

An Evaluation Study of
**Prime Minister's Rehabilitation Package for
Farmers in Suicide-Prone Districts of Andhra
Pradesh, Karnataka, Kerala and Maharashtra**



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**Agricultural Development and Rural Transformation Centre
Institute for Social and Economic Change, Bangalore**

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Contents

	Page No.
List of Tables	i
List of Figures	iv
List of Photos	iv
Acknowledgements	v
Preface	vii
Chapter 1 Introduction	1 - 9
Introduction	1
1.2 PM's Rehabilitation Package	2
1.3 Progress in Implementation of the Package in Four States	5
1.4 Need for the Study	7
1.5 Objectives	8
1.6 Methodology	8
1.7 Outline of the Study	9
Chapter 2 Overview of Prime Minister's Rehabilitation Package for Farmers in Suicide-Prone Districts of Andhra Pradesh, Karnataka, Kerala and Maharashtra	10 - 40
2.1 Ex-gratia Payment	10
2.2 Credit Component	11
2.2.1 Interest Waiver	11
2.2.2 Rescheduling of Loans and Disbursement of Fresh Loans	12
2.2.3 Additional Credit Flow after Rescheduling of Overdue	14
Non-Credit Related Measures	17
2.3 Assured Irrigation	17
2.4. Agriculture	19
2.4.1 Seed Replacement Programme	19
2.4.2 Micro Irrigation	22
2.4.3 Extension services	24
2.5 Subsidiary Income Activities	26
2.5.1 Animal Husbandry	26
2.5.2 Fisheries Development	31

2.6 Horticulture	33
2.7 Watershed Development	35
2.7.1 Participatory Watershed Development Programme	35
2.7.2 Construction of Check dams	37
2.7.3 Rain Water Harvesting structures	39
Chapter 3	
Agro-Economic Profile of the Selected Districts	41 - 71
Agro-Economic Profile of the Selected Districts	
Introduction	
3.1 Andhra Pradesh	41
3.1.1 Main Features of the Selected Districts	41
3.1.2. Basic Features of Sample Farmers	45
3.1.3 Crops Grown	46
3.1.4 Livestock owned and Milk Production	47
3.2 Karnataka State	48
3.2.1 Main Features of the Selected Districts	48
3.2.2. Basic Features of Sample Farmers from Karnataka	52
3.2.3 Crops Grown	53
3.2.4 Livestock owned and Milk Production	54
3.3 Kerala State	55
3.3.1 Main Features of the Selected Districts	55
3.3.2. Basic Features of Sample Farmers from Kerala	62
3.3.3 Crops Grown	63
3.3.4 Livestock owned and Milk Production	63
Maharashtra State	64
3.4.1 Main Features of the Selected Districts	64
3.4.2. Basic Features of Sample Farmers from Maharashtra	68
3.4.3 Crops Grown	69
3.4.5 Livestock Owned and Milk Production	70

Chapter 4	Implementation of the Prime Minister's Relief Package: Evidence from Field Survey	72 - 114
Introduction		72
4.1 Awareness about the PM rehabilitation Package		73
4.2. Ex-gratia Payment		74
4.3 Credit Measures: Restructuring /Rescheduling of Overdue loans / Interest waiver and Fresh Loans		76
4.4 Seed Replacement		79
4.5 Micro Irrigation- Sprinkler/Drip irrigation		83
4.6 Extension services		87
4.7 Subsidiary Income Generating Activities		89
4.7.1 Animal Husbandry		89
4.7.2 Fisheries		94
4.8 National Horticulture Mission (NHM)		98
4.9 Minor Irrigation		103
4.10 Major and Medium Irrigation		108
4.11 Participatory Watershed Programme		109
4.12 Proportion of households benefiting from more than one scheme		112
4.13 Any other Government Programme		114
Chapter 5	Summary and Concluding Remarks	115-147
II. Methodology and selection of samples		116
III. Over View of Prime Minister's Rehabilitation Package for Farmers in Suicide-Prone Districts of Andhra Pradesh, Karnataka, Kerala and Maharashtra		117
I. Ex-gratia Payment		118
II. Credit Component		118
III. Seed Replacement		119
IV. Micro-Irrigation		120
V. Extension Services		121
VI. Subsidiary Income Generating Activities		122

a) Animal Husbandry	122
b) Fisheries	123
VII. National Horticulture Mission (NHM)	124
VIII. Assured Irrigation	125
IX. Participatory Watershed Programme	127
A. Participatory Watershed Development Programme	127
B. Construction of Check dams	128
C. Rain Water harvesting structures	129
X. Evidence from Field Survey	130
1. Awareness about the P M rehabilitation Package	131
2. Ex-gratia Payment	131
3 Credit Components	132
4. Seed Replacement	133
5. Micro Irrigation- Sprinkler/Drip irrigation	134
6. Extension services	135
7. Subsidiary Income Generating Activities	136
7.1 Animal Husbandry	136
7.2 Fisheries	138
8. National Horticulture Mission (NHM)	139
9. Minor Irrigation	141
10. Participatory Watershed Programme	142
XI. Concluding Remarks and Suggestions	143
Annexure	148-152
Annexure Table 4.1: Grants Released and Actual Expenditure Incurred on Extension Activities	153
Annexure Table 4.2: Physical and Financial Targets and Realization under Special Livestock Package as on March 2009	153
Annexure Table 4.3: Benefits received under Horticulture Scheme to Sample Households – Andhra Pradesh	154
Annexure Table 4.4: Benefits received under Horticulture Scheme to Sample Households – Maharashtra	154
Annexure 5: Reviewer’s Comments and Responses	155
References	156-157

List of Tables

Sl.No.	Table No.	Title of the Table	Page No.
1	Table 1.1	List of identified districts in four selected states	3
2	Table 1.2	Financial summary of rehabilitation package by States	4
3	Table 1.3	Component-wise financial summary of the Rehabilitation Package in Four States as on June 30, 2008	6
4	Table 2.1	Beneficiaries of Prime Minister's ex-gratia funds	11
5	Table 2.2	Interest waived and number of farmers benefited *	12
6	Table 2.3	Overdue loans rescheduled and number of farmers benefited	13
7	Table 2.4	Additional credit flow to the agriculture sector	15
8	Table 2.5	Number of projects and financial assistance sanctioned under assured irrigation facilities package as on March 2009	18
9	Table 2.6	Distribution of certified seed, number of beneficiaries and subsidy (2006-07 to 2008-09) as on March 2009	21
10	Table 2.7	Allocation, release of funds and progress made under micro irrigation (as on March 31, 2009)	23
11	Table 2.8	Allocation, release and utilization of grants for Agriculture Technology and Management Agency (ATMA) Extension Services as on March 31, 2009	25
12	Table 2.9	Amount Received and Expenditure Incurred under Subsidiary Income Activities Scheme (as on March 31, 2009)	28

13	Table 2.10	Progress in implementation of fisheries component	32
14	Table 2.11	Progress of National Horticulture Mission	34
15	Table 3.1	Socio-Economic Characteristics of Sample Households – AP	46
16	Table 3.2	Average area under Crop Groups of Sample Households	47
17	Table 3.3	Average Number of Livestock Owned per household	48
18	Table 3.4	Socio-Economic Characteristics of Sample Households – AP	53
19	Table 3.5	Average area under Crop Groups of Sample Households	54
20	Table 3.6	Average Number of Livestock Owned per household	55
21	Table 3.7	Socio-Economic Characteristics of Sample Households	62
22	Table 3.8	Average area under Crop Groups of Sample Households	63
23	Table 3.9	Average Number of Livestock Owned per household	64
24	Table 3.10	Socio-Economic Characteristics of Sample Households	69
25	Table 3.11	Average area under Crop Groups of Sample Households	70

26	Table 3.12	Livestock Owned and Milk Production	70
27	Table 4.1	Distribution of Households by Source of Information	74
28	Table 4.2	Total number of beneficiaries of Ex-gratia Payment and average amount received in the selected districts (from 2006 to March, 2009)	75
29	Table 4.3	Average Quantity of Seeds Supplied, Subsidy Component and Area Covered by Certified Seeds	80
30	Table 4.4	Average area covered under micro irrigation (Drip/Sprinkler), total cost and subsidy per beneficiary household in the selected districts	84
31	Table 4.5	Total Cost, Subsidy Amount/ Beneficiary for livestock Package	91
32	Table 4.6	Development of Fisheries under PM Package on sample farms in Karnataka	95
33	Table 4.7	Development of Fisheries under PM Package in Kerala	97
34	Table 4.8	Total Outlay, Release and Utilization of NHM Assistance under PM Package (as of June 30, 2008)	99
35	Table 4.9	Physical and Financial Targets and Achievement of NHM in Sample districts of Karnataka	102
36	Table 4.10	Progress of Minor Irrigation Works under PM Relief Package in the Selected Districts of Karnataka	105
37	Table 4.11	Increase in Irrigated Area under Minor Irrigation Scheme	107
38	Table 4.12	Progress of Major and Medium Irrigation Projects under PM Package in the Selected Districts of Karnataka	108
39	Table 4.13	Land treated under Watershed programme and Water harvesting Structures Constructed on sample farms in Andhra Pradesh	110

40	Table 4.14	Watershed Development in the Selected Districts of Karnataka under PM Relief Package Project (Sujala-II)	111
41	Table 4.15	Land treated under Watershed Programme and Water Harvesting Structure Constructed – Maharashtra	112
42	Table 4.16	Beneficiaries by Number of Schemes Aailed and Average Size of Holdings in the Selected Districts of Karnataka	113
43	Table 4.17	Benefits aailed from other government programmes by the selected farmer households	114

List of Figures

		Page No.
Fig. 1	Statewise Financial Summary of PM Package	5
Fig. 2.	Financial Allocation by Components	7
Fig.3	Actual Disbursement against the Target	16
Fig. 3.1	Crop-wise Area used for Cultivation	58

List of Photos

	Page No.
Pic.1. Fishpond at Kallahalli in Hassan district	96
Pic. 2. Fish-pond at Shanthi Grama, Hassan	96
Pic. 3. Vanashivi Katte, Thirupathihalii, Hassan Taluk	104

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The agrarian distress reached a climax at the fag end of the twentieth century. One of the tragic manifestations of the crisis concerns a large number of suicides committed by farmers in some parts of India. In fact, the problem was so alarming that it attracted nationwide attention and generated frantic debates in the union and state legislatures. The spiralling number of suicides in the past decade or so is clearly a symptom of agrarian distress and impoverished condition of farmers. Concerned with the agrarian crisis and more so with the farmers' suicides in some parts of the country, the Prime Minister visited some parts of the Vidarbha region in Maharashtra and announced on July 1, 2006 a rehabilitation package for farmers in 31 suicide-prone districts of four states with the main objective of mitigating the distress-driven condition of farmers.

The Ministry of Agriculture, Government of India, intends to know the implementation of the programme and its effectiveness. In this direction studies were assigned to three AERCs located in Waltair, Pune and Chennai, and the Agricultural Development and Rural Transformation Centre (ADRTC), Bangalore. The ADRT Centre, Institute for Social and Economic Change, Bangalore, has undertaken the evaluation study for Karnataka and has to prepare a consolidated report for all the four states. This report is the outcome of the investigation taken up for evaluation of the Prime Minister's rehabilitation package in Karnataka, Andhra Pradesh, Kerala and Maharashtra.

We are grateful to the Ministry of Agriculture, Government of India, for reposing confidence in the ADRT Centre, and assigning the responsibility for coordination of the study and consolidation of findings from four states to the Institute for Social and Economic Change, Bangalore. We are grateful to Dr. R. S. Deshpande, Director, Institute for Social and Economic Change (ISEC), Bangalore, for constant encouragement and support during the course of the study.

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M. J. Bhende

P. Thippaiah

Preface

Agricultural distress was quite severe during the early part of this decade. It culminated into a spate of farmers' suicides in the states of Maharashtra, Karnataka, Andhra Pradesh and Kerala. Earlier, The National Development Council had taken note of the agrarian distress and stagnation in productivity. Subsequently, as the distress became quite severe in Maharashtra and other states. Prime Minister Dr. Manmohan Singh visited Vidarbha region of Maharashtra in early July 2006 to review the situation. Following the visit of the Prime Minister a rehabilitation package to mitigate the distress of the farmers in the suicide-prone districts of the country was declared in September 2006. The Union Cabinet approved the rehabilitation package for 31 identified districts in four states for an investment of ₹ 16978.69 crores of which ₹ 10579.43 crores as subsidy/grants and ₹ 6399.26 crores as loan.

The rehabilitation package aimed at establishing a sustainable and viable farming and livelihood support system through debt relief to farmers, complete institutional credit coverage, crop-centric approach to agriculture, assured irrigation facilities, effective watershed management, better extension and farming support services and subsidiary income opportunities through horticulture, livestock, dairying, fisheries. Besides, to alleviate for the farming community, as a whole the hardships faced by the debt stressed families of farmers, an ex-gratia assistance from Prime Minister's National relief Fund @ ` 50.00 lakh per district was also provided.

The implementation of the Rehabilitation Package came under scanner of many academicians, researchers and journalists. Doubts were raised about effectiveness of the package and therefore, it was felt necessary to check the veracity of the Rehabilitation Package and its effectiveness in the selected regions. The Ministry of Agriculture, Government of India, assigned this project to the Agricultural Development and Rural Transformation (ADRT) Centre of ISEC to look into the effectiveness of the Prime Minister Rehabilitation Package in suicide-prone districts of Andhra Pradesh, Karnataka, Maharashtra and Kerala.

This study is based on both primary and secondary data. Secondary data are collected from various sources like published and unpublished reports. Three districts are selected from the identified suicide prone districts in each state located in three distinct regions. After selection of district, one taluka from each district having the highest number of suicide cases (cumulative) among the talukas in the selected district was selected for primary data collection. Primary data are collected from 40 beneficiary households from each taluka/district adding up to

120 households (for three districts) with the help of specially designed questionnaire. The reference year for data collection was 2008-09.

We found that most of the farmers had availed of one or the other scheme/ component of the P M package. The schemes such as supply of subsidised certified seeds, sprinkler/drip irrigation sets, and supply of milch animals with subsidy and loan component were found to have helped the distressed farmers improve their family income. The subsidy component provided for micro irrigation varied drastically across the districts. Land holding size was positively associated with benefits as the farmers having more land made use of more than one scheme/programme.

I thank Dr. M J Bhende and Dr. P Thippaiah for completing the research study for Karnataka state and also for preparing a consolidated report for all the four states i.e., Andhra Pradesh, Karnataka, Kerala and Maharashtra where the PM's package is being implemented. The findings and policy suggestions of the study are expected to be useful to the policy makers for formulating policies and schemes for achieving the envisaged goals of the package.

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An Evaluation Study of Prime Minister's Rehabilitation Package for Farmers in Suicide-Prone Districts

M. J. Bhende and P. Thippaiah

Introduction

Although Indian agriculture has been facing a serious crisis since the late 1980s, it has assumed an alarming dimension since the middle of the 1990s. The diversification of agriculture from subsistence to commercial farming resulted in increased dependence on purchased (market) inputs. Increasing commercialisation of agriculture leading to increased use of purchased inputs reduced profitability and lack of safety nets made things worse for the farming community as a whole. The slowing down and stagnation of agricultural growth has adversely affected the income and employment of a vast majority of rural people dependent on agriculture. Moreover, uncertain monsoon, presence of spurious inputs like seeds, fertilisers, plant protection chemicals, fluctuations in the production and imperfect markets have contributed to the distress and frustration of the farmers. The important manifestation of the crisis in agriculture was the stagnating, if not deteriorating, terms of trade for agriculture (GoI, 2007).

The agrarian distress reached a climax at the fag end of the 20th century. One of the tragic manifestations of the crisis concerns a large number of suicides committed by farmers in some parts of India. In fact, the problem was so alarming that it attracted nationwide attention and generated frantic debates in the union and state legislatures. The spiralling number of suicides in the past decade or so is clearly a symptom of agrarian distress and impoverished condition of farmers. The Situation Assessment Surveys of the National Sample Survey Organization (NSSO, 2005) has reconfirmed the worsening situation of farming households which indicated that 48.6 per cent of the farmer households in India are indebted, and about 40 per cent farmer households in the country did not like farming because it is not profitable, risky and it lacks social status and felt that, given a choice, they would take up some other career (NSSO, 2005). The agrarian crisis in India has both long-term structural and institutional as well as short-term manifestations. There has been a sharp decline in the share of agriculture in the Gross Domestic Product (GDP) from 41 per cent in 1972-73 to less than 20 per

cent in 2005-06. Increased population pressure, sub-division and fragmentation of land, unviable land holdings, plateauing of the existing agricultural technology and stagnation in productivity also have added to the agrarian crisis.

Farmers' suicides have been receiving a lot of social and public policy attention¹. Suicides were mainly concentrated in Karnataka, Andhra Pradesh and Maharashtra. A large number of suicides were reported in Karnataka in the first three years of the decade starting 2000-01, while Andhra Pradesh had the maximum number in 2004-05. In 2006, there was virtually a suicide epidemic in Maharashtra. These incidents raised serious questions about the state of the agrarian economy and the economic hardships faced by farmers.

Concerned with the agrarian crisis and more so with the farmers' suicides in some parts of the country, the Prime Minister visited some parts of the Vidarbha region in Maharashtra and announced on July 1, 2006 a rehabilitation package with the main objective of mitigating the distress-driven condition of farmers. In order to deal with the problem of suicides and provide relief for the distressed households, the Government identified 31 districts in the four states of Andhra Pradesh, Maharashtra, Karnataka and Kerala where the incidence of farmers' suicides had been very high. On September 29, 2006, the Union Cabinet approved the Rehabilitation Package for 31 identified districts in Andhra Pradesh, Karnataka, Kerala and Maharashtra (Table1.1). The implementation period of the Prime Minister's (PM's) package was fixed for 3 years and included both immediate and medium-term measures.

1.2 PM's Rehabilitation Package

The rehabilitation package aimed at establishing a sustainable and viable farming and livelihood support system through debt-relief measures for farmers, complete institutional credit coverage, crop-centric approach to agriculture, assured

¹ Some of the studies are Deshpande (2002), Mohanty and Shroff (2004), Sarma (2004), Deshpande and Prabhu (2005), Gill and Singh (2006), Mishra (2006, 2006a), Mohanakumar and Sharma (2006), Satish (2006), Singh (2006), Sridhar (2006), Mitra and Shroff (2007), Vaidyanathan (2007), Shroff (2008), Padhi (2009), Parthasarathy and Shameem (1998), Mohan Rao (1998), Vasavi (1999), Narasimha Rao & Suri (2006).

irrigation facilities, effective watershed management, better extension and farming support services and subsidiary income opportunities through horticulture, livestock, dairying, fisheries and other subsidiary activities. In order to alleviate the hardships faced by the debt-driven families of farmers, ex-gratia assistance from the Prime Minister's National Relief Fund (PMNRF) at ₹ 50 lakh per district was also provided.

Table 1.1: List of identified districts in four selected states

Andhra Pradesh (16)	Karnataka (5)	Kerala (3)	Maharashtra (6)
1. Prakasam 2. Guntur 3. Nellore 4. Chittoor 5. Kadapa 6. Anantapur 7. Kurnool 8. Adilabad 9. Karimnagar 10. Khammam 11. Mahabubnagar 12. Medak 13. Nalgonda 14. Nizamabad 15. Rangareddy 16. Warangal	1. Belgaum 2. Chikmagalur 3. Chitradurga 4. Hassan 5. Kodagu 6. Shimoga	1. Wayanad 2. Palakkad 3. Kasargod	1. Akola 2. Wardha 3. Amravati 4. Buldhana 5. Washim 6. Yavatmal

A set of proposed interventions / package announced by the hon'ble Prime Minister for Karnataka mainly covers the following:

- Complete credit cover through institutional credit sources;
- Debt relief to farmers through waiver of entire overdue interest and rescheduling of overdue loans as on 30th June 2006.
- Additional credit flow for providing complete credit cover for the identified 6 districts. The fresh credit flow for the year 2006-07 was estimated at ₹ 3217.08 crore.
- Completion of major, medium and minor irrigation projects in the identified districts for providing assured irrigation facilities.

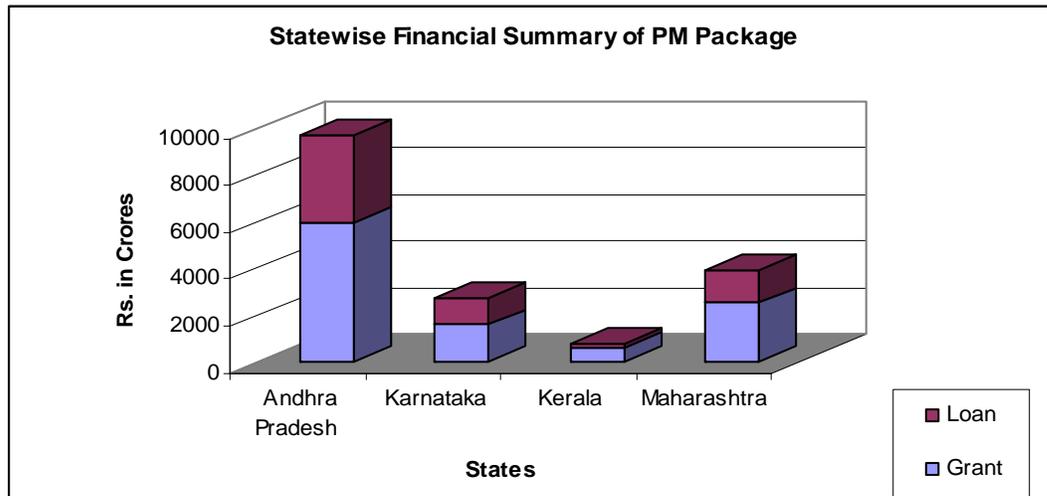
- Watershed management including watershed development, check-dam construction and rain-water harvesting.
- Installation of drip and sprinkler irrigation systems.
- Undertaking of a massive quality seed replacement programme;
- Diversification of agricultural activities into horticulture, livestock-rearing, dairying and fisheries etc., for creating additional sources of livelihood options in addition to farming and
- Extension of support services

The rehabilitation package envisaged completion of all irrigation schemes - major, medium and minor - across the identified districts within a timeframe. Watershed management included construction of 500 check-dams and 1,000 rainwater harvesting structures per district per year besides bringing in 15,000 ha. per district per year under Participatory Watershed Management Programme. The rehabilitation package involves a total amount of ₹ 16,978.69 crore consisting of ₹10, 579.43 crore as subsidy/grants and ₹6,399.26 crore as loan (Table 1.2). Andhra Pradesh has received the largest of the packages at ₹ 9,650.55 crore, with nearly 60 per cent of it going for subsidy / grant and the rest for loans. Kerala has received a total package of ₹ 765.24 crore, being the smallest among the four states. The State-wise financial summary of rehabilitation package is indicated in Table 1.2 and Fig.1.

Table 1.2: Financial summary of rehabilitation package by States

Name of the State	No. of Districts	Rehabilitation Package		
		Subsidy/grant	Loan	Total
Andhra Pradesh	16	5,943.31 (61.59)*	3,707.24 (38.41)	9,650.55 (100)
Karnataka	06	1,568.07 (58.30)	1,121.57 (41.70)	2,689.64 (100)
Kerala	03	577.21 (75.43)	188.03 (24.57)	765.24 (100)
Maharashtra	06	2,490.84 (64.31)	1,382.42 (35.69)	3,873.26 (100)
Total	31	10,579.43 (62.31)	6,399.26 (37.69)	16,978.69 (100)

Fig. 1



To ensure effective and time-bound implementation of the rehabilitation package, State-Level Coordination and Supervision Committees consisting of all the line departments concerned, NABARD with representatives from the Government of India have been constituted in all the identified states. The State Governments also constituted District-Level Committees. The Department of Agriculture and Cooperation and other Ministries/Departments of the Government of India are also regularly monitoring and reviewing the progress being made under the rehabilitation package. The implementation of this package in three states, namely, Karnataka, Kerala and Maharashtra (Andhra Pradesh is excluded due to non-availability of report / data) is presented in the next section.

1.3 Progress in Implementation of the Package in Four States

As mentioned above, the rehabilitation package was sanctioned for 31 identified districts in the States of Andhra Pradesh, Karnataka, Kerala and Maharashtra. It is important to see the progress in implementation of the package. The component-wise financial summary of the rehabilitation package in four states as on June 30, 2008, for which the latest data is available, is presented in Table 1.3 and Fig.2 and scheme-wise physical and financial targets and achievements for individual scheme/programme is presented in Annexure I.

Table 1.3: Component-wise financial summary of the Rehabilitation Package in Four States (as on June 30, 2008). (₹ in Crore)

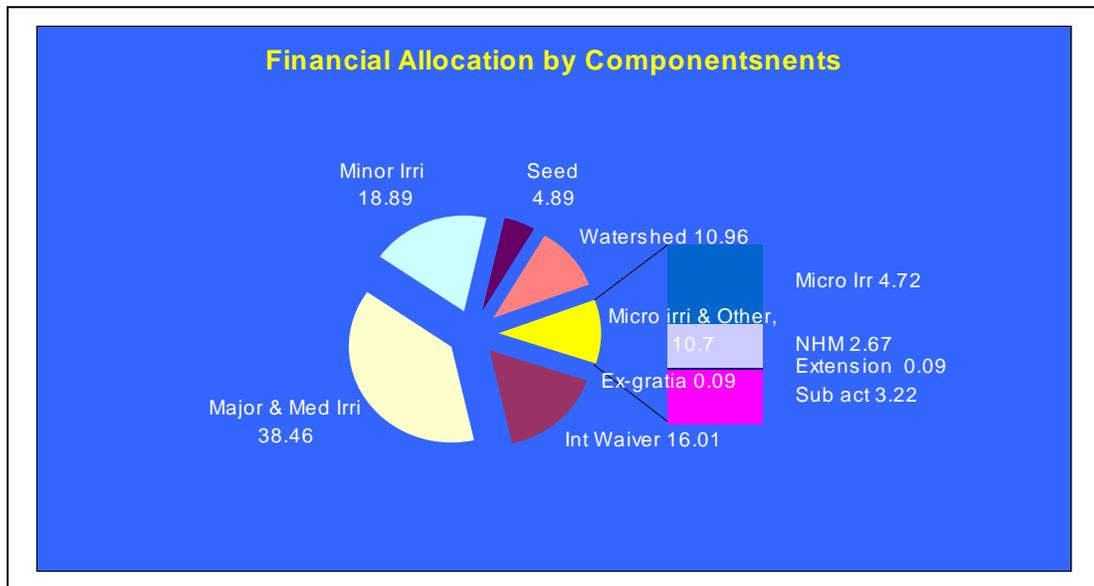
Sr. No	Item of assistance	Total amount	Subsidy/ Loan/grant	Subsidy/ Grant	Loan
1.	Ex-gratia assistance from PMNRF	15.50	Only grant	15.50	Nil
2.	Restructuring/rescheduling of loans	9,051.81	Only loan	Nil	9,051.81
3.	Credit flow	20,114.05	Only loan	Nil	20,114.05
4.	Interest waiver*	2,718.25	Only subsidy	2,718.25	Nil
5.	Assured Irrigation (i) Major & Medium irrigation	6,530.29	AIBP norms	4,268.84	2,261.45
	(ii) Minor irrigation	3,207.81	Only loan	Nil	3,207.81
	Total	9,738.10		4,268.84	5,469.26
6.	Seed Replacement	830.10	Only subsidy	830.10	Nil
7.	Watershed Development (i) Participatory Watershed	837.00	Only grant	837.00	Nil
	(ii) Check dams	930.00	Only loan	Nil	930.00
	(iii) Rainwater harvesting	93.00	50:50	93.00	Nil
	Total	1,860.00		930.00	930.00
8.	Micro Irrigation #	801.53	Only subsidy	801.53	Nil
9.	Horticulture Development(NHM)	452.78	Only subsidy	452.78	Nil
10.	Extension Services	15.50	Only grant	15.50	Nil
11.	Subsidiary income activities	546.93	Only subsidy	546.93	Nil
	Grand Total	16,978.69		10,579.43	6,399.26

Notes: * Burden of interest waiver will be shared equally by the Central and State Governments in the ratio of 50:50; # Scheme provides for 50 per cent subsidy and 50 per cent loan. Of 50 per cent subsidy, 40 per cent is central share and 10 per cent is from State Government.

N.B. - Amount under Restructuring /rescheduling of loans and Credit flow has not been included in the Grand Total.

It is evident from Table 1.3 that an amount of ₹ 16,978.69 crore was sanctioned under this relief package for all the identified states of which 16.01 per cent of the amount is utilized for waiving of overdue interest and 57.35 per cent for assured irrigation under the Accelerated Irrigation Benefit Programme (AIBP). The rest of the amount was spent on Watershed (10.96%), Seed replacement (4.89%), Micro irrigation (4.72%), Orange cultivation, Cattle and fisheries development, etc (22.08%). Thus, nearly three-fifths of the amount in the package was allotted for irrigation development programme.

Fig. 2.



1.4 Need for the Study

The Rehabilitation Package in these states is being implemented by the respective State Governments through the state-level coordination and supervision Committees, district-level Committees and Panchayati Raj institutions and local-level institutions and special purpose cooperative/community based organisations. The basic objective of this study is

to understand the ground reality as to whether the benefits of the package being implemented are reaching the intended beneficiaries because a number of complaints have been received from different quarters alleging misappropriation in the implementation of the package.

1.5 Objectives

The main objectives of the study are:

- To explore whether the benefits of the package are reaching the intended beneficiaries,
- To assess the overall social and economic impact of the Rehabilitation Package, and
- To study the constraints involved in the implementation of the package and suggest improvement.

1.6 Methodology

This study has been carried out for Andhra Pradesh, Karnataka, Kerala and Maharashtra State by using the primary and secondary data. The secondary data were collected from various sources like published and unpublished reports, monthly progress reports submitted by the district authorities to the State monitoring unit, agriculture department as well as line departments and implementing agencies, etc. For the data analysis, simple statistical tools like average, percentages, growth rates, etc. have been used.

Three districts are selected from the identified suicide-prone districts in each state located in three distinct regions. After selection of districts, one taluka from each district having the highest number of suicide cases (cumulative) among the talukas was selected for primary data collection. In the Prime Minister's Rehabilitation Package, there are eight major schemes implemented by the agriculture, horticulture, animal husbandry, irrigation, and fisheries departments. Further, compensation for families of suicide farmers and ex-gratia payment from PM National Relief Fund was paid by the Collector. For each of the eight schemes, five beneficiaries were selected from each taluka. Thus, in total there were 40 beneficiary samples per taluka/district. It was observed that sometimes a single household benefited from more than one programme in the PM's package. However, such households have been treated for only one scheme

even though information is collected for all the schemes he/she has availed under the package. Thus, in total, data from 120 households (for three districts) in specially designed questionnaire were collected in the month of June 2009. The reference year for data collection was 2008-09.

The Districts selected for primary data collection for the present study are:

- i. **Andhra Pradesh** : Anantapur, Guntur and Warangal
- ii. **Karnataka** : Belgaum, Chitradurga and Hassan
- iii. **Kerala** : Kasaragod, Palakkad and Wayanad
- iv. **Maharashtra** : Amravati, Buldhana and Yavatmal

1.7 Outline of the Study

The study is divided into five chapters. Chapter one, which is an introductory chapter, presents introduction to the Prime Minister's package, component-wise allocation, progress in implementation of package, need of the study, objectives of the study, etc along with methodology adopted for data collection and analysis. Implementation of various components of the Prime Minister's Package in 31 suicide-prone districts of 4 states, i.e., Andhra Pradesh, Karnataka, Kerala and Maharashtra, are discussed in Chapter two. Chapter three presents the agro-economic features of the selected districts. Chapter four presents the results from the primary data analysis. The last chapter presents the summary and policy implication of the study.

Chapter II

Overview of Prime Minister's Rehabilitation Package for Farmers in Suicide-Prone Districts of Andhra Pradesh, Karnataka, Kerala and Maharashtra

As stated earlier, the Prime Minister's Rehabilitation Package includes both credit and non-credit components. Among the non-credit component, there are eight major schemes implemented by the agriculture, horticulture, animal husbandry, irrigation, and fisheries departments under the Prime Minister's Rehabilitation Package. Moreover, ex-gratia payment from PM's National Relief Fund was paid by the Collector and compensation for families of suicide farmers was also extended to a few families by the State governments. We present the results by broad components of the Prime Minister's Rehabilitation Package being implemented in three states.

2.1 Ex-gratia Payment

With a view to alleviating the sufferings of debt-stressed families of farmers in the affected districts of Andhra Pradesh, Karnataka, Kerala, and Maharashtra, a sum of ₹ 50 lakh each was placed at the disposal of the respective District Collectors. Thus, under this programme a total amount of ₹ 3 crore each was received from PMNRF by Karnataka and Maharashtra states, ₹1.50 crore by Kerala and ₹ 8 crore by Andhra Pradesh. Each family of the debt-stressed farmers was assisted with a maximum of ₹10,000 for meeting health care and educational needs of the children. The cases were considered and approved by the district Collector after taking into account the recommendations made by the Panchayat / municipality. The programme was implemented in all the selected districts of the three states under study. The progress of implementation of this scheme is presented in Table 2.1. In some states like Maharashtra, the ex-gratia payment was supplemented by the state government using the Chief Minister's Relief Fund.

It can be seen from the table that funds provided for payment as ex-gratia assistance under the PMNRF were fully utilised by Andhra Pradesh and Maharashtra whereas Karnataka could use little more than 59 per cent of the total assistance of ₹

300 lakh received. Average assistance paid under ex-gratia payment ranged from ₹ 2,942 per beneficiary in Kerala to ₹ 10,000 per beneficiary in Andhra Pradesh.

Table 2.1: Beneficiaries of Prime Minister's ex-gratia funds*

Sl. No.	State	Number of Beneficiaries	Amount disbursed (₹ in lakh)	Average amount per beneficiary (₹)
1.	Andhra Pradesh	8,000	800.00	10,000
2.	Karnataka	4,570	177.70	3,888
3.	Kerala	4,913	144.53	2,942
4	Maharashtra	3,974	300.000	7,549

* Till March 2009

2.2 Credit Component

The Prime Minister's Rehabilitation Package includes both short-term and medium-term measures. The credit component includes waiving of the entire interest on overdue loans as on July 01, 2006, rescheduling of overdue loans over a period of three to five years with a one-year moratorium, and provision of fresh credit by the banking system. All the farmers had no past interest burden as on that date. Thus, they were immediately eligible for fresh loan from the banking system. The burden of waiver of overdue interest is to be shared equally by the Central and state governments. A summary of the rehabilitation package for Andhra Pradesh, Karnataka, Kerala and Maharashtra is presented below.

2.2.1 Interest Waiver

The burden of interest waiver scheme was to be shared by the Central and State Governments in the ratio of 50:50. The NABARD is the Nodal Agency for RRBs and Cooperatives. The RBI is the Nodal Agency for commercial banks. The support for waiver of overdue and penal interest from the Central government was in the form of grants. It can be seen from Table 2.2 that the actual interest waived is more than the over-due interest to be waived (estimated over-due interest) in case of Karnataka and Maharashtra whereas the overdue interest actually waived was little less than the estimated or targeted interest in Kerala. Interest waiver component under the PM's Rehabilitation Package was implemented during 2006-07 and 2007-08 in Andhra Pradesh. The farmers were relieved from the burden of interest on previous loans. However, it was observed that the RRBs and Cooperatives had claimed 3 to 4 per cent excess amount under interest waiver which was to be curtailed. The amount of overdue interest waived was the same as estimated while sanctioning the grants.

Table 2.2: Interest waived and number of farmers benefited *

(₹ in Crores)

Sl. No.	State	Overdue interest to be waived	Total overdue interest waived	Overdue interest waived of Cooperative Banks/Societies	Total Beneficiaries of interest waiver scheme
1	Andhra Pradesh	3,970.29	3,970.29	1,511.05	Not available
2	Karnataka	209.81	639.75	187.54	4,29,776
3	Kerala	360.00	216.62	112.15	Not available
4	Maharashtra	712.68	833.01	434.86	9,38,728

Note: * 2006-07 & 2007-08

Interest waived on loans from cooperative banks and RRBs accounted for 52 per cent of the total interest waived in Maharashtra and Kerala, about 37 per cent in Andhra Pradesh and 30 per cent in Karnataka. About 4.3 lakh account holders from Karnataka and 9.38 lakh farmers from Maharashtra benefited from the interest waiver scheme.

2.2.2 Rescheduling of Loans and Disbursement of Fresh Loans

Restructuring/Rescheduling of loans under the PM's Package is another part of credit component to provide relief for grieved suicide families as well as other farmers in the suicide-prone districts. To reduce the stress of the affected families, the overdue loans of the farmers are rescheduled over a period of 3 to 5 years and fresh loans are issued against the loans rescheduled. The overdue loans as on July 1, 2006 from all the formal agencies like Commercial Banks, RRBs and Co-operative Societies are rescheduled.

In Andhra Pradesh, over-due agriculture loans were estimated to the tune of ₹ 15149.61 crore borrowed by 87, 43,184 borrowers. However, the actual amount of overdue loans rescheduled was ₹ 5028.45 crore benefiting 35,54,332 farmers from 16 distress-prone districts of Andhra Pradesh (Table 2.3). During 2006-07, only 32.97 per cent of the estimated overdue loan of ₹ 7,252.31 crore was rescheduled. In the following year, only 33.39 per cent of the total estimated overdue of ₹ 7,897.30 crore was rescheduled.

Indebtedness among the farmers, especially the small and marginal farmers, was the main reason for suicides which led to the announcement of the PM's Rehabilitation Package but its coverage and impact became limited when the total debt relief and its redressal is examined.

Among the financial institutions which advanced loans to the farmers, about 74.90 per cent of the loans from Regional Rural Banks are rescheduled followed by Commercial Banks (31.67%) and Cooperatives (9.24%) during 2006-07. On the other hand, in the loan amount during 2007-08, most of the loan amount of Regional Rural Banks (77.60%) was rescheduled followed by Commercial Banks (28.64%) and Cooperatives (27.27%).

Table 2.3: Overdue loans rescheduled and number of farmers benefited

(₹ in Crores)

Sl. No.	state	Estimated Overdue as on 30 th June 2006	Estimated Number of Accounts	Actual Amount rescheduled	Actual No. of Accounts rescheduled
1	Andhra Pradesh	15,149.61	87,43,184	5,028.48#	35,54,332
2	Karnataka	1,194.52	3,64,988	1,868.06*	3,80,706
3	Kerala	815.53	N. A.	420.76**	NA
4	Maharashtra	1,296.00	9,33,000	1,418.48***	9,38,728

* As on 28th February, 2009

** As on 31st March, 2008

***As on March 31, 2007

for 2006-07 & 2007-08 (cumulative total)

In Karnataka, initially, rescheduling of loans was linked to waiver of interest. However, it was decided in the meeting held on 6th February 2007 that these two items be continued independently. It was also accepted that the amount under rescheduling of loans and waiver of interest might vary from the amount mentioned in the proposal initially. It was observed that in the anticipation of loans waiver in Karnataka, the farmers were not showing any interest in getting their loans rescheduled, and hence, it was decided to follow the Maharashtra model and the rescheduling of loans was done on "Book transactions" without waiting for farmers' consent.

