

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

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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 commercialization of agriculture leading to increased use of purchased inputs, reduced profitability and lack of safety nets made things worst 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 seed, fertilizers, 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 stagnation if not deteriorating terms of trade for agriculture (GOI, 2007).

The agrarian distress reached a high climax at the fag end of 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 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 percent of the farmer households in India are indebted, and about 40 percent 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 carrier (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 maximum in 2004-05. In 2006, there was virtually a suicide epidemic in Maharashtra. These incidents raised serious questions of 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 on July 1, 2006, after having visited some parts of the Vidarbha region in Maharashtra, announced 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 to 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 the States of Andhra Pradesh, Karnataka, Kerala and Maharashtra (Table1.1). The implementation period of 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 irrigation facilities, effective watershed management, better extension and farming support services and subsidiary income opportunities through horticulture, livestock,

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).

dairying, fisheries and other subsidiary activities. In order to alleviate the hardships faced by the debt driven families of farmers, ex-gratia assistance from Prime Minister's National Relief Fund (PMNRF) @ ₹50.00 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)
<ol style="list-style-type: none"> 1. Prakasam 2. Guntur 3. Nellore 4. Chittoor 5. Cuddapah 6. Ananthapur 7. Kurnool 8. Adilabad 9. Karimnagar 10. Khammam 11. Mahbubnagar 12. Medak 13. Naigonda 14. Nizamabad 15. Rangareddy 16. Warangal 	<ol style="list-style-type: none"> 1. Belgum 2. Chikamagalur 3. Chitradurga 4. Hassan 5. Kodagu 6. Shimoga 	<ol style="list-style-type: none"> 1. Wayanad 2. Palakkad 3. Kasargod 	<ol style="list-style-type: none"> 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 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 crores.
- 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 agri- 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

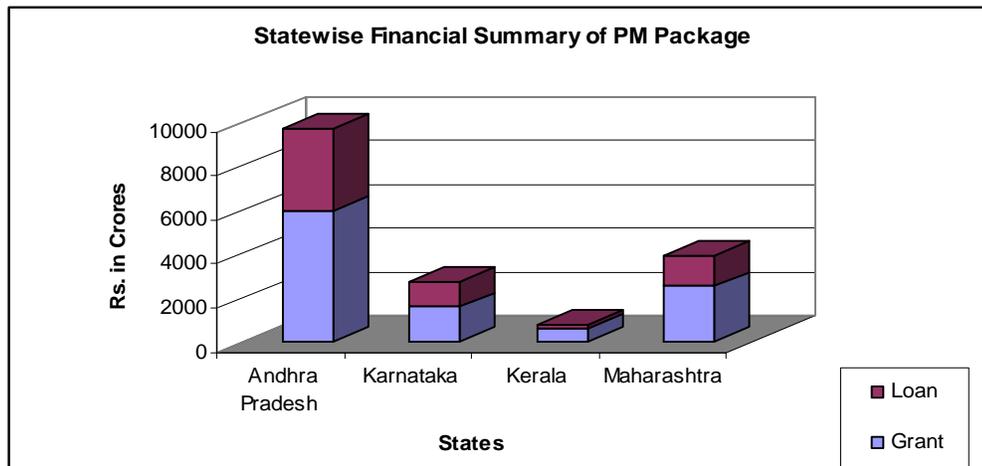
The rehabilitation package envisaged completion of all irrigation schemes, major, medium and minor, across the identified districts within a time frame. Watershed management included construction of 500 check dams and 1000 rainwater harvesting structures per district per year besides bringing in 15,000 ha. per district per year under Participatory Watershed Management Programme. The rehabilitation package involves a total amount of ₹ 16,978.69 crores, consisting of ₹10, 579.43 crores as subsidy/grants and ₹6399.26 crores as loan (Table 1.2). Andhra Pradesh has received the largest of the package at ₹ 9650.55 crores, 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 crores, 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

(₹ in Crore)

Name of the State	No. of Districts	<i>Rehabilitation Package</i>		
		Subsidy/grant	Loan	<i>Total</i>
Andhra Pradesh	16	5943.31 (61.59)*	3707.24 (38.41)	9650.55 (100)
Karnataka	06	1568.07 (58.30)	1121.57 (41.70)	2689.64 (100)
Kerala	03	577.21 (75.43)	188.03 (24.57)	765.24 (100)
Maharashtra	06	2490.84 (64.31)	1382.42 (35.69)	3873.26 (100)
Total	31	10579.43 (62.31)	6399.26 (37.69)	16978.69 (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)

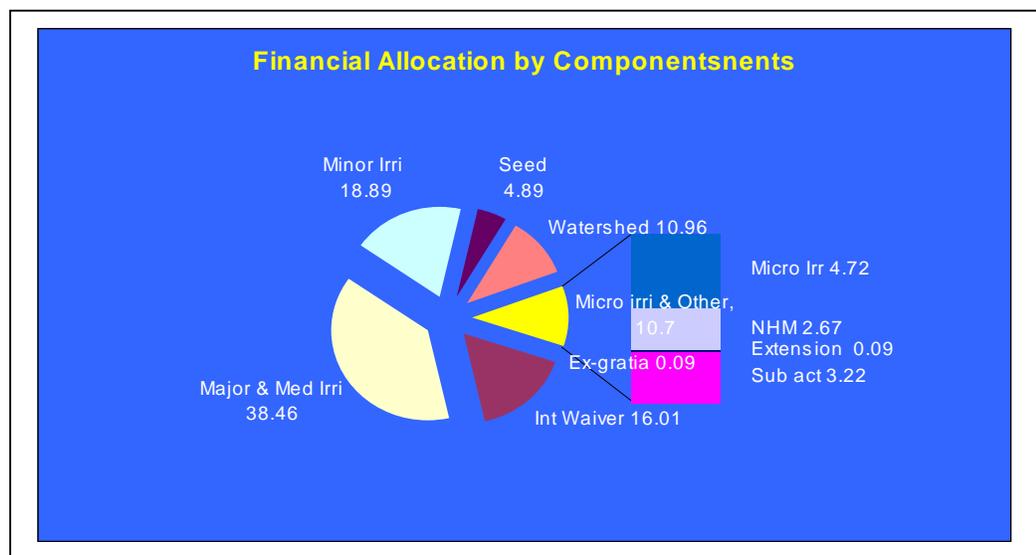
Sr. No	Item of assistance	Total amount	Subsidy/ Loan/grant	Subsidy/ Grant	Loan
1.	Ex-gratia assistance from PMNRF	15.50	Only grant	15.50	Nil
2.	Restructuring/rescheduling of loans	9051.81	Only loan	Nil	9051.81
3.	Credit flow	20114.05	Only loan	Nil	20114.05
4.	Interest waiver*	2718.25	Only subsidy	2718.25	Nil
5.	Assured Irrigation				
	(i) Major & Medium irrigation	6530.29	AIBP norms	4268.84	2261.45
	(ii) Minor irrigation	3207.81	Only loan	Nil	3207.81
	Total	9738.10		4268.84	5469.26
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	1860.00		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	16978.69		10579.43	6399.26

Notes: * Burden of interest waiver will be shared equally by the Central and State Government 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 ₹ 16978.69 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 towards 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 to 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 to the intended beneficiaries
- To assess the overall social and economic impact of the Rehabilitation Package
- 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 primary and secondary data. 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, the 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 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. In Prime Minister's Rehabilitation Package, there are eight major schemes implemented by agriculture, horticulture, animal husbandry, irrigation, and fisheries department. 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 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 was 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** : Ananthapur, 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 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 component of 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 summery and policy implication of the study.

Chapter II

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

As stated earlier, Prime Minister's Rehabilitation Package includes both credit and non-credit components. Among the non-credit component, there are eight major schemes implemented by agriculture, horticulture, animal husbandry, irrigation, and fisheries department under the Prime Minister's Rehabilitation Package. Moreover, ex-gratia payment from PM 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 Prime Minister's Rehabilitation Package being implemented in three states.

2.1 Ex-gratia Payment

With a view to alleviate the sufferings of debt stressed families of farmers in the affected districts of Andhra Pradesh, Karnataka, Kerala, and Maharashtra, a sum of ₹ 50.0 lakhs each was placed at the disposal of respective District Collectors. Thus, under this programme, total amount of ₹ 3.00 crore was received from PMNRF each by Karnataka and Maharashtra states, ₹1.50 crores by Kerala and ₹ 8.00 crores by Andhra Pradesh. Each family of the debt stressed farmer 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, ex-gratia payment was supplemented by the state government using Chief Minister's Relief Fund.

It can be seen from the table that funds provided for payment as ex-gratia assistance under PMNRF was fully utilised by Andhra Pradesh and Maharashtra whereas Karnataka could use little more than 59 per cent of the total assistance of ₹ 300 lakhs received from the PMNRF. Average assistance paid under ex-gratia payment ranged from ₹ 2942 per beneficiary in Kerala to ₹ 10,000 per beneficiary from 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 (RS)
1.	Andhra Pradesh	8000	800.00	10,000
2.	Karnataka	4570	177.70	3888
3.	Kerala	4913	144.53	2942
4	Maharashtra	3974	300.000	7549

* Till March 2009

2.2 Credit Component

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 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 PMs 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 have claimed 3 to 4 per cent excess amount under interest waiver which is 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	3970.29	3970.29	1511.05	Not available
2	Karnataka	209.81	639.75	187.54	429776
3	Kerala	360.00	216.62	112.15	Not available
4	Maharashtra	712.68	833.01	434.86	938728

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 P.M. Package is another part of credit component to provide relief to 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 crores borrowed by 87,43,184 borrowers. However, actual amount of overdue loans rescheduled was ₹ 5028.45 crores benefiting 35,54,332 farmers from 16 distressed prone districts of Andhra Pradesh (Table 2.3). During 2006-07, only 32.97 per cent of the estimated over due loan of ₹ 7252.31 crore was rescheduled. In the following year only 33.39 per cent of the total estimated over due of ₹ 7897.30 crore was rescheduled.

Indebtedness among the farmers, especially for small and marginal farmers was the main reason for suicides which led to the announcement of PMs 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 loans both 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 majority of the loan

amount of Regional Rural Banks (77.60%) are 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	15149.61	87,43,184	5028.48#	35,54,332
2	Karnataka	1194.52	3,64,988	1868.06*	3,80,706
3	Kerala	815.53	N. A.	420.76**	NA
4	Maharashtra	1296.00	9,33,000	1418.48***	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 the Table 2.3 that the actual loan amount rescheduled as well as the number of accounts benefited due rescheduling of loans are higher than the estimated overdue loan amount as well as accounts in both Karnataka as well as

Maharashtra state. In case of Maharashtra, agricultural loans amounting to ₹ 1418.48 crores by about 9.38 lakh farmers has been rescheduled as against the estimated overdue of ₹ 1296 crores from 9.33 lakh farmer borrowers as on 30th June, 2006.

As per the package ₹ 1194.52 crores were earmarked for restructuring of old debts in Karnataka. However, loans rescheduled from September 2006 through August 2008 accounted for ₹ 1248.78 crores covering 286,549 accounts. The records show that in Karnataka, agricultural loans to the tune of ₹ 1868.06 crores covering 364988 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 crores) than the estimated amount of ₹ 815.53 crores.

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 15032.20 crores, of this ₹ 13003.43 crores (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, ₹ 13960.21 crores (79.37%) of the targeted agricultural credit of ₹ 17588.35 crores 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 ₹7252.31 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 being 2.81. But during 2007-08, the loans rescheduled to a tune of ₹ 7897.30 crore of which ₹ 33.39 per cent loans are

rescheduled and against the rescheduling of loans 2.98 per cent of fresh loans are given.

It is observed that the relative role Co-operative Societies and RRBs is very low in share of credit flow, though they are meant for specially farmers and other rural segments. The reaching of institutional finance to present community by commercial Banks is governed by number of stipulated terms and conditions even subject to as and when business guide lines 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 Ananthapur, the credit achievement was 84.60% during 2007-08 and increased further to 95.29% of the targeted loan amount during 2008-09.

Table 2.4: Additional credit flow to the agriculture sector

(₹ Crore)

Year	2007-08		2008-09	
	Annual Target	Disbursement	Annual Target	Disbursement
Andhra Pradesh	15032.20	13003.43	17588.35	13960.21
Karnataka	3749.41	3270.30	4479.13	2830.34
Kerala	2395.45	2750.71*	3005.22	1976.00**
Maharashtra	2225.22	1737.86	2229.18	1179.84

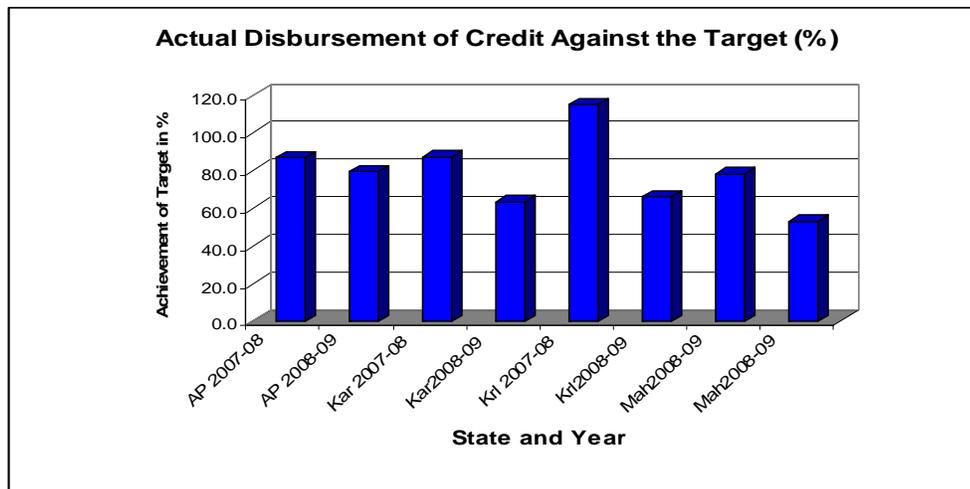
* As per the proposal sent by the Ministry

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

As per the records, in Karnataka agricultural loans amounting to ₹ 1248.78 crores for 286549 accounts was re-scheduled as on August 2008 and the fresh loans to the tune of ₹ 9787.04 crores were sanctioned to 90, 226 account holders against rescheduled loans. Credit flow increased to ₹ 9093.21 crores benefiting 229620 accounts. In case of Maharashtra, fresh loans were disbursed to 481512 farmers adding up to ₹ 1179.84 crores against the target of ₹ 2229.18 crores during 2008-09. Similarly, In Kerala, about two third 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 crores 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 accountholders after rescheduling the loans. The commercial banks extended fresh loans to the tune of ₹ 384.02 crores as against ₹ 9403.02 crores 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 ₹ 2750.71 crores and surpassed the target of ₹ 2395.45 crores set earlier. However, the credit disbursement was two third (₹ 1976 crores) as against the target of ₹ 3005.22 crores 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 ₹ 2225.22 crores for 2007-08, however the actual disbursement was ₹ 1737.86 crores accounting for 78 per cent of the targeted disbursement. The actual disbursement of credit during 2008-09 was approximately 53 per cent (₹ 1179.84 crores) of the targeted amount of ₹ 2229.18 crores. 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 575148 in 2007-08 and further to 481512 during 2008-09.

Non-Credit Related Measures

2.3 Assured Irrigation

Assured irrigation component of the P M package accounted for nearly 60 per cent (57.35 per cent) of the total package of ₹ 16978.69 crores 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 P M package. Out of 16 identified districts, Major Irrigation works were undertaken only in 10 districts during the period of the implementation of PMR Package. A total number of 15 AIBP Projects were undertaken during the implementation of PMR Package. Ten districts viz., (1) Prakasam, (2) Kadapa (3) Nizamabad, (4) Medak (5) Mahaboobnagar, (6) Nalgonda, (7) Warangal, (8) Karimnagar, (9) Khammam and (10) Adilabad are benefited. Out of the total targeted amount of ₹ 8984.23 crores, 71.24 per cent of amount is spent by Central Government while the share of State Government is 28.76. Against the targeted amount of ₹ 8984.23 crores, an amount of ₹ 6442.87 crores was achieved i.e. about 72 per cent (Table 2.5). The total achievement comprises 34.54 per cent by Centre and 65.46 per cent by State Government. Out of the total targeted amount by Centre, (₹ 6400 crores) the released amount is only 41.53 per cent during 2006-09.

The Government of India sanctioned ₹ 1208.71 crores comprising ₹ 725.24 crores as grants and ₹ 483.47 crores 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	8984.23	2657.92	6442.87	NA
		Minor	NA	2231.00	NA	NA	NA
2.	Karnataka	Major & Medium	17	1208.71	415.28	1467.36	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	1728	637.94	2641.24	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 crores 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 a loan under RIDF for the development of 892 minor irrigation projects in the selected 6 districts for the proposed development of minor irrigation 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 ₹ 2177.27 crore over a period of 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 ₹ 2679 crore was released, out of which ₹ 2641 crore was utilized by March 31, 2009. However, the irrigation potential created was only 88,644 hectares as against the targeted irrigation potential of 167871 hectares. Hence with the funds released only 53 percent of targeted potential could be created. Actual area irrigated was 16214 hectares by June 2007, and as per latest report, it increased to 27495 hectares by June 2008.

In the case of Kerala, Government of India provided a total of ₹ 105.03 crores over a period of three years through completion of all major medium, minor irrigation projects in the 3 selected districts. Of the total amount sanctioned, ₹ 35 crores were meant for major irrigation projects and the balance of ₹ 70.03 crores for the development of minor irrigation. Chief Engineer, Irrigation has reported that project reports for 75 minor irrigation schemes amounting to ₹ 19.61 crores has been sanctioned by NABARD under RIDF XIII and the Government of Kerala has also accorded administrative sanction for these works. So far NABARD has released ₹ 3.40 crores 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 to the farmers, a massive seed replacement programme was launched with 50 percent subsidy in the identified districts of 4 states. The total allocation for seed replacement programme was ₹830.10 crores for all the 4 states over a period of three years. National Seed Corporation (NSC) was appointed as Nodal agency for seed supply along with the State Seeds Corporation 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 of Andhra Pradesh under P.M's rehabilitation package. A.P. Seed Development Corporation was appointed as a nodal agency for seed supply. The entire amount of ₹ 470.18 crores has been utilized for distribution of seed on 50% subsidy to the farmers of the 16 districts under P.M. Package (Table 2.6).

