 100 feet depth. Sufficient water available for 2 crops.
ii. Additional area under cultivation/horticulture/ afforestation	About 100 ha area newly brought under cultivation. Farmers were given 4 to 5 mango plants each for planting but maintenance was poor.
iii. Changes in cropping pattern and intensity	Area under irrigated crops was increased and cropping intensity was increased to 1.5.
iv. Changes in agricultural productivity	Paddy productivity increased to 6.0 t/ha, green gram, black gram and rainfed sorghum 0.5 t/ha.
v. Changes in fodder & fuel wood availability	Field bunding has increased fodder and fuel wood availability in the watershed.
vi. Changes in size and character of livestock holdings	Not much change in livestock holding.
vii. Status of grazing land & their carrying capacity	Grazing lands are available in the village and supporting the livestock for open grazing.
viii. Employment	During development of watershed, lot of work was

generated due to implementation of project	done and year round employment was provided to all laborers in the village.
ix. Change in household category, total, & source-	Water availability has increased the yields and incomes of the beneficiary farmers.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Farmers are taking loans from banks and cooperative societies and less dependence on village money lenders.
xi. Reduction in out-migration (case studies)	Out migration is continuing for better employment and income in Hyderabad and other towns.
xii. Reduction in drought vulnerability of the watershed	Drought vulnerability still exists in the watershed.
xiii. Detailed case studies of specific farmers impacted by the project	Women SHG, Anantha Sairam raised mango nursery and sold 60,000 Mango saplings at 100% profit to watershed programs in the district.
xiv. Photographs showing work + its impact	Please see the attached pictures of water harvesting structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. Field bunding and other conservation structures were useful in conserving the natural resources.

   ii. Groundwater availability improved in all the bore wells and successfully supplying water for 2 crops.

8. **Observations and Comments by Evaluators:**

- Field bunding was seen and it is effective in reducing the soil erosion and conserving rain water.

- Rock fill dams and loose boulder structures were seen, some of them were partially damaged and no maintenance of those structures.

- A masonry check dam measuring 10 m body wall length, 1 m height and about 1000 m^3 capacity was seen. There was a big vertical crack on the body wall and water is going out from this. This structure was constructed in uncultivated area and there are no wells and beneficiary farmers around.

- A percolation tank of about 3000 m^3 capacity was seen in fallow area. It is a big tank and down side land was leveled for cultivating paddy crop. But surrounding area is uncultivated land with scrub vegetation. Farmers said that if rains are good and water is stored in the PT, paddy will be cultivated in the downside land. They said that there are some bore wells down side and benefiting some farmers.

Picture 32. Damaged check dam in Sanjeevanraopet watershed serving no purpose.

Picture 33. Damaged loose boulder structure in Sanjeevanraopet watershed.

Picture 34. Percolation tank constructed in fallow land in Sanjeevanraopet watershed.

Picture 35. Field bunding done in uncultivated land in Sanjeevanraopet watershed.

Impact Assessment Report
SIDDAPUR-REJINTHALA Watershed, DPAP – I batch
SADASIVAPET Mandal, MEDAK district, Andhra Pradesh

Date of assessment: 5th November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Siddapur-Rejinthala watershed
iii. Names of villages in the Watershed:	Siddapur and Rejinthala
iv. Villages/Mandal/District:	Siddapur, Rejinthala/Sadasivapet/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	
ii. Non arable land (ha)	
iii. Government land/ Community land (ha)	
iv. Private land (ha)	
v. Treated arable	
vi. Treated non-arable	

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes.	
iii. Works executed as per Records	Yes, CDs: 5, PTs: 1, Field bunding: 15 ha, RFDs/LBS: 100	
iv. Whether watershed committees exits	Yes, Chairman: P. Kista Reddy, President: Kishore Reddy, Secretary: Kistaiah	
v. If exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)
School building development & protection grills in Rejinthala village and Temple compound wall & renovation in Siddapur village with Rs. 50,000.