It can be seen from Table 2.3 that the actual loan amount rescheduled as well as the number of accounts benefited due to rescheduling of loans are higher than the estimated overdue loan amount as well as accounts in both Karnataka and Maharashtra state. In case of Maharashtra, agricultural loans amounting to ₹ 1,418.48 crore by about 9.38 lakh farmers have been rescheduled as against the estimated overdue of ₹ 1,296 crore from 9.33 lakh farmer borrowers as on 30th June, 2006.

As per the package, ₹ 1194.52 crore were earmarked for restructuring of old debts in Karnataka. However, loans rescheduled from September 2006 through August 2008 accounted for ₹ 1,248.78 crore covering 2,86,549 accounts. The records show that in Karnataka, agricultural loans to the tune of ₹ 1,868.06 crore covering 3,64,988 accounts are re-structured / rescheduled till 31st March, 2009. Surprisingly, the agricultural loans actually restructured in three suicide-prone districts of Kerala are less (₹ 420.76 crore) than the estimated amount of ₹ 815.53 crore.

2.2.3 Additional Credit Flow After Rescheduling of Overdue

The Agriculture credit targets and achievements in 16 identified districts of Andhra Pradesh during 2007-08 and 2008-09 are presented in Table 2.4. The targeted credit amount for all the credit agencies put together for 16 identified districts is 15,032.20 crore. Of this ₹ 13,003.43 crore (86.48%) was actually disbursed during 2007-08. Among the different agencies, Commercial banks rank first with 55.53% share in the total disbursement of agricultural credit followed by Rural banks (22.45%) and Cooperatives (8.51%). During 2008-09, ₹ 13,960.21 crore (79.37%) of the targeted agricultural credit of ₹ 17,588.35 crore could be disbursed (Fig. 3). The commercial banks shared 59.13% of the total agriculture credit disbursed by all the formal credit agencies followed by Rural Banks (16.46%) and Cooperatives (3.78%). The disbursement of credit or actual achievement in meeting the targets by cooperatives and RRBs remained very low in Warangal, Khammam, Nalgonda and Nizamabad districts in 2007-08 and in the case of RRBs, Cuddapah, Chittoor and Guntur, while Medak, Khammam were at very low level for Cooperative Societies.

It is observed in Andhra Pradesh that out of the total amount of ₹7,252.31 crore of agricultural loans during 2006-07, only 32.97 per cent of loan amount was rescheduled and of which only 2.46 per cent of fresh loan amount was disbursed while the percentage number of accounts was 2.81. But during 2007-08, the loans were rescheduled to a tune of ₹ 7,897.30 crore, of which ₹ 33.39 per cent loans were rescheduled and against the rescheduling of loans 2.98 per cent of fresh loans were given.

It is observed that the relative role of Co-operative Societies and RRBs is very low in the share of credit flow, though they are meant specially for farmers and other rural segments. The reaching of institutional finance to the farmer community by commercial Banks is governed by a number of stipulated terms and conditions subject to business guidelines of Reserve Bank of India.

The actual disbursement of agricultural credit for the sample district of Guntur was 88.08% of the set target during 2007-08, which was slightly decreased to 79.05% during 2008-09, while in the other sample district of Warangal, about 83.60 per cent of the credit target was achieved during 2007-08 and it declined to 68.99% during 2008-09. With regards to

Anantapur, the credit achievement was 84.60% during 2007-08 and it increased further to 95.29% of the targeted loan amount during 2008-09.

Table 2.4: Additional credit flow to the agriculture sector

Year	2007-08		2008-09	
	Annual Target	Disbursement	Annual Target	Disbursement
Andhra Pradesh	15,032.20	13,003.43	17,588.35	13,960.21
Karnataka	3,749.41	3,270.30	4,479.13	2,830.34
Kerala	2,395.45	2,750.71*	3,005.22	1,976.00**
Maharashtra	2,225.22	1,737.86	2,229.18	1,179.84

* As per the proposal sent by the Ministry

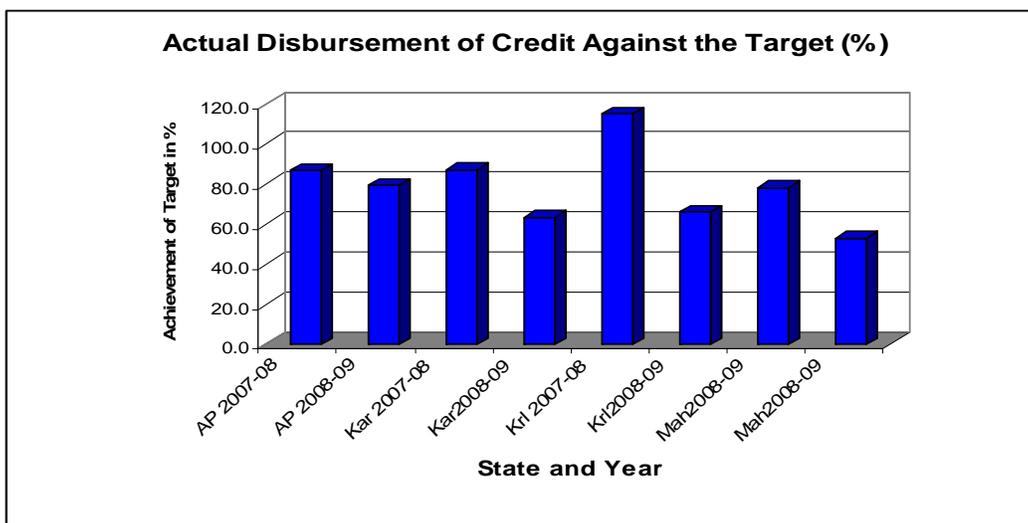
** Agricultural credit disbursed during the first three quarters of financial year 2008-09.

As per the records, in Karnataka, agricultural loans amounting to ₹ 1,248.78 crore for 2,86,549 accounts was re-scheduled as on August 2008 and the fresh loans to

the tune of ₹ 9,787.04 crore were sanctioned to 90,226 account holders against rescheduled loans. Credit flow increased to ₹ 9,093.21 crore benefiting 2,29,620 accounts. In case of Maharashtra, fresh loans were disbursed to 4,81,512 farmers adding up to ₹ 1,179.84 crore against the target of ₹ 2,229.18 crore during 2008-09. Similarly, In Kerala, about two-thirds of the target was met.

In Karnataka, RRBs and Cooperatives together shared 70 per cent of the total rescheduled accounts and 30 per cent of the rescheduled loan amount. On the contrary, commercial banks rescheduled loans to the tune of ₹ 869.77 crore accounting for 70 per cent of the total value of rescheduled loans, covering 29.5 per cent of the rescheduled accounts. However, it was observed that commercial banks had been very cautious in extending fresh loans to account holders after rescheduling the loans. The commercial banks extended fresh loans to the tune of ₹ 384.02 crore as against ₹ 9,403.02 crore disbursed by the RRBs and Cooperatives during 2006 after rescheduling old loans. The fresh loans sanctioned by the commercial banks accounted for 4 per cent of the total fresh loans provided by banks after rescheduling the old loans, covering around 40 per cent of the beneficiaries. The actual disbursement of credit in 3 districts of Kerala during 2007-08 was ₹ 2,750.71 crore and surpassed the target of ₹ 2,395.45 crore set earlier. However, the credit disbursement was two-thirds (₹ 1,976 crore) as against the target of ₹ 3,005.22 crore during 2008-09.

Fig.3



It can be observed from Table 2.4 that the credit target for distress-prone 6 districts of Maharashtra was fixed at ₹ 2,225.22 crore for 2007-08. However, the actual disbursement was ₹ 1,737.86 crore accounting for 78 per cent of the targeted disbursement. The actual disbursement of credit during 2008-09 was approximately 53 per cent (₹ 1,179.84 crore) of the targeted amount of ₹ 2,229.18 crore. The number of farmers who received additional credit flow increased from 4.48 lakhs in 2005-06 to 10.07 lakhs in 2006-07 which was the first year of the implementation of the programme. However, the number of borrowers declined to 5,75,148 in 2007-08 and further to 4,81,512 during 2008-09.

Non-Credit Related Measures

2.3 Assured Irrigation

Assured irrigation component of the PM package accounted for nearly 60 per cent (57.35 per cent) of the total package of ₹ 16,978.69 crore earmarked for 31 districts from 4 states i.e., Andhra Pradesh, Karnataka, Kerala and Maharashtra. Andhra Pradesh had included 14 major and 11 medium irrigation projects in 16 identified districts under the assured irrigation component of the PM package. Out of the 16 identified districts, Major Irrigation works were undertaken only in 10 districts during the period of the implementation of the PMR Package. A total number of 15 AIBP Projects were undertaken during the implementation of the PMR Package. Ten districts viz., (1) Prakasam, (2) Kadapa (3) Nizamabad, (4) Medak (5) Mahabubnagar, (6) Nalgonda, (7) Warangal, (8) Karimnagar, (9) Khammam and (10) Adilabad are benefited. Out of the total targeted amount of ₹ 8,984.23 crore, 71.24 per cent of amount is spent by the Central Government while the share of the State Government is 28.76. Against the targeted amount of ₹ 8,984.23 crore, an amount of ₹ 6,442.87 crore was achieved, i.e. about 72 per cent (Table 2.5). The total achievement comprises 34.54 per cent by the Centre and 65.46 per cent by State Government. Out of the total targeted amount by Centre, (₹ 6,400 crore), the released amount is only 41.53 per cent during 2006-09.

The Government of India sanctioned ₹ 1,208.71 crore comprising ₹ 725.24 crore as grants and ₹ 483.47 crore as loan under the special package for 17 major and medium irrigation projects in Karnataka. The proposals were sent to the Government of

India for obtaining the loan and grant under Accelerated Irrigation Benefit Programme (AIBP). 17 major and medium irrigation projects were identified in the selected six districts (Table 2.5).

Table 2.5: Number of projects and financial assistance sanctioned under assured irrigation facilities package as on March 2009

(₹ in crores)

Sl. No.	State	Major/minor projects	No. of Projects	Finance	Amount released by GOI & NABARD	Expenditure	Physical Achievement (Ha)
1.	Andhra Pradesh	Major & Medium	15	8,984.23	2,657.92	6,442.87	NA
		Minor	NA	2,231.00	NA	NA	NA
2.	Karnataka	Major & Medium	17	1,208.71	415.28	1,467.36	61075
		Minor	892	458.10	60.45	60.45	174
3.	Kerala	Major & Medium	6	35.00	2.72	NA	NA
		Minor	179	70.03	8.74		
4.	Maharashtra	Major & Medium	17	1,728	637.94	2,641.24	88644
		Minor	557	448.68	187.52		

The Government of Karnataka had requested the Government of India to provide grants to the tune of ₹ 458.10 crore for carrying out minor irrigation projects also. However, the request was not considered and the State Government was forced to take the decision for raising the entire amount as a loan under RIDF. NABARD agreed to provide the loan under RIDF for the development of 892 minor irrigation projects in the selected 6 districts over a period of three years.

In the identified six districts of Maharashtra, an area of 1.6 lakh hectares was targeted to bring under assured irrigation facilities at a cost of ₹ 2,177.27 crore over three years through completion of all major medium, minor irrigation projects. Under Accelerated Irrigation Benefit Programme (AIBP), central assistance was provided for

major/medium and minor irrigation projects. The assured irrigation project includes 8 major, 9 medium and 557 minor irrigation projects for six districts of Maharashtra. It can be observed from Table 2.5 that total funds of ₹ 2,679 crore was released, out of which ₹ 2,641 crore was utilized by March 31, 2009. However, the irrigation potential created was only 88,644 hectares as against the targeted irrigation potential of 1,67,871 hectares. Hence, with the funds released only 53 per cent of targeted potential could be created. Actual area irrigated was 16,214 hectares by June 2007, and as per the latest report, it increased to 27,495 hectares by June 2008.

In the case of Kerala, the Government of India provided a total of ₹ 105.03 crore over three years for completion of all major medium, minor irrigation projects in the 3 selected districts. Of the total amount sanctioned, ₹ 35 crore was meant for major irrigation projects and the balance of ₹ 70.03 crore for the development of minor irrigation. The Chief Engineer, Irrigation, has reported that project reports for 75 minor irrigation schemes amounting to ₹ 19.61 crore have been sanctioned by NABARD under RIDF XIII and the Government of Kerala has also accorded administrative sanction to these works. So far, NABARD has released ₹ 3.40 crore for 55 projects.

2.4. Agriculture- In all the suicide-prone districts agriculture is the main activity and, therefore, programmes related to soil health improvement and productivity enhancement, promotion of organic farming, seed replacement with high-yielding varieties and hybrids, popularization of micro irrigation and providing better extension services etc., are given importance.

2.4.1 Seed Replacement Programme:

In order to provide immediate assistance for the farmers, a massive seed replacement programme was launched with 50 per cent subsidy in the identified districts of 4 states. The total allocation for seed replacement programme was ₹830.10 crore for all the 4 states over a period of three years. The National Seed Corporation (NSC) was appointed as the Nodal agency for seed supply along with the State Seeds Corporations in the respective states. The entitlement for subsidised quality seed was limited to one

hectare per farmer. The scheme was implemented from rabi 2006 in some states (Maharashtra) and from summer season 2006-07 in other states (Karnataka).

The Government of Andhra Pradesh allocated ₹ 470.18 crore for seed replacement programme for 16 identified districts in the state under the PM's rehabilitation package. The AP Seed Development Corporation was appointed as the nodal agency for seed supply. The entire amount of ₹ 470.18 crore has been utilized for distribution of seed on 50% subsidy to the farmers of the 16 districts under the PM Package (Table 2.6).

The seeds of 14 major crops were distributed to the farmers in the 16 identified districts of Andhra Pradesh during 2006-09 on subsidy basis. The quantity allocated for each crop was in accordance with the importance of the crop in the respective districts. Among the total seeds distributed in the identified 16 districts, groundnut, chickpea, maize and soybean together shared more than 95 per cent of the total quantity (14,71,802 qtls) and 84 per cent of the total subsidy (₹ 47,017.90 lakh) under P M package.

In Andhra Pradesh, a total of 28,66,276 quintals of certified seed was distributed with a subsidy of ₹ 47,017.90 lakh during 3 years beginning with 2006-07. Groundnut, chickpea, maize and soybean accounted for 58 per cent, 25 per cent, 7 per cent and 5 per cent, respectively of the total subsidised seed distributed in the identified districts and shared 44 per cent, 23 per cent, 12 per cent and 5 per cent of the total subsidy in that order. Anantapur district shared the highest share of 32.59 per cent (9,34,119 quintals) of subsidised seed and accounted for 31.73 per cent (₹ 149.19 crore) of the total subsidy provided for seed distribution under the PM package in Andhra Pradesh. The reason for the higher share of Anantapur district in the total subsidised seed may be attributed to the distribution of a large quantity of groundnut seed in the district. In aggregate, Khammam, Nalgonda, Ranga Reddy, Guntur and Nellore districts received less benefit from subsidised seed when compared to other districts.

Table 2.6: Distribution of certified seed, number of beneficiaries and subsidy (2006-07 to 2008-09) as on March 2009

Sl. No.	State	Allocation/ Package (₹ in crore)	Seed distributed (quintals)	No. of beneficiaries	Subsidy amount (₹ in crore)	<i>Subsidy per beneficiary (RS)</i>
1.	Andhra Pradesh	470.18	14,71,802	NA	470.35	NA
2.	Karnataka	178.00	2,26,474	7,01,852	25.56	364
3.	Kerala	1.92	25,610	N. A	N. A	N. A
4.	<i>Maharashtra</i>	<i>180.00</i>	<i>10,77,454</i>	<i>27,84,247</i>	<i>143.98</i>	<i>517</i>

The Government of India indicated that only certified seeds should be distributed under the package. However, due to non-availability of certified seeds, the Government of Karnataka had sought permission for distributing 'Truthful Labelled' seeds (from private seed companies) also. The Government of India conceded the request for the first year, but it emphasized that only certified seeds should be distributed to the farmers from kharif 2007 onwards.

The Government of Karnataka distributed a total of 2.26 lakh quintals of certified seed during 2006-07 to 2008-09 through Rayatha Sampark Kendras located at Hoblis (encompassing 5-6 Gram Panchayats). About 7 lakh of the total 16.35 lakh farmers from six districts identified in Karnataka purchased subsidised seed, i.e., on an average, 43 per cent of the farmers benefited from the subsidised seed distribution. The selection of crop varieties / seed varied depending on the cropping pattern prevalent in the district. The major crops covered under this programme were Paddy, Jowar, Ragi, Chickpea, Pigeon pea, soybean, sunflower, Maize, Greengram, Blackgram, Cowpea and cotton. On an average, beneficiary farmers from Karnataka got a subsidy of ₹ 364. The Government of Karnataka could spend less than 30 per cent of the allocation made for seed distribution. There are wide variations in the quantity of seed distributed and the number of beneficiaries across the identified districts.

The Government of Kerala has utilised the entire amount of ₹ 1.92 crore allocated for distribution of certified seed. Palakkad district shared the maximum of ₹ 1.71 crore of the total allocation of ₹ 1.92 crore. Wayanad and Kasaragod shared ₹ 0.11 crore and ₹ 0.10 crore respectively. The total quantity of certified seed distributed was 25,610 quintals and the major quantum was shared by improved paddy varieties followed by pulses. The total coverage of area under HYV seeds is anticipated around 32,000 hectares in three districts of Wayanad, Palakkad and Kasargod.

In Maharashtra, the cost of the programme was ₹180 crore over a period of three years. The National Seed Corporation was appointed the nodal agency for seed supply. About 285 seed distribution centres were opened in 64 talukas of six districts to supply seed to farmers in 8,328 villages. It can be observed from the table that about 10.77 lakh quintals of seed was distributed during the period Rabi 2006 to Rabi 2008, which accounts for a total subsidy of ₹ 143.98 crore under this scheme. On an average, each beneficiary farmer received a subsidy of ₹ 517. The crops covered under this programme were Jowar, wheat, gram, tur, soybean, sunflower, safflower, maize, moog, udid and cotton.

The number of beneficiaries in kharif season was more than double the number in the rabi season. This is naturally expected since agriculture in these districts is rainfed and hence farmers take more crops in the kharif season. Further, if we consider the number of farmers in these six selected districts, which is 15.58 lakh (as per the Agricultural Census 2000-01, GoM), we can infer that on an average, approximately 23 per cent of farmers were beneficiaries of Seed Replacement Programme in the rabi season and 55 per cent were beneficiaries in the kharif season every year. Thus, the benefits of the seed replacement programme seem to have penetrated the suicide-prone districts.

2.4.2 Micro Irrigation:

All the selected districts in the four states are covered under the scheme of micro irrigation. The programme was targeted to cover 9.09 lakh hectares area in all the

identified districts under drip and sprinkler irrigation, involving an investment of ₹ 801.53 crore over a period of 3 years. The major objective of the micro irrigation programme was to reduce the wastage of irrigation water, improve the water use efficiency and thus bring in more area under irrigation to improve the productivity and production of crops in the identified districts under the PM package.

The Micro Irrigation Project was launched in Andhra Pradesh in 2003 with an objective of enhancing the crop productivity by improving the water use efficiency through Micro Irrigation Systems. APMIP has the project Director at the district level under the chairmanship of the District Collector. In this scheme, 100% subsidy was given to SCs and STs and 90% to all other farmers for supplying both drip and Sprinkler Irrigation sets with a ceiling of ₹50,000 per farm. About 200 APMIP Resource Centres were started across the State to provide direct interface between the farmers and departmental functionaries of MIP. It is a hub of all activities including orientation/trainings to farmers. All the 16 districts are covered under the of Micro Irrigation scheme.

Andhra Pradesh had provided ₹ 640 crore for the development of micro irrigation in 16 districts during 2007-08 and 2008-09. The project directors of APMIP surpassed the target and spent ₹ 283.10 crore against the release of ₹ 234.00 crore by the Government of India (Table 2.7). A total of about 2,22,636 hectares area was brought under micro irrigation. Among the districts, Nalgonda received the highest share (44.45%) in the total expenditure and also shared 40.47 per cent of the total area brought under micro irrigation during 2007-08 and 2008-09.

It can be seen from Table 2.7 that the states of Karnataka, Kerala and Maharashtra were allocated ₹ 64 crore, ₹ 19.53 crore and ₹ 78 crore, respectively under micro irrigation scheme to develop the drip and sprinkler irrigation base in the suicide-prone districts over three years. The Government of India released ₹ 33.79 crore, ₹ 6.36 crore and ₹ 112.55 crore for the drip and sprinkler irrigation scheme till June 2008 for the states of Karnataka, Kerala and Maharashtra respectively.

Table 2.7: Allocation, release of funds and progress made under micro irrigation (as on 31st March, 2009)

(₹ in crore)

State	Financial Allocation	Release by GOI	Physical Achievement	Final achievement
Andhra Pradesh	640.00	234.00	22,263	283.10
Karnataka	64.00	33.795	44,979	24.89
Kerala	19.53	6.36	1,592	1.063
Maharashtra	78.00	112.55	92,061	103.32

It can be seen from the Table 2.7 that the Government of Kerala could use a very negligible amount, i.e., ₹ 1.06 crore of the total ₹ 6.36 crore released by the Government of India. The actual area covered under micro irrigation is 1,592 ha of which 1,094 ha is covered by drip irrigation system and 498 ha under sprinkler irrigation. Palakkad district shared the maximum (77 per cent) of the total area under micro irrigation as well as the subsidy (76 per cent) of the total provided under the PM's rehabilitation package for 3 districts of Kerala. The Government of Karnataka spent ₹ 24.89 crore i.e., 74 per cent, of the released amount, whereas the Government of Maharashtra could utilize ₹ 103.32 crore accounting for 92 per cent of the total amount released till March 2009. The area covered under drip and sprinkler irrigation ranged between 1,552 ha in Kerala and 92,061 ha in Maharashtra.

2.4.3 Extension services

It is a well-known fact that agricultural extension plays a very important role in dissemination of information to the farmers at the appropriate time. However, it is argued that the agricultural extension systems in the states have become very weak and their presence on the field is negligible. Therefore, it was decided to put an effective and efficient extension service system in place in the identified districts for empowering the farmers. It was decided that the farmers would be provided extension support at the village level and convergence at the district level through Agriculture Technology Management Agencies (ATMA) of all the districts. The revamped extension services package includes a women farmers' empowerment programme also.

Agriculture Technology Management Agency (ATMA) is registered as an autonomous society, under the chairmanship of the District Collector who oversees the implementation of the project activities in agriculture and allied sectors under the Prime Minister's Special Rehabilitation Package in the 16 identified suicide-prone districts of Andhra Pradesh. The expenditure on extension services have been increasing since the inception of the PM Package. The Government of India released ₹ 26.52 crore. However, the Government of Andhra Pradesh could spend ₹ 12.13 crore till June 30, 2008.

Extension activities under ATMA were being carried out in only two (Hassan and Shimoga) of the six selected districts of Karnataka during 2006-07. The action plans and activation of ATMA programme were to be initiated in the other 4 districts, i.e., Kodagu, Chikmagalur, Chitradurga and Belgaum. The total allocation for this programme under the PM's package was ₹ 3 crore each for Maharashtra and Karnataka and ₹ 1.50 crore for Kerala (Table 2.8). However, during the three-year period, in addition to the grants received from the Central government, the state governments also released grants for the ATMA programme.

The Government of India had sanctioned a grant of ₹ 1.5 crore for strengthening extension activities in the 3 districts of Kerala and released ₹1.17 crore till June 30, 2008 (proposal sent by MoA). However, the officials at the Directorate of Agriculture, Government of Kerala, have reported that they have not received any funds till date under this programme from the Government of India. The Government of Kerala has decided to establish 3,000 farmers' counselling centres in the existing Krishi Bhavans over a period of 3 years. So far, the Government of Kerala could establish 1,000 counselling centres by spending ₹ 0.50 crore. Of these, 568 are located in Palakkad district followed by 269 in Kasargod and the remaining 163 crore in Wayanad district.

Table 2.8: Allocation, release and utilization of grants for Agriculture Technology and Management Agency (ATMA) Extension Services as on March 31, 2009

(₹ in crore)

State	Grants from Central Government	Allocation	Release by State Government	Actual expenditure by State Government

Andhra Pradesh	8.00	16.00	26.52*	12.13**
Karnataka	3.00	6.72	2.99	2.05
Kerala	1.50	1.50	1.17	0.50
Maharashtra	3.00	12.76	11.50	10.44

* Release by Government of India (Based on proposal sent by the MoA)

* Expenditure by AP government up to 30 June 2008 (Based on proposal sent by the MoA)

The department of agriculture, Government of Karnataka, has used a little more than ₹ 2 crore against the release of ₹ 2.99 crore by the State Government. The funds were used to conduct training programmes for the farmers, technology demonstration and for arranging exposure trips to research stations and agricultural universities for the benefit of farmers. In Maharashtra, ₹ 10.44 crore were spent by ATMA for various activities against the release of ₹ 11.50 crore by the State Government. Most of the funds released for extension in Maharashtra were spent on strengthening the Self-Help Groups.

2.5 Subsidiary Income Activities

2.5.1 Animal Husbandry

In order to support the subsidiary income of the farmers, schemes relating to livestock and fisheries were included in the PM's Package. The component relating to livestock and fisheries involves the following:

- Induction of 1,000 High-Yielding Milch animals per year per district with 50 per cent subsidy (balance, bank credit);
- Induction of 500 female calves per district with a provision of sharing 50% of the rearing cost;
- providing cattle/buffalo breeding services (through door-to-door services);
- feed and fodder supply programme;
- Establishment of four fodder block-making units with 50 per cent subsidy (balance, bank credit) and Supply of fodder blocks for feeding inducted animals with 25 per cent subsidy;
- Provision of adequate health care to all animals;

- Taking up massive AI programme and estrus synchronization of 70 per cent breedable animals;
- Establishment of chilling plants.

The initial allocation, release and utilization of funds for subsidiary activities by the states are shown in Table 2.9. It can be observed from the table that a package of ₹ 256.63 crore was approved for Andhra Pradesh by the Government of India for livestock / dairy development under the PM's rehabilitation package. The Government of India released grants to the tune of ₹ 188 crore over three years, from 2006-07 through 2008-09, whereas the state government released ₹ 195 crore (Table 2.9). However, the animal husbandry department of Andhra Pradesh, an implementing agency of the package, could spend ₹ 139.02 crore on the various components of the package till March 2009. ₹ 139.02 crore was spent inducting 36,502 milch animals, 7,389 calf-rearing activities, 12.93 lakh AI, treatment of 4.11 lakh cattlehead in health camps, commissioning of 26 bulk cooling units etc. **Thus the actual expenditure accounted for roughly 74 per cent of the total grants released by the Central Government.**

The Government of Karnataka received total grants of ₹ 92.53 crore and the Central Government released ₹ 57.58 crore towards implementation of the package. In Karnataka, the Live Stock Development Agency along with the Karnataka Milk Federation (KMF) has been implementing the programme. The State Government released ₹ 25.48 crore to KMF. However, KMF could spend only ₹ 20.66 crore on implementation of the package in Karnataka. **Thus, the Government of Karnataka could spend roughly 36 per cent of the total grants released by the Central Government.** The Karnataka Live Stock Development Agency along with KMF identified 5,945 beneficiaries and distributed 5,081 milch animals, enrolled 1,298 calves for rearing, treated 5,081 animals, disbursed subsidy for the development of 10 Block-making units, affected 20.33 lakh AI and treated 33,332 animals for Estrus synchronization during 2006 through March 2009.

Kerala Livestock Development Board, the Department of Animal Husbandry, and Malabar Cooperative Milk Producers' Union are implementing agencies for the livestock

component under subsidiary income activities in Kerala. The total allocation for livestock package was ₹ 46.12 crore, of which ₹ 42.52 crore was released for implementation of various activities of the component (Table 2.9).

Table 2.9: Amount Received and Expenditure Incurred under Subsidiary Income Activities Scheme (as on 31th March, 2009)

(in ₹ crore)

State	Allocation under the package	Amount released by State Govt	Expenditure as on 31 st March, 2009	Physical progress
Andhra Pradesh	256.63	188.01	139.02	36,502 milch animals inducted 7,389 calf rearing 12,93,035 artificial insemination 4,11,422 animals in fertility camps 28,667 health care 36,502 Feed and fodder support 26 bulk milk cooling units
Karnataka	92.63	57.58	20.6596	5,945 beneficiaries identified; 5,081 animals purchased 1,298 Calf rearing 5,081 animals treated 10 Block making units 20,33,152 AI

				33,332 Estrus synchronization
Kerala	49.42	42.52	33.3934*	5,582 animals inducted 4,466 calves enrolled 2,06,001 AI 1,34,443 Estrus synchronization 7 milk chilling plants
Maharashtra	135.00	50.97	49.00	19,459 milch animals distributed to 12,140 families 12,995 families assisted under calf-rearing programme 17,459 beneficiaries of feed & fodder supply 5,43,625 AI 1 bulk milk cooler

* Progress up to 10th March, 2009

The implementing agencies, Kerala Livestock Development Board, Department of Animal Husbandry and Malabar Cooperative Milk Producers' Union, utilized almost 78 per cent (₹ 33.39 crore) of the grants released by the Central government for livestock package till March 2009. A total of 5,582 high-yielding milch animals were purchased and inducted with a budget of ₹ 13.50 crore. Similarly, 4,466 calves have been enrolled and an amount of ₹ 3.28 crore was released to M/s. Kerala Foods for supply of feed to the calves. A target of 2.06 AI for cows and buffaloes was fixed and a total of 6.28 crore was spent on this account and other inputs such as mineral mixture, AI gloves, etc.

The Kerala Livestock Development Board, the Department of Animal Husbandry, had fixed the target for induction as 1,000 high-yielding milch animals per district, totalling 3,000 animals in the three districts together during 2006-07. Of this, a total of 2,877 animals were inducted. Similarly, 2,282 and 423 animals were inducted during 2007-08 and 2008-09 respectively against the target of 3,000 animals each year. A subsidy amounting to ₹ 1,350 lakh has already been released to the respective district collectors. The beneficiaries who purchased milch animals under the PM package are also entitled to receive feed and fodder for the newly inducted animals at the subsidised rates for one year. A total amount of ₹ 830.875 crore is sanctioned for the payment of feed and fodder subsidy of which ₹ 821.10 lakh has already been released to implementing agencies to make payment to MILM, a feed supply agency selected for all the 3 districts. The subsidised feed is being supplied to the beneficiary households of newly inducted animals.

The Government of Kerala had fixed a target of enrolling 4,500 calves during the 3 years, of which 4,466 calves have been enrolled from 2006-07 through 2008-09 and ₹ 328.50 lakh has been released to the district-level implementing officials for making payment to M/s. Kerala Foods, for supply of feed for the enrolled calves. Supply of cattle feed for calves is routed through the respective Milk Cooperative Societies to the beneficiary households. **However, we do not have the details about the number of beneficiaries either for milch animals or the calf- rearing programme being implemented in the 3 distress-prone districts of Kerala.**

It was also reported that ₹ 124 lakh were utilised by MRCMPU for providing a bulk milk chilling plant. Similarly, ₹ 628.14 lakh of the total allocation of ₹ 927.27 lakh was spent on AI component. Kerala Livestock Development Board also supplied 1 kg of Mineral Mixture per animal at the time of insemination. Another component of livestock package is Estrus synchronization. ₹ 674.26 lakh has been earmarked for this component and ₹ 76.85 lakh has already been released to the department of animal husbandry for purchase of medicines and supplements. The purchase procedure was initiated by the department at the time of field work. About 1,34,443 animals are targeted for Estrus synchronization treatment. The Department of animal husbandry has sought modification in the component and submitted an alternative proposal to the Pregnant Animals Feeding programme for approval by the Government of Kerala. ₹ 9 lakh is earmarked every year for health care of dairy animals. The amount released for 2006-07 has already been used. As the amount for 2007-08 was released at the fag end of the financial year, it could not be used, and hence the proposal for revalidation. The funds for 2008-09 were not released for the health component at the time of field work. To sum up, the government received ₹ 4,252.905 lakh for livestock component and could spend about ₹ 330.34 lakh amounting to 78.5 per cent of the total amount received on the animal husbandry component.

In case of Maharashtra, initially, the total package involved a total investment of ₹ 98.87 crore in six districts over a period of three years (which was eventually increased to ₹ 135 crore by 2008-09). It can be seen from the table that the total amount spent on various components amounted to about ₹ 49 crore as against the release of ₹ 50.98 crore. In addition to this, ₹ 0.72 crore has been spent on purchase of bulk cooler by Maharashtra State Dairy Association (Mahanand) by March 31, 2008 under the establishment of milk cooling centre scheme. **The total expenditure actually incurred accounts for 96 per cent of the total release from 2006-07 through 2008-09.** The Department of animal husbandry, Government of Maharashtra, implemented the programme. It can be observed from Table 2.9 that totally 12,140 farm families have been supplied with milch animals and 19,459 milch animals are distributed so far. Totally, 12,995 farm families have been assisted under the calf-

rearing programme and 5,43,625 Artificial Inseminations were carried out. Under the scheme of food and fodder supply, 17,459 farmer households from the six selected districts were benefited. For supply of instruments for development of fodder blocks, ₹0.85 crore was received by Maharashtra Animal Wealth Development Corporation, Akola. The implementation period of this scheme under the PM's package was from 2006-07 to 2008-09. However, the government extended the period for implementation by two more years, i.e. up to 30.09.2011 for non-credit component.

2.5.2 Fisheries Development

Development of fisheries was also identified as one of the subsidiary activities under the Prime Minister's package. The programme envisaged development of fish ponds in 100 hectares per district by providing 40 per cent of the capital and input costs (the rest to be sourced through bank credit).

Andhra Pradesh ranks second in inland fish production in the country. The fish production farm ponds constructed exclusively for fish culture are contributing nearly 5 lakh tonnes of inland fish and prawn. The farmers are encouraged by providing assistance under the Prime Minister's package. It has been proposed to provide farmers in the 16 districts with an opportunity for supplementary income through fisheries by development/creation of water bodies.

A fisheries programme is proposed initially in 100 hectares of area in each of these 16 districts and it may be taken up under the existing scheme of "Development of Fresh Water Aquaculture" in Andhra Pradesh. The scheme provides assistance for construction of ponds and input cost for the first year. As per the norms, the capital cost per hectare comes to ₹ 2.00 lakh and input costs about ₹ 30,000. The scheme is aimed at sustaining the fish production and increasing the productivity from 3 to 5 tonnes per hectare in all the identified 16 districts of Andhra Pradesh. Under this scheme, the unit cost is ₹ 2.30 lakh/ha out of which the subsidy component is 40% in case of the general category and 50 per cent for scheduled castes and scheduled tribes farmers. It can be seen from Table 2.10 that the Government of India has released ₹7.00 crore for three

years 2006-07, 2007-08 and 2008-09. Under the programme, 699 ha of fish ponds have been constructed during the last 3 years and an amount of ₹ 7 crore has been spent.

Table 2.10: Progress in implementation of fisheries component

(₹ in crore)

State	Allocation	Release of funds	Physical target (Ha)	Physical Achievement	Actual expenditure
Andhra Pradesh	7.00	7.00	1656	699	7.00
Karnataka	6.24	1.65	600	149.08	1.29
Kerala	3.33	3.33	250	180*	1.03
Maharashtra	6.21	0.23	Not available	102.34	0.19

* As on March 2009

As far as Karnataka is concerned, ₹ 6.24 crore was earmarked for the fisheries developmental activities in the 6 districts with a target of developing 100 ha of fish ponds in each district over 3 years. The Department of fisheries, Government of Karnataka, is the implementing agency. The fisheries development programme in Karnataka took off only in February 2007 and ₹ 1.65 crore was released to develop fish ponds/aquaculture over an area of 160 ha (Table 2.10). Five of the six districts received ₹ 26.91 lakh each for the targeted development of 26 hectares of fish ponds and supply of quality fingerlings with the only exception being Shimoga, which received ₹31.05 lakh with a target of developing 30 hectares of fish ponds. However, only 149.08 ha area was covered under aquaculture incurring an expenditure of ₹ 1.29 crore during 2007-08 and 2008-09 taken together. Thus, Karnataka could achieve 25 per cent of the physical target by spending 78 per cent of the total amount of ₹ 1.656 crore released by the GoI.

The Government of India allocated ₹ 3.33 crore under the PM package for development of aquaculture in the 3 identified districts of Kerala. The Fish Farmers

Development Agency (FFDA) was identified as the nodal agency for implementing the programme in Kerala. It was envisaged to develop 250 ha of fish ponds during 3 years. ₹ 1.03 crore was released to FFDA during the first year of the programme in

Kerala. FFDA utilised the entire amount to develop aquaculture on 180.4 ha of area. The Government of Kerala released the remaining ₹ 2.30 crore during 2007-08. However, area covered during the second year is not known as scrutiny of applications as well as survey of the area was in progress.

The fisheries component of subsidiary income activities has been implemented along with livestock in Maharashtra. Allocation for the fisheries component was meant for construction/ repairs and renovation of fish ponds and input subsidies. The total allocation for this component was ₹ 6.21 crore. However, only ₹ 23 lakh were released, and of this only ₹ 18.93 lakh could be spent for the development/ repair of fish ponds in the identified 6 districts of Maharashtra. A total of 91 fish ponds covering 102.34 ha area were constructed and 91 farmers benefited by this scheme.

2.6 Horticulture

The National Horticulture Mission (NHM) was launched with the objective of bringing a holistic and integrated development of the horticulture sector in the country. It is based on the cluster approach, focused development of selected crops, improvements in production and productivity, adoption of good agricultural practices aimed at promotion of exports and thrust on post-harvest management. The NHM has been included as one of the components in the PM package for development of horticulture in all the selected suicide-prone districts. Under the Prime Minister's Rehabilitation Package, a total amount of ₹ 319.55 crore was allocated and released among the four states, viz., Andhra Pradesh, Maharashtra, Kerala and Karnataka. The entire amount is a grant component.

The NHM has been implemented in 18 districts in Andhra Pradesh to ensure forward and backward linkages with active participation of all stakeholders. Initially, ₹ 75.30 crore was allocated to the horticulture development and distributed among 16 identified suicide-prone districts under the NHM Scheme. The total outlay for three years

(2006-07 to 2008-09) was ₹ 240.94 crore for the 16 identified districts. The Government of Andhra Pradesh spent a total of ₹ 161.12 crore on the NHM projects in the 16 districts against ₹ 133.25 crore (₹ 66.67 crore in 2006-07 and ₹ 66.58 crore during 2007-08 and 2008-09) released by the Government of India under the PM relief package. As the district-wise allocation under the scheme was not available, the state-level information is presented for the years 2006-07, 2007-08 and 2008-09. The state received ₹ 484.47 crore under the NHM programme and utilised ₹ 408.55 crore accounting for 84 per cent of the total grants received from the Government of India.