The seed of 14 major crops was distributed to the farmers among 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 identified 16 districts, groundnut, Chick pea, maize and soybean together shared more than 95 per cent of the total quantity (1471802 qtls) of seed and 84 per cent of the total subsidy (₹ 47017.90 lakh) under P M package.

In Andhra Pradesh a total of 2866276 quintals of certified seed was distributed with a subsidy of ₹ 47017.90 lakh during 3 years beginning with 2006-07. Groundnut, chick pea, 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. Anantpur district shared the highest share 32.59 per cent (934119 quintals) of subsidised seed and accounted for 31.73 per cent (₹ 149.19 crores) of the total subsidy provided for seed distribution under the P M package in Andhra Pradesh. The reason for higher share of Ananthapur district in the total subsidised seed may be attributed to the distribution of 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 their other counter parts.

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	1471802	NA	470.35	<i>NA</i>
2.	Karnataka	178.00	226474	701852	25.56	<i>364</i>
3.	Kerala	1.92	25610	N. A	N. A	<i>N. A</i>
4.	<i>Maharashtra</i>	<i>180.00</i>	<i>1077454</i>	<i>2784247</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 would 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 Hobli (encompassing 5-6 Gram Panchayats). About 7 lakh farmers of the total 16.35 lakh farmers from six districts identified in Karnataka purchased subsidised seed i.e., on average 43 per cent of the farmers benefited from 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 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 entire amount of ₹ 1.92 crores allocated for distribution of certified seed. Palakkad district shared the maximum of ₹ 1.71 crores of the total allocation of ₹ 1.92 crores. Wayanad and Kasaragod shared ₹ 0.11 crores and ₹ 0.10 crores respectively. The total quantity of certified seed distributed was 25610 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 32000 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. National Seed Company was appointed as Nodal agency for seed supply. About 285 seed distribution centres were opened in 64 talukas of six districts to supply seed to farmers in 8328 villages. It can be observed from the table that about 10.77 lakh quintals 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 when compared with that 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 take into consideration the number of farmers in these six selected districts, which are 15.58 lakh in number (as per Agricultural Census 2000-01, GoM), we can infer that approximately on an average every year 23 percent of farmers were beneficiaries of Seed Replacement Programme in the rabi season and 55 percent were beneficiaries in the kharif season. Thus the benefits of the seed replacement programme seem to have penetrated in the suicide prone districts.

2.4.2 Micro Irrigation.

All the selected districts in 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, by involving an investment of ₹ 801.53 crores 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 district under P M package.

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 district level under the chairmanship of 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 Centers were started across the State with a view 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 scheme of Micro Irrigation.

Andhra Pradesh had provided ₹ 660 crores for the development of micro irrigation in 16 districts during 2007-08 and 2008-09. The project directors APMIP surpassed the target and spent ₹ 283.10 against the release of ₹ 234.00 crores by the government of India (Table 2.7). A total of about 222636 hectares area was brought under micro irrigation. Among the districts, 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.

It can be seen from Table 2.7 that the state of Karnataka, Kerala and Maharashtra was allocated total ₹ 64.00 crores, ₹ 19.53 crores and ₹ 78.0 crores, respectively under micro irrigation scheme in order to develop the drip and sprinkler irrigation base in the suicide prone districts over the period of three years. The government of India released ₹ 33.79 crores, ₹ 6.36 crores and ₹ 112.55 crores for the drip and sprinkler irrigation scheme till June 2008 for the state 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	22263	283.10
Karnataka	64.00	33.795	44979	24.89
Kerala	19.53	6.36	1592	1.063
Maharashtra	78.00	112.55	92061	103.32

It can be seen from the Table 2.7 that government of Kerala could use very negligible amount i.e., ₹ 1.06 crores of the total ₹ 6.36 crores released by the government of India. The actual area covered under micro irrigation is 1592 ha of which 1094 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 P M rehabilitation package for 3 districts of Kerala. The government of Karnataka spent ₹ 24.89 crores i.e., 74 per cent of the released amount whereas Government of

Maharashtra could utilize ₹ 103.32 crores accounting for 92 per cent of the total amount released till March 2009. The area covered under drip and sprinkler irrigation ranged between 1552 ha in Kerala and 92061 ha in Maharashtra.

2.4.3 Extension services

It is well known fact that agricultural extension plays very important role in dissemination of information to the farmers at the appropriate time. However, it is argued that agricultural extension systems in the states have become very weak and its 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 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 & Allied sectors under the Prime Minister's Special Rehabilitation Package in 16 identified suicide prone districts of Andhra Pradesh. The expenditure on extension services have been increasing since inception of the P.M. Package. The Government of India released ₹ 26.52 crores however, the Government of Andhra Pradesh could spend ₹ 12.13 crores till June 30, 2008.

Extension activities under ATMA were being carried out in only two (Hassan and Shimoga districts) of the six selected district of Karnataka during 2006-07. The action plans and activation of ATMA programme were to be initiated in other 4 districts i.e., Kodagu, Chikmagalur, Chitradurga and Belgaum. The total allocation for this programme under PM's package was of ₹ 3.00 crore each for Maharashtra and Karnataka and ₹ 1.50 crores for Kerala (Table 2.8). However, during three years period, in addition to the grants received from Central government, the state governments also released grants for the ATMA programme.

The Government of India had sanctioned a grant of ₹ 1.5 crores for strengthening extension activities 3 districts of Kerala and released ₹1.17 crores 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 have decided to establish 3000 farmers counselling centres in the existing Krishi Bhavans over a period of 3 years. So far the Government of Kerala could establish 1000 counselling centres by spending ₹ 0.50 crores. Of these 1000 centres, 568 are located in Palakkad district followed by 269 in Kasargod and remaining 163 crores 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 crores)

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 little more than ₹ 2 crores against the release of ₹ 2.99 crores 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 crores were spent by ATMA for various activities against the release of ₹ 11.50 crores by the State Government. Most of the funds released for extension in Maharashtra were spent on strengthening of 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 PM's Package. The component relating to livestock and fisheries involves the following.

- Induction of 1000 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 program 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 tables that a package of ₹ 256.63 crores was approved for Andhra Pradesh by the Government of India for livestock / dairy development under the P M rehabilitation package. The Government of India released grants to the tune of ₹ 188 crores over a period of three years beginning with 2006-07 through 2008-09) where as the state government released ₹ 195.00 crores (Table 2.9). However, the animal husbandry department of Andhra Pradesh, an implementing agency of the package could spend ₹ 139.02 crores on various component of the package till March 2009. ₹ 139.02 crores was spent inducting 36502 milch animals, 7389 calf rearing activities, 12.93 lakh AI, treatment of 4.11 lakh cattles 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 crores and the Central Government released ₹ 57.58 crores towards implementation of the package. In Karnataka Live Stock Development Agency along with Karnataka Milk Federation (KMF) has been implementing the programme. The State Government released ₹ 25.48 crores to KMF. However, KMF could spend only ₹ 20.66 crores 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 5945 beneficiaries and distributed 5081 milch animals, enrolled 1298 calves for rearing, treated 5081 animals, disbursed subsidy for the development of 10 Block making units, effected 20.33 lakh AI and treated 33332 animals for Estrus synchronization during 2006 through March 2009.

Kerala Livestock Development Board, 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 crores of which ₹ 42.52 crores 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)

State	Allocation under the package	Amount released by State Govt	Expenditure as on 31 st March, 2009	Physical progress
<i>Andhra Pradesh</i>	<i>256.63</i>	<i>188.01</i>	<i>139.02</i>	<i>36502 milch animals inducted 7389 calf rearing 1293035 artificial insemination 411422 animals in fertility camps 28667 heath care 36502 Feed and fodder support 26 bulk milk cooling units</i>
Karnataka	92.63	57.58	20.6596	5945 beneficieries identified; 5081 animals purchased 1298 Calf rearing 5081 animals treated 10 Block making units 2033152 AI 33332 Estrus synchronization
Kerala	49.42	42.52	33.3934*	5582 animals inducted 4466 calves enrolled 206001 AI 134443 Estrus synchronization 7 milk chilling plants
Maharashtra	135.00	50.97	49.00	19459 milch animals distributed to 12140 families 12995 families assisted under calf rearing programme 17459 beneficieries of feed & fodder supply 543625 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 crores) of the grants released by the Central government for livestock package till March 2009. A total of 5582 high yielding milch animals were purchased and inducted with a budget of ₹ 13.50 crores. Similarly, 4466 calves have been enrolled and an amount of ₹ 3.28

crores 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 crores were spent on this account and other inputs such as mineral mixture, AI gloves, etc.

The Kerala Livestock Development Board, Department of Animal Husbandry had fixed the target for induction was 1000 high yielding milch animals per district, totalling to 3000 animals in the three districts together during 2006-07. Of this, a total of 2877 animals were inducted. Similarly, 2282 and 423 animals were inducted during 2007-08 and 2008-09 respectively against the target of 3000 animals each year. A subsidy amounting to ₹ 1350 lakh has already been released to the respective district collectors. The beneficiaries who purchased milch animals under the P M package are also entitled to receive feed and fodder for the newly inducted animals at the subsidised rates for a period of one year. A total amount of ₹ 830.875 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.

Government of Kerala had fixed a target of enrolling 4500 calves during 3 years period of which 4466 calves has 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 calf rearing programme being implemented in the 3 distress prone districts of Kerala.**

It was also reported that ₹ 124 lakhs were utilised by MRCMPU for providing bulk milk chilling plant. Similarly, ₹ 628.14 lakh of the total allocation of ₹ 927.27 lakh were spent on AI component. Kerala Livestock Development Board also supplied one kg of Mineral Mixture per animal at the time of insemination. Another component of livestock package is Oestrus 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. Purchase procedure

was initiated by the department at the time of field work. About 1, 34,443 animals are targeted for Oestrus synchronization treatment. Department of animal husbandry has sought modification in the component and submitted alternate proposal for Pregnant Animals Feeding programme for the 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. The amount for 2007-08 was released at the fag end of the financial year and hence could not be used and hence proposed for revalidation. The funds for 2008-09 were not released for the health component at the time of field work. To sum up, government received ₹ 4252.905 lakh for livestock component and could spend about ₹ 330.34 lakh amounting to 78.5 per cent of the total amount received for 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 total amount spent on various components amounted to about ₹ 49.00 crore as against the release of ₹ 50.98 crore. In addition to this, ₹ 0.72 crores has been spent towards purchase of bulk cooler by Maharashtra State Dairy Association (Mahanand) by March 31, 2008 under 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.** Department of animal husbandry, government of Maharashtra implemented the programme. It can be observed from the table 2.9 that total 12140 farm families have been supplied with milch animals and total 19459 milch animals are distributed so far. Total 12995 farm families have been assisted under calf rearing programme and 543625 Artificial Inseminations were carried out. Under the scheme of food and fodder supply, 17459 farmers household from the six selected districts were benefited. Towards supply of instruments for development of fodder blocks, ₹0.85 crore grants have been received by Maharashtra Animal Wealth Development Corporation, Akola. The implementation period of this scheme under PM's package was over a period of three years (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 Prime Minister's package. Programme envisaged development of fish ponds in 100 hectares per district by providing 40 per cent of 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 is contributing nearly 5 lakh tones of inland fish and prawn production. The farmers are encouraged by providing assistance under 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 may be taken up under the existing scheme of "Development of Fresh Water Aqua culture" 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 to increase the productivity from 3 to 5 tonnes per hectare in all the identified 16 districts of Andhra Pradesh. Under his scheme the unit cost is ₹ 2.30 lakhs/ha out of which the subsidy component is @ 40% in case of general and @ 50 per cent for scheduled castes and tribe farmers. It can be seen from Table 2.10 that the government of India has released ₹7.00 crores for three years 2006-07, 2007-08 and 2008-09. Under the programme 699.00 ha of fish ponds have been constructed during the last 3 years and an amount of ₹ 7. 00 crores have 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, an amount of ₹ 6.24 crores was earmarked for the fisheries developmental activities in 6 districts of Karnataka with a target of developing 100 ha of fish ponds in each district over a period of 3 years. Department of fisheries, government of Karnataka is the implementing agency in Karnataka. The fisheries development programme in Karnataka took off only in February 2007 and ₹ 1.65 crores 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 only an 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 crores 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 crores released by the GOI.

The Government of India allocated ₹ 3.33 crores under P M package towards development of aquaculture in 3 identified districts of Kerala. The Fish Farmers Development Agency (FFDA) was identified as a nodal agency for implementing the programme in Kerala. It was envisaged to develop 250 ha of fish ponds during 3 years. ₹ 1.03 crores was released to Fish farmers Development Agency (FFDA) during the first year of the programme in Kerala. FFDA utilised entire amount to develop aquaculture on 180.4 ha of area. The government of Kerala released remaining ₹ 2.30 crores during 2007-08. However, area covered during 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 fisheries component was meant for construction/ repairs and renovation of fish ponds and input subsidies. The total allocation for this component was ₹ 6.21 crores however, only ₹ 23 lakh were released and of this ₹ 18.93 lakh only 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 are benefited by this scheme.

2.6 Horticulture

The National Horticulture Mission (NHM) was launched with the objective of bringing a holistic and integrated development in the horticulture sector in the country. It is based on 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 P M package for development of horticulture in all the selected suicide prone districts. Under Prime Minister's Rehabilitation Package (PMR's), a total amount of ₹ 452.78 crores was allocated and released among four states viz. Andhra Pradesh, Maharashtra, Kerala and Karnataka. The entire amount is a grant component.

NHM has been implemented in 18 districts in A.P. to ensure forward and backward linkages with active participation of all stake holders. In Andhra Pradesh initially an amount of ₹ 75.30 crores for horticulture development was allocated and distributed among 16 identified suicide prone districts under NHM Scheme. The total outlay for three years (2006-07 to 2008-09) was ₹ 240.94 crores for the 16 identified districts. The Government of Andhra Pradesh spent a total of ₹ 161.12 crores on NHM projects in 16 identified districts against ₹ 133.25 crores (₹ 66.67 crores in 2006-07 and ₹ 66.58 crores during 2007-08 and 2008—09) released by the Government of India under P M 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 crores under the NHM programme and utilised ₹ 408.55 crores accounting for 84 per cent of the total grants received from the Government of India.

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

It can be seen from the Table 2.11 that an allocation of ₹ 106.15 crores was made for implementing NHM in selected districts of Karnataka. The department of horticulture has spent ₹ 98.33 crores of the total ₹ 98.59 crores 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 release	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

* As on December, 2008

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

In Kerala, ₹ 46.33 was sanctioned by the government of India and state government supplement the programme from its funds. State Horticulture Mission

(SHM) is the nodal agency for implementing NHM programme in the state. The SHM programme include establishment of nurseries, area expansion, re-plantation, organic farming, IPM, post harvest management, etc. A total of ₹ 40.70 crores were released till December 2008.

In the case of Maharashtra, ₹ 225.0 crore has been sanctioned by the government towards NHM programme, as against which about ₹ 115.26 crore (51.26 percent) were received by March 31, 2009. Under this scheme, new plantation of fruit perennial, floriculture, spices and aromatic plants have been taken up on 52128 ha area since 2006. Also 1267 community water tanks were completed. Old and senile orchards in an area of 8097 ha area are being rejuvenated. As 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 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, ₹ 837.00 crores were provided as grants for implementation of participatory watersheds in the 31 identified districts of four states and rest of the financial requirement were to be met from loans raised under RIGF from NABARD. Construction of check dams is one of the components of the package and ₹ 930 crores were provided as loan by the Government of India. Similarly, ₹ 93 crores were provided as subsidy for constructing rain water harvesting structures to be shared by the central and State Governments equally.

As per guidelines provided in the PM 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 period. In addition to this, about 15000 hectares area per district would be treated under participatory watershed development programme for which grant support of ₹ 60.0 lakh per watershed of 1000 hectare area each, is provided. Rainwater harvesting scheme aiming at accelerated growth of irrigation potential for ensuring agricultural development of

SC/ST beneficiaries including small and marginal farmers was provided with 50 percent back ended capital subsidy along with 50 percent bank loan, covering 1000 beneficiaries a year in each of the identified district.

2.7.1 Participatory Watershed Development Programme

Andhra Pradesh received ₹ 432.00 crores as grants for the development of participatory watersheds in 16 identified districts. Similarly, ₹ 480.00 crores was allocated for construction of Check dams and ₹ 48 crores towards Rain Water harvesting scheme. In the third and eighth SLIC meeting held on 20th January 2007 and 2008 mentioned by us that NABARD on its own with the assistance of Resource Support Organization will develop 15000 hectares area per year (for three years). The NABARD has agreed to development 15000 hectares area 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 National Bureau of Soil Survey Organization, Nagpur.

It was observed that ***Participatory Watershed Development programme covered an area of 4.83 lakh hectares area with an expenditure of ₹ 4756.26 crores as on 31st January 2010.*** The cumulative total area covered under participatory watershed management ranged from 24200 ha in Karim Nagar district to 40604 ha in Prakasam district. Among the 16 identified districts. The highest cumulative amount was released towards Chittor district (₹616.20 crores) whereas the Guntur district received the lowest amount (₹143.15 crores) for 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 crores was allocated for participatory watershed development. **About 90188 ha area was treated under participatory watershed development programme with an expenditure of ₹ 18.65 crore against sanctioned amount of ₹ 54.0 crore, by May 31, 2009.**

In case of Kerala, a package of ₹ 81.0 crores 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 crores will be provided in the second phase. During the first phase, 15000 ha are proposed to be treated in each district with an allocation of ₹ 9 crores each. The details about actual area treated and expenditure incurred is not available. However, as per available the data ₹ 1.53 crores were spent to treat 15600 ha of area under the participatory watershed development program in the selected districts of Kerala.***

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

A sum of ₹ 162 crores 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 of Karnataka were sanctioned for implementation by the Watershed Development Department (WDD), government of Karnataka. Action plan has been drawn indicating physical and financial targets. Survey work is in progress at some of the locations. Under this programme 15000 ha of area to be treated per district per year. ***Implementation of 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 crores till the end of March 2009. The 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 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. However, one check dam could be built initially to create a water source for starting a nursery and /or for drinking water purposes.