5. Qualitative Parameters of Impacts

i. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 9
	Before	After	Before	After	Male: 9
	---	---	10	10	Female: nil
Describe:					
ii. Records of meetings properly updated	WC: As and when required to seek concurrence of works and WA: No gram sabha conducted.				
iii. Liaison with scientific institutions established	Farmers were taken to CRIDA farm visit in Hyderabad and Ralegaon siddi watershed in Maharashtra.				
iv. Watershed Development Fund collected?, and its utilization	Yes, collected Rs. 70,000/- towards WDF and not utilized due to lack of clear guidelines.				
v. Self Help Groups	No:		Revolving fund:		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
vi. Planned CPRs sustainable & equitable development	About 15 ha field bunding was done.				
vii. Benefits to weaker sections (women, dalits and landless)	Provided employment during execution of watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open wells: 15-20(all dried) ; Bore wells: 80 Soil and water conservation activities and water harvesting structures helped in recharging the groundwater and water availability increased after watershed interventions.
ii. Additional area under cultivation/horticulture/ afforestation	About 20 ha additional area brought into cultivation. Mango, Teak and Eucalyptus plants were distributed to farmers for planting.
iii. Changes in cropping pattern and intensity	Sugarcane, turmeric, paddy, cotton, chillies and potato crops are grown.
iv. Changes in agricultural productivity	Paddy yields 4 t/ha; sugarcane yields about 90 t/ha.
v. Changes in fodder & fuel wood availability	Not much change in fodder and fuel wood availability.
vi. Changes in size and character of livestock holdings	20% increase in buffalo population.
vii. Status of grazing land & their carrying capacity	Grazing lands are available and helping in maintaining the livestock.
viii. Employment	Employment generated only for skilled and

generated due to implementation of project	specialized workers.
ix. Change in household category, total, & source-	Not much change.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Bank loans are a source however money lenders are major source.
xi. Reduction in out-migration (case studies)	About 5% migration on a daily basis for few days in a year.
xii. Reduction in drought vulnerability of the watershed	Drought vulnerability is higher however they seems to have some relief when commercial crops are grown.
xiii. Detailed case studies of specific farmers impacted by the project	No specific case study in the watershed.
xiv. Photographs showing work + its impact	Please see the attached pictures of water harvesting structures below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

8. **Observations and Comments by Evaluators:**

- A masonry check dam in Siddapur village was seen with about 400 m^3 capacity but silt accumulation has reduced its capacity by 70%. There are six bore wells, nine beneficiary farmers and 10 ha area got benefited.

- RFDs and LBS were seen in Regintala village but some are in good condition, some are partially damaged and some are not effective due to breaching of soil from sides. No maintenance of these structures.

- A percolation tank was seen in Regintala village with about 4000 m^3 capacity and about 1000 m^3 water was stored in it on the day of inspection. There are 3 bore wells, three beneficiary farmers and about 4 ha got benefited. Good groundwater availability in that area.

- A masonry check dam was seen in Regintala village with about 400 m^3 capacity but silt accumulation has reduced its capacity by 50%. There are three bore wells, five beneficiary farmers and 6 ha area got benefited. Check dam effectiveness has been reduced due to breaching of backside drain. Storage capacity has been reduced drastically.

- A masonry check dam was seen in Siddapur village with abut 300 m^3 capacity but silt deposition has reduced it to about 100 m^3. Leakage was observed due to crack on the body wall. Lot of bushes have grown up and reduced its capacity. There are four bore wells, six beneficiary farmers and 4 ha area got benefited.

	
Picture 36. Masonry check dam in Regintala village, Medak district.	*Picture 37. Loose boulder structure in Regintala village, Medak district.*
	
Picture 38. Masonry check dam with lot of silt accumulation in Siddapur village.	*Picture 39. Percolation tank in Regintala village, Medak district.*

Impact Assessment Report

TOPUGONDA Watershed, DPAP – I batch
KONDAPUR Mandal, MEDAK district, Andhra Pradesh

Date of assessment: 5th November 2009

1. Details of watershed:

i. Name of the Scheme:	DPAP – I Batch
ii. Name of the watershed:	Topugonda watershed
iii. Names of villages in the Watershed:	Topugonda
iv. Villages/Mandal/District:	Topugonda/Kondapur/Medak
v. Name and Address of PIA:	MDT, Sangareddy
vi. Total area of the watershed:	500 ha

2. Ownership pattern of land:

i. Arable land (ha)	300
ii. Non arable land (ha)	200
iii. Government land/ Community land (ha)	10
iv. Private land (ha)	190
v. Treated areable	290
vi. Treated non-arable	180

3. Verification financial and other Records

i. Total cost:	Approved:	Spent:
ii. Expenditure incurred as per guidelines	Yes.	
iii. Works executed as per Records	CDs: 5 (1 failure, 4 are good); PTs: 4 (all are good); Earthen bunding: 155 ha; PTs considered more useful.	
iv. Whether watershed committees exits	Yes, Chairman: P. Govardhan, President: G. Ramulu, Secretary: R. Shekar Reddy	
v. if exists, activities of the committees	Not functional due to any clear guidelines for utilizing the WDF to repair and maintain the structures.	