Among the 6 districts covered under the rehabilitation package in Karnataka, 4 districts namely, Belgaum, Chitradurga, Hassan and Kodagu, were already covered under the NHM. Shimoga and Chikmagalur districts got included afresh under the NHM. Similarly, in Maharashtra, five of the six identified districts were covered under the NHM. Buldhana was included later under the mission. In Kerala, NHM is being implemented in all the three selected districts.

It can be seen from Table 2.11 that an allocation of ₹ 106.15 crore was made for implementing NHM in the selected districts of Karnataka. The department of horticulture has spent ₹ 98.33 crore of the total ₹ 98.59 crore released by the Government of India till March 2009. Under this scheme, new plantation of fruit perennials, floriculture, spices and aromatic plants as well as rejuvenation and gap filling in old orchards have been taken up on 2.44 lakh ha area since 2006. Grants were provided for establishment of nurseries, vegetable seed production, promotion of organic farming, IPM and INM, establishment of pack house, primary processing, construction of storage for onion, creation of water resources, and development of wholesale and rural markets.

Table 2.11: Progress of National Horticulture Mission

(₹ in crore)

State	Allocation under the package by GoI	Total amount released	Financial progress achieved	Physical progress (ha)
Andhra Pradesh	75.30	NA	NA	NA
Karnataka	106.15	98.591	98.328	244237
Kerala*	46.33	105.70	40.70	Not available

Maharashtra	225.00	115.26	112.20	52128
Total	452.78	319.55	251.23	-

* As on December, 2008

Note: Horticulture Component has not been analyzed in the case of AP.

In Kerala, ₹ 46.33 crore was sanctioned by the Government of India and the state government supplemented the programme from its funds. The State Horticulture Mission (SHM) is the nodal agency for implementing the NHM programme in the state. The SHM programme includes establishment of nurseries, area expansion, re-plantation, organic farming, IPM, post-harvest management, etc. A total of ₹ 40.70 crore was released till December 2008.

In the case of Maharashtra, ₹ 225 crore has been sanctioned by the government towards NHM programme, of which about ₹ 115.26 crore (51.26 per cent) was received by March 31, 2009. Under this scheme, new plantation of fruit perennials, floriculture, spices and aromatic plants have been taken up on 52,128 ha area since 2006. Also 1,267 community water tanks were completed. Old and senile orchards in an area of 8,097 ha area are being rejuvenated. As the NHM is an ongoing programme, the funds would be available till the year 2012.

2.7 Watershed Development

Drought-proofing is one of the important components of the PM package for farmers in the suicide-prone districts and hence watershed development programme was included in order to increase the production and productivity of crops. The scheme is subdivided into three sub-schemes, viz., check-dams, participatory watershed development programme and rain-water harvesting scheme. As per the package, ₹ 837 crore was provided as grants for implementation of participatory watersheds in the 31 identified districts of four states and rest of the financial requirement was to be met from loans raised under the RIGF from NABARD. Construction of check-dams is one of the components of the package and ₹ 930 crore was provided as loan by the Government of India. Similarly, ₹ 93 crore was provided as subsidy for constructing rain-water harvesting structures to be shared by the Central and State Governments equally.

The PM's Relief Package targets constructing on an average 500 check-dams every year at an average cost of ₹ 2 lakh per check-dam in each district over three years. In addition to this, about 15,000 hectares area per district would be treated under the participatory watershed development programme for which a grant support of ₹ 60 lakh per watershed of 1,000 hectare area each is provided. Rainwater harvesting scheme aiming at accelerated growth of irrigation potential for ensuring agricultural development of the SC/ST beneficiaries, including small and marginal farmers, was provided with 50 per cent back-ended capital subsidy along with 50 per cent bank loan, covering 1,000 beneficiaries a year in each of the identified districts.

2.7.1 Participatory Watershed Development Programme

Andhra Pradesh received ₹ 432 crore as grants for the development of participatory watersheds in the 16 identified districts. Similarly, ₹ 480 crore was allocated for construction of Check-dams and ₹ 48 crore for towards Rainwater harvesting scheme. In the third and eighth SLIC meeting held on 20th January 2007 and 2008, we mentioned that the NABARD with the assistance of Resource Support Organization will develop 15,000 hectares per year (for three years). The NABARD has agreed to develop 15,000 hectares in each of the 16 districts under watershed development. The department of agriculture has reported that steps have been taken to identify the watersheds and the sites for check-dams and water harvesting structures with the help of Soil Resource Maps prepared by the National Bureau of Soil Survey Organization, Nagpur.

It was observed that the ***Participatory Watershed Development programme covered an area of 4.83 lakh hectares with an expenditure of ₹ 4756.26 crore as on 31st January 2010.*** The cumulative total area covered under the participatory watershed management ranged from 24,200 ha in Karimnagar to 40,604 ha in Prakasam among the 16 identified districts. The highest cumulative amount was released to Chittoor district (₹616.20 crore) whereas Guntur received the lowest amount (₹143.15 crore) for the Participatory Watershed Development programme under the Prime Minister's Rehabilitation Package (Mohana Rao, *et al*/2010)

Under the Prime Minister's package for distressed districts of Maharashtra, ₹ 162 crore was allocated for participatory watershed development. **About 90,188 ha area was treated under the participatory watershed development programme with an expenditure of ₹ 18.65 crore against the sanctioned amount of ₹ 54.0 crore, by May 31, 2009.**

In case of Kerala, a package of ₹ 81.0 crore was earmarked for participatory watershed development in 3 distressed districts. ***NABARD is supposed to provide ₹ 27 crore from RIDF in the first phase while the balance amount of ₹ 54 crore will be provided in the second phase. During the first phase, 15,000 ha are proposed to be treated in each district with an allocation of ₹ 9 crore each. The details about actual area treated and expenditure incurred are not available. However, as per available the data, ₹ 1.53 crore was spent to treat 15,600 ha of area under the participatory watershed development programme in the selected districts of Kerala.***

The guidelines provided to implement three components of the watershed programme were accepted in Andhra Pradesh, Maharashtra and Kerala whereas the Government of Karnataka sought some modification in the implementation of the watershed component and sought permission to implement participatory watershed based on "SUJALA" model of watershed development.

A sum of ₹ 162 crore is provided by NABARD for implementation of participatory watershed development in Karnataka. Under the RIDF XIII, 59 sub-watershed projects (331 micro watersheds) in the six distress districts of Karnataka were sanctioned for implementation by the Watershed Development Department (WDD), Government of Karnataka. An Action plan has been drawn indicating physical and financial targets. The survey work is in progress at some of the locations. Under this programme, 15,000 ha of area is to be treated per district per year. ***Implementation of the participatory watershed development component using SUJALA model was delayed as the Government of Karnataka had to seek permission from the Government of India to modify the watershed component to follow the SUJALA model in the***

suicide-prone districts of Karnataka. The Government of Karnataka could spend ₹ 7.15 crore till the end of March 2009. Most of the expenditure relates to the advances disbursed to NGOs for capacity building and plantation activities only. Land treatment and other field activities were not initiated till March 2009.

2.7.2 Construction of Check-dams

Check-dams provide benefit of irrigation to the farmers. This is a project on soil and water conservation, natural resources regeneration and management. This project is to be run by the watershed community. Check-dams are constructed at the end of the watershed to impound the excess water after allowing water to seep into the aquifer through the entire course of the drainage line of the watershed. However, one check-dam could be built initially to create a water source for starting a nursery and /or for drinking water purposes.

Under the PMR package, the total allocation for Andhra Pradesh is ₹ 480 crore and the entire amount is a loan component. The allocation for 2006-07 and 2007-08 is ₹ 240 crore. The Government of Andhra Pradesh has planned for 24,000 check-dams during 2007-08 and 2008-09 at an average cost of ₹ 2 lakh per check-dam to be constructed in 16 identified districts over three years. ***The funds available from NABARD for check-dams are only in the form of loan under RIDF. No amount has been spent so far during this period. The Government of Andhra Pradesh has sought funds under RIDF over and above the annual allocation for executing check-dams under the PM package.*** The State Government should prioritize the projects within the overall normative allocation under RIDF, the action plan for 2009-10 being 480 crore.

In Karnataka, consequent to the fresh sanction for implementation of **SUJALA** model of watershed development, **all previous check-dam projects sanctioned/kept in abeyance were withdrawn and this was conveyed to the Finance Department/ Watershed Development Department of the Government of Karnataka. It was decided that the funds allocated for check-dams (₹ 180 crore) would be utilized for the development of Participatory**

Watershed Projects based on SUJALA watershed model where in the check-dam is one of the components of watershed development.

The progress in the construction of check-dams in Kerala is not clear. As per the report from AERC, Chennai (Raj kumar *et al*, 2010), the estimated target under this component is to construct 500 check-dams per year district over three years. 24 projects have been sanctioned and ₹ 2.44 crore disbursed under RIDF as per the report of NABARD. The Kasaragod District Panchayat has submitted 51 project proposals for check-dams involving an amount of ₹ 5868.01 lakh whereas, the Palakkad District Panchayat has submitted 17 project proposals for construction of check-dams with an estimated cost of ₹ 863.90 lakh. In addition to this, the Soil Conservation unit of the State has submitted 22 project proposals on check-dams in the three districts, viz., Wayanad, Palakkad and Kasaragod, involving an expenditure of ₹ 1,471 lakh. ***Accordingly, the Government has accorded 'in principle' sanction for the implementation of 90 project proposals for check-dams under the Special Rehabilitation Package for the farmers of distress affected districts, viz, Wayanad, Palakkad and Kasaragod, involving an amount of ₹ 8,200.2 lakh.*** Further, the soil Conservation Unit has submitted 17 project reports containing the above 22 project proposals on check-dams involving an amount of ₹1471 lakh. These reports were forwarded to the Finance Department on 28.02.09 for submitting the same to NABARD for consideration. The detailed project reports called for from Kasaragod District Panchayat and Palakkad District Panchayat are still awaited.

Maharashtra had set a target of constructing 9,000 check-dams in the six districts over a period of three years. The estimated cost per year for this programme is ₹ 60 crore (i.e., a total of ₹ 180 crore in three years). During the last three years, Maharashtra received a total amount of ₹ 180 crore towards construction of check-dams. ***Against the target of 9,000 check-dams in three years, 7,970 check-dams were constructed by 2008-09, with an expenditure of ₹ 162.53 crore. It can thus be observed that 88 per cent of the target was achieved.***

2.7.3 Rainwater Harvesting structures

The Rainwater Harvesting scheme aims at accelerated growth of irrigation potential for ensuring agricultural development of the SC/ST beneficiaries, including small and marginal farmers. Allocation under the package was ₹48 crore for Andhra Pradesh and the entire amount is a grant component. APSCCFC will implement plans worth ₹22.61 crore and the balance of ₹ 25.39 crore will be shared by the Rural Development Department. *The Rural Development Department of the Government of Andhra Pradesh (for small and marginal farmers) and APSTCFC (for tribal farmers) and the Project Director, DWMA, are requested to prepare the action plans. No amount has been spent so far on the Rainwater harvesting scheme in Andhra Pradesh (Status as on 28th February 2009).*

In Karnataka, it was decided that an allocation of ₹ 18 crore made for construction of rainwater harvesting structures and ₹ 180 crore granted for construction of check-dams would be used for participatory watershed development programme along with the ₹ 162 crore earmarked for the participatory watershed development programme.

The State Government of Kerala received ₹ 9 crore allocation from the Central Government for the implementation of the Rain Water Harvesting scheme in the three identified districts in the state. The target is 1,000 structures per year per district for SC / ST, small and marginal farmers. **Funds are yet to be released by the Government of India. However, the state government is implementing another rainwater harvesting scheme called 'Jalanidhi' and requested NABARD for release of ₹ 9 crore as per the cabinet decision taken by the Ministry of Agriculture, Government of India.** The Regional Office, NABARD, has taken up the matter with Kerala Rural Water Supply and Sanitation Agency and Agricultural Production Commissioner, informing them that the RWHS could be covered as a component under NABARD-assisted watershed development programme for the three distressed districts of Kerala (Raj Kumar *et al*, 2010).

The Government of Maharashtra implemented the Rainwater harvesting scheme aiming at accelerated growth of irrigation potential for ensuring agricultural development of the SC/ST beneficiaries, including small and marginal farmers. The scheme provided for 50 per cent back-ended capital subsidy along with 50 per-cent bank loan, covering 1,000 beneficiaries a year in each of the identified districts.

Chapter III

Agro-Economic Profile of the Selected Districts

Introduction

As mentioned earlier, the rehabilitation package aims at maintaining sustainable and viable farming and livelihood support system through debt relief to farmers, complete institutional credit coverage, crop-centric approach to agriculture, assured irrigation facilities, effective watershed management, better extension and farming support services and subsidiary income opportunities through horticulture, livestock, dairying fisheries and other subsidiary activities. Therefore, in order to study the progress of the package/scheme and achievement of intended benefits, one needs to understand first the agro-economic profile of the selected districts/regions. In this context, we provide a brief discussion of the agro-economic profile of the selected sample districts as well as the sample farmers (being assisted under the PM rehabilitation package) from the four states.

3.1 Andhra Pradesh

Out of the 16 identified suicide-prone districts, three districts namely Guntur, Anantapur and Warangal are selected from three distinct regions - Guntur from South Coastal, Anantapur from Rayalaseema and Warangal from North Telangana where the highest number of suicides are identified.

3.1.1 Main Features of the Selected Districts

The total geographical area of **Anantapur district** is 19.13 lakh hectares. The geographical position of the peninsula renders Anantapur district, the driest part of the state and hence, agriculture conditions are often precarious. As per the 2001 Census, rural population constitutes 75 per cent of 36.40 lakh population of the district. The working force in the total population of the district forms 48.83 per cent as per 2001 Census. About 54 per cent of the rural population is in work force. The cultivators and agricultural workers together account for 64 per cent of the total rural work force. A

little more than 5 per cent of the male and about the same proportion of female rural workers are engaged in non-farm Rural Employment activities.

Monsoons also evade this part due to its unfortunate location. The normal rainfall of the district is 553 mm by which is the least rainfall when compared with other parts of Rayalaseema and even other parts of Andhra Pradesh. The normal rainfall during the South-West Monsoon period is 338 mm which forms about 61.2% of the total rainfall for the year. The average rainfall during 2000-01 to 2004-05 is 513 mm with a CV of 28 per cent. The failure of the rains in the South-West Monsoon period of June to September will lead the district to drought as crops fail.

The marginal holdings in Anantapur district account for just 34.45 per cent of the total holdings in the district and share 10.01 per cent of total area as against the 62 of the holdings sharing 22 per cent of the area at the state level. The medium and above (above 4ha) holdings account for 4.50 per cent of the total holdings in Andhra Pradesh with 26.70 per cent of total area, while the corresponding figures for Anantapur district are 9.25 per cent and 33.54 per cent respectively (Annexure Table-3.1).

The soils of Anantapur district are predominantly red. However, red and black soils occur almost in equal proportion in some of the areas of the district. The total cultivated area of the district is 11.69 lakh hectares, out of which 10.27 lakh hectares are under kharif and 1.42 lakh hectares are under Rabi. The area sown more than once accounts for 6 per cent of the net sown area in the district. The district occupies the lowest position in respect of irrigation facilities with only 13.13% of the Gross Cropped Area. Cropping intensity is 103 per cent. Rice is the staple food crop of the state and reported 29.80 per cent of gross cropped area. However, rice shared only 4 per cent of the gross cropped area (GCA) during 2005-06. Pulses accounted for 7.5 per cent while the oilseeds occupied 81 per cent of the gross cropped area in Anantapur district. Groundnut is the most important crop of Anantapur district and shared 77 per cent of the GCA. The fertilizer (N, P, K) consumption is 72 kg per ha and much below the state average of 194 kg per ha reported during 2006-07. The productivity of most of the crops in Anantapur was less than the state average (even for groundnut) except maize and

ragi crops. These reported slightly higher levels of yield per ha. In 2005-06, the per capita income for Anantapur district at current prices is ₹ 20,343 (₹ 16,768) and is almost 30 per cent lower than the state average of ₹ 26,226 at current prices.

The total geographical area of **Guntur district** is 11,39,100 hectares. The population of the district is 44,65,144 with a density of 394 per sq. km. The normal rainfall of the district is 851.00 mm. The average precipitation during 2000-01 to 2004-05 is 815 mm with a CV of 21 per cent. The important rivers and rivulets in the district are the Krishna, the Naguleru, the Chandravanka and the Gundlakamma. The river Krishna travels about 250 km through the district along the northern boundary of the district. The two major irrigation projects in the district are (1) Old Krishna Ayacut, now renamed as Prakasam Barrage with an ayacut of 2,02,032 hectares, and (2) Nagarjuna Sagar project with an ayacut of 2,54,583 hectares. Both the projects are constructed on the river Krishna. A medium irrigation channel by name Guntur Branch Canal (GBC) having an ayacut of 10,823 hectares, and the Minor Irrigation sources like tanks, filter points, tube-wells etc., are providing irrigation. The soils in general are very fertile and they are broadly classified as Black Cotton, Red loamy and Sandy loamy.

The marginal holdings account for 70 per cent and small holdings for 19 per cent of the total 7.02 lakh holdings in the district and the two groups shared 33 and 28 per cent of the area respectively (Annexure Table 3.15). The number of holdings of 4 ha and above accounts for 2.50 per cent of the holdings and shares about 15.25 per cent of the area. The average size of the land holdings in Guntur district is 0.97 ha as against the state average of 1.20 ha. The rural populations constitute about 71 per cent of the total population of the district. The literacy is 55.00 per cent. The total number of workers accounts for 54 per cent of the rural population in the district. Of the total rural workers, 21 per cent are cultivators and about 46 per cent are agricultural labourers.

The district is endowed predominantly with Black cotton soils that cover about 70 per cent of the area, followed by Red loamy with 24 per cent, and Sandy loamy in about 6 per cent of the area in the district. As per the 2005-06 statistics, the net sown area is 6.15 lakh accounting for 54 per cent of the total geographical area of 6.15 lakh ha. The

net irrigated area covers 58 per cent of the net sown area of the district, whereas the gross irrigated area accounts for 50 per cent of the gross cropped area. About 33 per cent of the net sown area is sown more than once; The cropping intensity is 128 per cent. The major crops grown in the district are: Paddy, Maize, Jowar and Bajra among cereals; Blackgram and Redgram among Pulses; Cotton, Chillies, turmeric and tobacco among non-food and commercial crops. Rice is a major crop grown on 3.20 lakh ha of the total 8.13 lakh ha of GCA, constituting about 39.4 per cent of the GCA of the district, and the entire crop is grown under irrigated condition. Cotton is the most important cash crop of the district and shares about 19 per cent of the GCA in the district. Among the pulses, black gram and pigeon pea are the important and cover 12.5 per cent and 4.4 per cent of the GCA respectively. Fertilizer (N, P, K) consumption is 292 kg per ha which is almost 50 per cent higher than the state average. Per hectare yield of paddy crop in Guntur is comparable with the state average whereas the yield levels of sorghum were almost four times (4452 kg/ha) higher than the state average of 1,107 kg/h during 2004-05 to 2006-07. Productivity of maize and cotton in Guntur district is significantly higher than the state average yields.

Warangal district is spread across 12,846 sq. kms. With a total population of 32.46 lakhs (2001 Census) Warangal district occupies 13th place in Andhra Pradesh. There are 262 persons per sq. km. in the district as against 277 in the state. The total rural population of the district is 26.23 lakhs accounting for 78 per cent of total population of the district. The literacy in the district is 49.26 per cent as against the state average of 61.58 per cent. Only 19.15 per cent of the female population of the district is literate as against the 26.10 per cent of the state. The working class population in the district is 15.66 lakhs, which is 55.53% of the total population. The workers in agricultural sector are 9.14 lakhs, forming 28.12% of the total population. The remaining 4.34 lakhs are the workers engaged in non-agricultural sectors, comprising 27.7 per cent of the total population of the district. The non-workers' population is 25.52 lakhs constituting 78.62 per cent of the total population in the district.

The district has sandy loam soils with perches of shallow black cotton soils and at places even medium and deep black cotton soils. The district generally tends to be dry and there is no much fluctuation in the temperature. The normal annual rainfall of the district is 994.001 mm. The average rainfall during 200-01 to 2004-05 is recorded as 845 mm with a CV of 21 per cent. The important irrigation sources in the district are Ramappa, Ghanpur (M), Parkal and Lakhnnavaran and Salivagu projects under which considerable area is irrigated. The other sources of irrigation in the district are rainfed tanks, wells and hill-streams which require good showers in the season.

The proportion of marginal land holdings is 63 per cent and shares 22 per cent of the area, whereas small farms account for 21 per cent of 5.61 lakh holdings and share about 24 per cent of the 6.98 lakh ha area of the district (Annexure Table 3.1). About 16 per cent of the holdings are above 2 ha and constitute 54 per cent of the area. The land holding distribution and area shared by each land holding category in Warangal district is comparable with the average land holding distribution at the state level. The average size of holdings in Warangal district is 1.24 ha as against the state average of 1.20 ha.

The net sown area in Warangal district is 4.89 lakh ha which accounts for 38 per cent of the total geographical area. Almost two-thirds of the net sown area of the district is under irrigation. About a quarter of the net sown area is double-cropped during 2005-06 and thus the gross cropped area is reported as 6.13 lakh ha as against a net sown area of 4.89 lakh ha. Wells are the major source of irrigation and cover 75 per cent of total (3.91 lakh ha) irrigated area. The remaining 25 per cent of the irrigation is through surface irrigation. Rice and maize are the important cereals grown in Warangal district and shared 33 and 13 per cent respectively of the gross cropped area of the district during 2005-06. About 94 per cent of the rice and 35 per cent of the maize area is under irrigation. Among pulses, greengram and redgram are the major pulses and each covers roughly 4 per cent of the GCA of the district. Cotton is grown on one-fourth of the GCA and groundnut shares about 7 per cent of the GCA. As per the records, 63 per cent of the area under cotton and about 72 per cent area under groundnut receive irrigation. The average consumption of N, P, K is 216.4 kg per ha, which is slightly

higher than the state average of 194 kg. The average productivity of groundnut, maize and tobacco is modestly higher than the state averages of the respective crops.

3.1.2. Basic Features of Sample Farmers

In this section, the basic features of the sample farmers are analyzed with the help of Primary level data. The specific features going to be discussed are: Demographic details including the family size, educational status, land holding details (before and after 2006) and transactions, sources of irrigation, cropping pattern, livestock owned and milk production, major implements and machinery owned by sample farmers and household income.

The average size of the family of the selected households varied from 4.6 persons per household in Warangal district to 5.17 persons per household in Anantapur district. The proportion of educated Adults (with > 7 standard education) was around 60 per cent in all the districts (Table 3.1)

Table 3.1: Socio-Economic Characteristics of Sample Households – AP

Districts	Average family Size			% of Adults with > 7 standard Education	Land holding (ha)		
	Adults	Children (< 15 yrs)	Total		Rainfed	Irrigated	Total
Anantapur	4.31	0.86	5.17	57	1.86	3.48	5.34
Guntur	4.11	0.71	4.83	60	0.78	1.68	2.46
Warangal	3.68	0.93	4.60	61	0.74	2.66	3.40
All	4.02	0.84	4.85	59	1.11	2.61	3.72

Our sample from 3 district consist of 10 per cent, 20 per cent, 47 per cent, 16 per cent and 6 per cent of the marginal, small, semi-medium, medium and large farm households, respectively. There are little variation in the number of samples from different landholding classes (Annexure Table 3.2). The average size of holding of sample varies from 3.02 ha in Guntur District to 5.52 ha in Ananthapur district.

The average size of landholding is 3.72 hectares. Out of total land owned by the sample households, about 70 per cent was irrigated and the remaining (about 30 per cent) land was rainfed (Table 3.1). The highest irrigated land was in Warangal district (78 per cent) and the lowest was in Anantapur district (65 per cent).

3.1.3 Crops Grown

Food crops shared about 75 per cent of the total cropped area, while non-food crops are grown on 22 per cent and Plantation crops on 3 per cent of the gross cropped area on sample farms (Table 3.2). Food crops shared almost 99 to 100 per cent of the cropped area on sample farms from Guntur and Warangal districts, whereas it occupied 55 per cent of the cropped area in Anantapur district.

Table 3.2: Average area under Crop Groups of Sample Households

Area in ha

Districts	Food Crops	Non Food Crops	Plantation Crops	Total
Anantapur	3.11 (55.10)	2.22 (39.47)	0.31 (5.44)	5.64 (100.0)
Guntur	2.42 (99.05)	0.01 (0.47)	0.01 (0.47)	2.44 (100.0)
Warangal	2.03 (100)	-- --	-- --	2.03 (100.0)
All	2.52 (74.78)	0.74 (22.06)	0.11 (3.26)	3.37 (100.0)

Note: Figures in parentheses are percentage to total.

Source: Field Survey data.

Among the food and non-food crops, paddy is the main crop in Guntur and Warangal districts while groundnut is the main crop in Anantapur district. Area under plantation crops is negligible in Guntur and Warangal districts when compared to 5.4 per cent of the gross cropped area in Anantapur district.

3.1.4 Livestock owned and Milk Production

The livestock development is an important aspect of the rural economy. It provides supplementary income for the farmers. It also helps to raise the general health level of the people and generate self-employment. The details of livestock owned by the sample households from Andhra Pradesh are presented in Table 3.3. It can be seen from the table that around 80 per cent or more of the sample farmers from Anantapur and Warangal districts owned livestock as against about half of the sample farmers from Guntur. Farmers from Anantapur and Warangal owned around 3 milch animals per household as against two in Guntur district. In addition to milch animals, farmers from Anantapur and Warangal maintained one bullock pair for agricultural operations. The value of live-stock ranged between ₹ 38,658 per household in Guntur to ₹ 67,671 per household in Anantapur district. It was observed that only the number of cows has increased after the implementation of the package, whereas the numbers of buffaloes, bullocks, sheep and goats have significantly decreased. The overall analysis indicates that there is no significant impact of the PM's Package on the livestock development.

Table 3.3: Average Number of Livestock Owned per household

Districts	% of HH having livestock	Av numbers				Av. Value of live stock/hh in Rs
		Cows	Buffaloes	Bullocks	Sheep/goats	
Anantapur	80.00	1.89	1.40	1.03	0.49	67,671
Guntur	51.43	1.03	0.91	0.00	0.00	38,658
Warangal	85.71	0.90	2..15	1.00	1.25	67,275
All	69.09	1.25	1.52	0.69	0.61	58,297

It was observed that about 60 per cent of the households from Anantapur, 31 per cent from Guntur and 54 per cent of the households from Warangal sell milk. The income from sale of milk ranged from ₹ 3,367 per annum per household in Anantapur district to ₹ 12,744 per annum in Guntur district. It was a modest ₹ 7,605 in Warangal district.

3.2 Karnataka State

The Prime minister's rehabilitation package for farmers in suicide-prone districts is being implemented in six districts of Karnataka. Out of these, 3 districts, namely,

Belgaum, Chitradurga and Hassan, were selected for evaluation of implementation of various components of the PM's package. A brief profile of these districts as well as the sample households is presented below.

3.2.1 Main Features of the Selected Districts

Belgaum district is the fifth largest in Karnataka, with 13,415 Sq Km area and is blessed with some prominent rivers, namely, Krishna, Malaprabha and Ghataprabha, while sub-rivers Markandeya, Hiranyakeshi, Mahadayi, Vedaganga and Doodhaganga also flow through the district. Naviluteertha Dam is constructed across the Malaprabha and Hidkal dam across the Ghataprabha. Eight of the total ten taluks are irrigated mainly from these two major projects. An area of about 1.13 lakh ha. is not available for cultivation, while 1.90 lakh ha. is under forest covers. The net sown area is 8.33 lakh ha accounting for 62 per cent of the total geographical area. The area sown more than once is 2.18 lakh ha during 2007-2008. The net irrigated area accounts for 53 per cent of the net sown area, which is more than state average of 30 per cent. Multi-seasonal cultivation undertaken on nearly 2.62 lakh ha. land results in a gross cropped area of 10.60 lakh ha.

The district receives an annual average rainfall of 808 mm; however, in the years 2001, 2002 and 2003 with a rainfall of 593.7 mm, 631.2 mm and 448.6 mm, severe drought occurred, causing a drastic reduction in agriculture production. On the other hand, a good rainfall in the years 2004, 2005 and 2006 (respectively 730.1 mm, 1033.4 mm and 893.9 mm) helped increase the production. The soils in the district are predominantly medium black to deep black, although sandy soils, red soils, sandy loams and shallow red soils also occur in parts of the district. The soil nutrient status of the district depicts a poor range for nitrogen, while phosphorus is medium in content and potassium is well supplied. Jowar, maize, paddy, wheat, bajra, Bengal gram and green gram are grown as main food crops, and sugarcane, cotton and tobacco are grown as the major commercial crops. Horticultural crops are cultivated over 53,704 hectares, of which spices and plantation crops are cultivated over 4,714 ha and 9,031 ha respectively. Fruits, vegetable crops and flowers are grown over 9,833 ha, 29,643 ha

and 483 ha respectively, and the district has a very good scope for promotion of most horticultural crops.

The district has a population density of 314 per Sq km with a total population of 42.14 lakh (2001 census) and a fairly better literacy rate of 64.42 %. The working population is 18.77 lakh accounting for 45 per cent of the total population in the district. The cultivators account for 38 per cent of the total workers. There are 5.33 lakh holdings with a total land of 10.08 lakh hectares. The Marginal and small farmers account for 69.73 per cent of the holdings sharing 31.79 per cent of the area. Large farms accounts for 1.32 per cent of the total holdings in the district and shared around 11 per cent of the area (Annexure Table 3.3). The per capita income of the district is ₹ 22,972 at current prices during 2006-2007, which is less than the state average of ₹31,713. This low per capita income and consecutive failure of rainfall in the years 2001, 2002 and 2003 may be the reasons for more farmers' suicides in the district. This can be gauged from the suicide trends in the district for the last seven years. As many as 182 farmers from Belgaum district committed suicides in 7 years from 2003-2004 to 2009-2010. About 47 per cent of the suicide farmers' families were provided compensation and the rest of the claims were rejected.

There are 362 scheduled Commercial Bank branches and 108 Grameena Bank branches (Regional Rural Banks) in the district in 2009. Total advances of these institutions amounted to ₹ 5,552 crore. Besides these, there are 1,121 cooperatives, PLD banks and other institutions extending credit to the farmers.

Chitradurga District comprises six taluks and 946 villages with a geographical area of 8,388.78 Sq. km accounting for 4.40 per cent of the state area. The district is drained by the Vedavathi river, a tributary of the Tungabhadra. There are two reservoirs, namely, Vanivilas Sagar and Rangayanadurga project, which offer irrigation facilities in Hiriyur and Molakalmur taluks. Apart from major and medium irrigation projects, there are about 315 large MI tanks. The net sown area is roughly 4.01 lakh ha accounting for 52 per cent of the geographical area of the state. A little more than 17 per cent of the net sown area was sown more than once resulting in 4.69 lakh ha of

gross cropped area. The proportion of the irrigated land is 18.1 per cent as against an average of 21.5 per cent in Karnataka. The district has diversified soil types. Red soil covers 36.2 per cent, clay soil 31.1 per cent, sandy loam 22.6 per cent, block soil 7.5 per cent and sandy soil covers 2.6 per cent of the total area. The district has 7,450 ha. of saline, 13,460 ha of sodic and 3,280 ha of water-logged soils.

The major crops cultivated in the district are Maize, Ragi, Jowar, Bajra, Minor Millets, Redgram, Cowpea, Greengram, Groundnut, Sunflower, Castor and Cotton. About 50 per cent of kharif area is covered by oilseeds crops, like groundnut and sunflower, and hence, this district is known to be a oilseeds district. In recent years, a large dry land area is being replaced by perennial tree horticulture crops like pomegranate, mango, sapota, mosambi, arecanut and coconut which ensure better economic returns. Oil seeds account for a major share in kharif (53 per cent) and summer (55 per cent) crops. The share of oil seeds is about 37 per cent of the total area under rabi crops, enabling cereals and pulses together to record a higher share.

The population of the district as per 2001 census is 15.18 lakh with a working population of 7.22 lakh accounting for 47.56 per cent. Of the working population, the cultivators constitute about 38.41 per cent, which is more than the state average of 29 per cent. There are 123 Commercial Bank branches and 66 Grameena Bank branches in the district, besides 287 cooperatives. The total advances of Commercial Banks and RRBs was ₹1,232 crore in 2009.

The total number of land holdings in the district is 2.82 lakh, operating in 5.79 lakh hectares. The marginal and small farmers constitute about 66.95 per of the total holdings and account for 31.10 per cent of total area. These are on the lower side of the state average of 74.78 per cent and 36.56 per cent respectively (Annexure Table 3.3). The average size of land holdings in Chitradurga district is higher at 2.05 hectares per holding, as compared with the state average of 1.63 hectares. The per capita income of the district stands at ₹ 20,699 in 2006-2007. This is lower than the state average. In Chitradurga district, 167 farmers committed suicide from 2003-2004 to 2009-2010.

However, only 70 claims were considered for payment of compensation and the rest were rejected by the state authorities.

Hassan District comprises 8 taluks, 38 hoblies and 2,369 villages. The geographic area of the district is 6,845 Sq. km and shares 3.58 per cent of the total area of the State. The population is 15.67 lakhs. Three important rivers, namely, Cauvery, Hemavathi and Yagachi, are flowing in this district. The Hemavathy reservoir at Gorur is the main dam. Yagachi and Vatehole are the other two small reservoirs in the district. Agriculture is the main activity of the people in the district. Cultivable area (4.42 lakh ha) accounts for two-thirds of the geographical area of the district. The net sown area is 3,93,481 ha or 59 per cent of the geographical area. About 17 per cent of the net sown area is planted more than once resulting in 4.60 lakh ha of gross cropped area. The total area under irrigation from all sources is 92,976 ha. This works out to 23.6 per cent of the total cultivable area. The major sources of irrigation are borewells (40 per cent), canals (34 per cent) and tanks (24 per cent)

There are 4.71 lakh farmers' holdings covering a total area of 4.66 lakh ha in Hassan district. The number of small and marginal holdings is on the increase year after year. A large proportion of farmers (79 per cent) are marginal and small farmers and shares 59 per cent of the total area; semi-medium and medium farmers account for 10.43 per cent of the holdings, about 35 per cent of the area. Large holdings accounts for 0.29 per cent of the total farmers but share 6.12 per cent of the total area. The average size of the holdings is 0.99 ha in Hassan district (Annexure Table 3.3).

In the taluks of Arsikere and Channarayapatna, the soils are red loamy in major areas and black soils in localized pockets of the remaining areas. The prominent crops that are grown in these taluks are Ragi, Groundnut, Niger, Sunflower, Pulses, Jowar, Sugarcane and coconut. In Belur, Alur, Hassan, Arakalgud and Holenarasipura, the soils are red sandy loam in major parts and red loam in the remaining areas and the principal crops grown here are Rice, Ragi, Maize, Pulses, and sesamum, and tobacco in some parts. In the Hilly zone i.e., in Sakaleshpura taluk, the soils are clay loam in major areas, while in some pockets lateritic soils can also be seen. The principal crops in this hilly zone are rice, plantation crops such as coffee, tea, cardamom and pepper; a major

portion is covered by forest. The proportion of area of the horticultural crops in the total cultivated area is 38.49 per cent, which is twice the state average and higher than the other two sample districts. Fertilizer use in the district is 156 kg / ha as against the state average of 79 kg / ha. Fertilizer consumption of the district is more than the state average mainly because more area is under plantation and commercial crops like Potato, tobacco and vegetables are grown.

There are 178 Commercial Bank branches and 44 Grameena Bank branches in the district. They advanced about ₹1,991 crore in March 2009. Besides these, several cooperatives are operating in the district. The per capita income of the district was ₹ 21,952 in 2005-2006, which is significantly, lower than the state average of ₹ 31,713. In Hassan district, 252 farmers committed suicide from 2002-004 to 2009-2010 and of these only 73 families received compensation. The maximum number of suicide cases (69) occurred during 2003-04. This is perhaps because 2003 recorded the lowest rainfall in the last 10 years in most of the taluks.

3.2.2. Basic Features of Sample Farmers from Karnataka

The average size of family among the selected households varied from 4.91 persons per household in Hassan district to 6.40 persons per household in Belgaum district (Table 3.4). The literacy rate is higher in Belgaum district and the lowest in Hassan district. Less than half of the adult members of the households in Hassan have studied up to the 7th standard or above, whereas three-fourths of the adult family members from Belgaum district have formal education up to the 7th standard or more.

Table 3.4: Socio-Economic Characteristics of Sample Households – Karnataka

Districts	Average family Size			% of Adults with > 7 standard Education	Land holding (ha)		
	Adults	Children (< 15 yrs)	Total		Rainfed	Irrigated	Total
Belgaum	4.60	1.80	6.40	75	1.00	2.00	3.00
Chitradurga	4.03	1.17	5.20	60	1.69	1.04	2.73
Hassan	4.00	0.91	4.91	43	1.02	1.51	2.53
All	4.21	1.30	5.50	60	1.23	1.52	2.75

Samples are selected randomly for each of the 8 major programmes under PM package. The beneficiaries, since the beneficiaries are not stratified as per the landholdings, the sample deviate modestly from the actual number of holdings in different land holding class. The total samples collected for the study (120 households) consists of 45 per cent marginal and small farmers, 35 per cent semi-medium farms, 18 per cent medium and remaining 2 per cent large farmers (Annexure Table 3.4).

It can be seen from Table 3.4 that the average size of land holdings ranged from 2.53 ha per household in Hassan district to 2.87 ha in Belgaum district. The irrigated area shared 38 per cent, 60 per cent and 67 per cent of the total owned land in Chitradurga, Hassan and Belgaum districts respectively. The overall size of the landholdings is 2.69 hectares per household consisting of 45 per cent rain-fed and 55 per cent irrigated land.

3.2.3 Crops Grown

Food crops shared about half of the total cropped area, while non-food crops are grown on 39 per cent and Plantation crops on 12 per cent of the gross cropped area on sample farms (Table 3.5). Food crops shared almost 68 per cent of the cropped area on sample farms from Chitradurga, whereas it occupied little less than one-third of the cropped area in Belgaum district. Hassan district had about 55 per cent of the gross cropped area under food crops.

Table 3.5: Average area under Crop Groups of Sample Households

Area in ha

Districts	Food Crops	Non-Food Crops	Plantation Crops	Total
Belgaum	1.24 (32.33)	2.05 (53.68)	0.53 (13.99)	3.82 (100.0)
Chitradurga	1.64 (67.76)	0.62 (25.58)	0.16 (6.66)	2.42 (100.0)
Hassan	1.25 (54.92)	0.71 (31.11)	0.32 (13.97)	2.27 (100.0)
All	1.38 (49.17)	1.10 (39.13)	0.33 (11.70)	2.81 (100.0)

Note: Figures in parentheses are percentage to total.