Under PMR's package the total allocation for Andhra Pradesh is ₹ 480.00 crore and the entire amount is a loan component. The allocation for 2006-07 and 2007-08 is ₹ 240 crores. The Government of Andhra Pradesh has planned for 24,000 check dams during 2007-08 and 2008-09 at an average cost of ₹ 2.00 lakh per check dam to be constructed in 16 identified districts over three years period. ***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 P.M. Package.*** The State Government should prioritize the projects within the overall normative allocation under RIDF. The action plan for 2009-10 being 480.00 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 the same 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 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 (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 district Panchayat, Kasaragod has submitted 51

project proposals for check dams involving an amount of ₹ 5868.01 lakhs whereas, the District Panchayat, Palakkad has submitted 17 project proposals for construction of check dams with an estimated cost of ₹ 863.90 lakhs. 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 ₹ 1471 lakhs. ***Accordingly, Government have 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 ₹ 8200.2 lakhs.*** Further, the soil Conservation has submitted 17 project reports containing the above 22 project proposals on Check Dams involving an amount of ₹1471 lakhs. These reports have been forwarded to Finance Department on 28.02.09 for submitting the same to NABARD for consideration. The detailed project reports called for from District Panchayat Kasaragod and District Panchayat, Palakkad are still awaited.

Maharashtra, had set a target of constructing 9000 check dams in six districts over a period of three years. The estimated cost per year for this programme is ₹ 60.0 crore (i.e., total of ₹ 180.0 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 9000 check dams in three years, total 7970 check dams were constructed by 2008-09, with an expenditure of ₹ 162.53 crore. It can thus be observed that 88 percent of the target was achieved.***

2.7.3 Rain Water Harvesting structures

Rain Water Harvesting scheme is aimed at accelerated growth of irrigation potential for ensuring agricultural development of SC/ST beneficiaries including small and marginal farmers. Allocation under the package was ₹48.00 crore for Andhra Pradesh and the entire amount is a grant component. APSCCFC will implement plans worth of ₹22.61 crore and the balance of ₹ 25.39 core will be shared by 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 Rain Water harvesting scheme in Andhra Pradesh (Status as on 28th February 2009).

In Karnataka, it was decided that an allocation of ₹ 18.00 crores made for construction of rain water harvesting structures and ₹ 180.00 crores granted for construction of check dams would be used for participatory watershed development programme along with ₹ 162 crores earmarked for the participatory watershed development programme.

The State Government of Kerala received ₹ 9.00 crores allocation from the Central Government for the implementation of Rain Harvesting scheme in three identified districts in the state. The target is 1000 structures per year per district for SC / ST, small and marginal farmers. **Funds are yet to be released by 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 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 that the RWHS could be covered as a component under NABARD assisted Watershed. Development programme for the three – distressed district of Kerala (Raj Kumar, et al, 2010).

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 was provided with 50 percent back ended capital subsidy along with 50 percent bank loan, covering 1000 beneficiaries a year in each of the identified district.

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. It is 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 P M rehabilitation package) from four states.

3.1 Andhra Pradesh

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

3.1.1 Main Features of the Selected Districts:

The total geographical area of **Ananthapur district** is 19.13 lakh hectares. The geographical position of the peninsula renders Ananthapur district, the driest part of the state and hence, Agriculture conditions are more often precarious. As per the 2001 Census, rural population constitute 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. Little more than 5 per cent of the male and about the same proportion of fememale 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 553.0 mms by which it secures least rainfall when compared to Rayalaseema and other parts of Andhra Pradesh. The normal rainfall for the South West Monsoon period is 338.0 mms 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 this South West Monsoon period of June to September will lead the District to drought by failure of crops.

The marginal holdings in Ananthapur district accounts for just 34.45 per cent of the total holdings in the district and shared 10.01 percent 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 2 ha) number of holdings account for 17 percent of the total holdings in Andhra Pradesh with 52 percent of total area, while corresponding figures for Ananthapur district are 34 percent and 66 percent respectively.

The soils of Ananthapur 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 percent 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 Ananthapur district. Groundnut is the most important crop of Ananthapur 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 Ananthapur was less than 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 Ananthapur district at current prices is ₹ 20343 (₹ 16768) and is almost 30 per cent lower than the state average of ₹ 26226 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 Gundlakamma. The river Krishna travels about 250 kms, 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. Surface irrigation is surface irrigation. The soils in general are very fertile and they are broadly classified as Black Cotton, Red loamy and Sandy loamy.

The marginal accounts for 70 per cent and small holdings for 19 per cent of the total 7.02 lakh holdings in the district and respective groups shared 33 and 28 per cent of the area. The number of holdings of 2 ha and above accounts for 11 per cent of the holdings and shares about 39 per cent of the area. The average size of land holding in Guntur district is 0.97 ha as against the state average of 1.20 ha. The population of the district is 44.65 lakh with a density of 394 per sq. km. The rural population 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 and covers about 70 per cent of the area followed by Red loamy 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 gross irrigated area accounts for 50 per cent of the gross cropped area. About 33 per cent of the netsown area is sown more than onces. 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 pulses and covers 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 ha yield of paddy crop in Guntur is comparable with the state average whereas yield levels of sorghum were almost four times (4452 kg/ha) higher than the state average of 1107 kg/h during 2004-05 to 2006-07. Productivity of maize and cotton in Guntur district is significantly higher when compared with the state average yields.

Warangal district is spread across 12846 sq. kms. With a total population of 32.46 lakhs (2001 Census) Warangal district occupies 13th place in the state of 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 percentage of 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 of 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 soils of the district comprise of sandy loams with perches of shallow black cotton soils and at places even medium and deep black cotton soil. As the district is 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 2000-01 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 Lakshnavaran and Salivagu project 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 farms under marginal land holding is 63 per cent and shares 22 per cent of the area whereas small farms accounts for 21 per cent of 5.61 lakh holdings in the district and shares about 24 per cent of the 6.98 lakh ha area of the district. 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 holding 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 of the district. Almost two third 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 covers 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 important cereals grown in Warangal district and shared respectively 33 and 13 per cent 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 of the district 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, more than 60 per cent (63 per cent) of the area under cotton and about 72 per cent area under groundnut receives 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 of N,P, K per ha. 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 the present 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 family of the selected household varied from 4.6 persons per household in Warangal district to 5.17 persons per household in ananthapur district. The proportion of educated Adults (with > 7 standard Education) hovered 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
Ananthapur	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

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

3.1.3 Crops Grown:

Food crops shared about 75 percent of total cropped area, while non-food crops are grown on 22 percent 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 Ananthapur district.

Table 3.2: Average area under Crop Groups of Sample Households

Area in ha

Districts	Food Crops	Non Food Crops	Plantation Crops	Total
Ananthapur	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 parenthesis 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 Ananthapur 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 Ananthapur district.

3.1.4 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 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 ananthapur and Warangal districts owned livestock as against about half of the sample farmers from Guntur owning livestock. Farmers from Ananthapur and Warangal owned around 3 milch animals as against two milch animals per households in Guntur district. In addition to milch animals, farmers from Ananthapur and Warangal has maintained one bullock pair for agricultural operations. The value of live stock ranged between ₹ 38658 per household in Guntur to ₹ 67671 per household in Ananthapur district. It was observed that only the number of cows has increased after 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 P.M 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
		Cows	Buffaloes	Bullocks	Sheep/goats	
Ananthapur	80.00	1.89	1.40	1.03	0.49	67671
Guntur	51.43	1.03	0.91	0.00	0.00	38658
Warangal	85.71	0.90	2..15	1.00	1.25	67275
All	69.09	1.25	1.52	0.69	0.61	58297

It was observed that about 60 per cent of the households from Ananthapur, 31 per cent from Guntur and 54 per cent of the households Warangal are engaged in sale of milk. The income from sale of milk ranged from ₹ 3367 per annum per household in Ananthapur district to ₹ 12744 per annum in Guntur district. The income from sale of milk was modest ₹ 7605 in Warangal district.

3.2 Karnataka State

Prime minister's rehabilitation package for farmers in suicide prone districts is being implemented 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 P M 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 the flow of 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 river and Hidkal dam across Ghataprabha river. Eight of the total ten taluks are irrigated mainly from these two major projects. 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 the year 2007-2008. The net irrigated area accounted for 53 per cent of the net sown area, which is more than state average of 30 per cent. Multi-seasonal cultivation is

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 808.00 mm; however, in the year 2001, 2002 and 2003 with a rainfall of 593.7 mm, 631.2 mm and 448.6 mm severe drought occurred, causing a severe reduction in agriculture production. On the other hand, a good rainfall in the year 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 and 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, 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 53704 hectares, of which spices and plantation crops are cultivated over 4714 ha and 9031 ha respectively. Fruits, vegetable crops, and flowers are grown over 9833 ha, 29643 ha and 483 ha respectively, and the district has a very good scope for promotion of most horticultural crops.

The 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 percentage of 64.42 %. The working population is 18.77 lakh accounted 45 per cent of the total population in the district. The cultivators account for 38 per cent of the total workers. There are 5.39 lakh holdings with a total land of 10.49 lakh hectares. The Marginal and small farmers accounted for 69 per cent of the holdings sharing 31.79 per cent of the area. The percapita income of the district is ₹ 22972 at current prices during 2006-2007, which is less than the state average of ₹31713. This low per capita income and consecutive failure of rainfall in the year 2001, 2002 and 2003 may be the reasons for more farmers' suicides in the district. This can be gauged from the suicides trends in the district for the last seven years. Nearly two hundred (182) farmers from Belgaum district committed suicides in the last 7 year starting from 2003-2004 to 2009-2010. About 47 percent of the suicide farmers' families were provided compensation and rest of them 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 ₹ 5552 crores. Besides, these there are 1121 cooperatives, PLD banks and other cooperative and they are extending credit to the farmers.

Chitradurga District comprises of six taluks and 946 villages with a geographical area of 8388.78 Sq. km accounting for 4.40 per cent of the state area. The district is drained by Vedavathi River, a tributary of 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. Net sown area is roughly 4.01 lakh ha accounting for 52 per cent of the geographical area of the state. 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 the state of Karnataka. The district has diversified soil types. Red soil covers 36.2 per cent, clay soil covers 31.1 per cent, sandy loam covers 22.6 per cent, block soil in 7.5 per cent and sandy soil covers in 2.6 per cent of the total area. The district has 7450 ha. of saline, 13460 ha of sodic and 3280 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 kharif area is covered by oilseeds crops like groundnut and sunflower and hence, this district is known to be oilseeds district. In recent years, 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 giving room for 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 several cooperatives which account for 287. Total advances of Commercial Banks and RRBs was ₹1232 crores in 2009

The total number land holdings in the district are 2.82 lakh, operating 5.79 lakh hectares. The marginal and small farmers constitute about 66.95 per cent of the total holdings and accounts for 31.10 per cent of total area. These are on lower side of the state average of 74.78 per cent and 36.56 per cent respectively (as per 2005-2006 agricultural census). The average size of land holding in Chitradurga district is higher at 2.24 hectares per holding as compared with the state average of 1.43 hectares. The per capita income of the district is stood at ₹ 20699 in 2006-2007. This is low as compare to the state average. In Chitradurga, district 167 farmers were committed suicide from 2003-2004 to 2009-2010. However, only 70 suicides were considered for payment of compensation and the rest were rejected by the state authorities.

Hassan District comprises of 8 taluks 38 hoblies & 2369 villages. The geographic area of the district is 6845 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. 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 third of the geographical area of the district. The net sown is 393481 ha or 59 per cent 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. Total area under irrigation from all sources is 92976 ha. This works out 23.6 per cent of the total cultivable area. Major sources of Irrigation are Bore wells (40 per cent), Canals (34 per cent) and tanks (24 per cent)

There are 4.36 lakh farmers (holdings) operating a total area of 4.50 ha in Hassan district. Number of small and marginal holdings is on the increase year after year. A large proportion of farmers (88 per cent) are marginal and small farmers and shares 56 per cent of the total area; semi-medium and medium farmers account for 11 per cent of the holdings and accounted for 37 per cent of the area. Large holdings accounts for 0.34 per cent of the total farmers but shares 6.75 per cent of the total area. Average size of holding is 1.03 ha in Hassan district.

Soil type in the taluks of Arsikere and Channarayapatna 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, Ground nut, Niger, Sun flower, Pulses, Jowar, Sugarcane and coconut. In Belur, Alur, Hassan, Arakalgud, and Holenarasipura, soils are red sandy loam in major parts and red loam in the remaining areas and the principal crops grown in this area are Rice, Ragi, and Maize, Pulses, seasamum and tobacco in some parts. In Hilly zone i.e., in Sakaleshpura taluk, the soils are clay loam in major areas, and 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 and major portion is covered by forest. The proportion of area of the horticultural crops in the total cultivated area is 38.49 percent, which is two times more than the state average and higher than the other two sample districts. Fertilizer use in the district is 156 kg / ha as against state average of 79 kg / ha. Fertilizer consumption of the district is more than the state average mainly because of coverage of more area under plantation and commercial crops like Potato, tobacco, and vegetable.

There are 178 Commercial Bank Branches and 44 Grameena Bank Branches in the district. They advanced about ₹1991 crores in March 2009. Besides these institutions several cooperatives are operating in the district. The percapita income of the district was 21952 in 2005-2006, which is significantly, lower than the state average of ₹ 31713. In Hassan district, 252 farmers committed suicides were reported from 2002-004 to 2009-2010 and of these only 73 families received compensatation. The maximum number of suicide cases (69) has occurred during 2003-04. This is perhaps due to lowest rainfall in 2003 compared to last 10 years in most of the taluks.

3.2.2. Basic Features of Sample Farmers from Karnataka

The average size of family of the selected household varied from 4.91 persons per household in Hassan district to 6.40 persons per household in Belgaum district (Table 3.4). 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 7th standard or above whereas three fourth of the adult family members from Belgaum district have formal education up to 7th standard or more.

Table 3.4: 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
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

It can be seen from Table 3.4 that the average size of land holding ranged from 2.53 ha per household in Hassan district to 3.0 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 district, respectively. The over all size of landholding is 2.75 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 total cropped area, while non-food crops are grown on 39 percent 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 parenthesis 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 district whereas it was around 7 per cent in Chitradurga district. Among the food crops maize and ragi are important staple crops in Chitradurga, rice ragi and maize is grown on sizable area in Hassan. Jowar, maize, wheat covers sizable area under food crops in Belgaum district. Sugarcane, soybeans and groundnut are major commercial crops along with banana and other horticultural fruit under the plantation category in Belgaum district. In Chitradurga district, groundnut and cotton are 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, betal nut 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. 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 average 10 farmers own 17 buffalo.

Table 3.6: 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	
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 on decline and on average less than one bullock pair is maintained by the sample farmers from Karnataka. Rearing of sheep and goats is practiced more in Belgaum district when compared with farmers in Chitradurga and Hassan district. On average we find about 2 small ruminants per household in Belgaum and one per household in Chitradurga district. The value of live stock ranged between ₹ 44,273 per household in Chitradurga district to ₹ 50,794 per household in Belgaum district. It was observed that almost all the household having milch animals are engaged in sale of milk. The income from sale of milk is too low (₹ 5017) per annum per household in Chitradurga district when compared to their counter parts from Hassan (₹ 16497) and Belgaum districts (₹ 13768).

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. This is one of the states identified as farmers' suicide prone state. Three districts namely, Kasargod, Palakkad and Wayanad in the state of Kerala are identified for the implementation of P M 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 in to three natural divisions. The low land, bordering the sea; the mid land consisting of the undulating country and the forest, clad high land on the extreme east. There are mainly four types of soils namely, sandy, sand loam, laterite and hill or forest soil. The sandy and the sandy loam soils exist as a continuous narrow belt all along the Western coast about 20 Kms in width.

Kasaragod district covers an area of 1992 Sq. km and a population of 1,204,078 and thus has a population density of 604 per skm. The climate of the district is classified as warm, humid and tropical. The average maximum temperature is 31.2°C and minimum is 23.6°C. The mean annual rainfall of the district is 3581 mm, which is highest in the state. (The state average is 3063). 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. Out of the total rainfall, the months June, July & August experience 2/3 of the quantity.

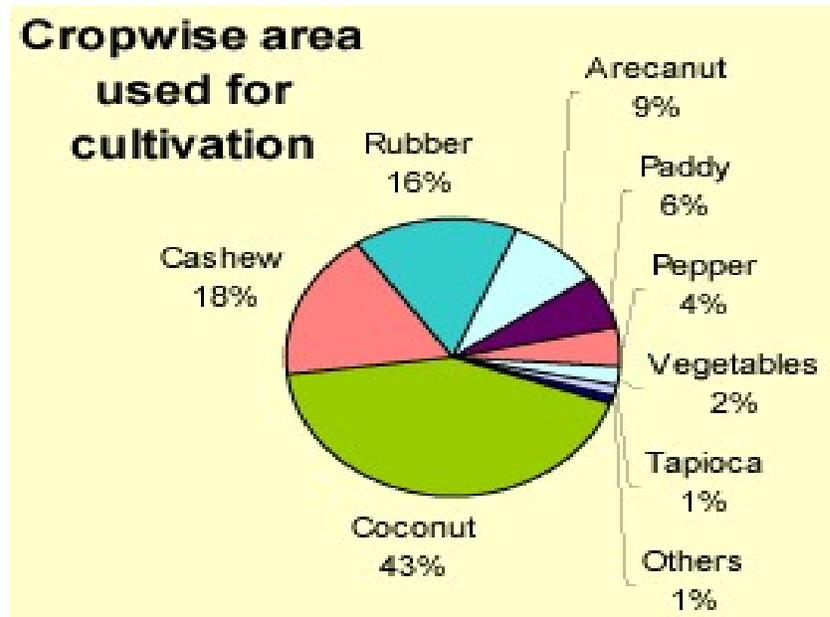
Total population of the district is 26.17 lakh consisting of 12.65 lakh males and 13.51 lakh females. The average literacy is 84 per cent as it is slightly higher among males (89.7 per cent) when compared with that of female literacy (79.3 per cent). About 30 per cent of the population is in the work force. There are 97289 cultivators accounting for 12.4 per cent of the total workers in the district. The agricultural labourers accounts for 44 per cent of the total work force in the district.

