CHAPTER II

PERFORMANCE AUDIT

Roads and Buildings Department

2.1 Pragatipath Scheme

Executive summary

Transportation plays an important role in economic and general development of the State. A well laid out road network is essential for efficient and cost effective movement of men and materials, without which trade and industry cannot maintain a competitive edge. The Roads & Buildings Department (the Department) has categorised Core Road Network (CRN) extending over 9,000 kilometres (kms) as priority network. It identified three major corridors known as *Vikaspath, Pravasipath* and *Pragatipath* which are designated to act as catalyst for achieving the targeted economic development of the State.

Pragatipath Scheme was announced (February 2005) by Government of Gujarat (GoG) with the aim to widen high speed corridors of 3,710 kms to connect East-West and North-South end of the Gujarat State. Road length of 1,074 kms was to be covered under Pragatipath Scheme through State budget funds and remaining length of the roads, *i.e.*, 2,636 kms were either developed or were being developed under other schemes of the State (Public Private Partnership- 393 kms; other schemes-1,342 kms) or by National Highway Authority of India (901 kms). The main objective of the scheme was to provide a widened road of 10 meters carriage width so as to run the vehicle at an uninterrupted speed of 80-100 kms. The performance audit covered the period from 2005-06 to 2013-14.

Initially, the scheme did not envisage widening of 70 major bridges on the selected corridors. However, subsequently, only 12 major bridges were taken up for widening.

The performance audit of the "Pragatipath Scheme" revealed that the Government has achieved widening and strengthening of 1,017.24 kms (99 *per cent)* of road length with high speed corridor of an average speed of 80 km/hour. However, there are some areas of concern relating to implementation of scheme, which are highlighted below:

The Department sanctioned work for road length of 1,023 kms in four phases at a cost of ₹ 946.54 crore during the period 2005-06 to 2008-09. Only ₹ 250.73 crore was released out of budget provisions of ₹ 774.04 crore during this period. Thus, the Government did not provide adequate funds in timely manner to complete the scheme within the set timeframe which led to delay of five years in completion of the scheme.

The Department incurred extra/ avoidable expenditure of ₹ 31.61 crore as California Bearing Ratio (CBR) and Benkelman Beam Deflection (BBD)

tests were not conducted before preparation of estimates. As per Gujarat Public Works Manual (paragraph 204 (b)), the tender, other than the lowest, should invariably be accepted only by the Committee at the respective levels if the lowest tenderer is not prepared to reduce the rates. However, the Department accepted the second lowest tender in a work relating to widening and strengthening of Savarkundla-Rajula-bypass Hindorna junction km 32/70 to 69/0 without any recorded reason which led to extra expenditure of ₹ 4.32 crore. In another work of widening and strengthening of Dediapada-Sagbara road km 67/0 to 99/4, the Department did not finalise the tender within validity period and re-invited the tenders, leading to extra expenditure of ₹ 4.60 crore. The security deposit of ₹ 1.62 crore was short recovered from the contractors due to oversight in two works relating to providing of cement concrete road and protective walls on Savarkundla Amreli Road km 1/0 to 31/0 and development of Radhanpur-Shamlaji Road as a high speed corridor section Kheralu-Sipor-Valsana km 0/0 to 17/2. In 11 works, excess payment of ₹ 1.99 crore was noticed in payment of price variations/ adjustment.

Crash barriers were not provided at 130 curves, 23 bridges and two embankments of height of more than three meters on Pragatipath Road (PPR-7) on the outer side of the curves and at the approaches of the bridges. Further, 17 out of 18 divisions had not installed sign boards even though many roads are having curves and bi-directional traffic is passing without median. The sign boards are required to be installed for avoiding any mishap on the roads.