Source: Field Survey data.

More than 50 per cent of the cropped area on sample farms in Belgaum is devoted to non-food crops. Plantations shared about 14 per cent of the cropped area in Belgaum and Hassan districts whereas it was around 7 per cent in Chitradurga district. Among the food crops, maize and ragi are the important staple crops in Chitradurga, while rice, ragi and maize are grown in sizeable areas in Hassan. Jowar, maize, and wheat cover considerable area under food crops in Belgaum district. Sugarcane, soybeans and groundnut are the major commercial crops along with banana and other horticultural fruit under the plantation category in Belgaum district. In Chitradurga district, groundnut and cotton are the important cash crops whereas, banana, betelnut, sapota, etc., are the important plantation crops. Potatoes and other vegetable crops are largely grown in Hassan district. Coconut, betelnut and sugarcane are the important plantation crops apart from coffee.

3.2.4 Livestock owned and Milk Production

The livestock development is an important aspect of the rural economy. It provides supplementary income to the farmers. It also helps to raise the general health level of the people and generate self-employment. The details on livestock owned by the sample households from Karnataka are presented in Table 3.6. It can be seen from the table that more than 85 per cent of the sample farmers from Karnataka rear / maintain livestock. A majority of the farmers maintain jersey or HF cross-bred cows for milk

production. Cows are more popular in Hassan district and roughly two cows are owned by each household. On the contrary, buffaloes are more popular in Belgaum and on an average, 10 farmers own 17 buffaloes.

Table 3.6: Average Number of Livestock Owned per household

Districts	% of HH having livestock	Av numbers				Av. Value of livestock/hh
		Cows	Buffaloes	Bullocks	Sheep/goats	
Belgaum	86	1.11	1.71	0.40	1.63	50794
Chitradurga	93	1.10	1.33	0.68	0.93	44273
Hassan	86	1.91	0.77	0.69	0.46	45593
All	88	1.36	1.27	0.59	1.00	46768

The use of bullock as drought power in agriculture seems to be declining and on an average less than one bullock pair is maintained by the sample farmers from Karnataka. Rearing of sheep and goats is prevalent more in Belgaum district than in Chitradurga and Hassan districts. On an average, we find about 2 small ruminants per household in Belgaum and one per household in Chitradurga district. The value of livestock ranged between ₹ 44,273 per household in Chitradurga district to ₹ 50,794 per household in Belgaum district. Almost all the households having milch animals are engaged in sale of milk. The income from sale of milk (₹ 5,017) per annum per household is too low in Chitradurga district when compared with Hassan (₹ 16,497) and Belgaum districts (₹ 13,768).

3.3 Kerala State

Kerala ranks 12th in population, 21st in area and 8th in population density. Kerala, to her pride, ranks first in literacy among the Indian States. Three districts, namely, Kasargod, Palakkad and Wayanad, in the state are identified for the implementation of the PM's rehabilitation package for farmers in the suicide-prone districts.

3.3.1 Main Features of the Selected Districts

Kasaragod district is marked off from the adjoining areas outside the State by the Western Ghats which run parallel to the sea and constitute an almost continuous mountain wall on the eastern side. The Ghats dominate the topography. The coastline is fringed with low cliffs alternating with stretches of sand. A few miles to the interior, the scene changes and the sand level rises towards the barrier of the Ghats and transforms into low red laterite hills interspersed with paddy fields and coconut gardens. Based on physical features, the District falls into three natural divisions. The lowland, bordering the sea; the midland consisting of the undulating country; and the forest-clad high-land on the extreme east. There are mainly four types of soils - sandy, sand loam, laterite and hill or forest soil. The sandy and sandy loam soils exist as a continuous narrow belt all along the Western coast, about 20 Km in width.

Kasaragod district covers an area of 1,992 sq. km and with a population of 12,04,078 has a population density of 604 per sq km. The climate of the district is classified as warm, humid and tropical. The average maximum temperature is 31.2°C and the minimum is 23.6°C. The mean annual rainfall of the district is 3,581 mm, which is the highest in the state. (The state average is 3,063). The south-west monsoon starts towards the end of May or the beginning of June heralded by thunder-storms and hold till September when the monsoon fades out. October-November brings the north-east monsoon. June, July and August experience two-thirds of the total rainfall.

Total population of the district is 26.17 lakh consisting of 12.65 lakh males and 13.51 lakh females. The average literacy is 84 per cent and is slightly higher among males (89.7 per cent) than among females (79.3 per cent). About 30 per cent of the population is in the work force. There are 97,289 cultivators accounting for 12.4 per cent of the total workers in the district. The agricultural labourers account for 44 per cent of the total work force in the district.

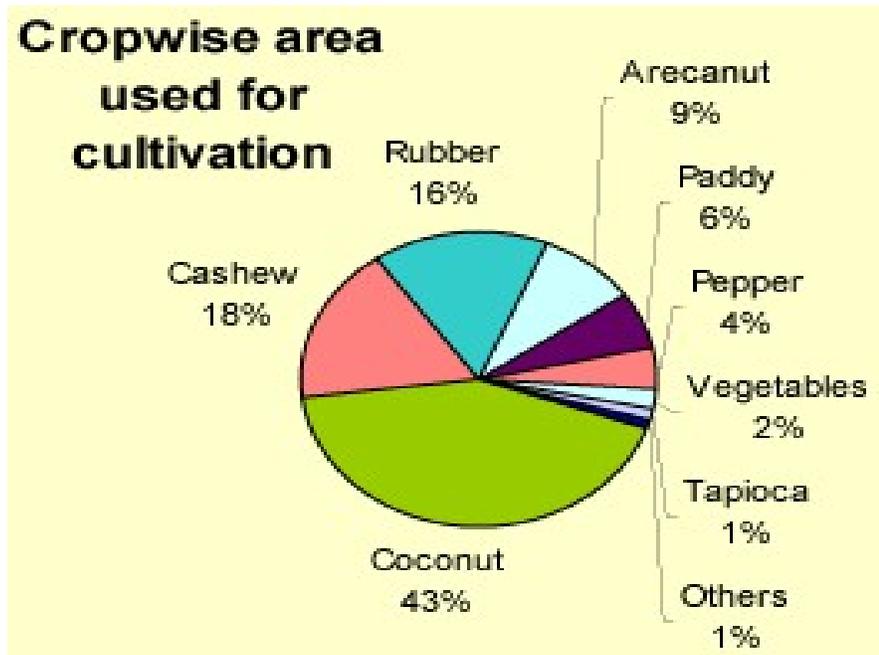
As per 2005-06 agriculture censuses, there are 2.23 lakh holdings in Kasargod district covering a total area of 86,383 ha. The marginal holdings constitute 90 per cent of the total holdings and share 48 per cent of the area (Annexure Table 3.5). Small farms account for 7 per cent of the holdings and share about a quarter of the area in the district. Land holdings with more than 10 ha of area constitute less than one per

cent of the holdings in the state, but cover nearly 4 per cent of the area. The average size of land holdings is 0.39 ha per farm household.

The area under forest is only 3 per cent of the geographical area, whereas the land put to non-agricultural use accounts for 10 per cent of the geographical area of the district. The net sown area constitutes 70 per cent of the total geographical area of the district. The area sown more than once is a little more than 6 per cent of the net cropped area. There are 12 rivers in the district providing ample irrigation facilities. Agriculture forms the mainstay of the population of the district. The soil in the three natural divisions generally fall under three types. In the highland region it is laterite. In the midland, the soil is a red ferruginous loam of laterite origin with an admixture of clay and sand. The coastal strip is sandy. The diversity of crops and the heterogeneity in cultivation are the key notes of agriculture here. The eastern tract comprises forests and hilly areas. The forests comprise a variety of timber with teak and other plantations.

The hilly areas are mostly cleared and put to private cultivation; the important crops being rubber, cashew and ginger. In the skeletal plateau areas, cashew trees are cultivated, while in some patches, arecanut, pepper and cocoa are grown. In the coastal tract, paddy, coconut, arecanut, cashew, tobacco, vegetable and tapioca are cultivated. Tanks and wells are the important sources of irrigation and their corresponding share in total irrigation is 19 per cent and 35 per cent of the irrigated area. Other sources of irrigation account for 42 per cent of the total irrigated area in the district. The cropping pattern of the district is shown in Fig 3.1 below.

Fig. 3.1



Source: www.kasargod.nic.in

Palakkad district has an area of 4,480 sq km of which forest covers 1,363 Sq. km. The population of the district is 26,17,482 with a density of 584 per sq km. The district of Palakkad, known as the granary of Kerala, is a land of valleys, hillocks, rivers, forests, mountains, streams, dams and irrigation projects. Situated at the foot of the Western Ghats, this is the gateway to Kerala from the north. Palakkad derives its name from the Malayalam words *Pala* (*Alstria scholaris*) and *Kadu* (forest), which go to prove that the place was once a beautiful stretch of forests covered with the sweet-scented flowers of the *pala* tree.

The district has a humid climate with a very hot season extending from March to June in the western part of the district whereas it is less humid in the eastern sector. The most important rainy season is during the south-west monsoon which sets in the first week of June and extends up to September. About 75% of the annual rain is received during the south-west monsoon period. Practically no rain is received during the period December to May. The temperature of the district ranges from 20 degree

Celsius to 45 degree Celsius. The maximum temperature recorded at Palakkad was 43 degree Celsius. Palakkad District is blessed with irrigation facilities. Irrigation dams were constructed across almost all the important tributaries of the Bharathapuzha. Six major dams have been completed: Pothundy, Mangalam, Walayar, Chitturpuzha, Malampuzha and Gayathripuzha Projects (Meenkara and Chulliar). In addition, the Kanjirapuzha and Attappady Valley irrigation projects are under construction.

As per 2005-06 agriculture census, Palakkad district has 5.28 lakh holdings covering 1.63 lakh ha of area. Small farmers' accounts for 92 per cent of the total holdings in the district and shares 43:24 per cent of the area. On the contrary, holdings with more than 4 ha area accounts for 0.67 per cent of the holdings and shares nearly 16 per cent of the area (Annexure 3.5).

The average land holding per household in the district has shown a decreasing trend over the years. It was 0.46 hectares per household in 1985-86, came down to 0.40 hectares in 1995-96 and in 2005-06 it was 0.31 hectares. There are three types of soils (1) literate soil seen in Ottappalam, Alathur, Chittur and Palakkad taluks, (2) Virgin forest soil in Mannarkkad Taluk, and (3) Black soil in Chittur and Attappady Valley which is used for the cultivation of Cotton. The area under cultivation in the district during the year 1998-99 was 49% of the total area, while the state figure is 58%. The area cropped more than once accounted for 42 per cent of the net cropped area in the district.

The population of Palakkad district is 26.17 lakh, consisting of 12.65 lakh males and 13.51 lakh females. On an average, 84.32 per cent of the district population is literate. The literacy level among the male population is higher (89.73 per cent) that among the female population (79.31 per cent). There are 7.86 lakh main workers accounting for 30 per cent of the total population. About 80 per cent of the rural population of this district are agriculturists or agricultural laborers.

Agriculture is the main occupation of the people of the district. The main crops cultivated are paddy, coconut, rubber, pulses, areca nut, tapioca, ginger, groundnut, sugarcane, cotton etc. Coconut and paddy occupy the predominant place among the

major crops. Palakkad district is called the "Granary of Kerala". The net cultivated area of the district is 2,18,336 hectares, ie., 49 per cent of the total geographical area. A major portion of the cultivable area is used for raising food crops. The total area under paddy is 1,07,467 hectares (total of three seasons). Palakkad is the only district in the state where Cotton and Groundnut are cultivated. Area under Cotton cultivation is 10,999 ha and Groundnut is sown on 7,019 hectares. Coconut and other oil seeds occupy a prominent position among the crops covering 53,302 hectares and it is one of the major sources of income to the cultivators. Paddy, Cereals and Millets are cultivated on 1,12,922 hectares and constitute the major agricultural activity of the district. The area under rice in the district accounts for 28 per cent of the total area in the state.

The climate in the district is suitable for cultivation of horticultural crops such as Mango, Jackfruit, Papaya etc. and the area under cultivation of fresh fruits is 24,440 hectares. Plantation crops such as Rubber, Tea, Coffee etc. are planted in a big way in midland and highland regions. The area under plantation crops is 98,370 hectares in which rubber occupies more than 70 per cent. More and more area is being brought under plantation crops.

Wayanad district has a total geographical area of 2,131 Sq. km. Wayanad has a salubrious climate with a mean average rainfall of 2,322 mm. Lakkidi, Vythiri and Meppadi are the high rainfall areas in Wayanad. Annual rain fall in these high rainfall areas ranges from 3,000 to 4,000 mm. High velocity winds are common during the south-west monsoon and dry winds blow in March-April. High altitude regions experience severe cold. In Wayanad (Ambalavayal) the mean maximum and minimum temperatures for the last five years were 29 degree Celsius and 18 degree Celsius respectively. This place experiences a high relative humidity which goes even up to 95 per cent during the south-west monsoon period. Generally, the year is classified into four seasons, namely, cold weather (December-February), hot weather (March-May), south-west monsoon (June-September) and north-east monsoon (October-November). The dale, 'Lakkidi', nestled among the hills of Vythiri taluk has the highest average rainfall in Kerala. The average rainfall in Wayanad is 300 mm per year. There is a decreasing trend

in rainfall in this area. The average rainfall data shows that the lowest rainfall received from the north-east monsoon is in Wayanad district.

The population of Wayanad district is 7,80,619 consisting of 3,91,273 males and 3,89,346 females respectively. The female-male sex ratio is 995 women per 1,000 males. The density of population was 315 per sq km in the 1991 census and reached 369 per sq km in the 2001 census. Strictly speaking, there is no urban population in Wayanad. However, life in Sulthan Bathery, Mananthavady and Kalpetta is gaining urban status. The literacy rate is around 74 per cent. Wayanad is basically agrarian, with plantation economy playing a major role. Of the total 2,131 sq km of geographical area, 78,787 ha is forest, forming 37% of the total area. About 1.14 lakh ha of the total area is used for agriculture which forms 54% of the total land area of the district.

Census of India 2001 reveals that 47.3 per cent of the total work force of the district pursues agriculture while the 30.5 per cent of the total labour force of the district is agricultural labourers. The district is characterized by 23 perennial plantation crops and spices with coffee forming the main agriculture crop. Coffee is cultivated in 66,973 hectares, sharing 33.65% of the total cropped area in the district and covering 80% of the total coffee plantations in Kerala. Other major crops are Pepper (40,839 ha), Coconut (10,947 ha), Rubber (6,451 ha), Arecanut (7,201 ha), Cardamom (4,107 ha), and Ginger (3,450 ha). Pepper is grown along with coffee in the north-eastern parts of the district, especially in Pulpally and Mullankolly. Paddy, once the major crop of the district, is now cultivated in only 12,988 ha and that too for a single harvest. Most of the paddy fields of the district are being converted for banana cultivation. Ginger cultivation in Wayanad has also substantially increased in recent years and paddy fields are increasingly being converted for ginger/vegetable cultivation. Many traditional rice varieties have also disappeared.

According to 2001 census, about 47.3 per cent of the working population in Wayanad is involved in agriculture or related activities. The area under major crops during 2003-04 is: Rice 12,988 ha, Pepper 40,839 ha, Ginger 3,450 ha, Cardamom 4,107 ha, Cashew nut 1,455 ha, Tapioca 1,915 ha, Coconut 10,947 ha, Arecanut 7,201 ha, Tea 6,049 ha, Coffee 66,973 ha, and Rubber 6,451 ha (www.wayanad.nic.in)*.

0. There are 1.56 lakh holdings sharing 86,570 ha among them. Marginal holdings accounts for 87 per cent of the total holdings sharing roughly one third of the area (Annexure 3.5) Large farms constitute just 0.18 per cent of the holdings but shares around 22 per cent of the area in Wayanad district. The average size of land holdings is 0.55 ha. A variety of crops including annuals and perennials are grown in these small holdings. The crops include coconut, arecanut, pepper, vegetables, tuber crops, drumstick, papaya, etc. and fruit trees like mango and jack.

3.3.2. Basic Features of Sample Farmers from Kerala

The average size of family of the selected households ranged from 4.18 members per family in Kasargod to 4.70 members per family in Wayanad district. Most of the households have 3 adult members in the family. In case of education (adults more than 7th standard education), it is observed that more than 70 per cent of the adults were educated. It can be seen from Table 3.7 that among the districts, the proportion of educated adults is the highest (about 86 per cent) in Palakkad and the lowest in Wayanad (73 per cent).

Table 3.7: Socio-Economic Characteristics of Sample Households

Districts	Average family Size			% of Adults with > 7th standard Education	Land holding (ha)		
	Adults	Children (< 15 yrs)	Total		Rainfed	Irrigated	Total
Kasargod	2.95	1.23	4.18	73.73	0.77	0.15	0.92
Palakkad	3.08	1.33	4.40	86.18	1.26	0.39	1.65
Wayanad	3.25	1.45	4.70	73.08	1.66	0.27	1.94
All	3.09	1.33	4.43	77.63	1.25	0.27	1.52

Source: Compiled from the Evaluation of P M rehabilitation package for farmers from suicide- prone districts in Kerala (Raj Kumar et al, 2010).

As stated earlier, we collected data from 40 beneficiary households each from 3 districts of Kerala. Thus, we have 120 sample farms. The total sample consists of 35 per cent marginal, 24 per cent small, 28 per cent semi-medium and 13 per cent medium farm households, respectively. There is no representation of farmers having 10 or > 10 ha of

owned land (Annexure Table 3.6). The semi-medium and medium farmers have greater representation in the sample than their share in the total holdings in the sample districts.

The average size of landholdings for all the three districts taken together is 2.84 ha per household. Out of total land owned by the sample households, about 18 per cent land was irrigated and the remaining 82 per cent land was rain fed (Table 3.7). The highest irrigated land was in Pallakad district (24 per cent) and the lowest was in Wayanad district (14 per cent).

3.3.3 Crops Grown

Foodgrain and non-foodgrain crops share about half of the cropped area on sample farms and the rest is covered by plantation crops. Foodgrain crops account for 21 per cent, whereas non-food grain crops share 28 per cent of the gross cropped area on sample farms (Table 3.8). The area under foodgrain crops ranged from less than 2 per cent of the cropped area in Kasargod to 55 per cent of the total area in Palakkad. Rice is the major food crop in the districts.

Table 3.8: Average area under Crop Groups of Sample Households

Area in ha				
Districts	Food Crops	Non-Food Crops	Plantation Crops	Total
Kasargod	0.01 (1.83)	0.00 (0.00)	0.68 (98.17)	0.68 (100.00)
Palakkad	0.78 (55.19)	0.08 (5.75)	0.55 (39.06)	1.41 (100.00)
Wayanad	0.20 (7.41)	1.26 (46.82)	1.24 (45.77)	2.70 (100.00)
All	0.33 (20.65)	0.45 (28.07)	0.82 (51.28)	1.60 (100.00)

Note: Figures in parentheses are percentage to total.

Source: Compiled from the Evaluation of PM rehabilitation package for farmers from suicide prone district in Kerala (Raj Kumar et al, 2010).

Non-food crops are important in Wayanad district and share little less than half of the cropped area on sample farms. Kerala is known for spices, medicinal and aromatic

plants and other plantation crops. The area under plantation crops varied from 39 per cent in Palakkad to 98 per cent of the cropped area in Kasargod district.

3.3.4 Livestock owned and Milk Production

Table 3.9 shows the ownership of livestock by the farmers of Kerala. The farmers appear to have owned several livestock animals such as cows, buffaloes, bullocks, goats and sheep. Most of them are reared for subsidiary income. As the animals stood them in good stead, the farmers invest money on them. It can be seen from the table that less than 50 per cent of the sample farmers from Kerala rear / maintain livestock. Cows are more popular than buffaloes among the sample farmers in Kerala. On an average, 7 cows are found per ten households. Two of the 40 farmers in Wayanad owned one buffalo each, whereas a lone farmer (out of 40) from Kasargod owned 3 buffaloes. The use of bullocks as drought power in agriculture seems to be declining and only one of the 40 farmers from Wayanad owned a bullock pair.

Table 3.9: Average Number of Livestock Owned per household

Districts	% of HH having livestock	Av numbers				Av. Value of live stock/hh
		Cows	Buffaloes	Bullocks	Sheep/ goats	
Kasargod	45	0.70	0.07	0.0	0.47	12897
Palakkad	38	0.75	0.00	0.00	0.00	14149
Wayanad	55	0.65	0.05	0.05	0.50	20572
All	46	0.70	0.04	0.02	0.33	15873

Source: Compiled from the Evaluation of PM rehabilitation package for farmers from suicide prone district in Kerala (Raj Kumar et al, 2010).

The value of livestock ranged between ₹ 12,897 per household in Kasargod district to ₹ 20,572 per household in Wayanad district. The farmers of the three districts produce milk on a competitive basis. It has been observed that the number of farmers involved in milk production remained the same even after the implementation of the PM's relief package in all the three districts. Overall, the Wayanad farmers earned ₹ 17,360 from sale of milk, as against ₹ 15,800 by the Palakkad farmers and ₹ 13,100 by the Kasargod farmers.

Maharashtra State

The three districts selected for the detailed analysis are Yavatmal, Amravati and Buldhana from the Vidarbha region of Maharashtra. Yavatmal district falls under the Moderate Rainfall Zone (900-1,250 mm), while Amravati and Buldhana fall under the Assured Rainfall Zone (700-900 mm). All the three districts are from the Amravati administrative division.

3.4.1 Main Features of the Selected Districts

Amravati district: Amravati city is its headquarter and it is known for its cotton market. Amravati faces extreme variations in temperature with very hot summers and very cold winters. The climate of this district is semi-arid. Its soil type is medium to deep black clay loam to clayey soils with neutral to slightly alkaline reaction. Cotton, jowar, orange and chilly are the major crops suitable for this kind of soil and climate. Amravati district receives rainfall from the south-west monsoon mainly in the months of June, July, August and September. The district receives an average rainfall of above 700 mm in a year with substantial variations in the level of rainfall across months/years as well as between the talukas. The average rainfall from 2000-01 to 2004-05 is 725 mm with a CV of 16 per cent. The wide variation in the normal rainfall across talukas within the district not only discourages the farmers to adopt the required quantity of various yield-increasing inputs but ultimately results in lower productivity most of the time.

The district has a population of 26.01 lakh, of which 66 per cent lives in the rural areas of the district. The percentage of total rural workers to total rural population is 38 per cent in Amravati district. This is possibly because of the urbanized nature of the district and its educational base as compared to the other two districts. The proportion of cultivators to total rural workers is 26.5 per cent. The lowest percentage of cultivators in Amravati was due to high percentage (59 per cent) of agricultural labours in this district. The share of agricultural labourers in the total rural work force is higher than the state average (33 per cent). Cultivators and rural labourers account for 85 per cent of the total rural workers.

As per the Agriculture Census 2005-06, there are 3.83 lakh holdings operating in 7.12 lakh ha of area in Amravati district (Annexure Table 3.7). The number of marginal holdings (below 1.0 ha) accounted for about 30 per cent of the total holdings and shared about 11 per cent area in Amravati district, whereas the same group accounted for 45 per cent of the total holdings and shared 14 per cent of the area in state. The small farms constituted 40 per cent of the holdings and accounted for 30 per cent of the area in the district. The medium and large holdings above (4 ha) holdings account for 9.5 per cent of the total holdings sharing, roughly 31 per cent of the total area. The average size of operational holdings is 1.86 ha which is higher than that at the state level (1.46 ha).

About a quarter of the total geographical area is under forest. The net sown area is 7.52 lakh ha and accounts for 62 per cent of the geographical area. Less than 10 per cent of the net sown area is under irrigation. However, the cropping intensity is 148 per cent, indicating about 48 per cent of the net sown area is sown more than once. Wells are the major source of irrigation and account for two-thirds of the irrigated area in the district. The area under cereals accounts for 12 per cent of the GCA in Amravati and sorghum, a major staple crop of the district, is grown on 8 per cent of the GCA. Though coarse cereals and pulses are relatively less remunerative crops, due to low irrigation availability, farmers prefer to allocate more area for pulse crops. Pulses share about 22 per cent of the GCA. Chick pea, pigeonpea and greengram are the important pulses grown in the district, each sharing 6 to 8 per cent of the total gross cropped area. Soybean and cotton are important cash crops district and each covers about 21 per cent of the cropped area in the district. The area under fruits and vegetables accounts for 6 per cent of the GCA. A little more than 3 per cent of the area under foodgrain crops (wheat, maize and chickpea) receives irrigation. It has to be noted here that the agriculture year 2008-09 was a bad year and production and productivity of all the crops declined drastically due to bad monsoon.

Buldhana District is spread over 9,671 sq km with headquarters at Buldhana which is connected to all the thirteen talukas by the state highway. The district gets rain from south-west monsoon, mostly from June to September. The general climate of the

district is characterized by hot and dry summers and cold winters with the seasonal variation in the temperature being pretty large. The total population of the district is 22.32 lakh of which 17.59 lakh, constituting 79 per cent of the total population, stays in rural areas. About 45.5 per cent of the rural population is in the work force. Among the rural workers, 40.6 per cent are the cultivators and 48.51 per cent of the rural workers are agricultural labourers. About 11 per cent of the male and 17 per cent of the female rural workers participate in non-farm rural employment activities.

The average annual rainfall in the district hovers around 800 mm. However, the actual average rainfall between 2000-01 and 2004-05 was 688 mm per annum with a CV of 35 per cent. The coefficient of variation (CV) in rainfall in the district during these five-year period is much higher than the five-year average rainfall from 1960-61 to 1990-2000. There are 4.16 lakh holdings operating in 7.08 lakh ha of area. Small and marginal holdings account for 71 per cent of the holdings and share 42.55 per cent of the area. On the contrary, farmers with land holdings of 4 ha and above account for 6.61 per cent of the farmers and operate in 23.42 per cent of the area (Annexure Table 3.7). The average size of the land holdings is 1.70 ha in Buldhana district which is slightly higher than the state average of 1.46 ha/per holding.

The district has less than 10 per cent of the geographical area under forest. About 6.69 lakh ha, accounting for 69 per cent of the 9.67 lakh ha of geographical area, is under cultivation. The major soil type is regur or black cotton soil. The district has poor irrigation infrastructure and its net irrigated area is 411 (2002-03) accounting for 6 per cent of the net sown area. Despite lack of irrigation, a little more than a quarter of the net sown area is planted more than once. Major crops grown in the district are sorghum, maize, wheat, pigeon pea, chickpea and green gram and urid under food grains, and cotton and soya beans as cash crops. Foodgrains constitute 23 per cent of the gross cropped area and sorghum shares almost half of the foodgrains area in Buldhana district. Pigeon pea is grown on 11 per cent of the cropped area whereas chick pea, greengram and urid share 7 per cent each in the GCA. Cotton is grown on 27 per cent and soybean covers 21 per cent of the cropped area in Buldhana district. Most of the irrigated area is devoted to wheat, fruits and vegetable crops. The farmers use on

an average 96.5 kg of fertilisers (N, P, K) per hectare. The yield levels of major crops were lower during 2008-09 than those during 2007-08.

The total geographical area of **Yavatmal district** is 13,519 sq km. The climate of the district is in general hot and dry with moderately cold winters. The year may be divided into four seasons. The hot season begins in March and extends up to the first week of June. This is followed by the south-west monsoon season which lasts up till the end of September. October and November constitute the post- monsoon season and is followed by the cold season which lasts up till February. Most of the total annual rainfall is received during the south-west monsoon season. The average rainfall of Yavatmal District is 964.7 mm. The average rainfall during 2000-01 and 2004-05 is 769 mm and the coefficient of variation for the year-to-year rainfall is 23 per cent. The rainfall is not uniform in all parts of the district.

The total population of Yavatmal district stood at 24.58 lakh as per the 2001 census, ranking it 16th among the 35 districts of Maharashtra. The rural population constitutes more than 80 per cent population of the district. The percentage of cultivators to total rural workers is 34 per cent in Yavatmal district as against the state average of 46 per cent. Cultivators and agricultural labourers constitute 85 per cent of the rural work force. About 15 per cent of the rural workers are engaged in non-farm rural employment.

There are 3.56 lakh holdings operating 8.49 lakh ha area in Yavatmal district (Annexure Table 3.7). The land holding pattern of the district is somewhat different from that of the state. As per the Agriculture Census 2005-06, the marginal holdings (below 1.0 ha) accounted for about 44.61 per cent of the total holdings in Maharashtra, and accounted for only 14.00 per cent of the total area. However, the number of marginal holdings in Yavatmal district is the lowest (8.63 per cent), which accounted for only 2.35 per cent of total area in the district. The small holdings accounted for 44.6 per cent of the total holdings and shared 26 per cent of the area in the district. The proportion of semi-medium holdings in the district is 32 per cent of the holdings and is higher than the state average (18 per cent). The medium and large (above 4 ha) number of holdings

account for 7.25 per cent of the total holdings in Maharashtra with 29 per cent of the total area, while the corresponding figures for Yavatmal district are 14.56 per cent and 36.40 per cent, respectively. The average size of land holdings in Yavatmal is 2.37 ha.

During 2007-08, the net area sown in Yavatmal district is 8.47 lakh hectares which accounts for 63 per cent of the total geographical area of 13.52 lakh ha. As per the records, the area irrigated through surface irrigation is 181 ha and well irrigation covered 337 ha during 2002-03. The net irrigated area constitutes about 6 per cent of the net sown area in the district. The cropping intensity is 115 per cent. Sorghum is the major staple crop of the district and is grown on nearly 10 per cent of the gross cropped area of Yavatmal district. Pulses occupy 22 per cent of the GCA. Pigeonpea and chickpea are major pulses of the district grown on 12 per cent and 7 per cent of the GCA, respectively. Soybean shared 25.5 per cent of the GCA whereas cotton accounted for 39.4 per cent of the GCA during 2007-08. Thus, almost two-thirds of the GCA is shared by two major cash crops, cotton and soybean. Wheat, chickpea, sugarcane, fruits and vegetables are the beneficiary of irrigation. The consumption of fertilisers is 85 kg per ha and is relatively lower than the state average of 103 kg per ha. Productivity or yield levels of most of the crops are lower during 2008-09 than those in 2007-08.

3.4.2. Basic Features of Sample Farmers from Maharashtra

The average size of family of the entire selected households was 5.30, and it was the largest in Buldhana (5.50) and the lowest in Yavatmal (5.08). In case of education (adults more than 7th standard education), it is observed that about 26 per cent of adults were educated. It can be seen from Table 3.1 that among the districts, Amravati recorded the highest adult education level (about 29 per cent) and the lowest was in Buldhana (23.7 per cent).

Table 3.10: Socio-Economic Characteristics of Sample Households

Districts	Average family Size			% of Adults with > 7 standard Education	Land holding (ha)		
	Adults	Children (< 15 yrs)	Total		Rainfed	Irrigated	Total
Yavatmal	3.65	1.43	5.08	26.0	1.22	1.28	2.50

Amravati	3.58	1.75	5.33	28.7	0.81	2.08	2.89
Buldhana	4.23	1.28	5.50	23.7	1.56	2.17	3.73
Total	3.82	1.48	5.30	26.0	1.20	1.84	3.04

Our sample of 120 beneficiary sample households consists of 30 per cent of marginal and small farmers, 46.7 per cent of the medium and 23.3 per cent of the large farm (> 4 ha) households. There are variations in the proportion of samples drawn from different districts. For example small farmers showed one third of the total samples selected the Yavantmal district as against 20 to 27 per cent from other two districts. On the contrary, there is proportionately large (40 per cent) representation of large farms in Buldhana district when compared to other two selected districts (Annexure Table 3.8).

The average landholding size was 3.04 hectare. Out of the total land owned by the sample households, about 59 per cent land was irrigated and the remaining about 41 per cent land was rainfed (Table 3.10). The highest irrigated land was in Amravati district (72 per cent) and the lowest was in Yavatmal district (51 per cent).

3.4.3 Crops Grown

The average area under crops grown as per crop groups by the sample households is presented in Table 3.11. It can be seen from the table that food crops are grown on about 30 per cent of total gross cropped area, while non-food crops are grown on around 44 per cent and plantation crops on about 26 per cent area.

Table 3.11: Average area under Crop Groups of Sample Households

Districts	Crops grown (Av. area in ha.)			
	Food Crops	Non-Food Crops	Plantation Crops	Total
Yavatmal	0.87 (32.99)	1.34 (50.68)	0.43 (16.33)	0.00 (100.0)
Amravati	0.87 (24.36)	1.34 (35.31)	0.43 (40.33)	0.00 (100.0)
Buldhana	1.17 (32.14)	1.70 (46.60)	0.78 (21.26)	0.00 (100.0)
Total	0.92 (29.93)	1.36 (44.21)	0.79 (25.86)	0.00 (100.0)

Note: Figures in parentheses are percentage to total.

Source: Field survey data.

The food crops grown in these districts include jowar, wheat, tur, gram, mung and udid. Non-food crops include oilseeds (such as soybean, safflower, Sesamum), cotton and othe. Citrus, lemon, papaya are among the horticulture/plantation crops. As seen earlier, the oilseeds and pulses dominate the cropping pattern in the selected districts, and the same trend is observed at the sample household level.

3.2.5 Livestock Owned and Milk Production

The details of livestock owned by the sample households are presented in Table 3.12. It can be seen from the table that around 85 per cent or more of the sample farmers owned either milch animals or draft animals (bullocks) or both as well as small ruminants like goats and sheep. On an average, there are 17 cows, 14 buffaloes, 19 bullocks and 27 goats and sheep per 10 farmers in the selected districts. The value of livestock ranged between ₹ 42,713 per household in Amravati to ₹ 61,969 per household in Yavatmal district.

Table 3.12: Livestock Owned and Milk Production

Districts	% of HH having livestock	Av numbers				Av. Value of live stock/hh
		Cows	Buffaloes	Bullocks	Sheep/goats	
Yavatmal	87.5	1.9	1.6	2.0	3.8	61969
Amravati	85.0	1.6	1.1	1.7	2.8	42713

Buldhana	87.5	1.7	1.4	2.0	1.4	44433
Total	86.7	1.7	1.4	1.9	2.7	49705

It was observed that the number of livestock has increased after the implementation of the PM's package. In fact, the total number of households having livestock population has increased by 5 per cent, from 82 per cent before 2006 to 87 per cent after 2006. The number of buffaloes and goats increased by about 24 per cent, and cows by more than 14 per cent. The number of goats owned per household increased by more than 58 per cent.

As seen earlier from the secondary data, the daily collection of milk increased significantly in all the three selected districts during the period 2006-07 to 2008-09. A similar picture was observed at the household level. As we have seen earlier, there was a significant increase in buffalo population after 2006, and therefore income from the sale of buffalo milk also increased by more than 50 per cent over the base period. The income from the sale of cow milk has also increased by about 11 per cent in the corresponding period. Thus, there was an increase in livestock population (by 1.7 per cent) as well as in the average income from the sale of milk in the selected households.

Chapter IV

Implementation of the PM's Relief Package: Evidence from Field Survey

Introduction

It was earlier noted that the rehabilitation package was sanctioned for 31 identified districts in the states of Andhra Pradesh, Karnataka, Kerala and Maharashtra. Among the 31 districts, 16 are from Andhra Pradesh, 6 each from Maharashtra and Karnataka, and the remaining 3 from Kerala. The total allocation under the PM's rehabilitation package was ₹ 16,978.69 crore, comprising ₹10,579.43 crore as subsidies or grants and the remaining ₹ 6,399.26 crore as loan by the Government of India to the concerned state governments. It was observed in the earlier chapters that the secondary data indicate that almost all the schemes under the PM's package were implemented in the identified districts with varying levels of achievements.

As mentioned earlier, the rehabilitation package aims at maintaining sustainable and viable farming and livelihood support systems through debt relief to farmers, complete institutional credit coverage, crop-centric approach to agriculture, assured irrigation facilities, effective watershed management, better extension and farming support services, and subsidiary income opportunities through horticulture, livestock, dairying, fisheries and other subsidiary activities. The basic objective of this study is to conduct a field survey, observe the ground reality, check whether the benefit of the package is reaching the intended beneficiaries and assess the impact of the package on the beneficiaries. This is especially important because the package has a number of relief measures to augment the incomes of the farmers.

The PM's rehabilitation package, as noted earlier, had eight major schemes, which were implemented by the agriculture, horticulture, animal husbandry, irrigation, and fisheries departments. Further, ex-gratia payment from the PM National Relief Fund was paid to the distressed families by the District Collectors. As discussed in the methodology, 3 districts each were selected from Andhra Pradesh, Karnataka, Maharashtra and Kerala for detailed data collection. At the first stage of sampling, 3

districts were selected having the highest number of recorded suicides. After selecting the district, a taluka having recorded the highest number of suicides was selected at the second stage. From each of the eight schemes, five beneficiaries were selected from each taluka. Thus, in total there were 40 beneficiary samples per taluka. It was observed that sometimes a single household benefited from more than one programme in the PM's package. However, such households have been treated for only one scheme, even though information is collected for all the schemes it has availed under the package. Thus, in all 120 households were selected. The required data were collected using pre-tested questionnaire by the personal interview method.

4.1 Awareness about the PM Rehabilitation Package

There needs to be awareness among the target group to make a welfare scheme successful. The officials of the Panchayat Raj Institutions play a key role in disseminating the news about the government's welfare programmes. Before analyzing the results, let us have an idea about the sources of information about the PM's relief package for the sample households. In Andhra Pradesh, about 90 per cent of the selected sample respondents reported that they came to know about the benefits under the Prime Minister's relief package through government officials and through "Adarsh Rythu" (ideal farmer) appointed by the agricultural department (Table 4.1). About 1 per cent came to know of the programmes from newspapers while the rest became aware through other sources like fellow farmers and relatives.

It was found that people in the selected districts in Karnataka were more familiar with the term "VIDARBHA PACKAGE" rather than the PM's Rehabilitation Package. More than 80 per cent of the respondents reported that they were aware of the PM's rehabilitation package locally known as the Vidarbha package. It can be seen from Table 4.1 that the majority (40 per cent) of the households came to know about the PM's package through the officials of the government departments and through village panchayats. Raitha Sampark Kendras, friends and newspapers were the other sources of information on the PM's rehabilitation package for Karnataka farmers.

In the case of Maharashtra, about 99 per cent of the total selected farmers received the information about the PM's relief package and various schemes under it

through the Gram Panchayats of the respective villages and just 1 per cent (only one household) received information from newspaper.