As per 1990-91 agriculture censuses, there are 1.70 lakh holdings in Kasargod district operating a total area of 88982 ha. The marginal holdings constituted 85 per cent of the total holdings and shared 43 per cent of the area. Small farms accounted for 10.5 per cent of the holdings and shared 27 per cent of the area. Land holding with more than 2 ha of area is 8142 and constituted little less than 5 percent of the holdings in the state but covered nearly 30 per cent of the area. The average size of land holding is 0.52 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 little more than 6 per cent of the net cropped area. There are 12 rivers in this district. These rivers provide 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. Diversity of crops and heterogeneity in cultivation are the key notes of agriculture here. The eastern tract comprises of forests and hilly areas. The forests comprise of 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 thie corresponding share in total irrigation is 19 per cent and 35 per cent of the irrigated area. Other sources of irrigation accounts for 42 per cent of the total irrigated area in the district. The cropping pattern of the district is shown fig 3.1 below.

Fig. 3.1



Source: www.kasargod.nic.in

Palakkad district has an area of 4,480 km² and of this the area under forest is 1363 Sq. kms. The population of the district is 2,617,482 with a population density of 584 per km². 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 South West Monsoon which sets the 2nd week of June and extends upto 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' C to 45' C. The maximum temperature recorded at Palakkad was 43'C. Palakkad District is blessed with Irrigation facilities. Irrigation Dams were constructed across

almost all the important tributaries of Bharathapuzha. Six major dams have been completed. They are Pothundy, Mangalam, Walayar, Chitturpuzha, Malampuzha and Gayathripuzha Projects (Meenkara and Chulliar) In addition to this Kanjirapuzha and Attappady Valley Irrigation Projects are under construction.

The average land holding per household has shown a decreasing trend over the year against 0.46 hectares per household in 85-86 in the district, the holding came down to 0.43 hectares in 90-91 and in 95-96 it is 0.40 Hectares. There are three types of soil (1) laterite soil seen in Ottappalam, Alathur, Chittur and Palakkad taluks (2) Virgin forest soil of 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 98-99 was 49% of the total area, where the state figure is 58%. 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 males and 13.51 females. On average 84.32 per cent of the district population is literate. Literacy levels among male population are higher (89.73 per cent) as compared to literacy level 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 percent 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 occupies the predominant place among the major crops. Palakkad district is called the "Granary of Kerala". The net cultivated area of the district is 218336 hectares ie., 49 per cent of the total geographical area. Major portion of the cultivable area is used for raising food crops. The total area under paddy is 107467 hectares (totals of three seasons). Palakkad is the only district in the state where Cotton and Groundnut are cultivated. Area under Cotton cultivation is 10999 ha and Groundnut is sown on 7019 hectares. Coconut and other oil seeds occupy a prominent position among the crops covering 53302 hectares and it is one of the major sources of income to the cultivators. Paddy, Cereals and Millets are cultivated on 112922 hectares and it is 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 the cultivation of horticultural crops such as Mango, Jack fruit, Papaya etc. and the area under cultivation of fresh fruits is 24440 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 98370 hectares in which rubber occupies more than 70 percent. More and more area is being brought under plantation crops.

Wayanad district The total geographical area is 2,131 Sq. km. **Wayanad** has a salubrious climate. The mean average rain fall in this district is 2322 m.m. Lakkidi, Vythiri and Meppadi are the high rainfall areas in Wayanad. Annual rain fall in these high rain fall areas ranges from 3,000 to 4,000m.m. 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 temperature for the last five years were 29°C and 18°C 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 rain fall in Wayanad is 300mm. per year. There is a decreasing trend in rainfall in this area. The average rainfall data shows that the lowest rain fall received from north east monsoon, is in Wayanad district.

Population of Wayanad district is 7,80,619. The male and female population is 3,91,273 and 3,89,346 respectively. The female-male sex ratio is 995 women per 1000 males. The density of population was 315 per sq.km. in 1991 census and reached 369 per sq. km. according to 2001 census. Strictly speaking, there is no urban population in Wayanad. However, life in Sulthan Bathery, Mananthavady and Kalpetta is in the process of 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 2131 Sq. km of geographical area, 78787 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 is involved with agriculture while the 30.5 per cent of the total labour force of the district is agricultural laborers. The district characterized by 23 perennial plantation crops and spices with coffee, forming the main agriculture crop. Coffee is cultivated in 66973 hectares. Coffee in the district shares 33.65% of the total cropped area in the district and it covers 80% of the total coffee plantations in the State of Kerala. Other Major crops are Pepper (40839 ha), Coconut (10947 ha), Rubber (6451 ha), Areca nut (7201 ha), Cardamom (4107 ha), and Ginger (3450 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 12988 ha only and that too for a single harvest. Much of the paddy field of the district is 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 with agriculture or related activities. The area under major crops during 2003-04 is: Rice 12988 ha, Pepper 40839 ha, Ginger 3450 ha, Cardamom 4107 ha, Cashew nut 1455 ha, Tapioca 1915 ha, Coconut 10947 ha, Arecanut 7201 ha, Tea 6049 ha, Coffee 66973 ha, and Rubber 6451 ha (www.wayanad.nic.in). As per 2The average size of land holding is 0.68 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 household 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,

proportion of educated adults is the highest (about 86 percent) in Palakkad and lowest in Wayanad (73 percent).

Table 3.7: 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
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 district in Kerala (Raj Kumar et al, 2010).

The average size of landholding for all the three districts taken together is 1.25 ha per household. Out of total land owned by the sample households, about 18 per cent land was irrigated and remaining about 82 percent land was rainfed (Table 3.7). The highest irrigated land was in Pallakad district (24 percent) and lowest was in Wayanad district (14 per cent).

3.3.3 Crops Grown:

Foodgrain and non-foodgrain crops shares about half of the cropped area on sample farms and rest is covered by plantation crops. Foodgrain crops accounted for 21 per cent whereas non-foodgrain shared 28 per cent of the gross cropped area on sample farms (Table 3.8). 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 parenthesis are percentage to total.

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

Non food crops are important in Wayanad district and shared 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 a subsidiary income based animals. The animals stood them good stead and hence the farmers invested 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 when compared to buffaloes among the sample farmers in Kerala. On 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 bullock as drought power in agriculture seems to on decline and only one of the 40 farmers from Wayanad owned bulck 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 P M rehabilitation package for farmers from suicide prone district in Kerala (Raj Kumar et al, 2010).

The value of live stock ranged between ₹ 12897 per household in Kasargod district to ₹ 20572 per household in Waynad 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 same even after the implementation of P M 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 Kasaragod 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 Moderate Rainfall Zone (900-1250 mm), while Amravati and Buldhana fall under Assured Rainfall Zone (700-900 mm). All the selected three districts are from Amravati Administrative division.

3.4.1 Main Features of the Selected Districts:

Amravati district: Amravati city is its head quarter and the same is known as principal cotton market. Amravati faces extreme variations in temperature with very hot summers and very cold winters. The climate of this district is semi-arid and the 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 south westerly monsoons mainly in the months of June, July, August and September. The district receives average rainfall 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 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 resides in the rural areas of the district. Percentage of total rural workers to total rural population is 38 per cent in Amravati district. This is possibly because of urbanized nature of the district and its educational base as compared to the other two districts. The percentage of cultivators to total rural workers accounts for little more than a quarter (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 in Amravati district is higher than the state average (33 per cent). Cultivators and rural labourers accounts for 85 per cent of the total rural workers.

As per Agriculture Census 2000-01, there are 3.39 lakh holdings operating 7.16 lakh ha of area in Amravati district. The number of marginal holdings (below 1.0 ha) accounted for about 28 per cent of the total holdings and shared about 10 per cent area in Amravati district whereas the same group accounted for 44 per cent of the total holdings and shared 13 per cent of the area in state. The small farms constituted 39 per cent of the holdings and accounted for 29 per cent of the area in the district. The medium and above (above 2 ha) number of holdings accounts for one third of the total holdings sharing two third of total area. The average size of operational holdings is 2.11 ha and found to be higher as compared to the same at the state level (1.66 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 accounts for two third of the

irrigated area in the district. 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 preferred to allocate more area for pulse crops. Pulses shares about 22 per cent of the GCA. Chick pea, pigeon pea and green gram 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 of the district and each covers about 21 per cent of the cropped area in the district. Area under fruits and vegetables accounts for 6 per cent of the GCA. 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 pread over 9671 Sq. km area. District head quarter is at Buldhana which is connected to all thirteen talukas by state highway. The district gets rain from south west monsoons, 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 accounting for 79 per cent of the total population stays in rural areas of Buldhana district. 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 rural agricultural labourers. About 11 per cent 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, 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 when compared with the five year average rainfall from 1960-61 to 1990-2000. There are 3.68 lakh holdings operating 7.12 lakh ha of area. Small and marginal holdings accounted for 67 per cent of the holdings and shared 37 per cent of the area. On the contrary, farmers with land holding of 2 ha and above accounted for 32.7 per cent of the farmers and operated 63 per cent

of the area. The average size of land holding is 1.93 ha in Buldhana district which is slightly higher than the state average of 1.66 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 net irrigated area is 411 (2002-03) accounting for 6 per cent of the net sown area. Despite lack of irrigation 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, chick pea and greengram and urid under foodgrains and cotton and soyabeans 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 and greengram and urid shares 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 average 96.5 kg of (N, P, K) per hectare. The yield levels of major crops are lower during 2008-09 when compared with the yield levels of respective crops during 2007-08.

The total geographical area of **Yavatmal district** is 13519 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 last up till the end of September, October and November constitute the post monsoon season and is followed by the cold season which last up till February. Most of the total annual rainfall is reserved 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. In terms of population district ranks 16th among the 35 districts of Maharashtra in 2001. Rural population constitute more than the 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 for the same. 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 3.16 lakh holdings operating 8.53 lakh ha area in Yavatmal district. Land holding pattern of the district is somewhat different from that of the state level average. As per Agriculture Census 2000-01, the marginal holdings (below 1.0 ha) accounted for about 43.71 per cent of the total holdings in Maharashtra, and accounted for only 13.18 per cent of total area. While the number of marginal holding in Yavatmal district is lowest (6.91 per cent), which accounted for only 1.78 per cent of total area in the district. The small holdings accounted for 42 per cent of the total holdings and shared 23 per cent of the area in the district. The proportion of small holdings in the district is almost 13 per centage points higher as compared to state average (29.7 per cent). The medium and above (above 2 ha) number of holdings accounts for 26.58 per cent of the total holding in Maharashtra with 61.32 per cent of total area, while corresponding figures for Yavatmal district are 50.29 per cent and 75.01 per cent, respectively. The average size of land holding in Yavatmal is 2.7 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, 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. Pigeon pea and chick pea 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 of Yavatmal district during 2007-08. Thus almost two third of the GCA is shared by two major cash crops cotton and soybean. Wheat, chick pea, sugarcane, fruits and vegetables are the beneficiary of irrigation. The consumption of fertilizer 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 when compared with the yield levels of crops in 2007-08.

3.4.2. Basic Features of Sample Farmers from Maharashtra

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

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	1.18	1.27	2.50
Amravati	3.58	1.75	5.33	28.7	0.80	2.08	2.89
Buldhana	4.23	1.28	5.50	23.7	1.49	2.08	3.73
Total	3.82	1.48	5.30	26.0	1.16	1.81	3.04

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

3.2.2 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 percent of total gross cropped area, while non-food crops are grown on around 44 percent and plantation crops on about 26 percent 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 parenthesis 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 includes oilseeds (such as soybean, safflower, Sesamum), cotton and some other crops. Citrus, lemon, papaya includes under horticulture/plantation crops. As seen earlier, the oilseeds and pulses crops dominate the cropping pattern in the selected districts, and the same trend was observed at sample household level.

3.2.5 Livestock Owned and Milk Production:

The details on 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 average, there are 17 cows, 14 buffaloes, 19 bullocks and 27 goats and sheep per 10 farmers in the selected districts. The value of live stock ranged between ₹ 42713 per household in Amravati to ₹ 61969 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 implementation of package. Infact the total number of households having livestock population has increased by 5 per cent, from 82 percent before 2006 to 87 percent after 2006. The number of buffalos and goat increased by about 24 percent, while cows by more than 14 percent. The number of goats owned per household increased by more than 58 percent.

As seen earlier from the secondary data that daily milk collection of milk increased significantly in all three selected districts during the period 2006-07 to 2008-09. A similar picture was observed at household level. As we have seen earlier, there was significant increase in buffalo population after 2006, and therefore income from the sale of buffalo milk may have also increased significantly by more than 50 percent over base period. The income from the sale of cow milk has also increased by about 11 percent in corresponding period. Thus there was increase in livestock population (by 1.7 percent) as well as 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 State of Andhra Pradesh, Karnataka, Kerala and Maharashtra. Among 31 districts identified for implementation of PM's Relief Package 16 districts are from Andhra Pradesh, 6 each from Maharashtra and Karnataka and remaining 3 from Kerala. The total allocation under the PM's rehabilitation package was ₹ 16,978.69 crores comprising of 10,579.43 crores as subsidies or grants and remaining ₹ 6,399.26 crores 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 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 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. The basic objective of this study was to conduct a field survey and observe the ground reality as to whether the benefit of the package is reaching the intended beneficiaries and also 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 agriculture, horticulture, animal husbandry, irrigation, and fisheries department. Further, ex-gratia payment from PM National Relief Fund was paid to the distressed families by the District Collector were also selected. As discussed in the methodology, 3 districts each were selected from Andhra Pradesh, Karnataka, Maharashtra and Kerala state for detailed data collection. At the first stage of sampling, 3 districts were selected having highest number of recorded suicides.

After selecting the district, a taluka having recorded 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 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 all total 120 households were selected. The required data were collected using pre-tested questionnaire by personal interview method.

4.1 Awareness about the P M rehabilitation Package

There needs to be awareness among target group to make a welfare scheme successful. The officials at the Panchayat Raj Institutions play a key role in disseminating the news about government's welfare programmes. Before analyzing the results, let us have an idea about the sources of information about the PM's relief package to 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 Prime Minister's relief package through government officials and through "Adarsh Rythu" (ideal farmer) appointed by Agricultural department (Table 4.1). About one per cent came to know of the programmes from News Papers 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 Vidarbha package. It can be seen from Table 4.1 that the majority (40 per cent) of the households came to know about PM package through the officials of the government departments and through village Panchayat. Raita Sampark Kendra, friends and news papers were the other sources of information regarding PM's rehabilitation package for Karnataka farmers.

In the case of Maharashtra, about 99 per cent of total selected farmers received the information about the PM's relief package and various schemes under same through Gram Panchayat of the respective villages and just 1 per cent farmers received information from news paper (only one household).

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
News Paper	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 the arrangements towards dissemination of information about the PM's package to the farmers and Gram Panchayat had duly informed the farmers about the relief measures.

4.2. Ex-gratia Payment

As stated earlier a sum of ₹ 50 lakh from Prime Minister's National Relief Fund was provided to the respective district collectors so as to facilitate paying of ex-gratia assistance. Each family of the debt stressed farmer 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 Prime Minister's Rehabilitation Package.

Andhra Pradesh received ₹ 8.00 crores 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 Chief Minister's relief package deposited rupees one lakh in the bank account to meet agricultural expenditure and another fifty thousand for debt relief to the affected families wherein a family member had committed suicide. In addition to these rupees ten thousand were 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 4570 farm families from six districts in Karnataka received an ex-gratia payment amounting to ₹ 1.777 crores as of March, 2009. The total disbursement of ex-gratia payment ranged from ₹ 9.01 lakhs in Hassan district to ₹ 50 lakhs in Belgaum and Chitradurga from 2006 through 2009 (Table 4.2). **Average amount of ex-gratia payment disbursed ranged from ₹ 2420 in Chitradurga district to roughly ₹ 10, 000 per beneficiary in Hassan district.** In case of Kerala, ₹ 1.445 crores are disbursed to 4913 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 ₹ 2844 in Kasargod to ₹ 3003 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	Ananthapur	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	5954
	Chitradurga	2066	50.00	2420
	Hassan	91	9.01	9901
	ALL	2998	109.01	3636
Kerala	Kasargod	1710	48.64	2844
	Palakkad	1538	45.89	2984
	Wayanad	1665	50.00	3003
	ALL	4913	144.53	2942
Maharashtra	Amravati	708	50.00	7062
	Buldhana	589	50.00	8489
	Yavatmal	767	50.00	6519
	ALL	2064	150.00	7267

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 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 and had to pay for their services. The beneficiaries spent, on an average, ₹ 298 to get

ex-gratia payment. **Many wealthy farmers also received ex-gratia payment for meeting education expenses of their wards. Collusion between local leaders and government officials was also evident as was observed, during our survey of the study districts.**

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 received on an average ₹ 7267 per head. The ex-gratia assistance ranged from ₹ 6519 per beneficiary family in Yavatmal district to ₹ 8489 in Buldhana district. In Maharashtra, about 61 per cent of the families used ex-gratia assistance to meet health related expenses and spent about 67 per cent of ex-gratia 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 PM's relief package, some of the farmers took help from somebody (farmer didn't reveals the person's name/identity). Overall, 48 per cent farmers received such kind of help for including their cases under PM's package. Towards help received from someone, on an average ₹ 191 was paid by sample household. In Amravati district, highest amount (₹ 221) was paid to get the benefits under PM's package as compared to the other two districts.

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

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

The credit related measures included in 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 RRB is the nodal agency for commercial banks. The government of

India provided ₹ 1194.52 crores 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 crores 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 ₹ 1868.06 crores 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 crores benefiting 4, 29,776 account holders from 6 districts under P M package. The government of India provided ₹ 209.81 crores 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 ₹ 3749.41 crores for 6 districts however; ₹ 3270.30 crores could be disbursed as on 31st March, 2008. The financial institutions lent ₹ 9093.21 crores (against the target of ₹ 4479.13 crores) as agricultural credit to 229620 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 over due interest due from about 1300 farmers amounting to ₹ 1.29 crores was waived off and the principal of ₹ 12.5 crores 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 Canara Bank reported that 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 they do not get any benefit of either interest waiver or complete debt waiver whereas those do not repay loans get the benefits of waiver programmes.

A farmer from had borrowed ₹ 50,000 in 2004-05 but could not repay the loan amount as well as principal. He got benefit under P M package and interest to the tune of ₹15000 was waived off and principal was rescheduled. He again borrowed 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.