4. Community participation (how community participation has been ensured and what EPA has been taken up, inputs of details of beneficiaries)

5. Qualitative Parameters of Impacts

viii. Functioning of village level institutions	No. of UGs		No. of SHGs		WC members: 10
	Before	After	Before	After	Male: 9
	---	60	--	10	Female: 1
Describe:					
ix. Records of meetings properly updated	WC: As and when required to seek concurrence of works and WA: As and when required.				
x. Liaison with scientific institutions established	Farmers were taken on exposure visits to other developed watersheds.				
xi. Watershed Development Fund collected?, and its utilization	Yes, collected Rs. 1,26,000/- towards WDF and not utilized due to lack of clear guidelines.				
xii. Self Help Groups	No:		Revolving fund:		
V.O functioning:			Savings:		
Utilization of loans:					
Bank linkages established:					
xiii. Planned CPRs sustainable & equitable development	About 155 ha field bunding was done.				
xiv. Benefits to weaker sections (women, dalits and landless)	Provided employment during execution of watershed activities.				

6. Quantitative Parameters of Impacts

i. Improvements in water table/water availability	Open Wells: 20-30; Bore Wells: 3 only. One to two months water additionally available, from February extended up to March.
ii. Additional area under cultivation/horticulture/ afforestation	About 30 ha additional area brought into cultivation/ 6 ha area covered under horticulture/10 ha area covered under afforestation.
iii. Changes in cropping pattern and intensity	Out of 120 ha of cropped area, about 16 ha additional area got opportunity to grow second crop. Cabbage, cauliflower, potato and onion crops are grown under irrigation with increased water availability.
iv. Changes in agricultural productivity	Productivity of rainfed crops reported are sorghum: 0.8 t/ha; Maize: 4 t/ha; Cotton: 1.2 t/ha.
v. Changes in fodder & fuel wood availability	Forage crops are grown in about 15 ha area and not much change in fuel wood availability.
vi. Changes in size and character of livestock holdings	Increase in milch cattle numbers were reported but no change in other livestock population.
vii. Status of grazing land & their carrying capacity	Grazing lands are available and supporting the livestock for open grazing.

viii. Employment generated due to implementation of project	During development of watershed, lot of work was done and year round employment was provided to all laborers in the village.
ix. Change in household category, total, & source-	Water availability has increased the yields and incomes of about 50 beneficiary farmers.
x. Freedom from Debt and reduction in degree of dependence of money lenders (case studies)	Farmers are taking crop loans from SBI, Kandi branch and less dependence on private money lenders.
xi. Reduction in out-migration (case studies)	No migration from the village.
xii. Reduction in drought vulnerability of the watershed	Not much reduction reported.
xiii. Detailed case studies of specific farmers impacted by the project	No specific case study in the watershed.
xiv. Photographs showing work + its impact	Please see the attached picture of focused group discussion below.

7. **Learnings and process documentation** (how the program could be implemented better; constraints, improvements possible, changes made etc.)

   i. Farmers considered that percolation tanks are more useful and expressed that regular de-silting and maintenance is essential for getting better results.
   ii. Promotion of horticultural plantations in larger area could have provided better income to the farmers.

8. **Observations and Comments by Evaluators:**

   i. Villagers are happy with the works undertaken during implementation of the watershed project.
   ii. Water harvesting structures, which are in good conditions are still serving the purpose.
   iii. Care and maintenance of the structures is essential to get sustainable benefits in the long run.

Picture 40. Progress of focused group discussion in Topugonda watershed.

ANALYSIS OF IMPACTS

Verification of Records

We could not verify the records as almost all the records were not available with WC. Some of the WC members when interviewed disowned their status as WC members. This project was initially handled by DRDA with PIAs from Department of forest and later part of the project period it was assigned to DWMA staff under the super vision of PD, DWMA, hence fetching older records did not materialize.

Community (People's) Participation

One of the main objectives of DPAP was to ensure and enhance people participation in this programme. In the initial stages of the project it self, the project seems to have missed the opportunity to ensure participation of people and create awareness to the people by ignoring to take up any entry point activity in the watershed villages. There were no activities in the project which were particularly targeted towards weaker sections, rural women although there was ample scope and opportunities to address the issues, by forming self-help groups (SHGs) of these sections of the society. User groups (UGs) were formed and soil and water conservation works were taken up by them successfully. Such success should have been given to weaker sections and women through SHGs for income generating activities to raise nursery of horticultural and forest tree plants in large scale. SHGs development would have impacted much better in terms of income generation and sustainability of rural livelihoods.

Soil and Water Conservation Structures

Soil and water conservation and other works permitted under this component in the project were 448 lakhs covering 14000 ha. A total about 1586 soil water conservation works and water harvesting structures were constructed. In addition to these structures field bunding was taken up in about 3000 ha under this activity.