Table 4.1: Distribution of Households by Source of Information

HH in percentage

Source	Andhra Pradesh	Karnataka	Kerala	Maharashtra
Village Panchayat / Govt. Department	90	40	Data not available	99
Newspaper	1	14	- do -	1
Raita Sampark Kendra	0	20	- do -	-
Friends	0	18	- do -	-
Input Dealers	0	05	- do -	-
Others	9	03	- do -	-
Total	100	100	Data not available	100

Thus, it is clear that the government made arrangements for dissemination of information about the PM's package to the farmers and the Gram Panchayats had duly informed the farmers about the relief measures.

4.2. Ex-gratia Payment

As stated earlier, a sum of ₹ 50 lakh from the Prime Minister's National Relief Fund was provided for the respective district collectors to facilitate paying of ex-gratia assistance. Each family of the debt-stressed farmers was assisted with a maximum sum of ₹ 10,000 for meeting health care and educational needs of the children. The cases were considered and approved by the district collectors after taking into account the recommendations made by the Panchayats. The programme was implemented in all the 31 districts identified for implementation of the Prime Minister's Rehabilitation Package.

Andhra Pradesh received ₹ 8 crore as grants for disbursement as ex-gratia payment to distressed families to meet their contingent expenditure needs for health, education, etc. The government of Andhra Pradesh, under the Chief Minister's relief package, deposited ₹ 1 lakh in the bank account to meet agricultural expenditure and another ₹ 50,000 for debt relief to the affected families wherein a family member had committed suicide. In addition to these, ₹10,000 was paid as ex-gratia payment to the families of suicide victims in the sample from the Prime Minister's Relief Fund. Most of the beneficiaries have used it for education purposes.

A total of 4,570 farm families from six districts in Karnataka received an ex-gratia payment amounting to ₹ 1.777 crore as of March, 2009. The total disbursement of ex-gratia payment ranged from ₹ 9.01 lakh in Hassan district to ₹ 50 lakh in Belgaum and Chitradurga from 2006 through 2009 (Table 4.2). **The Average amount of ex-gratia payment disbursed ranged from ₹ 2,420 in Chitradurga district to roughly ₹ 10, 000 per beneficiary in Hassan district.** In case of Kerala, ₹ 1.445 crore was disbursed to 4,913 farm families as ex-gratia payment to meet the contingent needs of education or health expenditure. The average amount of ex-gratia payment varied from ₹ 2,844 in Kasargod to ₹ 3,003 per beneficiary in Wayanad.

Table 4.2: Total number of beneficiaries of Ex-gratia Payment and average amount received in the selected districts (from 2006 to March, 2009)

State	District	No of beneficiaries	Total amount disbursed (₹ in lakhs)	Average amount (₹/beneficiary)
Andhra Pradesh	Anantapur	N A*	N. A.*	10,000
	Guntur	N A	N A	10, 000
	Warangal	N A	N A	10,000
	ALL	N A	N A	10,000
Karnataka	Belgaum	841	50.00	5,954
	Chitradurga	2,066	50.00	2,420
	Hassan	91	9.01	9,901
	ALL	2,998	109.01	3,636
Kerala	Kasargod	1,710	48.64	2,844
	Palakkad	1,538	45.89	2,984
	Wayanad	1,665	50.00	3,003
	ALL	4,913	144.53	2,942
Maharashtra	Amravati	708	50.00	7,062
	Buldhana	589	50.00	8,489
	Yavatmal	767	50.00	6,519
	ALL	2,064	150.00	7,267

Note: * Data not available

About 15 per cent of the sample households from the selected districts in Karnataka received an ex-gratia payment. Most of the beneficiaries used the ex-gratia payment for the education of their wards. In Karnataka, about two-thirds of the beneficiary households sought help from others or middlemen to get ex-gratia assistance, collusion between local leaders and government officials were observed during our survey of the study districts.

In Maharashtra, the entire amount of ₹ 3 crore provided for 6 District Collectors was disbursed to 3,974 distressed families till the end of March 2008 itself. There are 2,064 beneficiaries of ex-gratia payment in the 3 sample districts who received on an average ₹ 7,267 per head. The ex-gratia assistance ranged from ₹ 6,519 per beneficiary family in Yavatmal district to ₹ 8,489 in Buldhana district. In Maharashtra, about 61 per cent of the families used the ex-gratia assistance to meet health-related expenses and spent about 67 per cent of the amount. About 39 per cent of the beneficiaries reported that they used the grants to meet educational expenses of their wards. In order to get the benefits under the PM's relief package, some of the families took help from 'somebody' (they did not reveal the person's name/identity). Overall, 48 per cent farmers received such kind of help for including their cases under the PM's package. For the help received from someone, on an average ₹ 191 was paid by the sample households. In Amravati district, the highest amount (₹ 221) was paid to get the benefits under the PM's package as compared to the other two districts.

To sum up, the average amount of ex-gratia received by the beneficiaries varied not only across the states but also within the districts. The funds made available to the District Collectors of the identified districts for payment of ex-gratia are fully utilised in some of the districts whereas, in other districts, it is partially used. Collusion between local leaders and officials is also evident as some well-off farmers benefited from ex-gratia payment, whereas poor households were left out.

4.3 Credit Measures: Restructuring /Rescheduling of Overdue loans / Interest waiver and Fresh Loans

The credit-related measures included in the PM's relief package for suicide-prone districts were debt relief to the farmers by rescheduling / restructuring of loans, interest waiver and credit flow. The NABARD is the nodal agency for RRBs and Cooperatives and the local RRB is the nodal agency for commercial banks. The Government of India provided ₹ 1,194.52 crore as loan to the Government of Karnataka to facilitate rescheduling of loans of distressed farmers in the 6 suicide- prone districts of Karnataka.

However, an amount of ₹ 355.15 crore was rescheduled as of February 6, 2007. The progress in rescheduling of loans by cooperatives and commercial banks was slow as farmers were not eager to have their loans rescheduled in anticipation of loan waiver. The total loans rescheduled accounted for ₹ 1,868.06 crore covering 3,64,988 account holders by the end of March 2009.

The Government of Karnataka waived off interest on agricultural loans to the tune of ₹ 639.75 crore benefiting 4,29,776 account holders from 6 districts under the PM's package. The Government of India provided ₹ 209.81 crore as grants to the Government of Karnataka as its share for waiving off interest on agricultural loans. The target for agricultural credit flow during 2007-08 was fixed at ₹ 3,749.41 crore for 6 districts. However, ₹ 3,270.30 crore could be disbursed as on 31st March, 2008. The financial institutions lent ₹ 9,093.21 crore (against the target of ₹ 4,479.13 crore) as agricultural credit to 2,29,620 borrowers during 2008-09. **Most of the farmers, whose overdue loans were rescheduled, are not inclined to borrow fresh loans expecting waiver not only of the interest but also the principal amount they had borrowed in the past.**

A visit to a commercial bank (Canara Bank) branch in Hassan district revealed that the overdue interest due from about 1,300 farmers amounting to ₹ 1.29 crore was waived off and the principal of ₹ 12.5 crore was rescheduled to be paid in 3 to 5 yearly instalments. Fresh loans were given to about 40 per cent of the borrowers whose loans were rescheduled. The Manager of the bank reported that the recovery rate is around 40 to 45 per cent for fresh loans, but it is less than 20 per cent in the case of rescheduled loans. He also reported that nearly 75 per cent of the small farmers are repaying their loans promptly whereas the large farmers avoid repayment of loans. There is a feeling among the farmers that those who repay promptly are 'penalised' as

A farmer had borrowed ₹ 50,000 in 2004-05 but could not repay the loan amount as well as interest. He got benefit under P M package and interest to the tune of ₹15,000 was waived off and principal was rescheduled. He again borrowed a fresh loan of ₹ one lakh and used the money to perform his daughter's marriage. He has not bothered to repay the new or rescheduled loan so far.

they do not get any benefit of either interest waiver or complete debt waiver, whereas those who do not repay loans get the benefits of waiver programmes.

Another farmer had borrowed ₹ 30,000 as crop loan and ₹ 15,000 to purchase pipes for

irrigation. He has not repaid any money to the bank. The borrower was benefited from the interest waiver scheme, but does not know the exact amount.

During our field work, none of the farmers interviewed in our sample in Karnataka was aware about the outstanding debts. They were also not aware of either the overdue interest waived off or the principal amount rescheduled and annual instalment to be repaid.

In case of Maharashtra, about 67 per cent sample households borrowed loans from Cooperative Banks and the rest borrowed loans from Commercial banks. The main purpose of borrowing loans was to meet crop cultivation expenditure. The average amount borrowed ranged from ₹ 17,730 per borrower in Amravati district to ₹ 44,000 per borrower in Yavatmal district. The credit component related to the interest waiver scheme as well as rescheduling of the principal amount was implemented during 2006-07 and 2007-08. The average principal amount rescheduled varied from ₹ 13,500 per farmer in Buldhana district to ₹ 21,000 per borrower in Yavatmal district with an overall average of ₹ 16,733 per borrower in the three sample districts of Maharashtra (Kalamkar and Shroff, 2010).

The farmers who were interviewed in the 3 districts of Kerala reported that their entire outstanding loans were waived off. It is not clear whether this aspect has been included in the PM's package or has been provided in some other package of the Government of India or the Government of Kerala (Rajkumar, *et al*, 2010). About 35 per cent, 25 per cent and 15 per cent of the sample farmers from Wayanad, Palakkad and Kasargod districts, respectively, reported waiver of agricultural loans under the PM package. The loan amount waived ranged from a minimum of ₹ 5,000 to a maximum of ₹2,50,000. The average amount of loan waived was ₹ 23,833 per borrower in Kasaragod district as against ₹ 69,600 per borrower in Palakkad district. The overdue interest/penal interest waived varied between ₹ 2,000 and ₹ 45,000 for individual beneficiary. The average interest waived per borrower ranged from ₹ 3,667 per borrower in Kasaragod to ₹ 6,429 per borrower in Waynad district. About 70 per cent of the borrowers from the 3 districts of Kerala benefited from interest waiver in the range of ₹ 3,000 to ₹ 6,000.

The credit component related to the interest waiver scheme as well as rescheduling of the principal amount was implemented during the year 2006-07 as well as in 2007-08. Almost all the farmers who had overdue loans, benefited from interest waiver scheme and the overdue principal is rescheduled for repayment in instalments over a period of 3 to 5 years. It was observed that many beneficiaries are not aware about the quantum of interest waived or the yearly instalment he/she has to repay. Very few borrowers opted for fresh loans. One of the managers from a nationalized bank reported that repayment of the rescheduled loans is around 20 per cent as the borrowers expect complete waiver of loans.

4.4 Seed Replacement

The relief package consisted of the programme of distribution of certified seeds to the farmers for a period of three years on a 50 per cent subsidy basis. The certified and improved seed of paddy, ragi, maize, pigeonpea, greengram, blackgram, soybean, sunflower, sesamum and cotton were made available during the kharif season, while ragi, jowar, wheat, maize, chickpea, safflower and sunflower were made available during the rabi season to the farmers on a 50 per cent subsidy basis.

The seeds of 14 major crops were distributed to the farmers in the 16 identified districts of Andhra Pradesh during 2006-09 on subsidy basis. The quantity allocated for each crop was in accordance with the importance of the crop in the respective districts. Among the total seeds distributed in the 16 districts, groundnut, chickpea, maize and soybean together shared more than 95 per cent of the total quantity (28.66 lakh qtls) of seeds and 84 per cent of the total subsidy (₹ 47,017.90 lakh) under the PM's package.

Among the sample districts, Anantapur district shared 9.34 lakh quintals of the total subsidised seed distributed during 2006-07 through 2008-9 and accounted for ₹ 149.19 lakh worth subsidy. The total quantity of subsidised seed distributed in Guntur district was 31,242 quintals with a subsidy of ₹ 686.46 lakh. Similarly, 49,013 quintals of seed was distributed with a subsidy to the tune of ₹ 865.12 lakh. Under this scheme Paddy, Groundnut and Maize were distributed with 50 per cent subsidy in the selected districts. In Anantapur district, 120 kg of Groundnut seed was distributed to each farmer (Table 3.3). The farmers had to pay 50 per cent of the total cost of seed, i.e., ₹

1,600 as their share and the remaining ₹ 1,600 was subsidy. Similarly, ₹ 248 was paid by the farmers in Guntur district for 24 kg of paddy seed. Maize was distributed in Warangal district at the rate of 20 kg per farmer at a subsidised cost of ₹ 140. The certified seed covered on an average 0.84 hectares of land. All these beneficiaries reported that the yields were good and the supplied seed was adequate.

The Government of Karnataka had been implementing its own seed subsidy scheme at 75 per cent for small and marginal farmers in all the districts in the state with an area restricted up to 2 hectares. However, under a special package for the 6 districts, benefit of subsidy on certified or 'truthful' seed (due to non-availability of certified seed during the first year) was extended to all farmers limited to one hectare at 50 per cent subsidy. The small and marginal farmers were provided with seeds for 2 hectares at 50 per cent subsidy. All the three districts utilized the allocated budget for seed replacement. The total quantity of certified seeds distributed from September 2006 through March 2009 ranged from 30,827.21 quintals in Chitradurga to 86,914.73 quintals in Belgaum district (Table 4.3)

Table 4.3: Average Quantity of Seeds Supplied, Subsidy Component and Area Covered by Certified Seeds*.

State	District	Crops	Quantity (Kgs)	Subsidy (₹)	Area covered (ha)
Andhra Pradesh	Anantapur	Groundnut	120	1,600	0.90
	Guntur	Paddy, Maize	34	248	0.81
	Warangal	Maize	20	140	0.80
Karnataka	Belgaum	Soybean, maize, sunflower and pulses	36	504	1.13
	Chitradurga	Sunflower, Ragi, Cotton, maize and groundnut	30	383	2.05
	Hassan	Paddy, Ragi, Maize, sunflower & pulses	21	185	2.13
Maharashtra	Amravati	Soybean, wheat and chickpea	196	1,264	2.00
	Buldhana	Soybean, wheat and chickpea	146	1,786	1.60
	Yavatmal	Soybean, wheat	76	772	0.80

		and chickpea			
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Note: * Data for Andhra Pradesh, total quantity of seed in quintals and subsidy in lakh rupees for the district as a whole.

* Data for Kerala are not available

Certified seeds of major crops were supplied by the Department of Agriculture, Government of Karnataka, to various Raitha Sampark Kendras based on the demand in all the six districts. Most farmers purchased required seeds from the Kendras after paying up the necessary amount. The demand for certified seeds for different crops varied across 6 districts depending on the importance of crops in the districts. About 1,22,262 farmers from Belgaum, 51,589 from Chitradurga and 73,837 from Hassan district received subsidised seeds under the special package during 2008/09 alone. The total quantity of seeds distributed under the special package during 2008-09 was 48,518, 15,345.4 and 17,118.6 quintals in Belgaum, Chitradurga and Hassan districts, respectively.

It was observed that 69 per cent, 26 per cent and 31 per cent of the farmers from Belgaum, Chitadurga and Hassan, respectively, had purchased subsidised seeds supplied by the government. In Belgaum district, soybean and maize seeds were in demand whereas certified seeds of sunflower, ragi, cotton and groundnut were preferred in Chitradurga (Table 4.3). Similarly, farmers from Hassan district preferred certified paddy, ragi, maize and various pulse seeds. In Belgaum, farmers purchased, on an average, 36 kg of seeds covering a little over 1 hectare of area. In Chitradurga and Hassan districts, certified seeds could be planted on about 2 hectares of area. The subsidy amount per beneficiary farmer ranged from ₹ 185 in Hassan to ₹ 504 in Belgaum. Some of the farmers did not purchase the subsidised seeds as the hybrid seed from a specific seed company they preferred was not available. It was also observed that a few small and marginal farmers also had purchased subsidised and certified seeds from the Raitha Samparka Kendras and sold the same to others, probably to large farmers, at some premium.

On an average, 77 per cent of the farmers reported that the certified seeds supplied by the Department of Agriculture were adequate. However, different views

were expressed regarding the adequacy of subsidised certified seeds. Almost all the beneficiary farmers from Hassan opined that seeds were adequate, while 50 per cent from Belgaum and 20 per cent of the farmers from Chitradurga reported that the seeds provided were not adequate. Most of the farmers expressed that the use of certified seeds helped to raise productivity of crops by 5 to 17 per cent.

The Government of Kerala received ₹ 1.32 crore under the seed replacement scheme. A total of 1,901.53 mt (1,604.7 mt during the 1st crop season, 281.6 mt during the 2nd crop season and 15.23 mt during the 3rd crop season) of certified seeds were distributed with a total expenditure of ₹ 1.9187 crore. About 10 per cent of the farmers from Wayanad and an equal number of farmers from Palakkad benefited from the seed replacement scheme. Some farmers reaped the benefit of subsidy only once whereas a few twice or thrice. The beneficiary farmers bought subsidised certified seeds in varying quantities ranging from as low as 1 kg per head to a maximum of 170 kg. The area covered by the subsidised seed ranged from 0.4 ha to 1.6 ha. Roughly 5 per cent of the beneficiary farmers from Wayanad and 7.5 per cent from Palakkad received an average subsidy of ₹ 50 per head, whereas only one farmer each from the above districts got subsidy of more than ₹ 200. Most of the beneficiary farmers reported that the certified seed provided under the Prime Minister's package was adequate to meet their requirements.

In the districts of Maharashtra, the seed distribution arrangement was made through cooperative organisation godowns and other institutions, located at central places in those areas. The sample farmers purchased certified/improved seed from the agriculture department every year. The average quantity of subsidised purchased ranged from 76 kg per beneficiary from Yavatmal district to 196 kg seed per farmer in Amravati district (Table 4.3). Similarly, the average area covered by the subsidised seed varied from 0.80 ha per farmer in Yavatmal to 2 ha per farmer in Amravati district. Soybean seed was the most sought after seed by the farmers in the sample. This is of course expected as soyabean is an important crop in these districts. Towards seed purchased, a total amount of ₹ 1,274 per farmer was paid and the same amount of subsidy was availed. Farmers from Amravati district purchased a larger quantity of soybean seed than those from Yavatmal and Buldhana districts. Wheat and gram seed was purchased by farmers from Buldhana district only. The seed purchased was

adequate as per the need of all the selected farmers for analysis. Also, per-hectare yield has increased with certified seeds purchased from the agriculture department. The selected farmers did not specify any adverse comments on this scheme and were satisfied with it.

Distribution of certified seeds with 50 per cent subsidy in the identified districts is appreciated by all the farmers. Seeds of major crops are distributed to the farmers either through cooperative stores or the department of agriculture. The subsidy amount varied per beneficiary depending on the crop selected by the beneficiary farmer. The average area covered by subsidised seed varied from 0.40 ha to 2 ha per farmer. Most of the beneficiary farmers reported that the certified seed provided under the Prime Minister's package was adequate to meet their requirements and helped to raise productivity of crops by 5 to 17 per cent. It was also observed that a few small and marginal farmers also had purchased subsidised and certified seeds from the Raitha Samparka Kendras and sold the same to others, probably to large farmers, at some premium.

4.5 Micro Irrigation- Sprinkler/Drip irrigation

To promote better use of scarce water and improve the efficiency of irrigation water, resulting in increased per-hectare yield as well as the income of the farmer households, the scheme of development of micro irrigation was included as an important component in the Prime Minister's Rehabilitation Package. The drip and sprinkler irrigation sets were supplied to the farmers at 35 to 50 per cent subsidy in the identified districts.

It can be seen from Table 4.4 that the average area covered under micro-irrigation per beneficiary in Anantapur district was 5.50 hectares, 1.59 ha in Guntur and 0.68 in Warangal district. Horticultural and vegetable crops are mainly irrigated by the drip and sprinkler equipment. Anantapur farmers received a higher amount of subsidy than those of the other districts. On an average, two sets of drip irrigation equipment were purchased by sample farmers, and one in five farmers in the sample has

purchased sprinkler equipment on 50 per cent subsidy. On an average, each sample farmer has spent ₹ 21,930 for the purchase of micro irrigation equipment. All the farmers stated that more area came under irrigation and 87 per cent felt that they could go for double cropping.

The Department of Agriculture and Horticulture, Government of Karnataka, had distributed drip and sprinkler irrigation sets to the farmers at 35 to 50 per cent subsidy. Quotations had been sought from different suppliers of sprinkler and drip irrigation systems. The beneficiary farmer had the liberty to choose one of the short-listed companies to buy an irrigation set (Sprinkler heads/ drips). A majority of the farmers purchased sprinkler sets and a few chose the drip system. The sprinkler sets purchased cover an area ranging from 0.5 ha to 2 hectares. Farmers opting for the drip irrigation system were more in Belgaum district than in Chitradurga and Hassan districts. The cost of the drip irrigation system was higher than that of the sprinkler system for the comparable area.

Table 4.4: Average area covered under micro irrigation (Drip/Sprinkler), total cost and subsidy per beneficiary household in the selected districts*

State	District	Average Area irrigated (Ha)	Total Cost/beneficiary (₹)	Subsidy/beneficiary (₹)
Andhra Pradesh	Anantapur	5.50	21,240	1,04,806
	Guntur	1.59	22,060	32,400
	Warangal	0.68	22,491	52,691
	ALL	2.59	21,930	63,299
Karnataka	Belgaum	1.55	22,916	7,968
	Chitradurga	1.82	19,922	6,131
	Hassan	0.99	12,869	5,588
	ALL	1.39	18,858	6,844
Maharashtra	Amravati	1.00	35,400	17,700
	Buldhana	1.00	30,494	20,694
	Yavatmal	1.00	25,690	14,190
	ALL	1.00	30,528	17,528

Note: * Data about number of beneficiaries and average area covered under micro irrigation is not available for Kerala

The total cost of sprinkler sets varied from ₹ 6,983 (covering 0.5 ha area) to ₹ 15,750 per set with PVC pipes and ₹29,493 for sprinkler set for 0.4 ha with aluminium pipes. The cost of drip irrigation system ranged from as low as ₹ 30,580 for 0.4 ha to ₹ 1,20,907 for 2 hectares. The area covered under micro irrigation under the special package varied from a little less than 1 ha in Hassan district to 1.55 ha in Belgaum district (Table 4.4). The average cost of micro irrigation system was ₹ 12,869 per beneficiary household in Hassan as compared to ₹ 22,916 per beneficiary household in Belgaum district. The average cost as well as subsidy amount per household were found higher in Belgaum district than those in Chitradurga and Hassan districts. The difference in cost subsidy per beneficiary was mainly due to more number of drip irrigation sets purchased by the farmers from Belgaum district for irrigating sugarcane. The subsidy provided for micro irrigation system was not uniform across the districts. The subsidy amount ranged between ₹ 2,314 and ₹ 36,000 per beneficiary farmer in Belgaum district, where as in Hassan, it ranged from ₹ 3,000 to ₹ 6,000 per beneficiary farmer. The subsidy component accounted for 30.78 per cent of the total cost of sprinkler / drip set in Chitradurga as against 43.42 per cent of the total cost of micro irrigation unit in Hassan district. However, in absolute terms, it was the highest in Belgaum district.

It was observed that the farmers preferred sprinkler irrigation sets to drip irrigation system. The average area irrigated by drip / sprinkler irrigation system on beneficiary farm ranged from 0.99 ha in Belgaum to 1.82 ha in Chitradurga district. The micro irrigation system was used to irrigate sugarcane, soyabean, groundnut and cotton crops in Belgaum district; groundnut, sunflower, redgram and maize in Chitradurga; and maize, ragi, paddy, and banana in Hassan district. The beneficiary farmers reported that the micro irrigation system was more efficient as it saved on water, covered more area and improved the quality of the crop.

The performance of this scheme is poor in all the three districts of Kerala. The total area covered under the drip and micro irrigation system in the 3 districts of Kerala was 1,592 hectares. More than three-fourths of the area covered under micro irrigation under the PM's package is located in Palakkad district. The average unit cost for installing drip irrigation system is ₹ 40,000 per ha as against ₹ 15,000 for sprinkler

irrigation system. About 10 per cent of the Wayanad farmers, 2.5 per cent of the Palakkad farmers and 7.5 per cent of the Kasaragod farmers have confirmed that the sprinkler irrigation has helped to expand the area under irrigation. Overall, 7.5 per cent of the farmer beneficiaries of the package have indicated that the sprinkler irrigation has increased area under double cropping. As much as 10 per cent of the farmer beneficiaries confirmed the increase in double-cropped areas.

While reviewing some of the specific cases in drip irrigation and sprinkler irrigation in three districts of Kerala, certain disparities have been noticed. As per the guidelines, financial assistance to the beneficiary is limited to 50 % of the system cost subject to the maximum of ₹7,500 per ha. However, there are discrepancies in the subsidy provided to the beneficiary households. It was observed in Kasargod district that a few beneficiaries were granted subsidy less than 50 per cent of the unit cost, whereas others were granted more (Rajkumar, et al, 2010). For example, drip system for plant spacing of 2.5×2.5 m, for 0.20 ha, the subsidy ranged between 16.5 per cent and 32.5 per cent of the cost of the irrigation system whereas the subsidy for the same system for 0.4 ha and more area ranged from 42 per cent to 50%. For a cost of ₹ 33,700, the maximum of ₹ 16,850 has been provided, whereas as per the guidelines provided for A category states, the limit is ₹ 10,000 only for 2.5×2.5 m for 0.4 ha. On the contrary, for a total cost of ₹ 27,160, only 10 per cent subsidy, amounting to ₹ 2,790 has been provided. The beneficiary was entitled to receive ₹ 7,500, the ceiling amount, but was denied the same.

Such a low percentage of subsidies for small areas affect the very purpose of the scheme. There also appears some bias against the suppliers of micro irrigation systems. The farmer beneficiaries who purchased micro irrigation systems from M/s. Raid Co (supplier of drip/ sprinkler irrigation sets) were given 37 per cent subsidy whereas those who

purchased irrigation sets from M/s. Vikas Agro were given 50 per cent subsidy on the total cost of drip/ sprinkler irrigation sets. However, subsidy provided for purchase of drip/ sprinkler irrigation ranged between ₹ 6,597 per ha in Palakkad district to ₹ 8,095 per ha in Kasargod district.

The scheme of development of micro irrigation in the six districts of Maharashtra was sanctioned, with a target of 53,400 hectares area to be brought under sprinkler and drip irrigation. The sprinkler and drip irrigation sets were made available at 50 per cent subsidy. The maximum limit for land holdings to avail this scheme was 5 ha. Also, it was made compulsory to spend a certain amount for SC and ST as well as female beneficiaries by involving Panchayat Raj Institutions in the operation of this scheme. It can be seen from the Table 3.4 that selected farmers were having altogether 14 functioning open wells and 5 borewells, i.e on an average, 0.93 functioning open wells and 0.33 borewells. Among the districts, Buldhana district sample farmers have more number of open wells and borewells, while Yavatmal had the lowest. On an average,

1.31 hectares of land was covered earlier under irrigation and wheat, chickpea and orange are the main crops grown using available irrigation facility by sample households.

About 67 per cent farmers purchased sprinkler irrigation equipment and others purchased drip irrigation equipment. Most of the farmers in Yavatmal and Amravati districts preferred sprinkler irrigation, while drip irrigation system was availed in Buldhana district. In order to get the benefit under this scheme, the average own investment was ₹ 13,000 per farmer and an amount of ₹ 17,528 subsidy was received. Above 93 per cent of farmers have opined that due to sprinkler and drip irrigation, the area under irrigation increased and 87 per cent farmers mentioned that it helped them in expanding the area under double cropping. Obviously, there must be an increase in output and net income due to increase in area under irrigation and double cropping. About 60 per cent farmers incurred ₹ 300 expenditure (i.e., documentation, travel and other cost) to avail the benefit under this scheme. Out of total 15 farmers, one farmer commented that more subsidies should be given to the farmers. Overall, the selected farmers benefited from this scheme by increasing their area under irrigation and double cropping.

Under the micro irrigation scheme, sprinkler and drip irrigation sets / equipments are supplied to the farmers at 35 to 50 per cent subsidy. The scheme is implemented by both the department of agriculture as well as the department of horticulture. It was observed that the subsidy amount received by the beneficiaries varied across the districts (Karnataka) as well as within the districts among the beneficiaries (Kerala). There is also an allegation that a higher amount of subsidy is paid to the farmer if he / she buys a micro irrigation system from a particular dealer (Kerala). All the beneficiaries reported that the adoption of micro irrigation system had helped in efficient use of irrigation water leading to expansion in the irrigated area.

4.6 Extension services

Effective and efficient extension services played a key role in transferring public and private research findings for increasing production and productivity in agriculture and allied sectors in the past. It has been argued that the agricultural extension system in the states is in a disappearing/fading stage. Strengthening of extension services was

one of the components of the PM's package. Therefore, under this scheme, effective and efficient extension service mechanism was put in place in the identified districts for empowering the farmers. Agriculture Technology Management Agencies (ATMA) was operationalised in all the districts to ensure extension support and convergence at the district level. The activities included under the extension package are visits to demonstration fields, research stations, and study tours of the farmers for exposing them to new farming systems and technologies.

Andhra Pradesh received ₹ 8 crore as grants for strengthening its extension system in 16 suicide-prone districts. The Government of India released ₹ 26.52 crore for extension activities in Andhra Pradesh. However, the State Government could spend less than half (₹ 12 crore) of the total funds released by the Government of India till 30 June 2008 (Project Proposal, MoA, 2008). Data were gathered from the sample farmers from Anantapur, Guntur and Warangal districts about their participation in various extension programmes conducted under the PM package. Eighty per cent of farmers in Anantapur district have said that they have attended crop demonstration and all of them benefited from the programme. Similarly, 60 per cent of Warangal farmers were exposed to extension programmes and 60 per cent of them reported that the programme was beneficial. However, no extension activity / programme was reported in Guntur district. Overall, 47 per cent of sample farmers attended crop demonstrations or availed the exposure trip to research farms.

A grant of ₹ 3 crore was earmarked for strengthening of extension activities under ATMA model in the selected six districts of Karnataka. The Government of Karnataka received a total grant of ₹ 2.986 crore for extension activities from the Government of India till the end of March 2009. However, the Government of Karnataka could spend only ₹ 2.045 crore (68 per cent of the released funds) for extension activities in the 6 districts. The financial achievement was very poor in the 3 sample districts (Belgaum, Chitradurga and Hassan) wherein ₹ 65.59 lakh were utilised for extension activities as against the target of ₹ 276.26 lakh during 2006-07 through 2008-09 (Annexure Table 4.1). Grants for extension activities envisaged under the PM package during 2006-07 were released for Hassan district only. Belgaum and

Chitradurga districts were not supported during the year 2006-07 as the ATMA scheme had not been initiated in these districts.

It was observed that overall, 30 per cent of the sample households have attended crop demonstrations and only a handful (one per cent) of the sample farmers benefited from exposure trips arranged by the department of agriculture. Similarly, roughly, 2 per cent of the sample farmers attended a one-day training programme cum workshop on improved agricultural practices organized at the KVKs.

In case of Kerala, grants amounting to ₹ 1.50 crore have been sanctioned for extension activities in 3 distress-prone districts in the state. The Directorate of Agriculture, Government of Kerala, is designated as the implementing agency. The extension programme envisaged in the PM package was proposed to be implemented over a period of three years beginning from 2007-08. It was proposed to establish 525 Farmer Counselling Centres at the existing Krishi Bhavans in Wayanad, 1,725 Centres in Palakkad and 750 centres in Kasaragod district. However, only 568, 163 and 269 Farmers Counselling Centres were established in Palakkad, Wayanad and Kasargod districts, respectively. The total amount utilized was ₹ 50 lakh. The Women farmers' empowerment programme was included as one of the activities under this component. Fourteen of the beneficiaries have confirmed that they have attended the counselling programme, with 5 per cent from Wayanad, about 6 per cent from Palakkad and a miniscule of them from Kasaragod. Only less than 1.0 per cent of the farmer beneficiaries have attended any exposure visit to research farms for getting the demonstration to understand the nature of the problems, and the exposure visit of the research farm.

A multidisciplinary team of experts / officers was formed at the Gram Panchayat level for the conduct of counselling. The officials from the Directorate of Agriculture, Government of Kerala, informed the investigating team that they had not received any grants for extension component from the Government of India. However, the concept note for evaluation of the PM package sent by the ministry to AERCs indicates release of ₹ 1.17 crore during 2006-07.

In case of Maharashtra, all the selected sample farmer households have attended crop demonstration as well as exposure. More than 93 per cent of the farmers said that they had benefited from this scheme. Among the districts, the corresponding figures are 100 per cent in case of Amravati and Buldhana, and 80 per cent in Yavatmal district.

Grants are provided under the PM's package to strengthen the extension services in the identified districts so as to accelerate the agricultural growth. Agriculture Technology Management Agencies (ATMA) is identified as the nodal agency in all the districts to ensure extension support and convergence at the district level. The activities included under the extension package are visits to demonstration fields, research stations, and study tours of the farmers for exposing them to new farming systems and technologies. A large number of farmers benefited from the activities identified under the extension component in four states whereas very few farmers could make use of these in other states. In Maharashtra, a major part of the funds provided for extension activities are utilised for supporting and strengthening SHGs.

4.7 Subsidiary Income Generating Activities

4.7.1 Animal Husbandry

The animal husbandry and dairying sector plays a significant role in supplementing family incomes and generating employment in the rural sector, particularly among the landless, small and marginal farmers and women, besides providing nutritional security. In order to augment / support the income of farmers, the livestock/dairy and fishery activities were included as Subsidiary Income Generating Activities component in the PM's package. The package included components like supply of high-yielding animals, calf rearing, feed and fodder supply, animal health care, setting up of bulk milk chilling plants, fodder block-making units, provision of breeding services and estrus synchronisation, etc.

In Andhra Pradesh, 23 buffaloes were purchased by sample farmers. The average cost ranged from ₹ 24,200 in Anantapur to ₹ 35,000 per animal in Guntur and Warangal districts. The beneficiary households from Anantapur purchased on an average one milch animal as against roughly two milch animals by the beneficiaries from

Guntur and Warangal districts (Table 4.5). The beneficiaries from Anantapur invested on an average ₹14,800 as against ₹ 40,000 by their counterparts from Warangal district. The beneficiaries on an average invested ₹ 27,267 on livestock either from their own funds or by borrowing from banks. For the construction of shed/feed and animal rearing, the average subsidy comes to ₹ 26,840. The average annual income from dairy activity ranged from ₹ 17,400 per beneficiary in Warangal district to ₹ 29,000 in Guntur district, with an average income of ₹ 24,533 for all the beneficiaries.

In Karnataka, ₹ 92.71 crore was earmarked for the development of animal husbandry under the special package. The Karnataka Livestock Development Agency along with the Karnataka Milk Federation (KMF) Ltd was entrusted with the task of implementing the programme. A target for distribution of 8,502 high-yielding milch animals was fixed with a financial outlay of ₹ 1,275 lakh for all the six districts as of August 2008. However, only 3,902 cows were purchased with ₹ 585 lakh as subsidy at the end of August 2008. About 4,600 additional cows could not be purchased in time though the subsidy amount for the purchase of 4,044 milch animals had been released by the bank.

Table 4.5: Total Cost, Subsidy Amount/ Beneficiary for livestock Package

State	District	Average total cost	Av, Loan / own amount	Subsidy	Other expenses	Annual net income from livestock
Andhra Pradesh	Anantapur	24200	14800	9400	0.00	27200
	Guntur	63000	27000	36000	880	29000
	Warangal	70000	40000	35120	0	17400
	Average	52400	27267	26840	293	24533
Karnataka	Belgaum	54600	28400	26200	2136	13400
	Chitradurga	47120	24500	22620	1900	9500
	Hassan	59000	29200	29800	1960	8200
	Average	53573	27367	26207	1999	10583
Maharashtra*	Yavatmal	12727	8400	9418	0.0	1380
	Amravati	10863	3400	9636	140	2800
	Buldhana	18286	12100	13500	760	7400
	Average	14114	7967	10851	300	3860

Note: * Av. Subsidy amount (₹/household) for construction of shed/feed/calf rearing, etc.

The data about the number of beneficiaries, average cost of milch animals purchased, etc for Kerala are not available.

A uniform physical target (of 1,417 beneficiaries) was fixed for all the three study districts of Karnataka to supply high-yielding milch animals. However, the achievement varied across the districts. In Belgaum district, 926 animals were purchased by March 2009 and one animal each was supplied to 926 beneficiaries (Annexure Table 4.2). In Chitradurga district, 1,044 beneficiaries were identified and approved by the District Committee. However, 564 beneficiaries could purchase one milch cow during first year and 420 farmers in the second year. Thus, a total of 984 animals were purchased against the target of 3000 milch animals in Chitradurga District. Similarly, 1,227 beneficiaries were identified and approved by the district committee. However, only 954 cows had been purchased by March 2009. **During our field work we observed that some of the beneficiaries were either office-bearers of the milk cooperative society or had some connections with officials in the Karnataka Milk Federation or with officials from the department of animal husbandry.**

The average cost per animal ranged between ₹ 22,620 and ₹ 29,800 in the study districts (Table 4.5). The beneficiaries themselves selected and purchased the animals from cattle markets located in the neighbouring districts or in the neighbouring states like Maharashtra and Tamil Nadu. The average expenditure incurred was roughly ₹ 2,000 per beneficiary farmer. The subsidy amount ranged from ₹ 26,200 in Belgaum to ₹ 29,800 per pair of milch animals in Hassan district.

While about 50 per cent of the beneficiaries reported that it took one to two months time for approval of the project and release of funds, one-third of them reported three to five months, delay in getting the approval and disbursement of funds from the government and/or banks. The average net income per annum from milch animals ranged between ₹8,200 per beneficiary household in Hassan district and ₹ 13,400 in Belgaum district.

The expenditure on feed and fodder supply as well as animal health care was spread over a period of one year from the date of purchase of animals and the expenditure on calf-rearing over a period of one year from the date of caving, hence these expenses were incurred in a phased manner. **However, none of the beneficiary households received assistance for feed and fodder.** Breeding services were taken up by the KMF as well as the Departments of Animal Husbandry and veterinary sciences in the selected blocks.

It was observed that a little more than 15 per cent of the farmer beneficiaries have taken advantage of the animal husbandry and dairying component of the PM's package and they have purchased milch cattle and goats / sheep to the tune of ₹ 6,26,000, which may be split into ₹ 2,13,000 for the Wayanad farmers, ₹ 1,45,000 for the Palakkad farmers and ₹ 2,68,000 for the Kasaragod farmers. Of the cost, they have between them shared the cost at ₹ 91,500 which is roughly 16 per cent of the total cost of the milch cattle and small stock. The beneficiary farmers have also reported having earned an income of ₹ 1,82,000 from the large and small animals purchased. The actual income is ₹ 33,000 for the Wayanad farmers, ₹ 88,500 for the Palakkad farmers and ₹ 60,500 for the Kasaragod farmers (Raj Kumar *et al*/2010).