Another farmer had borrowed ₹ 30, 000 as crop loan and ₹ 15000 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 are 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 percent sample households borrowed loan from Cooperative Banks and the rest borrowed loan from Commercial banks. The main purpose of borrowing loan was to meet crop cultivation expenditure. The average amount borrowed ranged from ₹ 17730 per borrower in Amravati district to ₹ 44000 per borrower in Yavatmal district. The credit componenet related to interest waiver scheme as well as rescheduling of principal amount was implemented during the year 2006-07 as well as in 2007-08. The average principal amount rescheduled varied from ₹ 13500 per farmer in Buldhana district to ₹ 21000 per borrower in Yavatmal district with an over all average of ₹ 16733 per borrower in the three sample districts of Maharashtra (Kalamkar and Shroff, 2010).

The farmers who were interviewed in 3 districts of Kerala reported that their entire outstanding loans were waived off. It is not clear whether this aspect has been included in P M 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 Kassargod district, respectively reported waiver of agricultural loans under P M package. The loan amount waived ranged from a minimum of ₹ 5000 to a maximum of ₹250000. 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 ₹ 2000 and ₹ 45000 for individual beneficiary. The average interest waived per borrower ranged from ₹ 3667

per borrower in Kasaragod to ₹ 6429 per borrower in Waynad district. About 70 per cent of the borrowers from 3 districts of Kerala benefited from interest waiver in the range of ₹ 3000 to ₹ 6000.

The credit component related to interest waiver scheme as well as rescheduling of 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 over due 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 nationalized bank reported that repayment of rescheduled loan 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 50 percent subsidy basis. The certified and improved seed of Paddy, ragi, maize, pigeon pea, green gram, black gram, soybean, sunflower, sesamum, and cotton was made available during kharif season, while rabi jowar, wheat, maize, chick pea, safflower and sunflower was made available during rabi season to the farmers on 50 percent subsidy basis.

The seed of 14 major crops was distributed to the farmers in 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 identified 16 districts, groundnut, Chick pea, 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 (₹ 47017.90 lakh) under P M package.

Among the sample districts, Ananthapur 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 31242 quintals with a subsidy of ₹ 686.46 lakh. Similarly, 49013 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 Ananthapur district 120 kgs 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., ₹ 1600 as their share and remaining ₹ 1600 was subsidy. Similarly, ₹ 248 was paid by the farmers in Guntur district for 24 kgs of paddy seed. Maize was distributed in Warangal district at the rate of 20 kgs per farmer at a subsidised cost of ₹ 140. The certified seed covered on average 0.84 hectares of land. All these beneficiaries reported that the yields were good and 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 special package for 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 seed distributed from September 2006 through March 2009 ranged from 30827.21 quintals in Chitradurga to 86914.73 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	Ananthapur	Groundnut	120	1600	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	1264	2.00
	Buldhana	Soybean, wheat and chickpea	146	1786	1.60
	Yavatmal	Soybean, wheat and chickpea	76	772	0.80

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

* Data for Kerala are not available

Certified seeds of major crops were supplied by the Department of Agriculture, Government of Karnataka, to various Raith Sampark Kendras based on the demand in all the six districts. Most farmers purchased required seeds from Raith Sampark 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 122262 farmers from Belgaum, 51589 farmers from Chitradurga and 73837 farmers from Hassan district had 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 48518, 15345.4 and 17118.6 quintals in Belgaum, Chitradurga and Hassan district, 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, Soybeans 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 kgs 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 subsidised seed 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 Raith 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, there were variations about the views 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 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 crores under the seed replacement scheme. A total of 1901.53 mt (1604.7 mt during 1st crop season, 281.6 mt during 2nd crop season and 15.23 mt during 3rd crop season) of certified seeds were distributed with a total expenditure of ₹ 1.9187 crores. About 10 per cent of the farmers from Wayanad and 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 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 whereas only one farmer each from the above district 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 organization godowns and other institutions, located at central place in that area. The sample farmers purchased certified/improved seed from the agriculture department every year. Average quantity of subsidized purchased ranged from 76 kg per beneficiary from Yavatmal district to 196 kg seed per farmer in Amravati district (Table 4.3). Similarly average area covered by subsidized seed varied between 0.80 ha per farmer in Yavatmal to 2 ha per farmer in Amravati district. Soyabean 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, total amount of ₹ 1274/- per farmer was paid and the same amount of subsidy was availed. Farmers from Amravati district purchased relatively large quantity of soybean seed when compared with the farmers from Yavatmal and Buldhana district. Wheat and gram seed was purchased by farmers from Buldhana district only. The seed purchased was adequate as per 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 the scheme.

Distribution of certified seed with 50 per cent subsidy to the farmers in the identified districts is appreciated by all the farmers. Seeds of major crops are distributed to the farmers either through cooperative stores or department of agriculture. The subsidy amount varied per beneficiary depending on the crop selected by the beneficiary farmer. Average area covered by subsidized seed varied between 0.40 ha to 2 ha per farmer 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 Raith 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 the 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 identified district under the P M package.

It can be seen from Table 4.4 that average area covered under micro-irrigation per beneficiary in Ananthapur district was 5.50 hectares when compared with 1.59 ha in Guntur and 0.68 in Warangal district. Horticultural and Vegetables crops are mainly irrigated by the drip and sprinkler equipment. Ananthapur farmers received higher amount of subsidy when compared with other districts. On an average two sets of drip irrigation equipment were purchased by sample farmers, one in five farmers in the sample has purchased sprinkler equipment on 50 per cent subsidy. On an average each sample farmer has spent ₹ 21930 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. 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 irrigation set (Sprinkler heads/ drips). Majority of the farmers have purchased sprinklers sets and a few have chosen drip system. The sprinkler sets purchased covers an area ranging from 0.5 ha to 2 hectares. Farmers opting for drip irrigation system were relatively more in Belgaum district as compared to number of farmers from Chitradurga and Hassan districts. The cost of drip irrigation system was higher when compared with the cost 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	Ananthapur	5.50	21240	104806
	Guntur	1.59	22060	32400
	Warangal	0.68	22491	52691
	ALL	2.59	21930	63299
Karnataka	Belgaum	1.55	22916	7968
	Chitradurga	1.82	19922	6131
	Hassan	0.99	12869	5588
	ALL	1.39	18858	6844
Maharashtra	Amravati	1.00	35400	17700
	Buldhana	1.00	30494	20694
	Yavatmal	1.00	25690	14190
	ALL	1.00	30528	17528

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 ₹ 6983 (covering 0.5 ha area) to ₹ 15750 per set with PVC pipes and ₹29493 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 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 costs as well as subsidy amount per household were found higher in Belgaum district when compared with the average cost and subsidy in Chitradurga and Hassan districts. The difference in costs as well as 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 ₹ 2314 and ₹ 36000 per beneficiary farmer in Belgaum district, where as in Hassan, it ranged from ₹ 3000 to ₹ 6000 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 highest in Belgaum district.

It was observed that the farmers preferred sprinkler irrigation sets over 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. 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 quality of the crop.

The performance of this scheme is poor in all three districts of Kerala. Total area covered under drip and micro irrigation system in 3 districts of Kerala was 1592 hectares. More than three fourth of the area covered under micro irrigation under P M package is located in Palakkad district. The average unit cost for installing drip irrigation system is ₹ 40,000 per ha as against ₹ 15000 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.

Such a low percentage of subsidies for small area affect the very purpose of the scheme. There also appears some bias against the suppliers of micro irrigation

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 guide lines, 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 where as 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 ₹ 2790 has been provided. The beneficiary was entitled to receive ₹ 7500, the ceiling amount but was denied the same.

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 beneficiaries 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 ₹ 6597 per ha in Palakkad district to ₹ 8095 per ha in Kasargod district.

The scheme of development of micro irrigation in six districts of Maharashtra was sanctioned, with target of 53400 hectares area to be brought under sprinkler and drip irrigation. The sprinkler and drip irrigation sets were made available at 50 percent subsidy. The maximum limit for land holding to avail this scheme was 5 ha land. Also it was made compulsory to spend certain amount for SC and ST as well as female beneficiaries by making Panchayat Raj Institutions involved in the operation of this scheme. It can be seen from the Table 3.4 that selected farmers were having all together 14 functioning open wells and 5 bore wells, i.e on an average 0.93 functioning open wells and 0.33 bore wells. Among the districts, Buldhana district sample farmers have more number of open wells and bore wells, while Yavatmal had lowest. On an average 1.31 hectares of land was covered earlier under irrigation and wheat, chick pea and orange are the main crops grown using available irrigation facility by sample households.

About 67 percent farmers purchased sprinkler irrigation equipment and others purchased drip irrigation equipments. Most of the farmers in Yavatmal and Amravati district preferred sprinkler irrigation, while drip irrigation system was availed in Buldhana district. In order to get the benefit under this scheme, average own investment was ₹ 13000/- per farmer and an amount of ₹ 17528/- subsidy was received. Above 93 percent of farmer have opinioned that due to sprinkler and drip irrigation, the area under irrigation increased and 87 percent farmers mentioned that it helped them in expanding the area under double cropping. Obviously, there must be increase in output and net income due to increase in area under irrigation and double cropping. About 60 percent 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 selected farmers benefited from this scheme, by increasing their area under irrigation and double cropping.

Under 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 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 has helped in efficient use of irrigation water leading to expansion in the irrigated area.

4.6 Extension services

Effective and efficient extension service 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 agricultural extension system in the states is in disappearing/fading stage. Strengthening of extension services was one of the components of PM 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 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 ₹ 8.00 crores as grants for strengthening extension system in 16 suicide prone districts of Andhra Pradesh. The Government of India released ₹ 26.52 crores for extension activities in Andhra Pradesh. However, the State Government could spend less than half (₹ 12.00 crores) 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 Ananthapur, Guntur and Warangal districts about their participation in various extension programmes conducted under the P M package. Eighty per cent of farmers in Ananthapur district have said that they have attended crop demonstration and all of them benefited from the programme. Similarly sixty 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 were 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 ₹ 3.0 crores 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 crores for extension activities from the Government of India till the end of March 2009, however, the Government of Karnataka could spend only ₹ 2.045 crores (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 ₹ 74.38 lakhs were utilised for extension activities as against the target of ₹ 147.86 lakh during 2006-07 through 2008-09. Grants for extension activities envisaged under the P M package during 2006-07 were released for Hassan district only. Belgaum and Chitradurga districts were not supported during the year 2006-07 as ATMA scheme had not been initiated in these districts.

It was observed that overall, 30 percent 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 work shop on improved agricultural practices organized at the KVKs.

In case of Kerala, grants amounting to ₹ 1.50 crores have been sanctioned for extension activities in 3 distress prone districts in the state. Directorate of agriculture, Government of Kerala is designated as implementing agency. The extension programme envisaged in the P M 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 at Wayanad, 1725 Centres at Palakkad and 750 centres in Kasaragod district. However, only 568, 163 and 269 Farmers Counselling Centres were establish at Palakkad, Wayanad and Kasargod districts, respectively. The total amount utilized was ₹ 50 lakhs. 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 were 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 have not received any grants for extension component from the Government of India. However, the concept note for evaluation of P M package sent by the ministry to AERCs indicates release of ₹ 1.17 crores during 2006-07.

In case of Maharashtra, all the selected sample farmer households have attended crop demonstration as well as exposure. More than 93 percent of the farmers pinioned that they are benefited from this scheme. Among the districts, the corresponding figures are 100.0 percent in case of Amravati and Buldhana, however it was 80 percent in Yavatmal district.

Grants are provided under P M 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 a nodal agency in all the districts to ensure extension support and convergence at 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 extension component in a few states whereas very few farmers could make use of these in other states. In Maharashtra, 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

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 P M 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.

An Andhra Pradesh, twenty three buffaloes were purchased by sample farmers. The average cost ranged from ₹ 24200 in Ananthapur to ₹ 35000 per animal in Guntur and Warangal district. The beneficiary household from Ananthapur purchased on average one milch animal as against roughly two milch animals by the beneficiaries from Guntur and Warangal districts (Table 4.5). The beneficiaries from Ananthapur invested on average ₹14800 as against ₹ 40, 000 by their counterparts from Warangal district. The beneficiaries on 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 ₹ 17400 per beneficiary in Warangal district to ₹ 29000 in Guntur district with an average income of ₹ 24,533 for all the beneficiaries.

In Karnataka, ₹ 92.71 crores 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 the task of implementing the programme. A target for distribution of 8502 high yielding milch animals was fixed with a financial outlay of ₹ 1275 lakh for all the six districts as of August 2008. However, only 3902 cows were purchased with ₹ 585 lakh as subsidy at the end of August 2008. About 4600 additional cows could not be purchased in time though the subsidy amount for the purchase of 4044 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	Ananthapur	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 is not available.

A uniform physical target (of 1417 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 2nd animal to 344 beneficiaries. In Chitradurga district, 1044 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, 1227 beneficiaries were identified and approved by the district committee. A total of 470 cows had been purchased by August 2008 and KMF has released funds to the bank for another batch of 681 beneficiaries. **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.**

Average cost per animal ranged between ₹ 23500 and ₹ 29500 in the study districts (Table 4.9). The beneficiaries themselves selected and purchased the animals from cattle markets located in the neighbouring districts as well as

neighbouring states like Maharashtra and Tamil Nadu. Average expenditure incurred was roughly ₹ 2000 per beneficiary farmer. The subsidy amount ranged from ₹ 26200 in Belgaum to ₹ 29800 per pair of milch animals in Hassan district.

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 as against one third of the beneficiaries who 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 ₹8200 per beneficiary household in Hassan district to ₹ 13400 per beneficiary 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 household received assistance for feed and fodder.** Breeding services were taken up by the KMF as well as the Departments of Animal Husbandry and veterinary science 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 ₹ 626,000, which may be split into ₹ 213,000 for the Wayanad farmers, ₹ 145,000 for the Palakkad farmers and ₹ 268,000 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 ₹ 182,000 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, at ₹ 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 as to 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 towards accessing this component of the package and there have been others interviewed who have also answered the question as to assistance received in the negative (about 18 per cent of the beneficiaries). The receivers of such assistance account for less than one percent 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 also income.

In case of Maharashtra, under the for suicide prone districts selected sample households 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 subsidy scheme**. The average cost per animal worked out to be ₹ 14114 and about ₹ 6147 subsidy (44 percent subsidy) per farmers was received and remaining amount was invested by the farmer. Government also provided subsidy to the farmers for construction of shed/feed/calf rearing of about ₹ 10851 per farmer household. The cost per animal, amount invested by farmer and subsidy given by government towards construction of shed was recorded highest in Buldhana district.

The average net income from the livestock purchased was ₹ 3860 per household, in which Buldhana district household income was highest (₹ 7400), and lowest was in case of Yavatmal (₹ 1380). Towards documentation and travel, farmer had to spend ₹ 300. However, among the district, it is observed that there was no travel as well as documentation cost recorded in Yavatmal district. Though about 27 percent farmers received some kind of assistance from somebody in getting the benefits under this scheme, no amount was paid to them for their assistance by the farmers. Most of the farmers opined that the cattle purchased under this scheme

could not sustain under hot climatic conditions of the regions and thus affect 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 P M 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. 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 the cases (in Karnataka) where the beneficiaries of livestock package are the office bearers of either 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 animal and also for rearing a calf. However, none of the respondent have received assistance for feed and fodder. In Maharashtra, financial assistance is extended even to purchase bullocks. However, the financial assistance (subsidy) helped the beneficiaries to 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 PM package. Special package envisaged development of fisheries in 100 hectares per district by providing 40 per cent of capital and input cost and the rest were 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 Ananthpur district to 2.00 lakhs 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 Ananthpur on the development of 1 ha of fishponds. The beneficiaries received ₹ 80,000 as subsidy amount. 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 day of employment. Over all, the scheme was successful.

Table 4.6: Development of Fisheries under P M 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	Ananthapur	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 area proposed for the development of fish ponds and supply of seeds varied across the districts. As on 31st August 2008, only 17 beneficiaries from Belgaum, 75 from Chitradurga and 42 beneficiaries 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 fish ponds. The subsidy varied from ₹ 25150 per beneficiary in Belgaum district to ₹ 85870 per beneficiary in Hassan district.

It was observed that the average size of fish ponds 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 fish pond ranged from ₹ 0.75 lakh in Belgaum district to ₹ 2.28 lakh in Hassan district. The average cost of construction of fish pond is ₹ 2.30 lakh per ha. The average subsidy amount per beneficiary works out to ₹ 50,075. The beneficiaries of fisheries package reported that the construction of one ha of fish pond alone cost more than ₹ 2.00 lakh but the subsidy amount given was only ₹ 60000 to ₹ 80,000 per hectare which is very less. The supply of good fish feed was a constraint, adversely affecting upon the fish yield. On an average, 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 fish ponds was much higher in all the districts, the achievements were very poor both in terms of number of beneficiaries as well as the area covered under fish ponds. 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 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.



Fig.1. fishpond at Kallahalli in Hassan district



Fig. 2. Fish pond at Shanthi Grama, Hassan

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

As far as Kerala state is concerned, ₹ 1.03 crores was allocated for the development fisheries during 2006-07 and ₹ 2.30 crores in 2007-08. Fishery activity is taken up in all the three districts namely Palakkad, Wayanad, and Kasaragod. In Palakkad only inland fisheries activities are taken up 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 Kassargod district (₹ 30 lakh) and Wayanad with 20.56 lakh during 2006-07. It can be seen from the Table 4.7 that 1184 households from Kassargod and 454 from Wayanad and 214 households from Palakkad benefited from fisheries program during 2006-07. The major activities so far taken up are 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 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 P M 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 are successful in Andhra Pradesh and Kerala. 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 program as the initial investment for development of fish ponds is very high and subsidy component is only 40 per cent. Availability of

quality seed and infrastructure are major constraints for the development of fisheries in the identified district.