2.1.1 Introduction

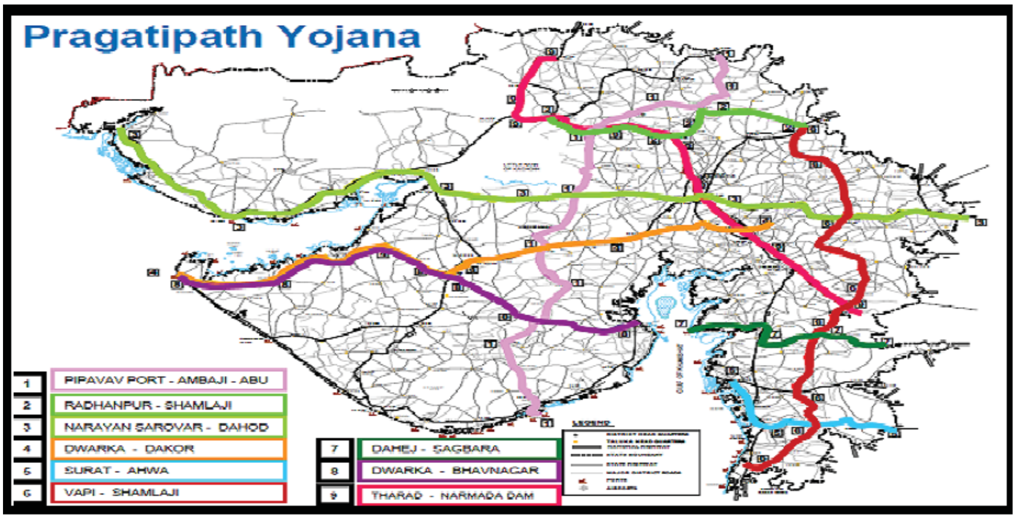
Length of roads aggregating 1,074 kms in length on the nine corridors[1] of existing roads of 3,710 kms length (as shown in the Map below), connecting East-West and North-South end of the State and providing access to marketing places of Agricultural Produce Market Committee (APMC), industrial areas, religious/ tourist places, tribal belts was identified (February 2005) as Pragatipath and chosen for development. Remaining length of the roads, *i.e.,* 2,636 kms were either developed or being developed under other schemes[2] of the State or by National Highway Authority of India[3] (NHAI). The Scheme was to be completed within three years, *i.e.,* by March 2009.

The objective of the proposed scheme was developing high quality roads with life span of 15 years to enable transportation at an uninterrupted average speed of 80 kms/ hour on the identified corridors.

[1] PPR-1 Pipavav-Ambaji-Abu Road (409 km), PPR-2 Radhanpur-Shamlaji (197 km), PPR-3 Narayan Sarovar- Dahod (0 km), PPR-4 Dwarka-Dakor (104 km), PPR-5 Surat-Ahwa (153 km), PPR-6 Vapi-Shamlaji (0 km), PPR-7 Dahej-Sagbara (88 km), PPR-8 Dwarka-Bhavnagar (51 km) and PPR-9 Tharad-Vav-Narmada Dam (72 km).

[2] Public Private Partnership- 393 kms; other schemes: 1,342 kms.

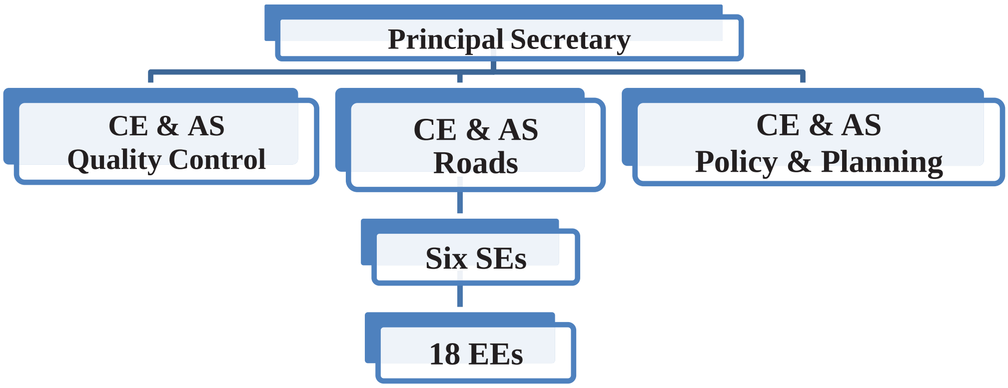
[3] NHAI: 901 kms.