When asked about their expenditures on travel and documentation in order to access the animal husbandry and dairying package, nearly 15 per cent of the farmer beneficiaries have indicated having spent a considerable sum on accessing the package: ₹ 8,700 for the Wayanad farmers, ₹ 4,100 for the Palakkad farmers and ₹ 4,350 for the Kasaragod farmers. The farmers interviewed have also hinted at some sort of bribe for accessing and obtaining the assistance and relief from the package. There is, however, no information on whether they have included the sum given as bribes in their travel and documentation expenditures. Less than 10 per cent of the beneficiaries have received some sort of assistance in accessing this component of the package. But about 18 per cent of the beneficiaries did not get any assistance. The receivers of such assistance account for less than 1 per cent in Wayanad, about 3 per cent in Palakkad and 5 per cent in Kasaragod districts. A little more than 5 per cent of the beneficiaries have paid some money to the middlemen, although this money has not been spelt out in rupee terms. About 10 per cent of the beneficiaries have also generated additional employment and income.

In Maharashtra, beneficiaries in the suicide-prone districts altogether purchased 20 animals (average 1.3 per household) and also received benefits such as health care to dairy animals. The animals purchased by the farmers were **cattle and bullock under the subsidy scheme**. The average cost per animal worked out to be ₹AAS 14,114 and about ₹ 6,147 subsidy (44 per cent subsidy) per farmer was received, and the remaining amount was paid by the farmer. The government also provided subsidy for construction of shed/feed/calf-rearing at ₹ 10,851 per farmer household. The cost per animal, the amount invested by a farmer and the subsidy given by the government for construction of sheds was recorded the highest in Buldhana district.

The average net income from the livestock purchased was ₹ 3,860 per household, in which Buldhana district household income was the highest (₹ 7,400), and the lowest was in case of Yavatmal (₹ 1,380). Towards documentation and travel, each farmer had to spend ₹ 300. However, among the districts, it is observed that there was no travel and documentation cost recorded in Yavatmal district. Though about 27 per

cent farmers received some kind of assistance from ₹somebody' in getting the benefits under this scheme, no amount was paid to them. Most of the farmers opined that the cattle purchased under this scheme could not sustain in the hot climatic conditions of the regions which affected the milk productivity.

In order to augment / support the income of farmers, the livestock/dairy and fishery activities were included as Subsidiary Income-Generating Activities component in the PM's package. The package included components like supply of high-yielding animals, calf-rearing, feed and fodder supply, animal healthcare, setting up of bulk milk chilling plants, fodder block-making units, provision of breeding services, estrus synchronisation, etc. It is observed during the field visit that there are no guidelines to select the beneficiaries. It is expected that the small and marginal farmers should get the preference to own a milch animal. However, we came across some cases (in Karnataka) where the beneficiaries of livestock package are the office-bearers of either the village milk cooperative society or have some connections at the taluk or Zilla Panchayat office. There is a provision in the package to provide assistance for feed and fodder for one year for milch animals and also for rearing a calf. However, none of the respondents has received assistance for feed and fodder. In Maharashtra, financial assistance is extended even to purchase bullocks. However, the financial assistance (subsidy) helped the beneficiaries augment household income substantially in almost all the states.

4.7.2 Fisheries

As stated earlier, fisheries is one of the components of subsidiary income activities suggested under the PM package. The special package envisaged development of fisheries in 100 hectares per district by providing 40 per cent of capital and input cost and the rest was to be sourced through bank credit.

In Andhra Pradesh, each beneficiary was encouraged to develop a fishpond in one hectare of land. The average cost of development of 1 ha of fishpond ranged from ₹ 1.30 lakh in Anantpur district to ₹ 2 lakh in Guntur and Warangal districts (Table 4.6). On an average, each beneficiary in Guntur and Warangal invested ₹ 1,20,000 as against

₹ 50,000 by the beneficiaries from Anantpur on the development of 1 ha of fishponds. The beneficiaries received ₹ 80,000 as subsidy. The average income from fish cultivation ranged between ₹ 30,000 per beneficiary in Guntur district and ₹ 40,000 per beneficiary household in Warangal. The activity also generated 300 days of employment. Overall, the scheme was successful.

Table 4.6: Development of Fisheries under PM Package on sample farms in Karnataka

State	District	Average area of fish pond (Ha)	Average expenditure for construction of fish pond (₹ in Lakh)	Average subsidy / per beneficiary (₹)	Av, income from fisheries
Andhra Pradesh	Anantapur	1.00	1.30	80,000	35000
	Guntur	1.00	2.00	80,000	30000
	Warangal	1.00	2.00	80,000	40000
	All	1.00	1.77	80,000	35000
Karnataka	Belgaum	0.30	0.75	25150	10,286
	Chitradurga	0.63	1.40	60200	22,222
	Hassan	1.00	2.28	85870	8,200
	All	0.56	1.29	50075	13570

* Field survey data

The number of beneficiaries approved and the area proposed for the development of fishponds and supply of seeds varied across the districts. As on 31st August 2008, only 17 beneficiaries from Belgaum, 75 from Chitradurga and 42 from Hassan district could complete the construction of ponds covering an area of 10.63 ha, 21.82 ha and 13.13 ha in the respective districts in that order. Subsidy was released to the beneficiaries who had completed the construction of fishponds. The subsidy varied from ₹ 25,150 per beneficiary in Belgaum district to ₹ 85,870 per beneficiary in Hassan district.

It was observed that the average size of fishponds varied across the districts from 0.3 ha in Belgaum district to roughly one ha in Hassan district (Table 4.6). The average expenditure incurred for development of a fish pond ranged from ₹ 0.75 lakh in Belgaum district to ₹ 2.28 lakh in Hassan district. The average cost of construction of a fish pond is ₹ 2.30 lakh per ha. The average subsidy amount per beneficiary works out to ₹ 50,075. The beneficiaries of the fisheries package reported that the construction of one ha of fishpond alone cost more than ₹ 2 lakh but the subsidy amount given was only ₹ 60,000 to ₹ 80,000 per hectare which was very less. The supply of good fish feed was a constraint, adversely affecting the fish yield. On an average, the fisheries activity

helped augment household income to the tune of ₹ 10,286; ₹ 22,222 and ₹ 8,200 in Belgaum, Chitradurga and Hassan districts, respectively.

Though the total number of beneficiaries as well as the area targeted under the fish ponds was much higher in all the districts, the achievements were very poor, both in terms of the number of beneficiaries as well as the area covered under the fishponds. It was observed that the fisheries programme was not performing well. The farmers who had availed the subsidy component under the PM Package were better off and those who already had a small tank in and around their fields were found (Fig1 & 2). The farmers who constructed new ponds were rare. The beneficiaries spent on an average ₹ 880 for documentation, travel etc.

A beneficiary, Mr. Manjunatha Swamy from Kallahalli in Hassan district, is a rich person and a former member of the Zilla Panchayat. He also has a brick-making unit very close to the pond. He owns 6 hectares of irrigated land (Fig 1). Another beneficiary, Mr. Shivaraj from Shanthi Grama from Hassan district is a retired teacher and has availed of the subsidy component under the fisheries programme. He owns a tank used for irrigation (a sluice /outlet can be seen in fig.2). He is also running a high school in the village.



Pic.1. fishpond at Kallahalli in Hassan district
Hassan



Pic. 2. Fish pond at Shanthi Grama,
Hassan

In Maharashtra, 91 fishponds (102.34 ha area) were constructed against the target of 101 ponds and 91 farmers benefited from this scheme. An amount of ₹ 621 lakh was allocated for the fisheries component of which only ₹ 23 lakh were released and further ₹ 19.93 lakh were actually utilized for the scheme.

As far as Kerala is concerned, ₹ 1.03 crore was allocated for the development fisheries during 2006-07 and ₹ 2.30 crore in 2007-08. Fishery activity is taken up in all the three districts, namely, Palakkad, Wayanad and Kasaragod. In Palakkad, only inland fisheries activities, and in Wayanad and Kasaragod both marine and inland fisheries activities are taken up. Among the 3 districts, Palakkad received a maximum allocation of ₹ 52.44 lakh followed by Kasaragod district (₹ 30 lakh) and Wayanad (₹ 20.56 lakh) during 2006-07. It can be seen from the Table 4.7 that 1,184 households from Kasaragod, 454 from Wayanad and 214 from Palakkad benefited from fisheries programme during 2006-07. The major activities so far taken up included stocking of fingerlings and the allotted amount for the 1st year has been fully utilized in all the three districts. Details about the implementation of the fisheries programme during 2007-08 are not available except that allocation of funds wherein ₹ 5 lakh, ₹ 200 lakh and ₹ 25 lakh are allocated to Wayanad, Palakkad and Kasaragod districts, respectively.

Table 4.7: Development of Fisheries under PM Package in Kerala*

District	Number of Beneficiaries	Area brought under fish culture (ha)	Fingerlings stocked	Expenditure incurred (₹ Lakh)
Wayanad	454	33.94	1,58,540	20.56
Palakkad	214	111.54	2,06,320	52.44
Kasaragod	1184	34.92	1,88,600	30.00
All	1852	180.40	5,53,460	103.00

* Data relates to 2006-07 only

Fisheries as a subsidiary income activity is successful in Andhra Pradesh and Kerala. The progress of development of fishponds for aquaculture is modest in Karnataka and negligible in Maharashtra. In Karnataka, farmers who already owned irrigation ponds or tanks took advantage of the scheme. Small and marginal farmers benefited the least from fisheries programme as the initial investment for development

of fishponds is very high and the subsidy component is only 40 per cent. Availability of quality seed and infrastructure are major constraints for the development of fisheries in the identified districts.

4.8 National Horticulture Mission (NHM)

Over the years, horticulture has emerged as a sunrise sector having the potential to accelerate the growth of our agrarian economy. NHM was also included as one of the components under the PM's package. The major activities proposed under NHM included raising nursery, area expansion of fruits and vegetable crops, rejuvenation of old gardens / replacement of old and diseased plants in the orchards, supply of quality planting material, promotion of organic farming, creation of water resources /irrigation, promotion of Integrated Nutrition Management (INM) / Integrated Pest Management (IPM), post-harvest management (pack houses, onion storage, primary processing), marketing improvement (both wholesale as well as rural markets/ Apni Mandi), etc.

Andhra Pradesh received a total allocation of ₹ 75.30 crore under the PM's package for horticulture development in the 16 suicide-prone districts of the state. The total outlay for horticulture development for 3 years was ₹ 240.94 crore. The state government released about ₹ 133.55 crore during 2006-07 to 2008-09 to implement the NHM programme in the 16 suicide-prone districts against the expenditure of ₹ 161.12 crore (Table 4.8). Under the PM's relief package, Sweet orange plants were distributed on subsidy in Anantapur district, whereas in Warangal, mango plantation was encouraged. In Guntur, banana plantations were encouraged by supplying plants and other inputs. The average area under horticulture crops covered was 3.24 ha, 0.51 ha and 0.84 ha in Anantapur, Guntur and Warangal district, respectively (Annexure Table 4.3). On an average, ₹ 66,833 was invested by each beneficiary farmer, of which ₹ 34,923 was subsidy provided under the NHM programme. No other expenditure was reported by the sample farmers. A majority, i.e., 73 per cent of beneficiaries, were satisfied with the scheme and felt that additional employment and income was created by the scheme.

Table 4.8: Total Outlay, Release and Utilisation of NHM Assistance under PM Package (as of June 30, 2008)

(₹ in crores)

Year	Outlay	Release by the GOI	Expenses
Andhra Pradesh			
2006-07	93.92	66.67	64.74
2007-08 & 09	147.02	66.58	96.38
Total	240.94	133.25	161.12
Karnataka			
2006-07	55.03	44.54	36.15
2007-08 & 09	54.47	53.23	22.63
Total	109.50	97.77	58.63
Kerala			
2006-07	36.14	29.39	1.01
2007-08 & 09	42.93	13.24	38.17*
Total	79.07	42.63	39.18
Maharashtra			
2006-07	60.80	46.88	26.86
2007-08 & 09	69.98	4.29	15.95
Total	130.78	51.17	42.81

* Up to October 2007

Source: Compiled from the Proposal of the project sent by the Ministry of Agriculture, GoI, New Delhi.

National Horticulture Mission (NHM) is being implemented in most of the districts in Karnataka. It can be seen from Table 4.8 that a sum of ₹109.50 crore was earmarked for horticulture development in the selected six suicide-prone districts of Karnataka. The Government of India released ₹44.54 crore in 2006-07 and ₹ 53.23 crore in 2007-08 as financial assistance as against the total outlay of ₹ 109.50 crore. The Government of Karnataka could spend ₹ 36.15 crore during 2006-07 and ₹ 22.63 crore from April 2007 through June 2008 amounting to about 60 per cent of the total amount released by the Government of India. There is a wide variation in the number of beneficiaries of the

NHM programme across the districts and over the years. The total number of beneficiaries varied from 17,144 in Chitradurga district to 43,580 in Hassan district during 2006-07 through 2008-09.

It was observed that the farmers who were already cultivating horticulture crops benefited more from the package. This encouraged more farmers to seek assistance and subsidy component from the horticulture department. In Hassan district, most farmers had availed of subsidy for Mango, Banana, and Sapota. Area expansion under floriculture was found modest due to lack of market and the high cost of installation of greenhouse / poly-house units. Beneficiaries from Chitradurga and Belgaum districts used the assistance for expansion of area under plantation crops like pomegranate, banana and sapota and also for developing irrigation system. The average expenditure incurred for documentation and others ranged between ₹ 160 and ₹ 360 per beneficiary of NHM.

In Kerala, ₹ 29.39 crore was released against the outlay of ₹ 36.14 crore. However, the Kerala State Horticulture Mission could use only ₹ 1.01 crore during 2006-07 (Table 4.8). During 2007-08 and 09, the total outlay was ₹ 42.93 crore of which ₹ 13.24 crore was released and ₹ 38.17 crore could be actually utilised. During the 3-year period (2006-07 to 2009), about 54 per cent of the total earmarked amount of ₹ 79.07 crore was released and 92 per cent of the released amount was spent for implementing the various components under the horticulture mission.

The Government of Kerala also supported the programme on horticulture. The total allocation for Horticulture Mission was ₹ 105.70 crore of which ₹ 47.45 crore was allocated to Wayanad, ₹ 30.13 crore to Palakkad and ₹ 28.12 crore to Kasargod. The three districts together could utilize a total sum of ₹ 40.27 crore or just 38 per cent of the total allocated amount of ₹ 105.70 crore during 2006-07 through 2008-09. The State Horticulture Mission includes establishment of nurseries, area expansion, re-plantation, organic farming, IPM, post-harvest management, etc. The main crops covered are cashew, pepper, banana, pineapple, vegetable crops and cut flowers.

Overall, 18 per cent of the farmers from the 3 identified districts of Kerala participated in the NHM programme. About 7 per cent of the farmers each from Wayanad and Palakkad districts benefited from NHM as against only 4 per cent of the farmers from Kasaragod district. The farmer beneficiaries have contributed almost one-third of the total investment for the NHM programmes. The Wayanad farmers have invested on an average ₹ 35,000, whereas the farmers from Palakkad and Kasargod have invested ₹ 3,31,000 and ₹ 60,500, respectively.

The total allocation for NHM was ₹ 225 crore under the PM package for distress-prone districts in Maharashtra. Of this, ₹ 51.17 crore was released by the Government of India and ₹ 42.81 crore was utilised by the Government of Maharashtra for implementing NHM in the selected districts (Table 4.12). On an average, two-thirds of the sample farmers benefited from the NHM in the study districts of Maharashtra. The average area under horticulture varied from 0.94 ha per beneficiary in Amravati district to 1.24 ha in Buldhana district (Annexure 4.4). The distribution of beneficiaries of the NHM programme was uneven across the districts. It was observed that almost all the sample farmers from Yavatmal got benefit from NHM while only 20 per cent of the sample farmers from Buldhana participated in the NHM programme. The total investment for NHM-related activity was ₹42,300, ₹ 33,200 and ₹ 52,580 per beneficiary farmer from Yavatmal, Amravati and Buldhana districts, respectively. The average amount of subsidy ranged from ₹ 23,400 per beneficiary in Amravati to ₹ 34,300 in Yavatmal district. The average cost of documentation and other expenses was ₹ 2,580 per beneficiary.

It can be seen from Table 4.9 that the total physical target (area coverage) for the three-year reference period (2006-07 to 2008-09) envisaged under the NHM package varied from 34,712 ha in Chitradurga district to 71,376 ha in Belgaum district. The actual area benefiting from the NHM package ranged between 25,479 ha in Hassan district and 27,656 ha in Chitradurga district. The overall area covered under the NHM activities accounted for 55 per cent of the total targeted area of 1,44,817 ha for the three-year period. As far as the financial targets were concerned, Belgaum district could spend roughly 32 per cent of ₹ 66.83 crore, while Chitradurga and Hassan districts spent

about 59 per cent of the target amount under NHM during 2006-07 through 2008-09. Overall, the three districts taken together could cover only 55 per cent of the area target and could spend only ₹ 20.57 crore of the total target of ₹ 32.06 crore accounting for 59 per cent of the aggregate financial target for 3 years.

Table 4.9: Physical and Financial Targets and Achievement of NHM in Sample districts of Karnataka

(Area in ha and ₹ in lakhs)

District	2006-2007		2007-2008		2008-2009		Total	
	Target	Progress	Target	Progress	Target	Progress	Target	Progress
Belgaum								
Physical	35535	10036	28046	11917	7795	5010	71376	26963
Financial	10.39	5.15	19.66	10.35	36.78	5.83	66.83	21.33
Chitrdurga								
Physical	14127	8328	9510	9537	11075	9791	34712	27656
Financial	984.13	423.69	906.00	677.18	723.95	451.60	2614.08	1552.47
Hassan								
Physical	0	0	26271	24739	12458	740	38729	25479
Financial	0.00	0.00	580.70	348.26	243.98	135.27	824.68	483.53
Total								
Physical	49662	18364	63827	46193	31328	15541	144817	80098
Financial	994.52	428.84	1506.36	1035.78	1004.71	592.7	3505.59	2057.33

As per the economic survey (GoK, 2009), ₹36.87 crore was earmarked for NHM in 2006-07 of which ₹29.82 crore could be spent by implementing different activities. In 2007-2008, an amount of ₹ 52.41 crore and ₹ 95 crore in 2008-2009 was approved. Absence of good marketing facilities for high-value cut flowers and the traditional flowers adversely affected the expansion of area under floriculture in most of the districts.

Over the years, horticulture has emerged as a sunrise sector having the potential to accelerate the growth of our agrarian economy. NHM was also included as one of the components under the PM package. A large number of activities are proposed under NHM, which is being implemented in most of the identified districts. Most of the beneficiaries availed subsidies for purchase of micro irrigation equipments, plantation of fruit crops and rejuvenation of old orchards.

4.9 Minor Irrigation

Under the prime minister's relief package for farmers in suicide-prone districts, a loan for minor irrigation was provided from the Rural Infrastructure Development Fund XIII of NABARD. In Karnataka, construction of new tanks, modernisation of tanks, pickups and barrages, flood control works and lift irrigation schemes were taken up under this component. More than 400 works (432) were envisaged in the 3 selected districts. **About 80 per cent of these works were for modernisation of minor irrigation tanks followed by pickups and barrages (10.65 per cent) and Lift Irrigation Schemes (5.09 per cent). Most of these works were related to renovation and rehabilitation of already existing irrigation structures.** Modernisation of tanks received the highest priority among all the works under the minor irrigation component. As many as 87 per cent of works in Hassan district, 68 per cent in Chitradurga and 48 per cent in Belgaum district were taken up under the minor irrigation component. The tanks having a command area of more than 40 ha come under the jurisdiction of the minor irrigation department, whereas the tanks with less than 40 ha of command area are looked after by the Zilla Panchayats. However, the Department of Minor Irrigation was executing work on modernisation of tanks, including the irrigation tanks coming under the administrative jurisdiction of Zilla Panchayats (less than 40 ha of command area). The ZPs were not consulted while selecting the tanks for repair and rehabilitation with less than 40 ha of command area. Most of the works were executed through the contractors.

The estimated cost of the 432 works in the three selected districts stood at ₹ 113.18 crore (Table 4.10). The estimated average cost of construction of new tanks and pickups/ barrages was more than ₹43 lakh per work; whereas the average estimated

cost of improvement of existing irrigation structures comes to ₹ 23.34 lakh per work. It was observed that the relatively developed districts, namely, Hassan and Belgaum, had received more allocation than Chitradurga. The total estimated cost in the case of Hassan district was ₹ 7,694.07 lakh and the least allocation was ₹ 939.85 lakh for Chitradurga district.

It was observed that only 101 of the 432 minor irrigation projects could be completed during the past three years and the rest 331 were found in different stages of completion in the selected districts of Karnataka. **The actual expenditure on completed and on-going projects works out to ₹ 2,379.07 lakh up to 2008-2009 accounting for 21.02 per cent of the total estimated cost of ₹ 11,317.56 lakh. The delay in completion of irrigation projects was on account of official procedures involved in inviting tenders, selection of contractors and issuing work orders, and so on.**

These investments were made either to create new irrigation potential or restore the lost potential of water bodies. **The initial target was to create irrigation potential of 19,246 ha. However, the new potential actually created accounts for 7.97 per cent of the target.** Even though the estimated cost of minor irrigation works was less in Belgaum district, the potential to be created was higher than Hassan district. The estimated cost per acre of potential creation in the case of Belgaum district works out to ₹29,979 and ₹ 99,766 in the case of Hassan district. The average cost for three districts taken together is estimated at ₹58,804 for creation of one ha of irrigation potential.

Vanashivi Katte, Thirupathihalli, Hassan Taluk



Pic. 3. Work of Tank Rehabilitation in Progress; estimated cost ₹ 19.90 lakh for creating 7.80 ha irrigation potential

Table 4.10: Progress of Minor Irrigation Works under PM Relief Package in the Selected Districts of Karnataka

Nature of the District/ Works	Estimated Potential Created/ Restored Ha	Estimated Cost ₹ Lakhs	Expenditure up to 2008-2009* ₹ Lakhs	Status of Works (Numbers)		
				Completed	Different Stages	Total
Belgaum						
Construction of New Tanks	480.22	302.9	2.09	0	6	6
Modernization of Tanks	2,253.37	718.15	133.96	3	25	28
Pickups and Barrages	2,135.08	1,124.59	98.01	2	17	19
Lift Irrigation Schemes	4,080.76	538	47.15	2	3	5
Total	8,949.43	2,683.64	281.21	7	51	58
Chitradurga						
Construction of New Tanks	54	30	6.22	0	1	1
Modernization of Tanks	1,745.73	712.9	588.55	13	8	21
Pickups and Barrages	68	30	28.35	0	1	1
Flood Control Works	417	166.95	167.38	7	1	8
Total	2,284.73	939.85	790.5	20	11	31
Hassan						
Modernization of Tanks	5,836.69	6,332.12	1,263.77	74	225	299
Pickups and Barrages	1,266	1,017.35	14.98	0	26	26
Flood Control Works	15	9.5	0	0	1	1
Lift Irrigation Schemes	895	335.1	28.61	0	17	17
Total	8,012.69	7,694.07	1,307.36	74	269	343
Total of 3 Districts						
Construction of New Tanks	534.22	332.9	8.31	0	7	7
Modernization of Tanks	9,835.79	7,763.17	1,986.28	90	258	348
Pickups and Barrages	3,469.08	2,171.94	141.34	2	44	46
Flood Control Works	432	176.45	167.38	7	2	9
Lift Irrigation Schemes	4,975.76	873.1	75.76	2	20	22
Total	19,246.85	11,317.56	2,379.07	101	331	432

Note: * Expenditure from 2006-07 to January 2009.

Discussions with the stakeholders at the village level about the ongoing works under the programme revealed that the works being carried out were of poor quality (Kereyagalhalli tank in Holalkere Taluk, Chtradurga District) and the farmers had complained to revenue authorities against the contractor for using sub-standard or poor quality material in the construction of bunds, sluice as well as main canals. Thalya village farmers also reported that only 10 per cent of the tank work had been taken up. **Since most of the works under minor irrigation component of PM's package were in various stages of completion, the actual benefits (expansion of irrigated area, quantity and quality of irrigation water supply, etc) from these programmes cannot be ascertained at this point of time.**

Among the selected three districts of Guntur, Anantapur and Warangal of Andhra Pradesh, major and medium irrigation works were undertaken only in Warangal. Also, no Minor Irrigation works were undertaken in any of the three selected districts. Though the earth work was not fully completed and the construction of field channels was also not fully covered for all villages, water was released from the project of Godavari Lift Irrigation Scheme (GLIS) during 2007-08. All the farmers covered under the project area were benefited. However, water was not released in the subsequent year i.e., 2008-09. The beneficiaries under the project area reported that they had received water substantially for their fields and could derive a 10% increase in income compared to previous years.

In Maharashtra, under the Accelerated Irrigation Benefit Programme (AIBP) and Rural Infrastructure Development Fund (RIDF), 8 major, 9 medium and 557 minor projects were included in the scheme. The details about the increase in irrigated area and benefits through intervention to sample households is presented in Table 4.11. It can be seen from the table that there was a significant increase in area irrigated, by about 76 per cent. The highest increase in area irrigated was recorded from Amravati district and the lowest was in Buldhana. Overall, due to this scheme, there was an increase in

irrigated area, which obviously must have helped the selected households to increase the output as well as income from agriculture.

Table 4.11: Increase in Irrigated Area under Minor Irrigation Scheme

District	Average Irrigated Area (ha.)			% of farmers benefited through intervention*
	Before package	After intervention	% increase	
Yavatmal	1.32	2.16	63.64	80.0
Amravati	1.48	3.20	116.22	100.0
Buldhana	1.86	2.84	52.69	100.0
Total	1.55	2.73	75.97	93.33

Notes: * Increase in irrigated area

Source: Field survey data.

In Kerala, this relates to the allocation of ₹ 70.03 crore as loans. Allocation for the first year has not been done. In all, 132 projects have been sanctioned for the development of minor irrigation and ₹ 6.65 crore distributed against RIDF during the last three years (Raj Kumar *et al*, 2010). 120 acres of land was irrigated by tanks before the intervention in Wayanad and this area continued under irrigation in the year of 2009. A similar extent was also under irrigation in the district of Palakkad whereas in Kasaragod it was just about 60 acres. It is heard from the farmers that some 292 acres are still under irrigation from the tanks - 90 acres in Wayanad and 202 acres in Kasaragod districts.

The Chief Engineer, Irrigation, has reported that the Project report for 75 schemes amounting to ₹ 1,960.88 lakh has been cleared by NABARD under RIDF XIII and the Government has also accorded administrative sanction to the above works. Over and above, the works sanctioned by NABARD in Palakkad District, investigation estimate for 30 check-dams has been approved by the Chief Engineer, I & D (IDRB), and these investigation works have been tendered by the Executive Engineer, MI Division, Palakkad. Detailed project report of the above schemes will be submitted after investigation. Detailed project report of 25 schemes amounting to ₹ 885.49 lakh as per the current schedule rate has been submitted to the Government for obtaining sanction. 55 projects were sanctioned and ₹ 3.40 crore disbursed under RIDF as per the report of NABARD (Rajkumar, R. *et al* 2010).

Under the prime minister's relief package for farmers in suicide-prone districts, a loan for minor irrigation was provided from the Rural Infrastructure Development Fund XIII of NABARD. The benefits from development of minor irrigation are shared by the community as a whole. In Andhra Pradesh, work on minor irrigation projects is not initiated in any of the identified districts, whereas in Karnataka and Kerala, most of the works under the minor irrigation component of PM's package were in various stages of completion. The actual benefits (expansion of irrigated area, quantity and quality of irrigation water supply, etc) from these programmes cannot be ascertained at this point of time. However, the respondents from the identified districts of Maharashtra have reported that the minor irrigation projects facilitated augmentation of area under irrigation.

4.10 Major and Medium Irrigation

The ongoing major and medium irrigation projects in the distress-affected districts were given thrust under the PM's Relief Package. In Karnataka, a total of 15 projects in 3 districts were being assisted by the Centre under Accelerated Irrigation Benefit Programme (AIBP). The Department of Irrigation, Government of Karnataka, spent ₹894.232 crore on development and completion of major and medium irrigation projects in the identified districts. However, the government has released only ₹246.33 crore, accounting for 27.5 per cent of the total expenditure incurred after the PM's package was announced (Table 4.12).

Table 4.12: Progress of Major and Medium Irrigation Projects under PM's Package in the Selected Districts of Karnataka* (₹ in Crores)

Districts	No of Projects	Total Est Cost	Balance at the Time of approval of Package	Alloca-tion for 2008-09	Progress* *	Grant Relea-sed by the centre	Physica Progress Ha
Major							
Hassan	2	4317	371.18	73.1	341.64	0	16,771
Belgaum	5	4,529.87	1,241.84	409.7	389.466	246.04	34,388
Total	7	8,846.87	1,613.02	482.8	731.106	246.04	51,159
Medium							
Hassan	4	344.75	69.6	33.15	20.592	0.29	2,084
Belgaum	2	361.97	329.75	72	142.58	0	0
Chitradurga	1	4	4	0.5	0	Nil	0
Total	7	710.72	403.35	105.65	163.172	0.29	2,084

G Total	14	9,557.59	2,016.37	588.45	894.278	246.33	53,243
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Source: Department of Water Resources (Medium and Major Irrigation)

Note: * Details about Medium and Major irrigation projects in sample districts of Kerala and Maharashtra are not available

** Progress up to 30-09-2008, Expenses after announcement of the Package

Among the selected three districts of Guntur, Anantapur and Warangal of Andhra Pradesh, major and medium irrigation works were undertaken only in Warangal district. Minor Irrigation works were not undertaken in any of the three selected districts.

4.11 Participatory Watershed Programme

Under this package, three components, namely, Participatory Watershed Development, construction of check-dams and Rainwater Harvesting were being implemented from the Watershed Development Fund (WDF) of NABARD. The participants involved in the programme included the Watershed Community, the Central and State Government departments, banks, agricultural research institutions, NGOs and NABARD. The entire financing for check-dams and rainwater harvest was provided by the Ministry of Finance in the form of grants and loans (50 per cent grant and 50 per cent loan). The Participatory Watershed Development programme is funded by NABARD under RIDF and is being implemented through NGOs in most of the places.

It was observed that in Andhra Pradesh, on an average 2.16 hectares of land per beneficiary household were treated by watershed (Table 4.13). Twelve farm-ponds were dug to conserve rainwater and bring more area under irrigation by the selected sample households. Though 24,000 check-dams were planned under the relief programme, no check-dam construction was reported by the sample farmers. Warangal district reported more expenditure in the construction of farm-ponds (₹26,400 average) than the other two districts. On an average, ₹ 8,572 was spent by sample farmers for farm-ponds. Total average cost was ₹ 18,055. All the beneficiary farmers agreed that the scheme would benefit them in increasing the irrigated area and help them realise higher yields.

Table 4.13: Land treated under Watershed programme and Water- harvesting Structures Constructed on sample farms in Andhra Pradesh

District	Av. Area covered (ha)	Water harvesting structure constructed		Cost of farm pond and check dam (₹ pond/check dam)	Av. Own contribution (₹ pond)	% of farmers think it would benefit them (Y)	Any check-dam constructed near farm	Benefits from Programme
		Av. Farm ponds (No.)	Av. Check dam (No.)					
Ananthapur	4.29	1.00	0.00	15,764	2,053	100	0	Increase in area irrigated
Guntur	0.57	0.60	0	12,000	6,000	100	0	Increase in area irrigated
Warangal	1.62	0.80	0	26,400	17,664	100	0	Increase in area irrigated
Avg.	2.16	0.80	0.00	18,055	8,572	100	0.00	Increase in area irrigated

Source: Field Survey Data.

In Karnataka, the watershed development programme has not been implemented and hence no progress is reported on this component against the proposed area to be covered in the 3 districts (Table 4.14). The reason given was non-availability of guidelines and non-approval of the programme by the funding agency, i.e., NABARD. After two years, the government directed them to follow the Sujala watershed guidelines. As a result, steps were taken to identify the area (Sub watershed and Micro Watersheds), and the NGOs. As per the information made available, a substantial amount (₹ 40 lakh each in Shimoga and Chitradurga Districts) was spent on training the NGOs, creating awareness, community mobilisation. Except this, nothing else was done. It was surprising to learn that the NGOs which were already trained and implementing the programmes elsewhere in the district had been involved again; this being the situation, spending a huge amount again on training NGOs would amount to waste of resources. It was proposed to construct 500 check-dams / year/ district along with 1,000 rainwater harvesting structures. However, no progress was witnessed in any of the districts except some targets each year.

Table 4.14: Watershed Development in the Selected Districts of Karnataka under PM Relief Package Project (Sujala-II)

₹ in Lakhs

District	Belgaum	Chitrdurga	Hassan	Total
No of Taluks	10	6	8	24
No of Sub Watersheds	10	6	15	31
Basin	Krishna	Krishna	Cauvery	
Area ha	32,653	21,887	32,000	86,540
No of Micro Catchments	67	43	68	178
No of Villages	84	68	255	407
RIDF 80%	3,134.69	2,101.15	3,072	8,307.84
State	783.67	525	768	2,076.67
Total	3,918.36	2,626.44	3,840	10,384.8

As mentioned earlier, three components were included in this scheme, namely, participatory watershed development, construction of check-dams and rainwater harvesting. The construction of check-dams was taken up in Maharashtra, which was funded by NABARD under RIDF. The land treated under watershed programme and water harvesting structure constructed in sample household farms are presented in Table 4.15. It can be seen from the table that on an average 1.75 ha (altogether more than 26 hectare) land was treated under watershed. Totally eight farm-ponds, three check-dams were constructed on the farms and four check-dams were constructed near the farms of the sample households. About ₹ 37,073 average expenditure was incurred on construction of one farm-pond/check-dam in selected areas and an average amount of ₹ 11,282 was contributed by the sample households. Out of the total farmers, only 40 per cent farmers anticipated that the scheme would benefit them. However, farmers also opined that the area under irrigation would increase due to construction of check-dams on the farms/near the farms.

Table 4.15: Land treated under Watershed Programme and Water Harvesting Structure Constructed - Maharashtra

District	Av. Area covered (ha)	Water harvesting structure constructed			Cost of farm pond and check dam (₹/pond/check dam)	Av. Own contribution (₹/pond)
		Av. Farm ponds (No.)	Av. Check dam (No)	Av. Check dam Near the farm (No)		
Yavatmal	1.56	0.4	0.4	0.2	24,952	3,500
Amravati	2.24	0.2	0.2	0.6	27,500	13,500
Buldhana	1.44	1	0	0.0	50,600	16,620
Total	1.75	0.5	0.2	0.3	37,073	11,282

Source: Field survey data.

Watershed development programmes are being implemented under the PM's package in all the identified districts. In addition to participatory watershed development, it includes construction of check-dams and also rainwater harvesting structures. Soil and water conservation under watershed programmes as well as impounding water through check-dams and rainwater harvesting structures improves groundwater recharge and in situ moisture conservation, which ultimately leads to higher productivity.

4.12 Proportion of households benefiting from more than one scheme

As we know, the PM's package consisted of different schemes or components, such as credit component (re-scheduling of loan, interest waiver and provision of fresh loan), ex-gratia payment to meet contingency expenses on education or health care; distribution of subsidised certified seed; supply of sprinkler / drip irrigation sets; livestock (supply of milch animals, grants for calf-rearing, provision of feed and fodder, artificial insemination, animal health care, etc); development of fishponds and supply of quality seed; different programmes under NHM; provision of extension services; and development of minor, medium/major irrigation in the selected districts. The farm families opted for one or the other scheme or a combination of schemes/programmes under the PM's package. For example, a few farmers received subsidised certified seeds

as well as sprinkler / drip irrigation sets while others got benefited under the credit component, like waiver of interest amount and rescheduling of overdue loans and also benefited under NHM package and assistance from animal husbandry department for purchase of milch animals.

It was observed that most of the farmers in the suicide-prone districts benefited from one or the other scheme under the PM's package. Some farmers got benefit from two schemes and a few others even from more than three schemes. It can be seen from Table 4.16 that only 26 per cent of the households from Chitradurga district benefited from two schemes as against 43 per cent of the households from Belgaum and Hassan districts. Similarly, about 34 per cent of the households from Belgaum and 17 per cent of the households from Hassan benefited from 3 or more programmes/schemes under the PM's package as against just 3 per cent of the households from Chitradurga district. A majority of the farmers benefited from credit component (re-scheduling of loan, interest waiver and provision of fresh loan) followed by supply of subsidised certified seeds. The number of beneficiaries of the fisheries component was the least. On the whole, 45 per cent, 37 per cent and 18 per cent of the households benefited from one, two and more than two schemes respectively. Farmers owning more land were found to have availed of more than one scheme or programme under the PM's package.

Table 4.16: Beneficiaries by Number of Schemes Availed and Average Size of Holdings in the Selected Districts of Karnataka

No of Schemes	Belgaum		Chitradurga		Hassan		All	
	HH	Area	HH	Area	HH	Area	HH	Area
1	23	4.99	71	4.68	40	5.69	45	5.03
2	43	6.39	26	9.78	43	5.78	37	6.94
3	34	11.3	3	32.5	17	8.58	18	11.56
All	100	7.75	100	6.79	100	6.22	100	6.92

Although the assistance under the PM's package commenced from September 2006, most of the programmes/schemes were finalised and initiated from 2007 onwards. The direct assistance provided to farm households, like supply of certified seeds which resulted in 7 to 10 per cent increase in the yield levels, and supply of

sprinkler and drip irrigation sets, were appreciated by the beneficiary farmers. The provision of subsidy for purchase of milch animals and support for rearing of calves by providing assistance for feed and concentrate also helped the distressed farm families to improve their income levels. The same holds true in the case of NHM schemes and Extension services. However, the impact of investment made on development of minor, medium and major irrigation projects would take some time as the modernisation of minor irrigation structure was still in progress during our field visits.

4.13 Any other Government Programme

After having information about the benefits availed by the farmers under the PM's relief package, it would be important to have an idea about the other government programmes that have benefited the sample household families. It was observed in Maharashtra that about 47 per cent of households availed benefits of ration cards, 13.3 per cent availed benefits of dairy animal's scheme and 6.7 per cent benefited from the Janatha houses, old-age pensions and such other schemes (Table 4.17).

Table 4.17: Benefits availed from other government programmes by the selected farmer households

State	Government programme availed (% to total no. of households)							
	Dairy animals	Jana-tha house	Bhagyajoti/kutirajyothi	Free electricity for bore-well	Small ruminants	Old age pension	BPL Ration card	Other
Andhra Pradesh	0.91	31.82	0.00	20.00	0.00	26.36	81.82	0.00
Karnataka	3.7	12.36	6.74	37.64	2.25	1.69	33.71	2.25
Kerala	N A	N A	N A	N A	N A	N A	N A	N A
Maharashtra	13.3	6.7	0.0	0.0	0.0	6.7	46.7	6.7

Note: NA – Data not available

Source: Field survey data.