4.8 National Horticulture Mission (NHM)

Over the years, horticulture has emerged as one of the sunrise sector having potential to accelerate the growth of agrarian economy. NHM was also included as one of the components under PM 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 orchard, 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 crores under the P M package for horticulture development in 16 suicide prone districts of the state. The total outlay for horticulture development for 3 years was ₹ 240.94 crores. The state government released about ₹ 133.55 during 2006-07 to 2008-09 to implement NHM programme in the 16 suicide prone districts against the expenditure of ₹ 161.12 crores (Table 4.8). Under the PM's relief package Sweet orange plants were distributed on subsidy in Ananthapur 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 varied was 3.24 ha, 0.51 ha and 0.84 ha in Ananthapur, Guntur and Warangal district, respectively. On average, ₹ 66,833 was invested by each beneficiary farmer, of which ₹ 34,923 was subsidy provided under NHM programme. No other expenditure was reported by the sample farmers. 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 Utilization 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 crores was earmarked for horticulture development in the selected six suicide prone districts of Karnataka. The government of India released ₹44.54 crores in 2006-07 and ₹ 53.23 crores in 2007-08 as financial assistance as against the total outlay of ₹ 109.50. The government of Karnataka could spend ₹ 36.15 crores during 2006-07 and ₹ 22.63 crores from April 2007 through June 2008. Thus, the government of Karnataka could spend about 60 per cent of the total amount released by the government of India. There is wide variation in the number of beneficiaries of NHM programme across the districts and over the years. The total number of beneficiaries of NHM programme varied from 17144 in Chitradurga district to 43580 beneficiaries in Hassan district during 2006-07 through 2008-09.

It was observed that the farmers who were already engaged in the cultivation of 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 and Banana, Sapota. Area expansion under floriculture was found modest due to lack of market and the high cost of installation of green house / 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 case of Kerala, ₹ 29.39 crores was released against the outlay of ₹ 36.14 crores. 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 crores were released and ₹ 38.17 crores could be actually utilised. During the 3 years 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 component under the horticulture mission.

Government of Kerala also supported the programme on horticulture. The total allocation for Horticulture Mission was ₹ 105.70 crores of which ₹ 47.45 crores were allocated to Wayanad district, ₹ 30.13 crores for Palakkad and ₹ 28.12 crores to Kasargod district. The three districts together could utilize a total sum of ₹ 40.27 crores or just 38 per cent of the total allocated amount of ₹ 105.70 crores during 2006-07 through 2008-09. The State Horticulture Mission include 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 3 identified district of Kerala participated in 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 NHM programmes. The wayanad farmers have invested on average ₹ 35,000, whereas the farmers from Palakkad and Kasargod have invested ₹ 331,000 and ₹ 60,500, respectively.

The total allocation for NHM was ₹ 225.00 crores under the PM package for distress prone districts in Maharashtra. Of this, ₹ 51.17 crores were released by the government of India and ₹ 42.81 crores were utilised by the government of Maharashtra for implementing NHM in the selected districts (Table 4.12). On 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 4.10). The distribution of beneficiary of 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 NHM programme. The total investment for NHM related activity was ₹42300, ₹ 33200 and ₹ 52580 per beneficiary farmers from Yavatmal, Amravati and Buldhana district, respectively. The average amount of subsidy ranged from ₹ 23400 per beneficiary in Amravati to ₹ 34300 in Yavatmal district. The average cost of documentation and other expenses was ₹ 2580 per beneficiary.

It can be seen from Table 4.9 that the total physical target (area coverage) for three year reference period (2006-07 to 2008-09) envisaged under NHM package varied from 34712 ha in Chitradurga district to 71376 ha in Belgaum district. The actual area benefiting from NHM package ranged between 25479 ha in Hassan district and 27656 ha in Chitradurga district. The overall area covered under the NHM activities accounted for 55 per cent of the total targeted area of 144817 ha for three year period. As far as financial targets were concerned, Belgaum district could spend roughly 32 per cent of ₹ 66.83 crores, while Chitradurga and Hassan district spent about 59 per cent of the target amount under NHM during 2006-07 through 2008-09. Overall, three district taken together could cover only 55 per cent of the area target and could spend only ₹ 20.57 crores 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 MHM in 2006-07 of which ₹29.82 crores could be spent by implementing different activities. In 2007-2008, an amount of 52.41 crores and ₹ 95 crores in 2008-2009 was approved. Absence of good marketing facilities for high value cut flowers as well as traditional flowers adversely affected the expansion of area under floriculture in most of the districts.

Over the years, horticulture has emerged as one of the sunrise sector having potential to accelerate the growth of agrarian economy. NHM was also included as one of the components under PM package. Large number of activities is proposed under NHM. 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.

4.9 Minor Irrigation

Under the prime mister 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, modernization 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 modernization 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.** Modernization 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. The tanks having command area of more than 40 ha come under the jurisdiction of minor irrigation department, whereas the tanks with less than 40 ha of command area are looked after by the Zilla Panchayats. However, Department of Minor Irrigation was executing work on modernization 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 for 432 works in three selected districts stood at ₹ 113.18 crores (Table 4.10). The estimated average cost of construction of new tanks and pickups/ barrages was more than ₹43 lakhs per work; where as 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 a relatively backward district Chitradurga. The total estimated cost in the case of Hassan district was ₹ 7694.07 lakhs and the least allocation was ₹ 939.85 lakhs in the case of 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 district of Karnataka. **The actual expenditure on completed and on-going projects works out ₹ 2379.07 lakhs up to 2008-2009 accounting for 21.02 per cent of the total estimated cost of ₹ 11317.56 lakhs. 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 19246 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 ₹29979 when compared to ₹ 99766 in the case of Hassan district. The average cost for three districts taken together is estimated at ₹58804 for creation of one ha of irrigation potential.

Vanashivi Katte, Thirupathihalii, Hassan Taluk



Work of Tank Rehabilitation in Progress, estimated cost ₹ 19.90 Lakhs 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	2253.37	718.15	133.96	3	25	28
Pickups and Barrages	2135.08	1124.59	98.01	2	17	19
Lift Irrigation Schemes	4080.76	538	47.15	2	3	5
Total	8949.43	2683.64	281.21	7	51	58
Chitradurga						
Construction of New Tanks	54	30	6.22	0	1	1
Modernization of Tanks	1745.73	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	2284.73	939.85	790.5	20	11	31
Hassan						
Modernization of Tanks	5836.69	6332.12	1263.77	74	225	299
Pickups and Barrages	1266	1017.35	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	8012.69	7694.07	1307.36	74	269	343
Total of 3 Districts						
Construction of New Tanks	534.22	332.9	8.31	0	7	7
Modernization of Tanks	9835.79	7763.17	1986.28	90	258	348
Pickups and Barrages	3469.08	2171.94	141.34	2	44	46
Flood Control Works	432	176.45	167.38	7	2	9
Lift Irrigation Schemes	4975.76	873.1	75.76	2	20	22
Total	19246.85	11317.56	2379.07	101	331	432

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

Discussions with the stake holders at the village level about the on going works under the programme revealed that the works being carried out were of poor quality (Kereyagalahalli tank Holalkere Taluk, Chtradurga 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 chanals. 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 P M 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 can not be ascertained at this point of time.**

Among the selected three districts Guntur, Ananthapur and Warangal of Andhra Pradesh, major and medium irrigation works were undertaken only in Warangal. On the other hand no Minor Irrigation works were undertaken in all 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 Irritation 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 have received water substantially to their fields and could derive a 10% of 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 though intervention to sample households is presented in Table 4.11. It can be seen from the table that there was significant increase in area irrigated, by about 76 percent. The highest increase in area irrigated was recorded from Amravati district and lowest was in Buldhana. Overall, due to this scheme, there was increase in irrigated area, which obviously must have helped the selected households to increase the output as well as income from the 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, Y-Yes

Source: Field survey data.

In Kerala, this relates to the allocation of ₹ 70.03 crores 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 crores distributed against RIDF during 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.

Chief Engineer, Irrigation has reported that Project report for 75 schemes amounting to RS. 1960.88 lakh has been sanctioned by NABARD under RIDF XIII and Government has also accorded Administrative sanction for the above works. Over and above the works sanctioned by NABARD in Palakkad District, investigation estimate for 30 Nos. of check dams has been approved by Chief Engineer, I & D (IDRB) and these investigation works has been tendered by Executive Engineer, MI Division. Palakkad and Detailed Project Report of the above schemes will be submitted after investigation. Detailed project report of 25 schemes amounting to ₹ 885.49 lakhs as per the current schedule rate has been submitted to Government for obtaining sanction. 55 projects sanctioned and ₹ 3.40 crores disbursed under RIDF as per the report of NABARD (Rajkumar, R. et al 2010).

Under the prime minister 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 whole. In Andhra Pradesh, work on minor irrigation projects is not initiated in any of the identified district, whereas in Karnataka and Kerala, most of the works under minor irrigation component of P M 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 can not be ascertained at this point of time. However, the respondents from identified districts of Maharashtra have reported that the minor irrigation projects facilitated agumentation of area under irrigation.

4.10 Major and Medium Irrigation

On going major and medium irrigation projects in the distress affected districts were given thrust under the PM Relief Package. In Karnataka, a total of 15 projects in 3 districts were being assisted by the centre under Accelerated Irrigation Benefit Programme (AIBP). Department of irrigation, Government of Karnataka spent ₹894.232 crores on development and completion of major and medium irrigation projects in the identified districts however, the government has released only ₹246.33 crores, accounting for 27.5 percent of the total expenditure incurred after PM package was announced (Table 4.12).

Table 4.12: Progress of Major and Medium Irrigation Projects under P.M. Package in the Selected Districts of Karnataka*

(₹ in Crores)

Districts	No of Projects	Total Est Cost	Balance at the Time of approval of Package	Allocation for 2008-09	Progress**	Grant Released by the centre	Physical Progress Ha
Major							
Hassan	2	4317	371.18	73.1	341.64	0	16771
Belgaum	5	4529.87	1241.84	409.7	389.466	246.04	34388
Total	7	8846.87	1613.02	482.8	731.106	246.04	51159
Medium							
Hassan	4	344.75	69.6	33.15	20.592	0.29	2084
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	2084
G Total	14	9557.59	2016.37	588.45	894.278	246.33	53243

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 Package

Among the selected three districts Guntur, Ananthapur and Warangal of Andhra Pradesh, Major and medium irrigation works were undertaken only in Warangal district. Minor Irrigation works were not undertaken up in any one 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 Watershed Community, Centre 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 (on 50 per cent grant and 50 per cent loan basis). 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 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 to realize 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	15764	2053	100	0	Increase in area irrigated
Guntur	0.57	0.60	0	12000	6000	100	0	Increase in area irrigated
Warangal	1.62	0.80	0	26400	17664	100	0	Increase in area irrigated
Avg.	2.16	0.80	0.00	18055	8572	100	0.00	Increase in area irrigated

Source: Field Survey Data.

In Karnataka, watershed development programme has not been implemented and hence no progress is reported on this component against the proposed area to be covered in 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 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 lakhs each in Shimoga and Chitradurga Districts) was spent on training the NGOs, creating awareness, community mobilization. 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 is being the situation, spending a huge amount again on training NGOs would amount to waste of resources. It had proposed to construct 500 check dams / year/ district along with 1000 rain water 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	32653	21887	32000	86540
No of Micro Catchments	67	43	68	178
No of Villages	84	68	255	407
RIDF 80%	3134.69	2101.15	3072	8307.84
State	783.67	525	768	2076.67
Total	3918.36	2626.44	3840	10384.8

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 dam was taken in the state of Maharashtra, which was funded by NABARD under RIDF. The land treated under watershed programme and water harvesting structure constructed in sample household farms is presented in Table 4.15. It can be seen from the table that on an average 1.75 ha (all together more than 26 hectare) land was treated under watershed. Total eight farm ponds, three check dams were constructed on the farm and four check dams were constructed near farm of the sample households. About ₹ 37073/-average expenditure was incurred on construction of one farm pond/check dam in selected areas and average amount of ₹ 11282/- was contributed by the sample household in same. Out of the total farmers, only 40 percent farmers anticipated that scheme

would benefit them. However, farmers also opined that area under irrigation would increase due to construction of check dam on the farm/near the farm.

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	24952	3500
Amravati	2.24	0.2	0.2	0.6	27500	13500
Buldhana	1.44	1	0	0.0	50600	16620
Total	1.75	0.5	0.2	0.3	37073	11282

Source: Field survey data.

Watershed development programme are being implemented under P M package in all the identified districts. In addition to participatory watershed development, it includes construction of check dams and also rain water harvesting structures. Soil and water conservation under watershed programmes as well as impounding water through check dams and rain water harvesting structures improves ground water 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, P M 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; live stock (supply of milch animals, grants for calf rearing, provision of feed and fodder, artificial insemination, animal health care, etc); development of fish ponds and supply of quality seed; different programmes under NHM; provision of extension services; development of minor, medium/major irrigation; etc in the selected districts. The farm families opted for one or the other scheme or a combination of

schemes/programmes under the P M 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 P M package. Some farmers got benefit from two schemes and a few others from more than three schemes also. 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 P M 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 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 under P M package. Farmers owning more land were found to have availed of more than one scheme or programme under the P M 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 PM package commenced from September 2006, most of the programmes/schemes were finalised and initiated from 2007 onwards. The direct assistance provided to farm households under P M package 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 was also appreciated by the beneficiary farmers as it helped them augment more area under irrigation. 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 modernization 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 PM's relief package, it would be important to have idea about the other government programmes availed by the sample household family. It was observed in Maharashtra that about 47 percent of household availed benefits of ration cards, 13.3 percent availed benefits of dairy animal's scheme and 6.7 per cent of the households availed benefits under jantha house, old age pensions and such other schemes (Table 4.17).

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

State	Government program availed (% to total no. of households)							
	Dairy animals	Jantha house	Baghy ajoty/kutiraj yothi	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 beneficiary of Janantha 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 when compared with 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 commercialization of agriculture leading to increased use of purchased inputs, reduced profitability and lack of safety nets made things worst 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 seed, fertilizers, 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 stagnation if not deteriorating terms of trade for agriculture (GOI, 2007).

The agrarian distress reached a high climax at the fag end of 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 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 maximum in 2004-05. In 2006, there was virtually a suicide epidemic in Maharashtra. These incidents raised serious questions of the state of the agrarian economy and the economic hardships faced by farmers.

The Prime Minister on July 1, 2006, after having visited some parts of the Vidarbha region in Maharashtra, announced a rehabilitation package 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 State 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 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 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 to 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 to the intended beneficiaries
- To assess the overall social and economic impact of the Rehabilitation Package
- To study the constraints involved in the implementation of the package and suggest improvement.

II. Methodology and selection of samples

Prime Minister's Rehabilitation (Vidarbha) Package for farmers in 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 P. M 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 highest cumulative suicide cases registered in the district in the past. Thus, Ananthapur, Guntur and Warangal districts are selected from Andhra Pradesh; Amravati, Buldhana and Yavatmal districts from Maharashtra;

Belgaum, Chitradurga and Hassan in Karnataka; and Kasargod, Palakkad and Wayanad districts from Kerala state

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 period. There were 8 major schemes implemented by agriculture, horticulture, animal husbandry, irrigation, fisheries departments and also compensation for families of dead farmers and an ex-gratia payment from PM national relief fund paid by the district collector. 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 PM package in the districts were collected from the office of the Joint Director, Agriculture, Deputy Director Horticulture, and from other line departments such as department of fisheries, animal husbandry, NABARD, Lead banks, Office of executive engineer for major and minor irrigation, and nodal offices managing and monitoring P M rehabilitation package such as Vasantao Naik Sheti Swalamban Mission (VNSSM) in Maharashtra, so on. The main findings and concluding remarks are presented here.

///. Over View of Prime Minister's Rehabilitation Package for Farmers in Suicide Prone Districts of Andhra Pradesh, Karnataka, Kerala and Maharashtra

Prime Minister's Rehabilitation Package includes both credit and non-credit components. Among the non-credit component, there are eight major schemes implemented by agriculture, horticulture, animal husbandry, irrigation, and fisheries department 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 to 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. Utilization (disbursal) of the ex-gratia payment varied from state to state and also district to district within the state and beneficiary to beneficiary.

- ◆ Funds provided for payment as ex-gratia assistance under PMNRF was fully utilised by Andhra Pradesh and Maharashtra whereas Karnataka could use little more than 59 per cent of the total assistance of ₹ 300 lakhs received from the PMNRF. Kerala government also utilised ₹ 144.5 lakhs of the 150 lakh grants meant for ex-gratia payment.
- ◆ Average assistance paid under ex-gratia payment ranged from ₹ 2942 per beneficiary in Kerala to ₹ 10,000 per beneficiary from Andhra Pradesh.
- ◆ Belgaum and Chitradurga districts spent the entire amount of ₹50 lakhs provided for payment as ex-gratia.
- ◆ In Hassan district, a sum of ₹10,000 each were paid as an ex-gratia amount to 91 families. On the contrary, the amount of ex-gratia payment varied from ₹ 2000 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 of the benefits under ex-gratia payment scheme.

II. Credit Component

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.

- ◆ The support for waiver of overdue and penal interest from the central government was in the form of grants.
- ◆ Interest waiver component under PMs 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 rescheduling of loans are higher than the estimated overdue loan amount as well as accounts in both Karnataka as well as Maharashtra state.
- ◆ In Andhra Pradesh, over due agriculture loans were estimated to the tune of ₹ 15149.61 crores borrowed by 87,43,184 borrowers. However, actual amount of overdue loans rescheduled was ₹ 5028.45 crores benefiting 35,54,332 farmers from 16 distressed 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 was found aware of either the overdue interest waived off or the principal amount due.
- ◆ 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 to the farmers, a massive seed replacement programme was launched with 50 percent subsidy in the identified districts of 4 states. The total allocation for seed replacement programme was ₹830.10 crores 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 special package, benefit of subsidy on certified was extended to all farmers restricted to one hectare at 50 per cent subsidy. All the three districts utilized 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 except Karnataka. The government of Karnataka could spend less than 30 per cent of the allocation made for seed distribution.
- ◆ Anantpur district in Andhra Pradesh shared the highest share 32.59 per cent (934119 quintals) of subsidised seed and accounted for 31.73 per cent (₹ 149.19 crores) of the total subsidy provided for seed distribution under the P M package in Andhra Pradesh.
- ◆ Farmers expressed dismay over delay in supply of seeds and the process of distribution at the Raith Samparka Kendras i.e., too much of crowd with farmers jostling to collect seeds at the distribution centres.
- ◆ All the beneficiary farmers opined that the certified seeds contributed 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 Raith Samparka Kendras and sold the same to others, probably to large farmers at same premium.