2.1.2 Organisational Structure

For implementation of the Pragatipath Scheme, the Principal Secretary, Roads and Buildings Department (the Department) is assisted by three Chief Engineers and Additional Secretaries (CE&AS), six Superintending Engineers (SEs) and 18 Executive Engineers (EEs) heading various circles and divisions. The technical support to the Department is extended by the Gujarat Engineering Research Institute (GERI), Vadodara and Central Design Organisation (CDO), Gandhinagar.

The organisation chart of the Department for implementation of the scheme is as under:



2.1.3 Audit objectives

The objectives of the performance audit were to get a reasonable assurance that:

- Adequate and effective planning was done for implementation of the scheme in the State;
- Effective budget and funds management was in place;

- The works under the project were executed in an efficient and economical manner;
- A robust system of monitoring and evaluation of the scheme was present/ existed; and
- The envisaged benefits of the scheme were realised.

2.1.4 Audit criteria

The implementation of Pragatipath Scheme was assessed against following criteria keeping in view the audit objectives:

- Plan documents/ guidelines of the scheme;
- Budget proposals, allocation of funds and expenditure statements;
- Conditions and stipulations specified in administrative approvals, technical sanctions, rules and guidelines issued by the Government;
- Gujarat Budget Manual 1983, Gujarat Public Works Manual 1987, notifications, regulations and executive orders of State Government on the scheme; and
- Monitoring and evaluation reports of Pragatipath Scheme.

2.1.5 Scope of Audit and coverage

The Government decided (February 2005) to strengthen and widen road length of 1,074 kms in nine road corridors at a cost of ₹ 746 crore within three years (*i.e*. up to March 2009). The scheme was declared completed by widening and strengthening of 1,017.24 kms road[4] and construction of nine bridges at a cost of ₹ 876.63 crore in January 2014. The Department entered into 58 work contracts (49 for road works and nine for bridge works) between 2005-06 and 2013-14.

A performance audit covering entire period of the scheme, *i.e.*, 2005-06 to 2013-14 was taken up between June 2013 and April 2014 covering works executed by all 18 divisions. During the course of the performance audit, the records *viz.*, budget, planning, monitoring progress files *etc.*, for 58 works contracts were test checked at the R&B Department, Gandhinagar, as well as in the 18 divisions, of which 57 were completed works.

An entry conference was held on 15 July 2013 at the level of Principal Secretary of the Department, wherein audit objectives, scope and methodology of audit were explained. The audit findings were reported (August 2014) to the State Government and replies received (November 2014) from the Department have been incorporated in the relevant paragraphs. An exit conference was also held on 14 November 2014 with the Secretary of the R&B Department and the Department officials to discuss the draft audit findings. The views expressed by them have been considered while finalising this report.

[4] 988.04 kms completed in Pragatipath scheme, 29.20 kms completed in other scheme and 6.225 kms not executed.

Audit findings

2.1.6 Planning

Planning is an integral part of project implementation. Robust planning is necessary to ensure that a project is executed and completed effectively, efficiently and economically.

The deficiencies noticed in the planning for the scheme are discussed below.

2.1.6.1 Overlapping in estimation of cost and coverage

The Department decided for Pragatipath Road (PPR)-4 of Khambhaliya-Jamnagar- Rajkot (₹ 110 crore) and PPR-3 of Maliya-Halvad-Dhangadhra-Viramgam road (₹ 23 crore) to be constructed under Public Private Participation mode. However, the cost of these lengths was erroneously included in cost estimates of ₹ 746 crore to be met out of State funds.