In Karnataka, 12 per cent of the households are beneficiaries of the Janatha housing scheme as against 32 per cent of the households from Andhra Pradesh. About one-fifth of the households from Andhra Pradesh and more than 37 per cent of the households from Karnataka benefited from free electricity for motor pumps used for

irrigation. The proportion of BPL card-holders is 82 per cent in Andhra Pradesh, 34 per cent in Karnataka and 47 per cent of the total households in Maharashtra.

Chapter V

Summary and Concluding Remarks

Although Indian agriculture has been facing a serious crisis since the late 1980s, it has assumed an alarming dimension since the middle of the 1990s. The diversification of agriculture from subsistence to commercial farming resulted in increased dependence on purchased (market) inputs. Increasing commercialisation of agriculture leading to increased use of purchased inputs, reduced profitability and lack of safety nets made things worse for the farming community as a whole. The slowing down and stagnation of agricultural growth has adversely affected the income and employment of a vast majority of rural people dependent on agriculture. Moreover, uncertain monsoon, presence of spurious inputs like seeds, fertilisers, plant protection chemicals, fluctuations in the production and imperfect markets have contributed to the distress and frustration of the farmers. The important manifestation of the crisis in agriculture was the stagnating, if not deteriorating, terms of trade for agriculture (GoI, 2007).

The agrarian distress reached a climax at the fag end of 20th century. One of the tragic manifestations of the crisis concerns a large number of suicides committed by farmers in some parts of India. In fact, the problem was so alarming that it attracted nationwide attention and generated frantic debates in the Union and state legislatures. The spiralling number of suicides in the past decade or so is clearly a symptom of agrarian distress and impoverished condition of farmers. Farmers' suicides have been receiving a lot of social and public policy attention. Suicides were mainly concentrated in Karnataka, Andhra Pradesh and Maharashtra. A large number of suicides were reported in Karnataka in the first three years of the decade starting 2000-01, while Andhra Pradesh had the maximum in 2004-05. In 2006, there was virtually a suicide epidemic in Maharashtra. These incidents raised serious questions about the state of the agrarian economy and the economic hardships faced by farmers.

The Prime Minister visited some parts of the Vidarbha region in Maharashtra and announced a rehabilitation package on July 1, 2006 with a view to mitigating the

distress of farmers in the identified districts. On September 29, 2006, the Union Cabinet approved the Rehabilitation Package for 31 identified districts in the states of Andhra Pradesh, Karnataka, Kerala and Maharashtra. The rehabilitation package aimed at establishing a sustainable and viable farming and livelihood support system through debt relief to farmers, complete institutional credit coverage, crop-centric approach to agriculture, assured irrigation facilities, effective watershed management, better extension and farming support services and subsidiary income-generating opportunities through horticulture, livestock, dairying, fisheries and other subsidiary activities. In order to alleviate the hardships faced by the debt-stressed families of farmers, ex-gratia assistance from the Prime Minister's National Relief Fund was also provided.

The Rehabilitation Package in these states is being implemented by the respective state governments through the state-level coordination and supervision committees, district-level committees and the Panchayati Raj institutions and local-level institutions and special purpose cooperative/community-based organisations. The basic objective of this study is to understand the ground reality as to whether the benefits of the package being implemented are reaching the intended beneficiaries because a number of complaints have been received from different quarters alleging misappropriation in the implementation of the package. **The specific objectives of the study are:**

- To explore whether the benefits of the package are reaching the intended beneficiaries,
- To assess the overall social and economic impact of the Rehabilitation Package, and
- To study the constraints involved in the implementation of the package and suggest improvement.

II. Methodology and selection of samples

The Prime Minister's Rehabilitation (Vidarbha) Package for farmers in the suicide-prone districts is being implemented in six districts each of Karnataka and Maharashtra, 3 districts of Kerala and 16 districts of Andhra Pradesh. To study the process of implementation of the PM's Rehabilitation package and get the feed-back from the beneficiaries of the programme, 3 districts are selected from each state. The districts

were selected on the basis of the highest cumulative suicide cases registered in the district in the past. Thus, Anantapur, Guntur and Warangal are selected from Andhra Pradesh; Amravati, Buldhana and Yavatmal from Maharashtra; Belgaum, Chitradurga and Hassan in Karnataka; and Kasargod, Palakkad and Wayanad from Kerala.

After selecting the districts, in the second stage, we selected one taluk in each district having the highest number of suicide cases (cumulative) registered during the last five years. There were 8 major schemes implemented by agriculture, horticulture, animal husbandry, irrigation and fisheries departments. Also, compensation for the families of the dead farmers and an ex-gratia payment from the PM's National Relief Fund were paid by the district collectors. The list of beneficiaries was collected from the line departments involved in implementation of the specific component of the package. Five households were selected randomly from the list of beneficiaries for eight major schemes or components of the package. Thus, the data were collected from 120 beneficiaries from three districts. Secondary data on various programmes and schemes being implemented under the PM's package in the districts were collected from the offices of the Joint Director, Agriculture; Deputy Director, Horticulture; other line departments, such as the departments of fisheries, animal husbandry, NABARD, Lead banks, Office of the executive engineer for major and minor irrigations; and nodal offices managing and monitoring the PM's rehabilitation package, such as Vasant Rao Naik Sheti Swalamban Mission (VNSSM) in Maharashtra, so on. The main findings and concluding remarks are presented here.

III. Overview of Prime Minister's Rehabilitation Package for Farmers in Suicide-Prone Districts of Andhra Pradesh, Karnataka, Kerala and Maharashtra

The Prime Minister's Rehabilitation Package includes both credit and non-credit components. Among the non-credit components, there are eight major schemes implemented by the agriculture, horticulture, animal husbandry, irrigation, and fisheries departments under the Prime Minister's Rehabilitation Package. Credit component has three sub-components, i.e., waiver of overdue interest, restructuring of overdue loans and disbursement of fresh loans. In addition to this, financial assistance up to ₹ 10,000

is provided for the distressed families to meet the contingency expenses for health, education, etc.

I. Ex-gratia Payment

The Government of India released ₹ 50 lakh per district to facilitate payment of ex-gratia amount to the families of distressed farmers for meeting contingent expenditure on health care and education needs of their children. The amount was disbursed by the district collector on the recommendation of the district committee. Utilisation (disbursal) of the ex-gratia payment varied from state to state, from district to district within the state and from beneficiary to beneficiary.

- ◆ Funds provided for payment as ex-gratia assistance under PMNRF were fully utilised by Andhra Pradesh and Maharashtra whereas Karnataka could use a little more than 59 per cent of the total assistance of ₹ 300 lakh received from the PMNRF. The Kerala government also utilised ₹ 144.5 lakh of the Rs 150 lakh grants meant for ex-gratia payment.
- ◆ Average assistance paid under ex-gratia payment ranged from ₹ 2,942 per beneficiary in Kerala to ₹ 10,000 per beneficiary in Andhra Pradesh.
- ◆ Belgaum and Chitradurga districts spent the entire amount of ₹50 lakh provided for payment as ex-gratia.
- ◆ In Hassan district, a sum of ₹10,000 each was paid as an ex-gratia amount to 91 families. On the contrary, the amount of ex-gratia payment varied from ₹ 2,000 to ₹ 10,000 per beneficiary in Chitradurga and Belgaum districts.
- ◆ Beneficiary families of ex-gratia payment sought more and continuous assistance to meet health care and educational expenses.
- ◆ It was observed that a good number of better-off farm families also availed themselves of the benefits under the ex-gratia payment scheme.

II. Credit Component

The Prime Minister's Rehabilitation Package includes both short-term and medium-term measures. The credit component includes waiving of the entire interest on overdue loans as on July 01, 2006, rescheduling of overdue loans over a period of three

to five years with a one-year moratorium, and provision of fresh credit by the banking system. All the farmers had no past interest burden as on that date. Thus, they were immediately eligible for fresh loans from the banking system.

- ◆ The burden of waiver of overdue interest is to be shared equally by the Central and state governments. The support for waiver of overdue and penal interest from the Central government was in the form of grants.
- ◆ Interest waiver component under the PM's Rehabilitation Package was implemented during 2006-07 and 2007-08 in all the four states.
- ◆ Actual interest waived is more than the over-due interest to be waived (estimated over-due interest) in case of Karnataka and Maharashtra, whereas the overdue interest actually waived was less (60 per cent) than the estimated overdue interest in Kerala.
- ◆ The actual loan amount rescheduled as well as the number of accounts benefited due to rescheduling of loans are higher than the estimated overdue loan amount as well as accounts in both Karnataka and Maharashtra.
- ◆ In Andhra Pradesh, over-due agriculture loans were estimated to the tune of ₹ 15149.61 crore borrowed by 87,43,184 borrowers. However, the actual amount of overdue loans rescheduled was ₹ 5,028.45 crore benefiting 35,54,332 farmers from 16 distress-prone districts of Andhra Pradesh.
- ◆ Interest waived on loans from cooperative banks and RRBs accounted for 52 per cent of the total interest waived in Maharashtra and Kerala, about 37 per cent in Andhra Pradesh and 30 per cent in Karnataka.
- ◆ The progress in rescheduling of loans from cooperatives and commercial banks was found to be slow as farmers were not eager to reschedule their loans in anticipation of loan waiver.
- ◆ None of the farmers interviewed from the selected districts in Karnataka was aware of either the overdue interest waived off or the principal amount due.
- ◆ In Karnataka, most of the farmers were reluctant to borrow after getting their overdue loans rescheduled expecting the government to waive off the entire loan amount.

III. Seed Replacement

- ◆ In order to provide immediate assistance for the farmers, a massive seed replacement programme was launched with 50 per cent subsidy in the identified districts of 4 states. The total allocation for seed replacement programme was ₹830.10 crore for all the 4 states over a period of three years.
- ◆ The selection of crop varieties / seed varied depending on the cropping pattern prevalent in the district. The quantity allocated for each crop was in accordance with the importance of the crop in the respective districts.
- ◆ Under the special package, benefit of 50 per cent subsidy on certified seeds was extended to all farmers with up to one hectare. All the three districts in each state utilised the allocated budget for seed replacement.
- ◆ The quantum of subsidised seed distributed as well as the amount of subsidy varied across identified districts in all the states.
- ◆ The allocation made for distributing subsidised seed was fully utilised by Andhra Pradesh, Maharashtra and Kerala. However, the Government of Karnataka could spend less than 30 per cent of the allocation made for seed distribution.
- ◆ Anantapur district in Andhra Pradesh shared the highest share of 32.59 per cent (9,34,119 quintals) of subsidised seed and accounted for 31.73 per cent (₹ 149.19 crore) of the total subsidy provided for seed distribution under the PM's package in Andhra Pradesh.
- ◆ Farmers from Karnataka expressed dismay over the delay in supply of seeds and the process of distribution at the Raitha Samparka Kendras. It was due to large crowds of farmers jostling to collect seeds at the distribution centres.
- ◆ All the beneficiary farmers opined that the certified seeds contributed to 10 to 17 per cent increase in the yield levels.
- ◆ It was also observed that a few small and marginal farmers had purchased the subsidised/certified seeds from the Raitha Samparka Kendras (in Karnataka) and sold the same to others, probably to large farmers at some premium.

IV. Micro-Irrigation

- ◆ All the selected districts in the four states are covered under the scheme of micro irrigation. The programme was targeted to cover 9.09 lakh hectares area in all the

identified districts under drip and sprinkler irrigation, involving an investment of ₹ 801.53 crore over a period of 3 years.

- ◆ The major objective of the micro irrigation programme was to reduce the wastage of irrigation water, improve the water use efficiency and thus bring in more area under irrigation to improve the productivity and production of crops in the identified districts.
- ◆ The Departments of agriculture and horticulture distributed drip and sprinkler irrigation sets to the farmers with varying levels of subsidy.
- ◆ Most of the farmers purchased sprinkler sets covering an area ranging from 0.5 ha to 2 hectares.
- ◆ Andhra Pradesh had provided ₹ 660 crore for the development of micro irrigation in 16 districts during 2007-08 and 2008-09. A total of 2,22,636 hectares was brought under micro irrigation. Nalgonda district received the highest share (44.45%) in the total expenditure and also shared 40.47 per cent of the total area brought under micro irrigation during 2007-08 and 2008-09.
- ◆ The Government of Kerala could use very negligible amount, i.e., ₹ 1.06 crore of the total ₹ 6.36 crore released by the Government of India. The actual area covered under micro irrigation is 1,592 ha, of which 1094 ha is covered by drip irrigation and 498 ha under sprinkler irrigation. Palakkad district shared the maximum (77 per cent) of the total area under micro irrigation as well as the subsidy (76 per cent) of the total provided under the PM's rehabilitation package for 3 districts of Kerala.
- ◆ The Government of Karnataka spent ₹ 24.89 crore i.e., 74 per cent of the released amount whereas the Government of Maharashtra could utilise ₹ 103.32 crore accounting for 92 per cent of the total amount released till March 2009.
- ◆ The area covered under drip and sprinkler irrigation ranged between 1,552 ha in Kerala and 92,061 ha in Maharashtra.
- ◆ Selection of drip or sprinkler irrigation system was largely determined by the crops brought under irrigation. Drip irrigation system was preferred in Kerala where plantation crops dominate the cropping system.

V. Extension Services

- ◆ Effective and efficient extension service plays a key role in empowering the farmers. Hence, strengthening of extension services was one of the components of the PM's package. It was decided that the farmers would be provided extension support at the village level and convergence at the district level through Agriculture Technology Management Agencies (ATMA) of all the districts.
- ◆ The activities include training programmes, seminars and workshops, visits to demonstration fields and research stations, and study tours of the farmers for exposing themselves to new farming systems and technologies.
- ◆ The expenditure on extension services has been increasing since the inception of the PM's Package. Though the Government of India released ₹ 26.52 crore, the Government of Andhra Pradesh could spend ₹ 12.13 crore till June 30, 2008.
- ◆ Extension activities under ATMA were being carried out in only two (Hassan and Shimoga districts) of the six selected districts of Karnataka during 2006-07. The action plans and activation of ATMA programme were initiated in the remaining 4 districts, i.e., Kodagu, Chikmagalur, Chitradurga and Belgaum during 2007-08.
- ◆ The total allocation for extension programme under the PM's package was ₹ 3 crore each for Maharashtra and Karnataka and ₹ 1.50 crore for Kerala.
- ◆ The Government of India had sanctioned a grant of ₹ 1.5 crore for strengthening extension activities in 3 districts of Kerala and released ₹1.17 crore till June 30, 2008 (concept note and proposal sent by MoA).
- ◆ The department of agriculture, Government of Karnataka, has used a little more than ₹ 2 crore against the release of ₹ 2.99 crore by the State Government. The funds were used to conduct training programmes for the farmers, technology demonstration and for arranging exposure trips to research stations and agricultural universities for the benefit of farmers.
- ◆ In Maharashtra, ₹ 10.44 crore was spent by ATMA for various activities against the release of ₹ 11.50 crore by the State Government. Most of the funds released for extension in Maharashtra were spent on strengthening of Self-Help Groups.

VI. Subsidiary Income Generating Activities

a) Animal Husbandry

- ◆ In order to support the subsidiary income activities of the farmers, schemes relating to livestock and fisheries were included in the PM's Package. The package included components like supply of high-yielding animals, calf-rearing, feed and fodder supply, animal health care, setting up of bulk milk-chilling plants, fodder block-making units, provision of breeding services and estrus synchronisation, etc.
- ◆ The Government of Andhra Pradesh released ₹ 195.00 crore as against the Central grants of ₹ 188.00 crore for subsidiary activities under the PM's package over a period of three years beginning 2006-07. However, the animal husbandry department of Andhra Pradesh, an implementing agency of the package, could spend ₹ 139.02 crore on various components of the package till March 2009.
- ◆ Thus, the actual expenditure accounted for roughly 74 per cent of the total allocation for livestock and dairy package approved for Andhra Pradesh.
- ◆ The Government of Karnataka received total grants of ₹ 92.53 crore and the Central Government released ₹ 57.58 crore towards implementation of the package.
- ◆ In Karnataka, Livestock Development Agency along with Karnataka Milk Federation (KMF) has been implementing the programme. The State Government released ₹ 25.48 crore to KMF. However, KMF could spend only ₹ 20.66 crore on implementation of the package in Karnataka. Thus the Government of Karnataka could spend roughly 36 per cent of the total grants released by the Central Government.
- ◆ In Kerala, the total allocation for livestock package was ₹ 46.12 crore, of which ₹ 42.52 crore was released for implementation of various activities of the component.
- ◆ The implementing agencies, Kerala Livestock Development Board, Department of Animal Husbandry and Malabar Cooperative Milk Producers' Union, utilised almost 78 per cent (₹ 33.39 crore) of the grants released by the Central government for livestock package till March 2009.
- ◆ In case of Maharashtra, initially, the total package involved a total investment of ₹ 98.87 crore in six districts over a period of three years. The total amount spent on various components amounted to about ₹ 49.00 crore as against the release of ₹ 50.98 crore. The total expenditure actually incurred accounts for 96 per cent of the total release from 2006-07 through 2008-09.

b) Fisheries

- ◆ Development of fisheries was also identified as one of the subsidiary activities under the Prime Minister's package. The programme envisaged development of fishponds in 100 hectares per district by providing 40 per cent of capital and input costs (the rest to be sourced through bank credit).
- ◆ The Government of Andhra Pradesh spent ₹7 crore for the development of fisheries in identified 16 districts during the last three years 2006-07, 2007-08 and 2008-09, and has constructed 699 ha of fishponds under the PM package.
- ◆ As far as Karnataka is concerned, an amount of ₹ 6.24 crore was earmarked for the fisheries developmental activities in 6 districts. The fisheries development programme in Karnataka took off only in February 2007.
- ◆ The Fisheries department in Karnataka could develop only 146.3 ha area under fishponds against the target of 108 ha incurring an expenditure of ₹ 1.264 crore during 2007-08 and 2008-09 taken together. Thus, Karnataka could achieve 90 per cent of the physical target by spending 76 per cent of the released amount.
- ◆ The Government of India allocated ₹ 3.33 crore under the PM's package towards development of aquaculture in 3 identified districts of Kerala. The Fish Farmers Development Agency (FFDA) was identified as the nodal agency for implementing the programme in Kerala.
- ◆ It was envisaged to develop 250 ha of fishponds during 3 years. ₹ 1.03 crore was released to FFDA during the first year of the programme in Kerala. FFDA utilised the entire amount to develop aquaculture on 180.4 ha of area.
- ◆ The Government of Kerala released the remaining ₹ 2.30 crore during 2007-08. However, area covered during the second year is not known as the scrutiny of applications as well as the survey of the area was in progress.
- ◆ In Maharashtra, allocation for fisheries component was meant for construction/repairs and renovation of fishponds and input subsidies. The total allocation for this component was ₹ 6.21 crore. However, only ₹ 23 lakh were released and of this ₹ 18.93 lakh only could be spent for the development/ repair of fishponds in the identified 6 districts of Maharashtra.
- ◆ A total of 91 fishponds covering 102.34 ha area were constructed and 91 farmers benefited by this scheme.

VII. National Horticulture Mission (NHM)

- ◆ The National Horticulture Mission (NHM) was launched with the objective of bringing a holistic and integrated development in the horticulture sector in the country. The NHM has been included as one of the components in the PM's package for development of horticulture in all the selected suicide-prone districts.
- ◆ Under the Prime Minister's Rehabilitation Package, a total amount of ₹ 452.78 crore was allocated and released among the four states, viz., Andhra Pradesh, Maharashtra, Kerala and Karnataka. The entire amount is a grant component.
- ◆ In Andhra Pradesh, the total outlay for horticulture development was ₹ 240.94 crore for the 16 identified districts. The Government of Andhra Pradesh spent a total of ₹ 161.12 crore on NHM projects in 16 identified districts against ₹ 133.25 crore (₹ 66.67 crore in 2006-07 and ₹ 66.58 crore during 2007-08 and 2008—09) released by the Government of India under the PM's relief package.
- ◆ The state received ₹ 484.47 crore under the NHM programme and utilised ₹ 408.55 crore accounting for 84 per cent of the total grants received from the Government of India.
- ◆ Among the 6 districts covered under the rehabilitation package in Karnataka, 4 districts, namely, Belgaum, Chitradurga, Hassan and Kodagu, were already covered under NHM. Shimoga and Chikmagalur districts were included afresh under NHM.
- ◆ An allocation of ₹ 106.15 crore was made for implementing NHM in the selected districts of Karnataka. The department of horticulture has spent ₹ 98.33 crore of the total ₹ 98.59 crore released by the Government of India till March 2009.
- ◆ The Government of India approved a grant of ₹ 46.33 crore for NHM activities in Kerala and the state government also supported the programme from its own funds.
- ◆ State Horticulture Mission (SHM) is the nodal agency for implementing the NHM programme in the state. A total of ₹ 40.70 crore was released till December 2008.
- ◆ In Maharashtra, five of the six identified districts were covered under the National Horticulture Mission (NHM). The remaining district, i.e. Buldhana, was included later under the mission. In Kerala, NHM is being implemented in all the three selected districts.

- ◆ In the case of Maharashtra, ₹ 225 crore has been sanctioned by the government towards NHM programme, and ₹ 115.26 crore (51.26 per cent) was received by March 31, 2009.
- ◆ Under the NHM scheme, new plantation of fruit perennials, floriculture, spices and aromatic plants have been taken up on 52,128 ha area since 2006. Also, 1,267 community water tanks were completed. Old and senile orchards in an area of 8,097 ha area are being rejuvenated.

VIII. Assured Irrigation

- ◆ Assured irrigation component accounted for nearly 60 per cent (57.35 per cent) of the total PM's package of ₹ 16,978.69 crore earmarked for the 31 districts from 4 states.
- ◆ Under minor irrigation component, construction of new tanks, modernisation of tanks, pickups and barrages, flood control works and Lift Irrigation Schemes were taken up.
- ◆ Andhra Pradesh had included 14 major and 11 medium irrigation projects in its 16 identified districts under the assured irrigation component of the PM package. Major Irrigation works were undertaken only in 10 districts during the period of the implementation of PMR Package.
- ◆ Against the targeted amount of ₹ 8,984.23 crore, an amount of ₹ 6,442.87 crore, i.e. about 72 per cent, could be utilised. Out of the total targeted amount by the Centre, (₹ 6,400 crores) the released amount is only 41.53 per cent during 2006-09.
- ◆ The Government of India sanctioned ₹ 1,208.71 crore comprising ₹ 725.24 crore as grants and ₹ 483.47 crore as loan under the special package for 17 major and medium irrigation projects in Karnataka.
- ◆ The Government of Karnataka had requested the Government of India to provide grants to the tune of ₹ 458.10 crore for carrying out minor irrigation projects also.
- ◆ The Government of Karnataka could not get financial assistance for minor irrigation from the Government of India and hence decided to raise a loan under RIDF. NABARD agreed to provide the loan for the development of 892 minor irrigation projects in the selected 6 districts over a period of three years.

- ◆ In Maharashtra, an area of 1.6 lakh hectares in the six identified districts was targeted to bring under assured irrigation facilities at a cost of ₹ 2,177.27 crore over a period of three years through completion of all major medium, minor irrigation projects.
- ◆ The assured irrigation project includes 8 major, 9 medium and 557 minor irrigation projects in the six districts of Maharashtra.
- ◆ Total funds of ₹ 2,679 crore were released, out of which ₹ 2,641 crore was utilised by March 31, 2009.
- ◆ The irrigation potential created was only 88,644 hectares (53 per cent) of the target of 1,67,871 hectares.
- ◆ In the case of Kerala, the Government of India provided a total of ₹ 105.03 crore over a period of three years for completion of all major, medium and minor irrigation projects in the 3 selected districts.
- ◆ Of the total amount sanctioned, ₹ 35 crore was meant for major irrigation projects and the balance of ₹ 70.03 crore for the development of minor irrigation.
- ◆ It was reported that project reports for 75 minor irrigation schemes amounting to ₹ 19.61 crore had been sanctioned by NABARD under RIDF XIII and NABARD had released ₹ 3.40 crore for 55 projects.

IX. Participatory Watershed Programme

- Drought-proofing is one of the important components of the PM's package for farmers in suicide-prone districts and hence watershed development programme was included in order to increase the production and productivity of crops.
- The scheme is subdivided into three sub-schemes, viz., check-dams, participatory watershed development programme and rainwater harvesting scheme.

A. Participatory Watershed Development Programme

- ◆ As per the package, ₹ 837 crore was provided as grants for implementation of participatory watersheds in the 31 identified districts of four states and the rest of the financial requirement was to be met from loans raised under RIDF from NABARD.

- ◆ It was envisaged that about 15,000 hectares per district would be treated under the participatory watershed development programme for which a grant support of ₹ 60 lakh per watershed of 1,000 hectare area each is provided.
- ◆ Andhra Pradesh received ₹ 432 crore as grants for the development of participatory watersheds in 16 identified districts. Similarly, ₹ 480 crore was allocated for construction of check-dams and ₹ 48 crore towards the Rainwater harvesting scheme.
- ◆ The NABARD has agreed to development 15,000 hectares area in each of the 16 districts under watershed development.
- ◆ Participatory Watershed Development programme covered an area of 4.83 lakh hectares with an expenditure of ₹ 4,756.26 crore as on 31st January 2010.
- ◆ The cumulative total area covered under participatory watershed management among the 16 identified districts ranged from 24,200 ha in Karimnagar district to 40,604 ha in Prakasam district.
- ◆ ₹ 162 crore was allocated for participatory watershed development under the Prime Minister's package for distressed districts of Maharashtra. About 90,188 ha area was treated under the participatory watershed development programme with an expenditure of ₹ 18.65 crore against the sanctioned amount of ₹ 54 crore, by May 31, 2009.
- ◆ In case of Kerala, a package of ₹ 81 crore was earmarked for participatory watershed development in 3 distressed districts. NABARD is supposed to provide ₹ 27 crore from RIDF in the first phase while the balance amount of ₹ 54 crore will be provided in the second phase.
- ◆ During the first phase, 15,000 ha are proposed to be treated in each district with an allocation of ₹ 9 crore each. However, as per the available data, ₹ 1.53 crore was spent to treat 15,600 ha of area under the participatory watershed development programme in the selected districts of Kerala.
- ◆ Implementation of participatory watershed development component using the SUJALA model was delayed as the Government of Karnataka had to seek permission from the Government of India to modify the watershed component to follow the SUJALA model in the suicide-prone districts of Karnataka.

- ◆ A sum of ₹ 162 crore is provided by NABARD for implementation of participatory watershed development in Karnataka. Under the RIDF XIII, 59 sub-watershed projects (331 micro watersheds) in the six distress districts of Karnataka were sanctioned for implementation by the Watershed Development Department (WDD), Government of Karnataka.
- ◆ The Government of Karnataka could spend ₹ 7.15 crore till the end of March 2009. Most of the expenditure relates to the advances disbursed to NGOs for capacity-building and plantation activities only. Land treatment and other field activities were not initiated till March 2009.

B. Construction of Check-dams

- ◆ Construction of check-dams is one of the components of the package and ₹ 930 crore was provided as loan by the Government of India.
- ◆ As per guidelines provided in the PM's Package, it was targeted that on an average 500 check-dams every year at an average cost of ₹ 2.0 lakh per check-dam will be constructed in each district over three years.
- ◆ Check-dams provide benefit of irrigation for the farmers. This is a project to be run by the watershed community. Check-dams are constructed at the end of the Watershed to impound the excess water after allowing water to seep into the aquifer through the entire course of the drainage line of the watershed.
- ◆ Under the PMR package, the total allocation for Andhra Pradesh is ₹ 480 crore and the entire amount is a loan component. The Government of Andhra Pradesh has planned for 24,000 check-dams during 2007-08 and 2008-09 at an average cost of ₹ 2 lakh per check-dam to be constructed in 16 identified districts over three years period.
- ◆ No amount has been spent so far during this period. The Government of Andhra Pradesh has sought funds under RIDF over and above the annual allocation for executing check-dams under the PM's Package.
- ◆ In Karnataka, consequent to the fresh sanction for implementation of **SUJALA** model of watershed development, all previous check-dam projects sanctioned/kept in abeyance were withdrawn. It was decided that the funds allocated for check-dams (₹ 180 crore) would be utilised for the development of Participatory Watershed

Projects based on SUJALA watershed model wherein check-dam is one of the components of watershed development.

- ◆ The progress related to the construction of check-dams in Kerala is not clear. As per the report from AERC, Chennai, the estimated target under this component is to construct 500 check-dams per year district over three years.
- ◆ A total of 24 check-dam projects have been sanctioned and ₹ 2.44 crore disbursed under RIDF as per the report of NABARD.
- ◆ Accordingly, the Government has accorded 'in principle' sanction for the implementation of 90 project proposals for check-dams under the Special Rehabilitation Package for the farmers of distress affected districts, viz, Wayanad, Palakkad and Kasaragod, involving an amount of ₹ 82 crore.
- ◆ The Maharashtra government had set a target of constructing 9,000 check-dams in six districts over a period of three years. During the last three years, Maharashtra received a total amount of ₹ 180 crore towards construction of check-dams.
- ◆ Against the target of 9,000 check-dams in three years, 7,970 check-dams were constructed by 2008-09, with an expenditure of ₹ 162.53 crore.

C. Rainwater harvesting structures

- ◆ ₹ 93 crore were provided as subsidy for constructing rainwater harvesting structures to be shared by the Central and State governments equally.
- ◆ Rainwater harvesting scheme aiming at accelerated growth of irrigation potential for ensuring agricultural development of the SC/ST beneficiaries, including small and marginal farmers, was provided with 50 per cent back-ended capital subsidy along with 50 per cent bank loan, covering 1,000 beneficiaries a year in each of the identified district.
- ◆ Andhra Pradesh received ₹48 crore allocation for construction of rainwater harvesting structures under the package and the entire amount is a grant component. APSCCFDC will implement plans worth ₹22.61 crore and the balance of ₹ 25.39 crore will be shared by the Rural Development Department.
- ◆ No amount has been spent so far on the Rainwater Harvesting scheme in Andhra Pradesh (status as on 28th February 2009).

- ◆ In Karnataka, it was decided that an allocation of ₹ 18 crore made for construction of rain-water harvesting structures would be used for participatory watershed development programme along with ₹ 162 crore earmarked for the participatory watershed development programme.
- ◆ The State Government of Kerala received ₹ 9 crore allocation from the Central government for the implementation of the Rain Harvesting scheme in three identified districts in the state.
- ◆ The target is 1,000 structures per year per district for SC / ST, small and marginal farmers. Funds are yet to be released by the Government of India. The Government of Kerala is implementing another rainwater harvesting scheme called 'Jalanidhi' and requested NABARD for release of ₹ 9 crore as per the cabinet decision taken by the Ministry of Agriculture, Government of India.
- ◆ The Government of Maharashtra implemented the rainwater harvesting scheme aiming at accelerated growth of irrigation potential for ensuring agricultural development of SC/ST beneficiaries, including small and marginal farmers.
- ◆ The beneficiaries were provided 50 per cent back-ended capital subsidy along with 50 per cent bank loan, covering 1,000 beneficiaries a year in each of the identified district.

IV. Evidence from Field Survey

The total allocation under the PM's rehabilitation package was ₹ 16,978.69 crore comprising 10,579.43 crore as subsidies or grants and the remaining ₹ 6,399.26 crore as loan by the Government of India to the concerned state governments. It was observed in the earlier chapters from the secondary data that almost all the schemes under the PM's package were implemented in the identified districts with varying levels of achievements. As stated earlier, data are collected from 40 households each from 3 districts of Andhra Pradesh, Karnataka, Kerala and Maharashtra. Total sample size thus comprises 120 households from each state. The data are analysed and the findings are discussed and summarised below.

1. Awareness about the PM's Rehabilitation Package

- ◆ It was observed that people in the selected districts in Karnataka were more familiar with the term “VIDARBHA PACKAGE’ rather than the PM's Rehabilitation Package.
- ◆ A majority (40 per cent) of the households came to know about the PM's package through the government officials.
- ◆ In the case of Maharashtra, about 99 per cent of the total selected farmers received the information about the PM's relief package and the various schemes under it through the Gram Panchayats of the respective villages.

2. Ex-gratia Payment

- ◆ The Andhra Pradesh government disbursed ₹ 10,000 each as ex-gratia to distressed families to meet their contingent expenditure needs for health, education, etc. and utilised the full amount of ₹ 8 crore received from the Government of India.
- ◆ A total of 4,570 farm families from six districts in Karnataka received an ex-gratia payment amounting to ₹ 1.777 crore as of March, 2009.
- ◆ The total disbursement of ex-gratia payment ranged from ₹ 9.01 lakh in Hassan district to ₹ 50 lakh in Belgaum and Chitradurga from 2006 through 2009.
- ◆ In Karnataka, the average amount of ex-gratia payment disbursed ranged from ₹ 2,420 in Chitradurga district to roughly ₹ 10,000 per beneficiary in Hassan district.
- ◆ In case of Kerala, ₹ 1.445 crores is disbursed to 4913 farm families as ex-gratia payment. The average amount of ex-gratia payment per beneficiary varied from ₹ 2844 in Kasargod to ₹ 3003 in Wayanad.
- ◆ Collusion between local leaders and government officials was observed, during our survey of the study districts in the approval of beneficiaries for the payment of ex-gratia as many wealthy farmers also received ex-gratia payment bypassing the poor in Karnataka.
- ◆ In Maharashtra, entire amount of ₹ 3 crores provided to 6 District Collectors was disbursed to 3974 distressed families till the end of March 2008 itself.
- ◆ There are 2064 beneficiaries of ex-gratia payment in the 3 sample district and the ex-gratia assistance ranged from ₹ 6519 per beneficiary family in Yavatmal district to ₹ 8489 in Buldhana district.

3. Credit Components

- ◆ The Government of India provided ₹ 11,94.52 crore as loan to the Government of Karnataka to facilitate rescheduling of loans of distressed farmers in the 6 suicide-prone districts of Karnataka.
- ◆ The total loans rescheduled in Karnataka accounted for ₹ 1,868.06 crore covering 3,64,988 account holders by the end of March 2009.
- ◆ The Government of Karnataka waived off interest on agricultural loans to the tune of ₹ 639.75 crore benefiting 4,29,776 account holders from 6 districts under the PM's package.
- ◆ Most of the farmers, whose overdue loans were rescheduled, are not inclined to borrow fresh loans expecting waiver not only of the interest but also the principal amount they had borrowed in the past.
- ◆ A Manager of the Canara Bank reported that the recovery rate is around 40 to 45 per cent for fresh loans but it is less than 20 per cent in the case of rescheduled loans.
- ◆ ***There is a feeling among the farmers that those who repay promptly are 'penalised' as they do not get any benefit of either interest waiver or complete debt waiver, whereas those who do not repay loans get the benefits of waiver programmes.***
- ◆ During our field work, none of the farmers interviewed in our sample in Karnataka was aware of the outstanding debts. They were also not aware of either the overdue interest waived off or the principal amount rescheduled and annual instalment to be repaid.
- ◆ In Maharashtra, the average principal amount rescheduled varied from ₹ 13,500 per farmer in Buldhana district to ₹ 21,000 per borrower in Yavatmal district with an overall average of ₹ 16,733 per borrower in the three sample districts of Maharashtra.
- ◆ The overdue interest/ penal interest waived varied between ₹ 2,000 and ₹ 45,000 for individual beneficiary. The average interest waived per borrower ranged from ₹ 3,667 per borrower in Kasaragod to ₹ 6,429 per borrower in Wayanad district.
- ◆ About 70 per cent of the borrowers from 3 districts of Kerala benefited from interest waiver in the range of ₹ 3,000 to ₹ 6,000.

4. Seed Replacement

- ◆ The seeds of 14 major crops were distributed to the farmers in the 16 identified districts of Andhra Pradesh during 2006-09 on subsidy basis. The quantity allocated for each crop was in accordance with the importance of the crop in the respective districts.
- ◆ Among the total seeds distributed in the 16 districts, groundnut, Chickpea, maize and soybean together shared more than 95 per cent of the total quantity (28.66 lakh qtls) of seed and 84 per cent of the total subsidy (₹ 47,017.90 lakh) under the PM's package.
- ◆ In Anantapur district, 120 kg of Groundnut seed was distributed to each farmer. The farmers had to pay 50 per cent of the total cost of seed, i.e., ₹ 1,600, as their share and the remaining ₹ 1,600 was subsidy. Similarly, ₹ 248 was paid by the farmers in Guntur district for 24 kg of paddy seed. Maize was distributed in Warangal district at the rate of 20 kg per farmer at a subsidised cost of ₹ 140.
- ◆ The certified seed covered on an average 0.84 hectares of land. All these beneficiaries reported that the yields were good and the supplied seed was adequate.
- ◆ All the three identified districts in Karnataka utilised the allocated budget for seed replacement. It was observed that 69 per cent, 26 per cent and 31 per cent of the farmers from Belgaum, Chitradurga and Hassan, respectively, had purchased subsidised seeds supplied by the government.
- ◆ In Belgaum, farmers purchased, on an average, 36 kg of seeds covering a little over 1 hectare of area. In Chitradurga and Hassan districts, certified seeds could be planted on about 2 hectares of area. The subsidy amount per beneficiary farmer ranged from ₹ 185 in Hassan to ₹ 504 in Belgaum.
- ◆ **It was also observed that a few small and marginal farmers had purchased subsidised seeds from the Raitha Samparka Kendras and sold the same to others, probably to large farmers, at some premium.**

- ◆ Most of the farmers from identified districts in Karnataka reported that the use of certified seeds helped to raise the productivity of crops by 5 to 17 per cent.
- ◆ About 10 per cent of the farmers from Wayanad and an equal number of farmers from Palakkad benefited from the seed replacement scheme. Some farmers reaped the benefit of subsidy only once whereas a few twice or thrice.
- ◆ The area covered by subsidised seed ranged between 0.4 ha to 1.6 ha. Roughly 5 per cent of the beneficiary farmers from Wayanad and 7.5 per cent of the beneficiary farmers from Palakkad received an average subsidy of ₹ 50 per head.
- ◆ In Maharashtra, average quantity of subsidised seed purchased ranged from 76 kg per beneficiary from Yavatmal district to 196 kg per farmer in Amravati district. The average area covered by subsidised seed varied from 0.80 ha per farmer in Yavatmal to 2 ha per farmer in Amravati district. Soybean seed was the most sought after seed by the sample farmers.
- ◆ Farmers from Amravati district purchased larger quantity of soybean seed than those from Yavatmal and Buldhana districts. Wheat and gram seed was purchased by farmers from Buldhana district only.
- ◆ The seed purchased was adequate as per the need of all the selected farmers. Farmers reported increase in the yield levels with the adoption of certified seeds purchased from the agriculture department.

5. Micro Irrigation- Sprinkler/Drip irrigation

The scheme for development of micro irrigation was included as a component in the Prime Minister's Rehabilitation Package to improve the efficiency of irrigation water, resulting in increased per-hectare yield as well as the income of the farmer households.