IV. Micro-Irrigation

- ◆ All the selected districts in 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 crores 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 district under P M package.
- ◆ Department 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 crores for the development of micro irrigation in 16 districts during 2007-08 and 2008-09. A total of about 222636 hectares area 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.
- ◆ Government of Kerala could use very negligible amount i.e., ₹ 1.06 crores of the total ₹ 6.36 crores released by the government of India. The actual area covered under micro irrigation is 1592 ha of which 1094 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 P M rehabilitation package for 3 districts of Kerala.
- ◆ The government of Karnataka spent ₹ 24.89 crores i.e., 74 per cent of the released amount whereas Government of Maharashtra could utilize ₹ 103.32 crores accounting for 92 per cent of the total amount released till March 2009.
- ◆ The area covered under drip and sprinkler irrigation ranged between 1552 ha in Kerala and 92061 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 PM package. It was decided that the farmers would be provided extension support at the village level and convergence at district level through Agriculture Technology Management Agencies (ATMA) of all the districts.
- ◆ The activities include training programmes, seminars and workshops, visits to demonstration fields, research stations, and study tours of the farmers for exposing themselves to new farming systems and technologies.
- ◆ The expenditure on extension services have been increasing since inception of the P.M. Package. The Government of India released ₹ 26.52 crores however, the Government of Andhra Pradesh could spend ₹ 12.13 crores till June 30, 2008.

- ◆ Extension activities under ATMA were being carried out in only two (Hassan and Shimoga districts) of the six selected district 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 PM's package was of ₹ 3.00 crore each for Maharashtra and Karnataka and ₹ 1.50 crores for Kerala.
- ◆ The Government of India had sanctioned a grant of ₹ 1.5 crores for strengthening extension activities 3 districts of Kerala and released ₹1.17 crores till June 30, 2008 (concept note and proposal sent by MOA).
- ◆ The department of agriculture, Government of Karnataka has used little more than ₹ 2 crores against the release of ₹ 2.99 crores 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 crores was spent by ATMA for various activities against the release of ₹ 11.50 crores 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 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.
- ◆ Government of Andhra Pradesh released ₹ 195.00 crores as against the central grants of ₹ 188.00 crores for subsidisry activities under P M package over a period of three years beginning with 2006-07. However, the animal husbandry department of Andhra Pradesh, an implementing agency of the package could spend ₹ 139.02 crores on various component 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 crores and the Central Government released ₹ 57.58 crores towards implementation of the package.
- ◆ In Karnataka Live Stock Development Agency along with Karnataka Milk Federation (KMF) has been implementing the programme. The State Government released ₹ 25.48 crores to KMF. However, KMF could spend only ₹ 20.66 crores 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 crores of which ₹ 42.52 crores 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 utilized almost 78 per cent (₹ 33.39 crores) 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 Prime Minister's package. Programme envisaged development of fish ponds 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 ₹7.00 crores for the Development of fisheries in identified 16 districts during last three years 2006-07, 2007-08 and 2008-09 and has constructed 699.00 ha of fish ponds under P M package
- ◆ As far as Karnataka is concerned, an amount of ₹ 6.24 crores was earmarked for the fisheries developmental activities in 6 districts of Karnataka. The fisheries development programme in Karnataka took off only in February 2007.

- ◆ Fishery department in Karnataka could develop only 146.3 ha area under fish pond against the target of 108 ha incurring an expenditure of ₹ ₹ 1.264 crores 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 crores under P M package towards development of aquaculture in 3 identified districts of Kerala. The Fish Farmers Development Agency (FFDA) was identified as a nodal agency for implementing the programme in Kerala.
- ◆ It was envisaged to develop 250 ha of fish ponds during 3 years. ₹ 1.03 crores was released to FFDA during the first year of the programme in Kerala. FFDA utilised entire amount to develop aquaculture on 180.4 ha of area.
- ◆ The government of Kerala released remaining ₹ 2.30 crores during 2007-08. However, area covered during second year is not known as scrutiny of applications as well as survey of the area was in progress.
- ◆ In Maharashtra, allocation for fisheries component was meant for construction/repairs and renovation of fish ponds and input subsidies. The total allocation for this component was ₹ 6.21 crores however, only ₹ 23 lakh were released and of this ₹ 18.93 lakh only 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 are 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 P M package for development of horticulture in all the selected suicide prone districts.
- ◆ Under Prime Minister's Rehabilitation Package (PMR's), a total amount of ₹ 452.78 crores was allocated and released among four states viz. Andhra Pradesh, Maharashtra, Kerala and Karnataka. The entire amount is a grant component.
- ◆ In Andhra Pradesh, total outlay for horticulture development was ₹ 240.94 crores for the 16 identified districts. The Government of Andhra Pradesh spent a total of ₹ 161.12 crores on NHM projects in 16 identified districts against ₹ 133.25 crores

(₹ 66.67 crores in 2006-07 and ₹ 66.58 crores during 2007-08 and 2008—09) released by the Government of India under P M relief package.

- ◆ The state received ₹ 484.47 crores under the NHM programme and utilised ₹ 408.55 crores accounting for 84 per cent of the total grants received from the Government of India
- ◆ Among the 6 districts covered under 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 crores was made for implementing NHM in selected districts of Karnataka. The department of horticulture has spent ₹ 98.33 crores of the total ₹ 98.59 crores released by the government of India till March 2009.
- ◆ Government of India approved a grant of ₹ 46.33 for NHM activities in Kerala and state government also supported the programme from its own funds.
- ◆ State Horticulture Mission (SHM) is the nodal agency for implementing NHM programme in the state. A total of ₹ 40.70 crores were released till December 2008.
- ◆ In Maharashtra, five of the six identified districts were covered under the National Horticulture Mission (NHM). The remaining one 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, ₹ 225.0 crore has been sanctioned by the government towards NHM programme, as against this about ₹ 115.26 crore (51.26 percent) were received by March 31, 2009.
- ◆ Under NHM scheme, new plantation of fruit perennial, floriculture, spices and aromatic plants have been taken up on 52128 ha area since 2006. Also 1267 community water tanks were completed. Old and senile orchards in an area of 8097 ha area are being rejuvenated.

VIII. Assured Irrigation

- ◆ Assured irrigation component accounted for nearly 60 per cent (57.35 per cent) of the total P M package of ₹ 16978.69 crores earmarked for 31 districts from 4 states.

- ◆ Under minor irrigation component, construction of new tanks, Modernization 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 16 identified districts under the assured irrigation component of P M package. Major Irrigation works were undertaken only in 10 districts during the period of the implementation of PMR Package.
- ◆ Against the targeted amount of ₹ 8984.23 crores, an amount of ₹ 6442.87 crores i.e. about 72 per cent could be utilised. Out of the total targeted amount by Centre, (₹ 6400 crores) the released amount is only 41.53 per cent during 2006-09.
- ◆ The Government of India sanctioned ₹ 1208.71 crores comprising ₹ 725.24 crores as grants and ₹ 483.47 crores 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 crores 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 loan under RIDF. NABARD agreed to provide a loan under RIDF 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 ₹ 2177.27 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 six districts of Maharashtra.
- ◆ Total funds of ₹ 2679 crore was released, out of which ₹ 2641 crore was utilized by March 31, 2009.
- ◆ The irrigation potential created was only 88,644 hectares (53 per cent) of the targeted irrigation potential of 167871 hectares.
- ◆ In the case of Kerala, Government of India provided a total of ₹ 105.03 crores 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 crores were meant for major irrigation projects and the balance of ₹ 70.03 crores for the development of minor irrigation.
- ◆ It was reported that project reports for 75 minor irrigation schemes amounting to ₹ 19.61 crores has been sanctioned by NABARD under RIDF XIII and NABARD had released ₹ 3.40 crores for 55 projects.

IX. Participatory Watershed Programme

- Drought proofing is one of the important components of the PM 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 rain water harvesting scheme.

A. Participatory Watershed Development Programme

- ◆ As per the package, ₹ 837.00 crores were provided as grants for implementation of participatory watersheds in the 31 identified districts of four states and rest of the financial requirement were to be met from loans raised under RIGF from NABARD.
- ◆ It was envisaged that about 15000 hectares area per district would be treated under participatory watershed development programme for which grant support of ₹ 60.0 lakh per watershed of 1000 hectare area each, is provided.
- ◆ Andhra Pradesh received ₹ 432.00 crores as grants for the development of participatory watersheds in 16 identified districts. Similarly, ₹ 480.00 crores was allocated for construction of Check dams and ₹ 48 crores towards Rain Water harvesting scheme.
- ◆ The NABARD has agreed to development 15000 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 ₹ 4756.26 crores as on 31st January 2010.
- ◆ The cumulative total area covered under participatory watershed management among the 16 identified districts ranged from 24200 ha in Karim Nagar district to 40604 ha in Prakasam district.

- ◆ ₹ 162 crores was allocated for participatory watershed development under the Prime Minister's package for distressed districts of Maharashtra. About 90188 ha area was treated under participatory watershed development programme with an expenditure of ₹ 18.65 crore against sanctioned amount of ₹ 54.0 crore, by May 31, 2009.
- ◆ In case of Kerala, a package of ₹ 81.0 crores 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 crores will be provided in the second phase.
- ◆ During the first phase, 15000 ha are proposed to be treated in each district with an allocation of ₹ 9 crores each. However, as per available the data ₹ 1.53 crores were spent to treat 15600 ha of area under the participatory watershed development program in the selected districts of Kerala.
- ◆ Implementation of 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.
- ◆ A sum of ₹ 162 crores 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 of Karnataka were sanctioned for implementation by the Watershed Development Department (WDD), government of Karnataka.
- ◆ The government of Karnataka could spend ₹ 7.15 crores till the end of March 2009. The 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 crores were provided as loan by the Government of India.
- ◆ As per guidelines provided in the PM 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 period.

- ◆ Check Dams provide benefit of irrigation to 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 PMR package the total allocation for Andhra Pradesh is ₹ 480.00 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 ₹ 2.00 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 P.M. 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 utilized for the development of Participatory Watershed Projects based on SUJALA watershed Model where in 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, Government have 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 ₹ 82.00 crores.
- ◆ Maharashtra government had set a target of constructing 9000 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 9000 check dams in three years, total 7970 check dams were constructed by 2008-09, with an expenditure of ₹ 162.53 crore.

C. Rain Water harvesting structures

- ◆ ₹ 93 crores were provided as subsidy for constructing rain water 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 SC/ST beneficiaries including small and marginal farmers was provided with 50 percent back ended capital subsidy along with 50 percent bank loan, covering 1000 beneficiaries a year in each of the identified district.
- ◆ Andhra Pradesh received ₹48.00 crore allocation for construction of rain water harvesting structures under the package and the entire amount is a grant component. APSCCFC will implement plans worth of ₹22.61 crore and the balance of ₹ 25.39 core will be shared by Rural Development Department.
- ◆ No amount has been spent so far on Rain Water Harvesting scheme in Andhra Pradesh (Status as on 28th February 2009).
- ◆ In Karnataka, it was decided that an allocation of ₹ 18.00 crores made for construction of rain water harvesting structures would be used for participatory watershed development programme along with ₹ 162 crores earmarked for the participatory watershed development programme.
- ◆ The State Government of Kerala received ₹ 9.00 crores allocation from the Central Government for the implementation of Rain Harvesting scheme in three identified districts in the state.
- ◆ The target is 1000 structures per year per district for SC / ST, small and marginal farmers. Funds are yet to be released by 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 Ministry of Agriculture, Government of India.
- ◆ 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 percent bank loan, covering 1000 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 crores comprising of 10,579.43 crores as subsidies or grants and remaining ₹ 6,399.26 crores 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 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 of 120 households from each state. The data are analysed and the findings are discussed and summarised below.

1. Awareness about the P M 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.
- ◆ 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. Majority (40 per cent) of the households came to know about PM package through the officials of the government departments
- ◆ In the case of Maharashtra, about 99 per cent of total selected farmers received the information about the PM's relief package and various schemes under same through Gram Panchayat of the respective villages

2. Ex-gratia Payment

- ◆ Andhra Pradesh government disbursed ₹ 10, 000 each to as ex-gratia payment to distressed families to meet their contingent expenditure needs for health, education, etc. and utilised full amount of ₹ 8 crores received from the Government of India.
- ◆ A total of 4570 farm families from six districts in Karnataka received an ex-gratia payment amounting to ₹ 1.777 crores as of March, 2009.
- ◆ The total disbursement of ex-gratia payment ranged from ₹ 9.01 lakhs in Hassan district to ₹ 50 lakhs in Belgaum and Chitradurga from 2006 through 2009.

- ◆ In Karnataka, average amount of ex-gratia payment disbursed ranged from ₹ 2420 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 Maharashtra, entire amount of ₹ 3 crores provided to 6 District Collectors was disbursed to 3974 distressed families till the end of March 2008 it self.
- ◆ 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 ₹ 1194.52 crores 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 ₹ 1868.06 crores 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 crores benefiting 4,29,776 account holders from 6 districts under P M 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.
- ◆ The Manager of the Canara Bank reported that 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 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 about the outstanding debts. They are 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 ₹ 13500 per farmer in Buldhana district to ₹ 21000 per borrower in Yavatmal district with an over all average of ₹ 16733 per borrower in the three sample districts of Maharashtra.
- ◆ The overdue interest/ penal interest waived varied between ₹ 2000 and ₹ 45000 for individual beneficiary. The average interest waived per borrower ranged from ₹ 3667 per borrower in Kasaragod to ₹ 6429 per borrower in Waynad district.
- ◆ About 70 per cent of the borrowers from 3 districts of Kerala benefited from interest waiver in the range of ₹ 3000 to ₹ 6000.

4. Seed Replacement

- ◆ The seed of 14 major crops was distributed to the farmers in 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 identified 16 districts, groundnut, Chick pea, 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 (₹ 47017.90 lakh) under P M package.
- ◆ In Ananthapur district 120 kgs of Groundnut seed was distributed to each farmer. The farmers had to pay 50 per cent of the total cost of seed i.e., ₹ 1600 as their share and remaining ₹ 1600 was subsidy. Similarly, ₹ 248 was paid by the farmers in Guntur district for 24 kgs of paddy seed. Maize was distributed in Warangal district at the rate of 20 kgs per farmer at a subsidised cost of ₹ 140.
- ◆ The certified seed covered on average 0.84 hectares of land. All these beneficiaries reported that the yields were good and supplied seed was adequate
- ◆ All the three identified districts in Karnataka utilized 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, Chitadurga and Hassan, respectively, had purchased subsidised seeds supplied by the government.

- ◆ In Belgaum, farmers purchased, on an average, 36 kgs 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 Raith 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 productivity of crops by 5 to 17 per cent.
- ◆ About 10 per cent of the farmers from Wayanad and 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 subsidized 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 subsidized purchased ranged from 76 kg per beneficiary from Yavatmal district to 196 kg seed per farmer in Amravati district and the average area covered by subsidized seed varied between 0.80 ha per farmer in Yavatmal to 2 ha per farmer in Amravati district. Soyabean seed was the most sought after seed by the sample farmers.
- ◆ Farmers from Amravati district purchased relatively large quantity of soybean seed when compared with their counterpart farmers from Yavatmal and Buldhana district. Wheat and gram seed was purchased by farmers from Buldhana district only.
- ◆ The seed purchased was adequate as per 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

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, average area covered under micro-irrigation per beneficiary in Ananthapur 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. Ananthapur farmers received higher amount of subsidy when compared with other districts.
- ◆ Beneficiary farmers from identified districts in Andhra Pradesh, spent on average ₹ 21930 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 covers 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 highest in Belgaum district.
- ◆ The performance of this scheme is poor in all three districts of Kerala. Total area covered under drip and micro irrigation system in 3 districts of Kerala was 1592 hectares. More than three fourth of the area covered under micro irrigation under P M 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 the 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 beneficiaries 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 target of 53400 hectares area to be brought under sprinkler and drip irrigation.
- ◆ It is observed that the beneficiary farmer from Maharashtra have invested on average ₹ 13000/- and received ₹ 17528 as a subsidy for purchasing sprinkler or drip irrigation system.
- ◆ Above 93 percent of farmer have opinioned that due to sprinkler and drip irrigation, the area under irrigation increased and 87 percent farmers mentioned that it helped them in expanding the area under double cropping.

6. Extension services

Effective and efficient extension service played a key role in transferring public and private research findings for increasing production and productivity in agriculture and allied sectors in the past. Strengthening of extension services was one of the components of PM 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 district level.

- ◆ Eighty per cent of farmers in Ananthapur district have said that they have attended crop demonstration and all of them benefited from the programme. Similarly sixty 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 were reported in Guntur district.
- ◆ It was observed that overall, 30 percent 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 work shop on improved agricultural practices organized at the KVKs.
- ◆ In Kerala, it was proposed to establish 525 Farmer Counselling Centres at the existing Krishi Bhavans at Wayanad, 1725 Centres at Palakkad and 750 centres in Kasaragod district. However, only 568, 163 and 269 Farmers Counselling Centres were establish at 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 and the exposure visit of the research farm.

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 P M 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 Ananthapur purchased on average one milch animal as against roughly two milch animals by the beneficiaries from Guntur and Warangal districts
- ◆ The beneficiaries on 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 ₹ 17400 per beneficiary in Warangal district to ₹ 29000 in Guntur district with an average income of ₹ 24,533 for all the beneficiaries.
- ◆ A uniform physical target (of 1417 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 2nd animal to 344 beneficiaries. In Chitradurga district, 1044 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, 1227 beneficiaries were identified and approved by the district committee.

- ◆ Average cost per animal ranged between ₹ 23500 and ₹ 29500 in the study districts
- ◆ Average cost per animal ranged between ₹ 23500 and ₹ 29500 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 ₹8200 per beneficiary household in Hassan district to ₹ 13400 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 ₹ 20572 for the Wayanad farmers, ₹ 14150 for the Palakkad farmers and ₹ 12900 for the Kasaragod farmers.
- ◆ Nearly 15 per cent of the farmer beneficiaries from Kerala have indicated having spent a considerable sum on accessing the package, at ₹ 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, under the for suicide prone districts selected sample households 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 subsidy scheme**.
- ◆ The average cost per animal worked out to be ₹ 14114. The beneficiary received about ₹ 6147 as subsidy (44 per cent) and the remaining amount was invested by the farmer.