Further, 51 km road length of PPR-4 Dwarka-Khambhaliya was also included in the PPR-8 Dwarka-Bhavnagar (51 km). Thus, road length of 51 km was taken twice while sanctioning road length of 1,074 km envisaged under the scheme. These errors led to over estimation of cost by 22 *per cent* and length of road by five *per cent*. The actual length of roads and estimated cost planned for the scheme work out to 1,023 km and ₹ 613 crore (₹ 746 crore less ₹ 133 crore) respectively.

2.1.6.2 Failure to remove bottlenecks

Selected corridors consisted of roads in protected forest land in 19 works, 30 railway crossings, shifting of electrical poles/ lines in 23 works, utility shifting requiring clearances from Forests Department, Railway Authority, Electricity Company and 31 Municipal Authorities for undertaking widening of roads.

In this connection, we observed the following:

- Roads admeasuring 20.9 km[5] in four divisions were not widened to 10 m as per the requirement of the scheme due to non-clearance from the Forests Department.
- Eleven railway crossings[6] in four divisions were not widened due to lack of coordination with Railway Authorities.
- Roads aggregating 30.6 km[7] were not widened due to hilly terrains.

---

[5] 7 km (km 103/0 to 109/225 and km 146/4 to 147/2 of PPR-1 in Palanpur), 8.2 km (km 127/0 to 135/2 of PPR-2 in Mehsana), 3.3 km (km 56/223 to 59/500 of PPR-5 in Project Implementing Unit (PIU), Navsari) and 2.4 km (km 0/0 to 2/4 of PPR-7 in Bharuch).

[6] Three each at Amreli and Surendranagar, two each at Himmatnagar and Mehsana and one at PIU, Navsari.

[7] 30.6 km (chainage km 61/6 to 92/2 of PPR-5 in PIU, Navsari).

Thus, failure to remove these bottlenecks partially defeated the envisaged goal of providing high speed corridors as vehicles would have to slow down on these segments.

2.1.6.3 Non-inclusion of major bridges

The objective of providing high speed road corridor cannot be achieved without simultaneously widening the bridges on the route of the selected corridors. We observed that initially the scheme did not envisage widening of 70 bridges on the selected corridors. However, later on the Government decided (June 2006) to include estimates for widening bridges into four lanes. Subsequently, only 12 major bridges were taken up for construction between August 2008 and February 2014, of which 11 bridges were completed between February 2010 and January 2014 and one bridge of Amreli Division was in progress (November 2014).

We observed that the initial project cost did not include the bridges widening. This also meant that the vehicles slow down as they approach and negotiate the bridges. The widening of bridges also involves costs. Thus, there was a balancing act of providing faster roads and thereafter trying to address the issue of bridge widening. Having provided the faster roads, the Department needs to assess which of the remaining 58 bridges need widening and accordingly plan them in a future programme.

2.1.6.4 Lack of proper project planning

The Department had not prepared detailed project report (DPR)[8] for the scheme but issued instructions from time to time and decided (February 2005) to complete the scheme by March 2009. The scheme was declared as completed in January 2014.

2.1.7 Financial management

The year-wise budget provision and expenditure booked for execution of the scheme during 2005-06 to 2013-14 is shown in **Table -1** below:

Table-1 Details of the expenditure against the budget provision

(₹ in crore)

Year	Budget provision	Fund released	Actual utilisation	Excess (+)/ Savings (-) with reference to budget provision	Excess/ savings in percentage
2005-06	19.09	19.61	19.61	+ 0.52	2.72
2006-07	110.33	106.64	106.64	- 3.69	3.34
2007-08	56.00	55.26	55.26	- 0.74	1.32
2008-09	88.98	69.22	69.22	- 19.76	22.21
2009-10	191.50	229.77	229.77	+ 38.27	19.98
2010-11	185.00	228.17	228.17	+ 43.17	23.33
2011-12	89.11	135.32	135.32	+ 46.21	51.86
2012-13	22.03	24.40	24.40	+ 2.37	10.76
2013-14	12.00	12.00	8.24	- 3.76	31.42
Total	**774.04**	**880.39**	**876.63**	**102.59**	**13.25**

8 The Detailed Project Report generally aims to review the adequacy/ deficiency of the existing road networks; establish technical, financial and economic feasibility on each Scheme; prioritisation of the feasible schemes and fixing time frame; recommend funding options and the implementation of programme.