- ◆ In Andhra Pradesh, the average area covered under micro-irrigation per beneficiary in Anantapur district was 5.50 hectares when compared with 1.59 ha in Guntur district and 0.68 in Warangal district. Horticultural and Vegetables crops are mainly irrigated by the drip and sprinkler equipment. Anantapur farmers received higher amount of subsidy when compared with other districts.
- ◆ Beneficiary farmers from the identified districts in Andhra Pradesh spent on an average ₹ 21,930 for the purchase of micro irrigation equipment. All the farmers

have expressed that more area came under irrigation and 87 per cent felt that they could go for double cropping.

- ◆ Department of Agriculture and Horticulture, Government of Karnataka had distributed drip and sprinkler irrigation sets to the farmers at 35 to 50 per cent subsidy.
- ◆ The sprinkler sets purchased cover an area ranging from 0.5 ha to 2 hectares.
- ◆ The subsidy provided for micro irrigation system was not uniform across the districts. The subsidy component accounted for 30.78 per cent of the total cost of sprinkler / drip set in Chitradurga as against 43.42 per cent of the total cost of micro irrigation unit in Hassan district. However, in absolute terms, it was the highest in Belgaum district.
- ◆ The performance of this scheme is poor in all the three districts of Kerala. Total area covered under drip and micro irrigation system in the 3 districts was 1,592 hectares. More than three-fourths of the area covered under micro irrigation under the PM's package is located in Palakkad district.
- ◆ As per the guide-lines, financial assistance to the beneficiary is limited to 50 % of the system cost subject to a maximum of ₹7,500 per ha. However, it was observed in Kasargod district that a few beneficiaries were granted subsidy less than 50 per cent of the unit cost, whereas others were granted more than the stipulated ceiling.
- ◆ **There also appears some bias against the suppliers of micro irrigation systems. The farmer beneficiaries who purchased micro irrigation systems from M/s. Raid Co (supplier of drip / sprinkler irrigation sets) were given 37 per cent subsidy whereas those who purchased irrigation sets from M/s. Vikas Agro were given 50 per cent subsidy on the total cost of drip/ sprinkler irrigation sets.**
- ◆ The scheme of development of micro irrigation in six districts of Maharashtra was sanctioned with the target of 53,400 hectares area to be brought under sprinkler and drip irrigation.
- ◆ It is observed that the beneficiary farmers from Maharashtra have invested on an average ₹ 13,000 and received ₹ 17,528 as subsidy for purchasing sprinkler or drip irrigation system.

- ◆ More than 93 per cent of farmers have opined that due to sprinkler and drip irrigation, the area under irrigation increased and 87 per cent of farmers mentioned that it helped them in expanding the area under double-cropping.

6. Extension services

Effective and efficient extension services played a key role in transferring public and private research findings and increasing production and productivity in agriculture and allied sectors in the past. Strengthening of extension services was one of the components of the PM's package. Therefore, under this scheme, an effective and efficient extension service mechanism was put in place in the identified districts for empowering the farmers. Agriculture Technology Management Agencies (ATMA) was operationalised in all the districts to ensure extension support and convergence at the district level.

- ◆ Eighty per cent of farmers in Anantapur district have said that they have attended crop demonstrations and all of them benefited from the programme. Similarly 60 per cent of Warangal farmers were exposed to extension programmes and 60 per cent of them reported that the programme was beneficial. However, no extension activity/programme was reported in Guntur district.
- ◆ It was observed that overall, 30 per cent of the sample households had attended crop demonstrations and only a handful (1 per cent) of the sample farmers benefited from exposure trips arranged by the department of agriculture. Similarly, roughly 2 per cent of the sample farmers attended a one-day training-cum-workshop on improved agricultural practices organised at the KVKs.
- ◆ In Kerala, it was proposed to establish 525 Farmer Counselling Centres at the existing Krishi Bhavans in Wayanad, 1,725 Centres in Palakkad and 750 centres in Kasaragod district. However, only 568, 163 and 269 Farmers Counselling Centres were established in Palakkad, Wayanad and Kasargod districts, respectively.
- ◆ Fourteen of the beneficiaries have confirmed that they have attended the counselling programme, with 5 per cent from Wayanad, about 6 per cent from Palakkad and a miniscule of them from Kasaragod. Only less than 1.0 per cent of the farmer beneficiaries have attended any exposure visit to research farms, for getting the demonstration to understand the nature of the problems.

7. Subsidiary Income-Generating Activities

7.1 Animal Husbandry

In order to augment / support the income of farmers, the livestock/dairy and fishery activities were included as Subsidiary Income-Generating Activities component in the PM's package. The package included components like supply of high-yielding animals, calf-rearing, feed and fodder supply, animal health care, setting up of bulk milk-chilling plants, fodder block-making units, provision of breeding services and estrus synchronisation, etc.

- ◆ The beneficiary household from Anantapur purchased on an average one milch animal as against roughly two milch animals by the beneficiaries from Guntur and Warangal districts,
- ◆ The beneficiaries on an average invested ₹ 27,267 on livestock either from their own funds or by borrowing through banks. For the construction of shed feed and animal-rearing the average subsidy comes to ₹ 26,840. The average annual income from dairy activity ranged from ₹ 17,400 per beneficiary in Warangal district to ₹ 29,000 in Guntur district with an average income of ₹ 24,533 for all the beneficiaries.
- ◆ A uniform physical target (of 1,417 beneficiaries) was fixed for all the three study districts of Karnataka to supply high-yielding milch animals. However, the achievement was found varying across the districts.
- ◆ In Belgaum district, 842 animals were purchased by August 2008, one animal each was supplied to 498 beneficiaries and a 2nd animal to 344 beneficiaries. In Chitradurga district, 1,044 beneficiaries were identified in the first year and 630 in the second year. However, 417 beneficiaries were given two animals each and 54 beneficiaries got just one milch cow. Similarly, 1,227 beneficiaries were identified and approved by the district committee.
- ◆ Average cost per animal ranged between ₹ 23,500 and ₹ 29,500 in the study districts.
- ◆ **Almost all the beneficiaries from Karnataka have reported that they have not received payments for purchase of feed and concentrate and for rearing calves. The average net income per annum from milch animals**

ranged between ₹8,200 per beneficiary household in Hassan district to ₹ 13,400 per beneficiary in Belgaum district.

- ◆ During our field work in Karnataka, we observed that some of the beneficiaries were either office-bearers of the milk cooperative society or had some connections with officials in the Karnataka Milk Federation or with officials from the department of animal husbandry.
- ◆ In Kerala, a little more than 15 per cent of the farmers have taken advantage of the animal husbandry and dairying component of the PM's package and they have purchased milch cattle and goats / sheep to the tune of ₹ 6.26 lakh, which may be split into ₹ 2.13 lakh for the Wayanad farmers, ₹ 1.45 lakh for the Palakkad farmers and ₹ 2.68 lakh for the Kasaragod farmers.
- ◆ The average income per household from dairy (sale of milk) is ₹ 20,572 for the Wayanad farmers, ₹ 14,150 for the Palakkad farmers and ₹ 12,900 for the Kasaragod farmers.
- ◆ Nearly 15 per cent of the farmer beneficiaries from Kerala have indicated spending a considerable sum on accessing the package; ₹ 8,700 for the Wayanad farmers, ₹ 4,100 for the Palakkad farmers and ₹ 4,350 for the Kasaragod farmers. The farmers interviewed have also hinted at some sort of bribe for accessing and obtaining the assistance and relief from the package.
- ◆ In case of Maharashtra, the selected sample households altogether purchased 20 animals (average 1.3 per household) and also received benefits such as health care for dairy animals. The animals purchased by the farmers were **cattle and bullock under the subsidy scheme.**
- ◆ The average cost per animal worked out to be ₹ 14,114. The beneficiary received about ₹ 6,147 as subsidy (44 per cent) and the remaining amount was invested by the farmer.
- ◆ The Government also provided subsidy for the farmers for construction of shed/feed/calf-rearing of about ₹ 10,851 per farmer household.
- ◆ The average net income from the livestock purchased was ₹ 3,860 per household, in which Buldhana district household income was the highest (₹ 7,400), and the lowest was in Yavatmal (₹ 1,380).

- ◆ Most of the farmers opined that the cattle purchased under this scheme could not sustain under hot climatic conditions of the regions and thus the milk productivity was affected.

7.2 Fisheries

Fishery or aquaculture is one of the components of subsidiary income activities suggested under the PM's package. The special package envisaged development of fisheries in 100 hectares per district by providing 40 per cent of capital and input cost and the rest was to be sourced through bank credit.

- ◆ In Andhra Pradesh, development of fishponds was encouraged in one hectare of land. The average cost of development of 1 ha of fishpond ranged from ₹ 1.30 lakh in Anantapur district to ₹ 2 lakh in Guntur and Warangal districts.
- ◆ On an average, each beneficiary in Guntur and Warangal invested ₹ 1,20,000 as against ₹ 50,000 by the beneficiaries from Anantapur on the development of 1 ha of fishponds.
- ◆ The beneficiaries received ₹ 80,000 as subsidy. The average income from fish cultivation ranged between ₹ 30,000 per beneficiary in Guntur district and ₹ 40,000 per beneficiary household in Warangal. The activity also generated 300 days of employment. Overall, the scheme was successful.
- ◆ In Karnataka, the average size of fishponds varied across the districts from 0.3 ha in Belgaum to roughly 1 ha in Hassan. The average expenditure incurred for development of fishpond ranged from ₹ 0.75 lakh in Belgaum district to ₹ 2.28 lakh in Hassan district. The average cost of construction of a fishpond is ₹ 2.30 lakh per ha. The average subsidy amount works out to ₹ 50,075 per beneficiary or ₹ 89,420 per ha.
- ◆ The supply of good fish feed was a constraint, adversely affecting the fish yield. On an average, the fisheries activity helped augment household income to the tune of ₹ 10,286; ₹ 22,222 and ₹ 8,200 in Belgaum, Chitradurga and Hassan districts, respectively.

- ◆ The better-off farmers and those who already had small tanks /ponds in and around their fields have availed the subsidy under the fishery component of the PM's Package. The farmers who constructed new ponds were rare.
- ◆ In Maharashtra, 91 fishponds (102.34 ha area) were constructed against the target of 101 ponds and 91 farmers benefited under this scheme. An amount of ₹ 621 lakh was allocated for the fisheries component, of which only ₹ 23 lakh was released and ₹ 19.93 lakh was actually utilised for the scheme.
- ◆ Among the 3 districts of Kerala, Palakkad received a maximum allocation of ₹ 52.44 lakh followed by Kasaragod (₹ 30 lakh) and Wayanad with ₹ 20.56 lakh during 2006-07. The districts have fully utilised the allocated amount.
- ◆ A total of 1,184 households from Kassargod and 454 from Wayanad and 214 from Palakkad benefited from the fisheries programme during 2006-07. The major activity taken so far is stocking of fingerlings.

8. National Horticulture Mission (NHM)

Over the years, horticulture has emerged as a sunrise sector having the potential to accelerate the growth of our agrarian economy. NHM was also included as one of the components under the PM's package.

- ◆ Andhra Pradesh received a total allocation of ₹ 75.30 crore under the PM's package for horticulture development in 16 suicide-prone districts of the state. The total outlay for horticulture development for 3 years was ₹ 240.94 crore.
- ◆ Under the PM's relief package, Sweet orange plants were distributed on subsidy in Anantapur district, whereas in Warangal, mango plantation was encouraged. In Guntur, banana plantations were encouraged by supplying plants and other inputs.
- ◆ The average area under horticulture crops was 3.24 ha, 0.51 ha and 0.84 ha in Anantapur, Guntur and Warangal districts, respectively. On an average, ₹ 66,833 was invested by each beneficiary farmer, of which ₹ 34,923 was subsidy provided under the NHM programme.
- ◆ A majority, i.e., 73 per cent, of beneficiaries were satisfied with the scheme and felt that additional employment and income was created by the scheme.

- ◆ In Karnataka, the total number of beneficiaries of the NHM programme varied from 17,144 in Chitradurga district to 43,580 beneficiaries in Hassan district during 2006-07 through 2008-09.
- ◆ Overall, the three districts taken together could cover only 55 per cent of the area target and could spend only ₹ 20.57 crore of the total target of ₹ 32.06 crore, accounting for 59 per cent of the aggregate financial target for 3 years.
- ◆ In Hassan district, most of the farmers availed subsidy for development of mango, banana and sapota plantations. Beneficiaries from Chitradurga and Belgaum districts used the assistance for expansion of area under plantation crops like pomegranate, banana and sapota and also for developing irrigation system.
- ◆ In Kerala, during the 3-year period (2006-07 to 2009), about 54 per cent of the total earmarked amount of ₹ 79.07 crore was released and 92 per cent of the released amount was utilised for implementing the various components under the horticulture mission
- ◆ Overall, 18 per cent of the farmers from the 3 identified districts of Kerala participated in the NHM programme. About 7 per cent of the farmers each from Wayanad and Palakkad districts benefited from NHM as against only 4 per cent of the farmers from Kasargod district.
- ◆ The farmer beneficiaries have contributed almost one-third of the total investment for the NHM programmes. The Wayanad farmers have invested on an average ₹ 35,000, whereas the farmers from Palakkad and Kasargod have invested ₹ 3,31,000 and ₹ 60,500, respectively.
- ◆ On an average two-thirds of the sample farmers benefited from the NHM in the study districts of Maharashtra. The average area under horticulture varied from 0.94 ha per beneficiary in Amravati to 1.24 ha in Buldhana.
- ◆ The distribution of beneficiaries of the NHM programme was uneven across the districts. It was observed that almost all the sample farmers from Yavatmal got benefit from NHM as against only 20 per cent of the sample farmers from Buldhana reporting participation in the NHM programme.
- ◆ The total investment for NHM-related activities was ₹42,300, ₹ 33,200 and ₹ 52,580 per beneficiary farmers from Yavatmal, Amravati and Buldhana districts, respectively.

- ◆ The average amount of subsidy ranged from ₹ 23,400 per beneficiary in Amravati to ₹ 34,300 in Yavatmal district. The average cost of documentation and other expenses was ₹ 2,580 per beneficiary.

9. Minor Irrigation

- ◆ In Karnataka, construction of new tanks, modernisation of tanks, pickups and barrages, flood-control works and lift irrigation schemes were taken up under this component. As many as 432 works were envisaged in the 3 selected districts.
- ◆ **About 80 per cent of these works were for modernisation of minor irrigation tanks followed by pickups and barrages (10.65 per cent) and Lift Irrigation Schemes (5.09 per cent). Most of these works were related to renovation and rehabilitation of already existing irrigation structures.**
- ◆ Modernisation of tanks received the highest priority among all the works under minor irrigation component and as many as 87 per cent of works in Hassan district, 68 per cent in Chitradurga and 48 per cent in Belgaum district were taken up under the minor irrigation component.
- ◆ It was observed that only 101 of the 432 minor irrigation projects could be completed during the past three years and the rest 331 were found in different stages of completion in the selected districts of Karnataka.
- ◆ The estimated cost per acre for creation of irrigation potential in the case of Belgaum district works out to ₹29,979 and ₹ 99,766 in the case of Hassan district. The average cost for three districts taken together is estimated at ₹58,804 for creation of 1 ha of irrigation potential.
- ◆ **The delay in completion of irrigation projects was on account of official procedures involved in inviting tenders, selection of contractors, issuing work orders, and so on.**
- ◆ **Since most of the works under the minor irrigation component of the PM's package were in various stages of completion, the actual benefits (expansion of irrigated area, quantity and quality of irrigation water supply, etc) from these programmes cannot be ascertained at this point of time.**

- ◆ Discussions with the farmers about the ongoing works of tank renovation under the PM's package revealed that the works being carried out are of poor quality (Kereyagalhalli tank in Holalkere Taluk, Chitradurga District) and the farmers had complained to revenue authorities against the contractor for using sub-standard or poor quality material used in the construction of bunds, sluice as well as main canals.
- ◆ Minor Irrigation works were not undertaken in any of the three selected districts of Andhra Pradesh. Major and medium irrigation works were undertaken only in Warangal.
- ◆ In Maharashtra, under the Accelerated Irrigation Benefit Programme (AIBP) and Rural Infrastructure Development Fund (RIDF), 8 major, 9 medium and 557 minor projects were included in the scheme.
- ◆ The development of minor irrigation under the PM's package resulted in augmenting irrigated area in the selected districts. The average area irrigated increased from 1.55 ha before implementation of the PM's package to 2.73 ha after implementation of the package.
- ◆ In Kerala, a total of 132 projects have been sanctioned for the development of minor irrigation and ₹ 6.65 crore distributed against RIDF during the last three years

10. Participatory Watershed Programme

Under this package, three components, namely, Participatory Watershed Development, construction of check-dams and rainwater harvesting were being implemented from the Watershed Development Fund (WDF) of NABARD. The participants involved in the programme included the Watershed Community, the Central and State Government Departments, Banks, Agricultural Research Institutions, NGOS and NABARD. The entire financing for check-dams and rainwater harvest was provided by the Ministry of Finance in the form of grants and loans (50 per cent grant and 50 per cent loan). The Participatory Watershed Development programme is funded by NABARD under RIDF and is being implemented through NGOs in most of the places.

- ◆ It was observed that in Andhra Pradesh, on an average, 2.16 hectares of land per beneficiary household were treated by watershed (Table 4.13). Twelve farm ponds

were dug to conserve rainwater and bring more area under irrigation by the selected sample households.

- ◆ Though 24,000 check-dams were planned under the relief programme, no check-dam construction was reported by the sample farmers.
- ◆ Warangal district reported more expenditure on the construction of farm ponds (₹26,400 averages) than the other two districts. On an average, ₹ 8,572 was spent by sample farmers for farm ponds. Total average cost was ₹ 18,055. All the beneficiary farmers agreed that the scheme would benefit them in increasing the irrigated area and help them realise higher yields.
- ◆ In Karnataka, the watershed development programme has not been implemented and hence no progress is reported on this component in the 3 districts.
- ◆ As per the information made available, a substantial amount (₹ 40 lakh each in Shimoga and Chitradurga Districts) was spent on training the NGOs, creating awareness and community mobilisation. Except this, nothing else was done.
- ◆ The construction of check-dams was taken up in the state of Maharashtra, which was funded by NABARD under RIDF.
- ◆ On an average, 1.75 ha (altogether more than 26 hectares) land was treated under watershed. Totally eight farm ponds, three check-dams on the farms and four check-dams near the farms of the sample households were constructed.
- ◆ About ₹ 37073 expenditure was incurred on an average on construction of one farm pond/check-dam in the selected areas and an average amount of ₹ 11,282 was contributed by the sample households for the same. Only 40 per cent of the farmers anticipated that the scheme would benefit them.

XI. Concluding Remarks and Suggestions

- ◆ State governments are implementing parallel programme along with the PM's rehabilitation package to assist distressed farmers in suicide-prone districts (with identical components). For example, some State Governments provide monetary compensation to the farm families whose member has committed suicide. A few states have also resorted to waiver of loan from cooperative societies, supplying seed with subsidy, promoting micro-irrigation and horticulture with subsidy,

construction of farm ponds, etc. The parallel implementation of state schemes along with the PM's package creates confusion among the beneficiaries. However, it was observed that most of the farmers in the suicide-prone districts benefited from one or the other scheme / component of the PM package. Some farmers got benefit from two schemes and a few others from even more than three schemes.

- ◆ The average amount of ex-gratia received by the beneficiary varied not only across the states but also within the state. In some districts, all the beneficiaries received ₹ 10,000 each as ex-gratia assistance whereas in other districts within the state it was around ₹ 3,000 per beneficiary. Hence, there is a need to provide guidelines for disbursement of ex-gratia payments. Collusion between local leaders and officials is also evident as some well-off farmers benefited from ex-gratia payment whereas poor households were left out.
- ◆ The credit component related to interest waiver scheme as well as rescheduling of principal amount was implemented during the years 2006-07 and 2007-08. Almost all the farmers who had overdue loans benefited from interest waiver scheme and the overdue principal is rescheduled for repayment in instalments over a period of 3 to 5 years. It was observed that many beneficiaries were not aware of the quantum of interest waived or the yearly instalments he/she had to repay. Very few borrowers opted for fresh loans. A manager from a nationalised bank reported that repayment of rescheduled loan is around 20 per cent as the borrowers expect complete waiver of loans. Many borrowers do not repay loans in anticipation of waiver of the loan. The policy should be to provide incentive for prompt repayment and penalty for default. The existing policy penalises the borrowers who promptly repay their loans. The government should not waive the loans of all the borrowers and should pursue the policy of selective loan waiver based on the socioeconomic condition of the borrower.
- ◆ Distribution of certified seeds with 50 per cent subsidy to the farmers in the identified districts is appreciated by all the farmers. This is one of the important components of the PM's package which helped farmers immensely. It was observed

that a few small and marginal farmers had purchased subsidised seeds from the Raitha Samparka Kendras (Karnataka) and sold the same to others, probably to large farmers, at some premium.

- ◆ Under the micro irrigation scheme, sprinkler and drip irrigation sets / equipments are supplied to the farmers at 35 to 50 per cent subsidy. The scheme is implemented by both the department of agriculture as well as the department of horticulture. It was observed that the subsidy amount received by the beneficiaries varied across the districts (Karnataka) as well as within the districts among the beneficiaries (Kerala). There is also an allegation that more subsidy is paid to the farmer if he / she buys a micro irrigation system from a particular dealer (Kerala). All the beneficiaries reported that the adoption of micro irrigation system has helped in efficient use of irrigation water leading to expansion in the irrigated area. There is a need to provide clear-cut guide-lines on the subsidy component, so that all the beneficiaries would get the same benefit without any room for leakages or corruption.
- ◆ Grants are provided under the PM's package to strengthen the extension services in the identified districts so as to accelerate the agricultural growth. Agriculture Technology Management Agencies (ATMA) is identified as the nodal agency in all the districts to ensure extension support and convergence at the district level. A large number of farmers benefited from the activities identified under the extension component in the 4 states, whereas very few farmers could make use of these in other states. Close monitoring of extension activities is necessary to achieve the desired goals.
- ◆ In order to augment / support the income of farmers, the livestock/dairy and fishery activities were included as subsidiary income-generating activities component in the PM's package. We have observed during the field visit that there are no clear guidelines to select the beneficiaries for subsidiary activities. It is expected that the small and marginal farmers should get the preference over others. However, we came across some cases (in Karnataka) where the beneficiaries of livestock package

are the office-bearers of either the village milk cooperative society or have some connections at the taluk or Zilla Panchayat offices.

- ◆ Though there is a provision in the package to provide assistance for feed and fodder for one year for milch animals and also for rearing a calf, none of the respondents has received the assistance (Karnataka). Periodic monitoring and surprise checks by the competent authorities are necessary to control the pilferage of funds.
- ◆ While farmers did receive subsidy to purchase high-yielding milch animals and also augmented their incomes from the sale of milk, they continued to face problems in getting fodder. The full potential of milk yield could not be attained due to heat stress and poor availability of fodder. It was felt that local breeds may be more suitable as they can sustain the heat and require less fodder.
- ◆ Small and marginal farmers benefited the least from the fisheries programme as the initial investment for development of fishponds is very high and the subsidy component is only 40 per cent. Availability of quality seed and infrastructure (availability of ice, transport, markets) are major constraints faced by the beneficiaries in the identified districts.
- ◆ Over the years, horticulture has emerged as a sunrise sector having the potential to accelerate the growth of our agrarian economy. NHM is being implemented in most of the identified districts. Most of the beneficiaries availed subsidies for purchase of micro irrigation equipments, plantation of fruit crops and rejuvenation of old orchards.
- ◆ The benefits from development of minor irrigation are shared by the community as a whole. In Andhra Pradesh, work on minor irrigation projects is not initiated in any of the identified districts, whereas in Karnataka and Kerala, most of the works under the minor irrigation component of the PM's package were in various stages of completion. However, the actual benefits (expansion of irrigated area, quantity and quality of irrigation water supply, etc) from these programmes cannot be ascertained

at this point of time. The respondents from the identified districts of Maharashtra have reported that the minor irrigation projects facilitated augmentation of area under irrigation. It was observed that the quality of civil work done in the process of rejuvenation/ rehabilitation of tanks under the PM's package in Karnataka was of poor quality and the farmers had complained to the authorities. It is suggested that the Gram Panchayat should have the authority to check and supervise the work related to minor irrigation under their jurisdiction.

- ◆ Watershed development programmes are being implemented under the PM's package in all the identified districts. In addition to participatory watershed development, they include construction of check-dams and rainwater harvesting structures. Further, the watershed development programmes involve soil and water conservation as well as impounding water through check-dams and rainwater harvesting structures to improve the groundwater recharge and *in situ* moisture conservation which ultimately leads to higher productivity.
- ◆ Out of these eight schemes, four schemes – distribution of certified seed at subsidised rate, Accelerated Irrigation Benefit Programme, Watershed Development Programme and Micro Irrigation scheme - aimed at increasing the area under irrigation. These schemes did increase the area under irrigation and improved the productivity of all major crops cultivated in the districts. Thus, irrigation projects have to be completed and watershed activities have to be further promoted so as to recharge groundwater. Only when protective irrigation is available, the farmers will be in a position to face the drought.
- ◆ Overall, the study concluded that farmers in the suicide-prone districts of the four states were aware of the PM's package and the department of agriculture, gram panchayats and others had given due publicity to this programme. Farmers had availed of relief measures such as interest waiver and rescheduling of loans and also subsidy under various schemes, which enabled them to be eligible for fresh loans and augment their incomes through subsidiary activities. However, their capacity to

cope with the drought conditions whenever monsoons failed was still weak and the PM's package through its multiple schemes had limited impact on this front.

Annexures

Annexure I

Progress in Implementation of the Package in Four States

The component-wise progress as on 30th June, 2008 (Concept Note provided by the Ministry of Agriculture)

Credit-related measures

(i) Debt relief to farmers (Re-schedule of Loans)

Name of the State	Target Amount (₹ in crore)	Loans rescheduled as on 31 st December, 2007	
		No. of Accounts	Amount (₹ in crore)
Andhra Pradesh	5,745.76	10,53,766	7,650.84
Karnataka	1,194.52	2,29,620	1,248.78
Kerala	815.53	N.A.	802.63
Maharashtra	1,296.00	9,33,000	1,384.38
Total	9,051.81	22,16,386	11,086.63

(ii) Interest Waiver (₹ in crore)

Name of the State	Overdue interest to be waived	Overdue interest waived
Andhra Pradesh	1,436.44	1,978.11
Karnataka	209.81	706.35
Kerala	360.00	218.93
Maharashtra	712.68	824.98
Total	2,718.93	3,728.37

(iii) Credit Flow

Name of the State	Target 2007-08	Disbursement as on 31.03.2008	(₹ in crore)	
			Target 2008-09	Disbursement As on 30.06.08
Andhra Pradesh	15,032.50	15,326.76	17,588.35	587.19
Karnataka	3,749.41	3,270.30	4,479.13	NA
Kerala	2,395.45	2,750.71	3,005.22	NA
Maharashtra	2,225.35	1,737.86	2,402.27	111.35

Total	23,402.71	23,085.63	27,474.97	698.54
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Note: The achievement data for 2008-09 relate to RRBs & cooperatives.

A. Assured Irrigation Facilities

I. Major Irrigation

(₹ in crore)

State	Allocation			Financial	Progress	
	Physical (No. of Projects)				Expenditure by State Govt.	Release by Gol
	Original Package	Additional	Total			
Andhra Pradesh	04	10	14	3,233.00	4,198.50*	1,995.25*
Karnataka	04	05	09	1,204.05	654.62*	323.08*
Kerala	-	01	01	-	-	2.72
Maharashtra	08	-	08	1,260.43	486.62*	637.94*
Total	16	16	32	5,697.48	5,339.74*	2,958.99

Notes:* including medium irrigation, Gol- Government of India

II. Medium Irrigation

(₹ in crore)

State	Allocation			Financial	Progress	
	Physical (No. of Projects)				Expenditure by State Govt.	Release by Gol
	Original Package	Additional	Total			
Andhra Pradesh	06	05	11	325.00	\$	\$
Karnataka	01	07	08	04.66	\$	\$
Kerala	01	04	05	35.00	-	-
Maharashtra	09	-	09	468.15	\$	\$
Total	17	16	33	832.81	-	-

Note: \$ Included in major irrigation.

III. Minor Irrigation

(₹ in crore)

State	Allocation under package		Progress (Expenditure)	
	Physical (No. of Projects)	Financial	Expenditure by State Govt.	Sanctioned by NABARD
Andhra Pradesh	932	2,231.00	232.06	265.28
Karnataka	897	458.10	-	232.19
Kerala	179	70.03	Nil	8.74
Maharashtra	557	448.68	323.38	187.52

Total	2,565	3,207.81	555.44	693.73
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B. Seed Replacement Programme

(₹ in crore)

State	Allocation Package Amount	Seeds supplied		Amount released during 2006-07 to 2008-09	Amount Utilized
		Agency	Qty (lakh qtls)		
Andhra Pradesh	470.18	A.P. State Seeds Dev. Corporation	16.07	278.87	278.87
Karnataka	178.00	NSC and Karnataka State Seeds Corporation	8.02	27.87	17.84
Kerala	1.92	-	0.10	1.92	1.92
Maharashtra	180.00	NSC /Maharashtra State Seeds Corporation	5.81	121.18	121.18
Total	830.10		30.00	429.84	419.81

D. Watershed Development

I. Check-dams

(₹ in crore)

State	Allocation under package		Progress	
	No. of check dams	Financial	Physical (No.)	Amount sanctioned
Andhra Pradesh	24,000	480.00	7,707	102.87
Karnataka	9,000	180.00	-	-
Kerala	4,500	90.00	23	12.26
Maharashtra	9,000	180.00	7,994	151.53
Total	46,500	930.00	15,724	266.66

Sanctioned by NABARD under RIDF

II. Watershed Development Programme

(₹ in crore)

State	Allocation under package	Progress
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	Physical (lakh ha)	Financial	Physical (lakh ha)	Amount sanctioned by NABARD
Andhra Pradesh	7.20	432.00	3.380	15.84
Karnataka	2.70	162.00	0.964	4.74
Kerala	1.35	81.00	0.156	1.53
Maharashtra	2.70	162.00	0.147	13.96
Total	13.95	837.00	4.647	36.07

Note: Amount Sanctioned by NABARD

III. Rain-water Harvesting Scheme

(₹ in crore)

State	Allocation under package		Progress	
	Physical (No. of beneficiaries)	Financial	Physical (No.)	Amount released by NABARD
Andhra Pradesh	4,800	48.00	Nil	-
Karnataka	18,000	18.00	-	-
Kerala	9,000	9.00	Nil	Nil
Maharashtra	18,000	18.00	295	5.40
Total	93,000	93.00	295	5.40

E. Horticulture Development

(₹ in crore)

State	Allocated amount under package	2006-07			2007-08 and 2008-09		
		Outlay	Release *	Exp\$	Outlay	Release *	Exp\$
Andhra Pradesh	75.3	93.92	66.67	67.74	147.0 2	66.58	96.38
Karnataka	106.15	55.03	44.54	36.15	54.47	53.23	22.63
Kerala	46.33	36.14	29.39	1.01	42.93	13.24	38.17 #
Maharashtra	225	60.8	46.88	26.86	69.98	4.29	15.95
Total	452.78	245.89	187.48	128.76	314.4	137.34	173.13

Notes: * Release by Government of India, \$ Expenditure by State Government, # Expenditure up to October, 2007, All the identified 31 districts have been included under NHM.

F. Micro Irrigation

(₹ in Crore)

State	Allocation under package	Progress
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	Physical (lakh ha)	Financial	Physical (lakh ha)	Amount released by Gol	Expenditure by State Govt.
Andhra Pradesh	8.00	640	6.11	137.52	163.8
Karnataka	0.43	64	0.085	16.09	25.68
Kerala	0.13	19.53	0.007	6.36	0.5
Maharashtra	0.534	78	0.485	57.8	68.76
Total	9.094	801.53	6.687	217.77	258.74

G. Extension services

(₹ in crore)

State	Amount Allocated under package	2006-07		(2007-08)		(2008-09)	
		Release*	Expn.\$	Release*	Expn. \$	Release*	Expn.\$
Andhra Pradesh	8.00	4.67	3.15	21.85	8.85	-	00.13
Karnataka	3.00	Nil	Nil	1.25	0.33	-	-
Kerala	1.50	1.17	-	Nil	-	-	-
Maharashtra	3.00	3.83	3.82	3.64	3.09	2.89	0.25
Total	15.50	9.67	6.97	26.74	12.2 7	2.89	00.38

Note: * Amount released by Government of India; \$ Expenditure by State Government

H. Subsidiary Income Activities

(₹ in crore)

State	Amount allocated under package	Amount released by Govt. of India	Expend. as on 30.06.08	Physical progress
Andhra Pradesh	263.63	123.35	59.52	<ul style="list-style-type: none"> ▪ 10,602 milch animals inducted and 4,050 calves enrolled. ▪ 21,00,000 animals covered under estrus synchronization. ▪ 4,19,369 AI carried out ▪ 22 BMC established. ▪ 312.73 ha. of ponds constructed ▪ Construction of 193 ha of ponds taken up.

Karnataka	98.87	35.33	12.85	<ul style="list-style-type: none"> ▪ 4,202 beneficiaries identified and 3,123 milch animals purchased and 953 calves enrolled. ▪ 10,09,747 AI carried out and estrus synchronization carried out in 26,332 animals. ▪ Orders placed for purchase of 10 bulk milk Coolers. ▪ 3,123 animals given health care. ▪ 14 ponds constructed.
Kerala	49.42	31.54	20.31	<ul style="list-style-type: none"> ▪ 2,552 milch animals inducted and 2,064 calves enrolled. ▪ 4,60,795 artificial inseminations carried out. ▪ 81 ha area developed.
Maharashtra	98.87	37.49	17.77	<ul style="list-style-type: none"> ▪ 11,987 milch animals inducted. ▪ 6,148 calves inducted ▪ 2,29,889 AI carried out ▪ 1,236 animals given healthcare. ▪ 1 fodder block making units set up ▪ 32 units of chilling units set up ▪ 23 ponds completed(11.287 ha)
Total	510.79	227.71	110.45	

Released by Government of India (up to 31.03.08)

Annexure Table 4.1: Grants Released and Actual Expenditure Incurred on Extension Activities

(₹ in lakhs)

District	Year	Programme	Grant Released	Expenditure
Belgaum	2006-07	0	0	0
	2007-08	41.99	37.23	14.99
	2008-09	66.49	0	13.05
	Total	108.48	37.23	28.04
Chitradurga	2006-07	0	0	0
	2007-08	33.36	29.49	7.25
	2008-09	41.1	0	8.76
	Total	74.46	29.49	16.01
Hassan	2006-07	18.11	14.5	9.94
	2007-08	37.26	15.35	6.97
	2008-09	37.95	0	4.63
	Total	93.32	29.85	21.54
ALL	2006-07	18.11	14.5	9.94
	2007-08	112.61	82.07	29.21
	2008-09	145.54	0	26.44
	Total	276.26	96.57	65.59

Annexure Table 4.2: Physical and Financial Targets and Realization under Special Livestock Package as on March 2009

(₹ in Lakh)

District	Target for 3 Years	Amount Released by	Achievement
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	(2006-2009)		KMF to Milk Unions			
	Physical	Financial	Physical	Financial	Physical	Financial
Belgaum						
Cows	3000	450	2417	367.55	926	138.9
Others	596103	1838.05	233010	1717.64	757903	443
Total	599103	2288.05	235427	2085.19	758829	581.9
Chitradurga						
Cows	3000	450	2417	367.55	984	147.6
Others	285453	1122.7	232360	881.72	156089	135.14
Total	288453	1572.7	234777	1249.27	157073	282.74
Hassan						
Cows	3000	450	2417	367.55	954	143.1
Others	350853	1273.3	138442	1000.86	684564	354.55
Total	353853	1723.3	140859	1368.41	685518	497.65
All						
Cows	9000	1350	7251	1102.65	2864	429.6
Others	1232409	4234.05	603812	3600.22	1598556	932.69
Total	1241409	5584.05	611063	4702.87	1601420	1362.29

Source: Department of Agriculture, GoK, Bangalore

Annexure Table 4.3: Benefits received under Horticulture Scheme to Sample Households – Andhra Pradesh

District	Average Area (ha) / Per farmer	Average total investment (₹/farmer)	Av. own funds (₹/farmer)	Av. govt. subsidy received (₹/farmer)	% of farmers opinioned that additional employment & income generated by
Anantapur	3.24	1,37,640	69,320	68,320	40.00
Guntur	0.51	18,798	12,548	6,251	40.00
Warangal	0.84	44,062	13,866	30,196	40.00
A.V	1.53	66,833	31,911	34,923	73.33

Annexure Table 4.4: Benefits received under Horticulture Scheme to Sample Households - Maharashtra

District	Average Area (per farmer) ha	Average total investment (₹/farmer)	Av. own fund (₹/farmer)	Av. govt. subsidy received (₹/ farmer)	Other Expendi- ture (₹/farmer)	% of farmers received assistance in getting benefits (Y)	% of farmers opinioned that additional employ- ment & income generated (Y)
Yavatmal	1.06	42,300	8,000	34,300	500	100.0	40.0
Amravati	0.94	33,200	9,800	23,400	980	80.0	20.0
Buldhana	1.24	52,580	19,240	33,340	6,260	20.0	0.0
Av.	1.08	42,693	12,347	30,347	2,580	66.7	20.0

Note: Y- Yes

Source: Field survey data.

Annexure 5 : Reviewer's Comments and Responses

Review Report from Professor Vijay Paul Sharma, Chairman, CMA, Indian Institute of Management, Ahmedabad

- a. **Title of the Draft Study Report Examined:**
An Evaluation Study of Prime Minister's Rehabilitation Package for Farmers in Suicide-prone Districts of Andhra Pradesh, Karnataka, Kerala and Maharashtra
- b. **Date of Receipt of the Draft Report:** 25.11.10
- c. **Date of Despatch of Comments:** January 12, 2011
- d. **Comments on the Objectives of the study:** The report deals with the evaluation of performance of the PM's package for farmers in four states. The objectives are well stated.
- e. **Comments on the Methodology:** No comments.
- f. **Comments on the Presentation, Get up etc.:**
 - A. On page 69, the figures of rainfed and irrigated land do not exactly add up to the average land holdings of farmers in the districts studied. This may be rectified.
 - B. The study should compare the average land holding of the package beneficiary farmers with the average size of land holding in the district (for all four states) to know the extent of inclusion or exclusion of marginal and small farmers in the package and their performance compared with other categories.
 - C. It should also give the category-wise profile of surveyed farmers i.e. How much %age of marginal, small, semi-medium, medium and large farmers in the total sample for each state.
 - D. The recommendations are not state and district specific. It should make some state specific recommendation to make implementation more effective.
- g. **Overall View on Acceptability of the Report:** With revisions in the light of the above comments, the report should be accepted.

Responses:

All the comments and suggestions made by the Reviewer have been incorporated at appropriate places.

M J Bhende

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