Most of the water harvesting structures constructed either by PIA, DWMA or PIA, Forest department were generally of good quality, and suitably located except some which have been mentioned. Due to these SWC structures, large numbers of farmers

in different mandals have reported increased availability of water and ground water levels rose, which was also verified in our field visits.

Water Availability for Irrigation and Drinking Purpose

Impact has been very much felt by the beneficiary farmers in DPAP watershed villages in terms of ground water increase, and water availability for irrigation and more importantly for drinking purpose. Farmers in different villages confirmed that water level in bore wells increased on an average in the range of 3 to 10 feet during rainy season and availability extended by two months during summer. Farmers mentioned that period of water availability in the wells for irrigation extend from January/February before the watershed development to end of March/April after the watershed development. This situation favored for double cropping with three to five supplemental irrigations for second crops during post rainy season. However there was also mention about more number of low rainfall seasons after watershed development, which could have restricted their benefits of watersheds. In all most all the villages there was a clear agreement on availability of drinking water round the year in plenty after watershed development project implementation in their area.

Horticulture, Afforestation and Avenue Plantation

Mango, guava, cashew and other plants were distributed covering 93 ha and 7000 mango saplings were distributed to plant them in back yards etc, social forestry in 70 ha, farm forestry (teak) about 20000 saplings were distributed and avenue plantation was done in about 6 km distance along the sides of roads during the initial 4 years of the project. Horticultural plantations have come for bearing and farmers are getting good income from these plantations.

Enhanced Agricultural Productivity of Seasonal Crops

Due to water availability farmers in all the watersheds reported increase in area of paddy and sugarcane cultivation. Due to availability of water for longer period in the season up to end of March/April, crops like vegetables, groundnut, sunflower, black gram and green as second crop after paddy was introduced. Although variability exists in reported productivity enhancement from as low as 10% to more

than 30% increase was noticed in main crop as well as second crop in some watersheds. Although paddy and sugarcane are not efficient crops for scarce water utilization, farmers are growing paddy and sugarcane crops in the watersheds.

Common Property Resources and Wasteland Development

Medak is having large areas of CPRs and wastelands for development under the watershed project. About 280 ha of CPRs were developed with bush clearing, field bunding and assigned these lands to weaker sections for cultivation in 15 watersheds. Around 480 ha of additional area brought under cultivation after suitable land treatment and development. About 70 ha of wasteland were planted with *Pongamia*, teak, neem and other tree species.

Employment and Migration

In the entire 15 watersheds under assessment, only in four (27%) watersheds beneficiaries expressed that labor migration is stopped during implementation of watershed project and afterwards due to NREGS. Migration is still continuing to the extent of 5 to 20% in eleven watersheds. Labor migration had come down from almost 50% before the watershed development activities. However, wage parity between men and women still exists in most of the watersheds. Labor migration is almost arrested at present due to National Rural Employment Guarantee Scheme of government of India, but can not be attributed to watershed development. As informed by respondent farmers at the time of focused group discussion, 5-20% migration in some of the villages was for higher wage earnings and for especially semi-skilled and skilled labors like construction workers and vendors.

Our analysis of Focused group discussions with village communities indicate that 50% of the watershed villages sounded that they are not vulnerable to one or two years of droughts as they expressed confidence of growing one crop, as well as their credit worthiness with banks can help tide over the financial and food insecurity due to crop failures.

Watershed Development Fund

Watershed Development Fund should be collected in all the watersheds as per guidelines and deposited in the banks for joint operations by watershed committee and WDT from the PIA. It was reported that DWMA has collected about Rs. 16.82 lakhs towards WDF from some WC and the amount has been transferred to PD, DWMA. Farmers and WC members in almost all the watersheds mentioned that if the fund were made available for repair and maintenance of watershed structures, their impact would have been felt very much by the beneficiaries in the watershed.

About ICRISAT

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is a non-profit, non-political organization that conducts agricultural research for development in Asia and sub-Saharan Africa with a wide array of partners throughout the world. Covering 6.5 million square kilometers of land in 55 countries, the semi-arid tropics have over 2 billion people, and 644 million of these are the poorest of the poor. ICRISAT and its partners help empower these poor people to overcome poverty, hunger, malnutrition and a degraded environment through better and more resilient agriculture.

ICRISAT is headquartered in Hyderabad, Andhra Pradesh, India, with two regional hubs and four country offices in sub-Saharan Africa. It belongs to the Consortium of Centers supported by the Consultative Group on International Agricultural Research (CGIAR).

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