- ◆ Government also provided subsidy to the farmers for construction of shed/feed/calf rearing of about ₹ 10851/- per farmer household.
- ◆ The average net income from the livestock purchased was ₹ 3860 per household, in which Buldhana district household income was highest (₹ 7400), and lowest was in case of Yavatmal (₹ 1380).
- ◆ Most of the farmers opined that the cattle purchased under this scheme could not sustain under hot climatic conditions of the regions and thus affect the milk productivity.

7.2 Fisheries

Fishery or aquaculture is one of the components of subsidiary income activities suggested under PM package. Special package envisaged development of fisheries in 100 hectares per district by providing 40 per cent of capital and input cost and the rest were 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 Ananthpur district to 2.00 lakhs 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 Ananthpur on the development of 1 ha of fishponds.
- ◆ The beneficiaries received ₹ 80,000 as subsidy amount. 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 day of employment. Over all, the scheme was successful.
- ◆ In Karnataka, average size of fish ponds varied across the districts from 0.3 ha in Belgaum district to roughly one ha in Hassan district. The average expenditure incurred for development of fish pond ranged from ₹ 0.75 lakh in Belgaum district to ₹ 2.28 lakh in Hassan district. The average cost of construction of fish pond is ₹ 2.30 lakh per ha. The average subsidy amount works out to ₹ 50,075 per beneficiary or ₹ 89420 per ha.
- ◆ The supply of good fish feed was a constraint, adversely affecting upon the fish yield. On an average, 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 a small tanks /ponds in and around their fields have availed the subsidy under fishery component of the PM Package. The farmers who constructed new ponds were rare.
- ◆ In Maharashtra, 91 fish ponds (102.34 ha area) were constructed against the target of 101 ponds and 91 farmers benefited with 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.
- ◆ Among the 3 districts of Kerala, Palakkad received a maximum allocation of ₹ 52.44 lakh followed by Kassargod district (₹ 30 lakh) and Wayanad with 20.56 lakh during 2006-07. The districts have fully utilised the allocated amount.
- ◆ A total of 1184 households from Kassargod and 454 from Wayanad and 214 households from Palakkad benefited from fisheries program 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 one of the sunrise sector having potential to accelerate the growth of agrarian economy. NHM was also included as one of the components under PM package.

- ◆ Andhra Pradesh received a total allocation of ₹ 75.30 crores under the P M package for horticulture development in 16 suicide prone districts of the state. The total outlay for horticulture development for 3 years was ₹ 240.94 crores.
- ◆ Under the PM's relief package Sweet orange plants were distributed on subsidy in Ananthapur 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 varied was 3.24 ha, 0.51 ha and 0.84 ha in Ananthapur, Guntur and Warangal district, respectively. On average, ₹ 66,833 was invested by each beneficiary farmer, of which ₹ 34,923 was subsidy provided under NHM programme.
- ◆ 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 NHM programme varied from 17144 in Chitradurga district to 43580 beneficiaries in Hassan district during 2006-07 through 2008-09.
- ◆ Overall, three district taken together could cover only 55 per cent of the area target and could spend only ₹ 20.57 crores 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 years 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 component under the horticulture mission
- ◆ Overall 18 per cent of the farmers from 3 identified district of Kerala participated in 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 NHM programmes. The wayanad farmers have invested on average ₹ 35,000, whereas the farmers from Palakkad and Kasargod have invested ₹ 331,000 and ₹ 60,500, respectively.
- ◆ On 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.
- ◆ The distribution of beneficiaries of 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 NHM programme.
- ◆ The total investment for NHM related activities was ₹42300, ₹ 33200 and ₹ 52580 per beneficiary farmers from Yavatmal, Amravati and Buldhana district, respectively.

- ◆ The average amount of subsidy ranged from ₹ 23400 per beneficiary in Amravati to ₹ 34300 in Yavatmal district. The average cost of documentation and other expenses was ₹ 2580 per beneficiary.

9. Minor Irrigation

- ◆ In Karnataka, construction of new tanks, modernization 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 modernization 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.**
- ◆ Modernization 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 district of Karnataka.
- ◆ The estimated cost per acre for creation of irrigation potential in the case of Belgaum district works out to ₹29979 when compared to ₹ 99766 in the case of Hassan district. The average cost for three districts taken together is estimated at ₹58804 for creation of one ha of irrigation potential.
- ◆ **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.**
- ◆ **Since, most of the works under minor irrigation component of P M 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 can not be ascertained at this point of time.**
- ◆ Discussions with the farmers about the on going works of tank renovation under P M package revealed that the works being carried out are of poor quality

(Kereyagalahalli tank Holalkere Taluk, Chtradurga 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 chanals.

- ◆ 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 P M package resulted in augmenting irrigated area in the selected districts. The average area irrigated increased from 1.55 ha before implementation of the P M 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 crores distributed against RIDF during 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 Watershed Community, Centre 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 (on 50 per cent grant and 50 per cent loan basis). 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 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 to realize higher yields.
- ◆ In Karnataka, watershed development programme has not been implemented and hence no progress is reported on this component against the proposed area to be covered in 3 districts.
- ◆ As per the information made available, a substantial amount (40 lakhs each in Shimoga and Chitradurga Districts) was spent on training the NGOs, creating awareness, community mobilization. Except this, nothing else was done.
- ◆ The construction of check dam was taken in the state of Maharashtra, which was funded by NABARD under RIDF.
- ◆ On an average 1.75 ha (all together more than 26 hectare) land was treated under watershed. Total eight farm ponds, three check dams were constructed on the farm and four check dams were constructed near farm of the sample households.
- ◆ About ₹ 37073/-average expenditure was incurred on construction of one farm pond/check dam in selected areas and average amount of ₹ 11282/- was contributed by the sample households for same. Out of the total farmers, only 40 per cent farmers anticipated that scheme would benefit them.

Xi. Concluding Remarks and Suggestions

- ◆ State governments are implementing parallel programs along with the P M 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 P M 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 P M package. Some farmers

got benefit from two schemes and a few others from more than three schemes also

- ◆ 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 rupees ten thousand as ex-gratia assistance whereas in other district within the state it was around three thousand ruppess per beneficiary. Hence, there is a need to provide guide lines for disbursement of ex-gratia payments. Collusion between local leaders and officials is also evident as some well off farmers benefitted from ex-gratia payment whereas poor households were left out.
- ◆ The credit componenet related to interest waiver scheme as well as rescheduling of 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 over due 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. A managers from nationalized 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 penalizes the borrowers who promptly repay their loans. The government should not vaive the loans of all the borrowers and should pursue the policy of selective loan waiver based on socioeconomic condition of the borrower.
- ◆ Distribution of certified seed 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 P M package which helped farmers immensely. It was observed that a few small and marginal farmers had purchased subsidised seeds from the Raith Samparka Kendras (Karnataka) and sold the same to others probably to large farmers at some premium.

- ◆ Under 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 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 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 about the subsidy component, so that all the beneficiaries would get same benefit will not have any room for leakages or corruption.

- ◆ Grants are provided under P M 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 a nodal agency in all the districts to ensure extension support and convergence at district level. A large number of farmers benefited from the activities identified under extension component in a few 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 P M 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 the cases (in Karnataka) where the beneficiaries of livestock package are the office bearers of either 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 animal and also for rearing a calf. However, none of the respondent has received assistance for feed and fodder (Karnataka). Periodic

monitoring and surprise checks by the competent authorities are necessary to control the filferage of funds.

- ◆ While farmers did receive subsidy to purchase high yielding milch animals and also augmented their incomes from sale of milk, they continued to face problems about availability of 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 fisheries program as the initial investment for development of fish ponds is very high and 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 district.
- ◆ Over the years, horticulture has emerged as one of the sunrise sector having potential to accelerate the growth of 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 whole. In Andhra Pradesh, work on minor irrigation projects is not initiated in any of the identified district, whereas in Karnataka and Kerala, most of the works under minor irrigation component of P M 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 can not be ascertained at this point of time. The respondents from identified districts of Maharashtra have reported that the minor irrigation projects facilitated agumentation of area under irrigation. It was observed that quality of civil work done in the process of rejuvenation/ rehabilitation of tanks under P M package in Karnataka was of poor quality and the farmers has 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 PM package in all the identified districts. In addition to participatory watershed development, it includes construction of check dams and also rain water harvesting structures. Soil and water conservation under watershed programmes as well as impounding water through check dams and rain water harvesting structures to improve ground water recharge and in situ moisture conservation which ultimately leads to higher productivity.
- ◆ Out of these eight schemes, four schemes namely – Distribution Certified Seed at subsidised rate, Accelerated Irrigation Benefit Programme, Watershed Development Programme and Micro Irrigation scheme aimed at increasing area under irrigation. These schemes did increase 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 ground water. 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 four States were aware of the PM's package and the department of agriculture, gram panchayats as well as 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 also augment their incomes through subsidiary activities. However their capacity to cope up with drought conditions whenever monsoons failed was still weak and 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

Credit related measures:

(i) Debt relief to farmers (Re-schedulement 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	1,053,766	7650.84
Karnataka	1,194.52	2,29,620	1248.78
Kerala	815.53	N.A.	802.63
Maharashtra	1,296.00	9,33,000	1384.38
Total	9051.81	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	1436.44	1978.11
Karnataka	209.81	706.35
Kerala	360.00	218.93
Maharashtra	712.68	824.98
Total	2718.93	3728.37

(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	15032.50	15326.76	17588.35	587.19
Karnataka	3749.41	3270.30	4479.13	NA
Kerala	2395.45	2750.71	3005.22	NA
Maharashtra	2225.35	1737.86	2402.27	111.35
Total	23,402.71	23085.63	27474.97	698.54

Note: The achievement data for 2008-09 relates to RRBs & cooperatives.

A. Assured Irrigation Facilities

I. Major Irrigation

(₹ in crore)

State	Allocation			Progress		
	Physical (No. of Projects)			Financial	Expenditure by State Govt.	Release by Gol
	Original Package	Additio nal	Total			
Andhra Pradesh	04	10	14	3233.00	4198.50*	1995.25*
Karnataka	04	05	09	1204.05	654.62*	323.08*
Kerala	-	01	01	-	-	2.72
Maharashtra	08	-	08	1260.43	486.62*	637.94*
Total	16	16	32	5697.48	5339.74*	2958.99

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

II. Medium Irrigation

(₹ in crore)

State	Allocation			Progress		
	Physical (No. of Projects)			Financial	Expenditure by State Govt.	Release by Gol
	Original Package	Additio nal	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	2231.00	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	2565	3207.81	555.44	693.73

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	24000	480.00	7707	102.87
Karnataka	9000	180.00	-	-
Kerala	4500	90.00	23	12.26
Maharashtra	9000	180.00	7994	151.53
Total	46500	930.00	15724	266.66

* Sanctioned by NABARD under RIDF

II. Watershed Development Programme

(₹ in crore)

State	Allocation under package		Progress	
	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	4800	48.00	Nil	-
Karnataka	18000	18.00	-	-
Kerala	9000	9.00	Nil	Nil
Maharashtra	18000	18.00	295	5.40
Total	93000	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	147.02	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 upto October, 2007, All the identified 31 districts have been included under NHM.

F. Micro Irrigation

(₹ in Crore)

State	Allocation under package		Progress		
	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	12.27	2.89	00.38

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

H. Subsidiary income Activities

(₹ in crore)

State	Amount allocated under package	Amount release 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"> ▪ 10602 milch animals inducted and 4050 calves enrolled. ▪ 21,000,00 animals covered under estrus synchronization. ▪ 419369 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"> ▪ 4202 beneficiaries identified and 3123 milch animals purchased and 953 calves enrolled. ▪ 1009747 AI carried out and estrus synchronization carried out in 26332 animals. ▪ Orders placed for purchase of 10 bulk milk Coolers. ▪ 3123 animals given health care. ▪ 14 ponds constructed.
Kerala	49.42	31.54	20.31	<ul style="list-style-type: none"> ▪ 2552 milch animals inducted and 2064 calves enrolled. ▪ 460795 artificial inseminations carried out. ▪ 81 ha area developed.
Maharashtra	98.87	37.49	17.77	<ul style="list-style-type: none"> ▪ 11987 milch animals inducted. ▪ 6148 calves inducted ▪ 229889 AI carried out ▪ 1236 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	

Note: * Release by Government of India (up to 31.03.08)

Annexure Table 4.7: 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 4.8: Physical and Financial Targets and Realisation under the Special Livestock Package as of August 2008

(₹ in Lakh)

District	Target for 1 st & 2 nd year		Amount Released by KMF to Milk Unions		Achievement	
	Physical	Financial	Physical	Financial	Physical	Financial
Belgaum						
Cows	1417	212.65	417	62.55	842	126.30
Others		871.31		156.02	(500)	280.09
Total		1083.86		218.57		406.39
Chitradurga						
Cows	1417	212.55	417	62.55	888	133.20
Others		452.89		156.02	(1674)	102.99
Total		665.44		218.57		236.19
Hassan						
Cows	1417	212.55	417	62.55	470	70.50
Others		615.19		156.02	(1227)	217.39
Total		827.74		218.57		287.89

Annexure Table 4.9: 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
Ananthapur	3.24	137640	69320	68320	40.00
Guntur	0.51	18798	12548	6251	40.00
Warangal	0.84	44062	13866	30196	40.00
A.V	1.53	66833	31911	34923	73.33

Table 4.10: 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 Expenditure (₹/farmer)	% of farmers received assistance in getting benefits (Y)	% of farmers opinioned that additional employment & income generated (Y)
Yavatmal	1.06	42300	8000	34300	500	100.0	40.0
Amravati	0.94	33200	9800	23400	980	80.0	20.0
Buldhana	1.24	52580	19240	33340	6260	20.0	0.0
Av.	1.08	42693	12347	30347	2580	66.7	20.0

Note: Y- Yes

Source: Field survey data.

References

- Deshpande, R S (2002), "Suicide by Farmers in Karnataka: Agrarian Distress and Possible Alleviatory Steps", *Economic and Political Weekly*, Vol. 37, No.26, June 29, pp. 2601-2610.
- Deshpande, R. S. and Nagesh Prabhu (2005), "Farmers' Distress: Proof beyond Question", *Economic and Political Weekly*, Vol. 44, No. 45, pp 4663-4665.
- Gill, Anitha, and Lakhwinder Singh (2006), "Farmers' Suicides and Response of Public Policy", *Economic and Political Weekly*, Vol. 41, No.26, June 30 - July 07, pp. 2762-2768.
- GOI (2007), *Report of the Expert Group on Agricultural Indebtedness*, Ministry of Finance, Government of India, July.
- Mishra, Srijit (2006), "Farmers' Suicides in Maharashtra", *Economic and Political Weekly*, Vol. 41, No.16, April 22, pp. 1538-1545.
- Mishra, Srijit (2006a), "Suicides Mortality Rates across States of India", *Economic and Political Weekly*, Vol. 41, No.16, April 22, pp. 1566-1569.
- Mohankumar, S. and R. K. Sharma (2006), "Analysis of Farmer Suicides in Kerala", *Economic and Political Weekly*, Vol. 41, No.16, April 22 - April 28, pp. 1553-1558.
- Mohan Rao, R.M. (1998), "Study on Causes for suicides Among Cotton Farmers in Andhra Pradesh" NABARD CHAIR UNIT, Department of Co-operation and Applied Economics, Andhra University, Visakhapatnam.
- Mohana Rao, L. K.; Gangadhara Rao, G.; Adishesu, k; Ram Gopal, N.; Nageswara Rao, M.; Jeelani, G. M.; Giribabu, K. V.; Ramesh, K. and Malathi, P. (2010), Report on "Prime Minister's Rehabilitation Package for Suicide Prone Districts of Andhra Pradesh", Report No. 131, Agro economic Research Centre, Andhra University, Visakhapatnam, July 2010.
- Mohanty, B B and Sangeeta Shroff (2004), "Farmers' Suicides in Maharashtra", *Economic and Political Weekly*, Vol. 39, No.52, December 25, pp. 5599-5606.
- National Sample survey Organization (NSSO) (2005), situation Assessment survey of Farmers: Indebtedness of Farmer Households, 59th Round, (January – December)
- Narasimha Rao. And P Suri, K.C. (2006) "Dimensions of Agrarian Distress in Andhra Pradesh", *Economic & Political Weekly*, April, 22, 2006 pp 1546 -1552.

- Padhi, Ranjana (2009), "On Women Surviving Farmer Suicides in Punjab", *Economic and Political Weekly*, Vol. 44, No.19, May 09, pp. 53-59.
- Parthasarathy & Shammem (1998), 'Suicides of Cotton Farmers in Andhra Pradesh, An Exploratory study *Economic & Political Weekly*, 33 (13) March 28, 1998, p 720 – 726.
- Raj Kumar, R., Muthusamy, S. R. and Abdul Salam, A, (2010). Report on "Prime Minister's Rehabilitation Package for Suicide Prone Districts of Andhra Pradesh", Report No. 144, Agro economic Research Centre, University of Madras, Chennai, Tamil Nadu.
- Satish, P (2006), "Agricultural Institutional Credit, Indebtedness and Suicides in Punjab", *Economic and Political Weekly*, Vol. 41, No.26, June 30, pp. 2754-2761.
- Shroff, Sangeeta (2008), "Agrarian Distress and Farmers Suicide in India: Focus on Maharashtra", *the India Economy Review 2008*, Vol. V, June 30, pp. 204-209.
- Singh, Sukhpal (2006), "Credit, Indebtedness and Farmer Suicides in Punjab", *Economic and Political Weekly*, Vol. 41, No.30, July 29-July 04, pp. 3330-3331.
- Sridhar, V. (2006), "Why Do Farmer Commit Suicide?", *Economic and Political Weekly*, Vol. 41, No.16, April 22, pp. 1565-1569.
- Vaidyanathan, A. (2007), "Farmers' Suicides and the Agrarian Crisis", *Economic and Political Weekly*, Vol. 41, No.38, September 23, pp.4009-4013.
- Vasavi, R. (1999) Agrarian distress in Bidar, 'Market State and Suicides', *Economic & Political Weekly*, 34 (22) August 7, 1999 p-2263 – 2268.

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