The excess utilisation of funds was made through supplimentary demand/ re-appropriation.

2.1.7.1 Inadequate schedule of funding

It was observed that the sanctions to the works were accorded by the Department considering the availability of the funds earmarked which were not necessarily commensurate with the requirement of the scheme. During the period 2005-06 to 2008-09, the Department sanctioned work for road length of 1,023 km length in four phases at a cost of ₹ 946.54 crore as shown in **Table-2** below. The sanction for phase-IV for road length of 343 km at a cost of ₹ 409.79 crore was given in the year 2008-09.

Table-2: Details of km planned and actually sanctioned

Year	Total length planned (in km)	Estimated Cost (₹ in crore)	Phase	Length actually sanctioned (in km)	Sanctioned Cost (₹ in crore)
2005-06	607	364	I	337	160.83
2006-07	300	225	II	141	86.90
2007-08	167	157	III	202	289.02
2008-09	-	-	IV	343	409.79
Total	**1,074**	**746**		**1,023**	**946.54**

Further, 12 bridges[9] were also sanctioned during the year 2009-10 to 2011-12 at a cost of ₹ 68.23 crore. Thus, total sanctioned cost of the scheme worked out to ₹ 1,014.77 crore.

The scheme was planned to be completed at a cost of ₹ 746 crore within four years from 2005-06 to 2008-09. However, budget provisions of ₹ 274.40 crore only (34 *per cent*) were provided and amounts of ₹ 250.73 crore were released during the year 2005-06 to 2008-09, as shown in **Table-1** above. This indicates that adequate funds were not provided by the Government up to March 2009. Thus, the delay in sanctioning of works due to non- availability of adequate funds eventually led to delay of five years in completion of the scheme.

Though "Pragatipath" was an important scheme, it did not receive the priority in funding to ensure its completion within the targeted time line.

Implementation of the scheme

During the Performance Audit, we scrutinised records of 58 works costing ₹ 720.21 crore (Estimated cost ₹ 861.78 crore) awarded between 2005-06 and 2014-15. The 57 works were completed at a cost of ₹ 875.02 crore between 2006-07 and 2013-14 and one work was in progress (December 2014).

We observed technical and financial irregularities leading to additional/ avoidable expenditure of ₹ 44.54 crore due to preparation of estimate without conducting CBR and BBD tests before preparation of estimates, deficiencies

9 Cost of Khari river bridge included with the cost of road work and two bridges (Gagadiya bridge ₹ 5.61 crore and Mindola bridge ₹ 7.13 crore) sanctioned under other schemes.

in tendering process and avoidable payment of price variation *etc.*, as shown in **Table-3** below:

Table-3: Deficiencies in implementation of the scheme

Sl. No.	Nature of observation	No. of works involved	Amount of excess/ avoidable expenditure (₹ in crore)
1	Non-conducting of CBR and BBD tests	8	31.61
2	Irregularities in tendering process	7	10.94
3	Avoidable payment of price variation	11	1.99
Total			**44.54**

2.1.8 Estimation of the Scheme

Comprehensive survey of the length of road is a pre-requisite for preparation of an accurate estimate. Further, the Gujarat Public Works Manual (vide paragraph 143(1)) and the R&B Department's instructions (June 1998) stipulate that care should be taken while finalising the detailed drawings and estimates of works so as to avoid frequent changes in the works after award on account of excess/ extra items which may lead to increase in cost and delays in completion of work. The Government also instructed (February 2005 and June 2006) to conduct CBR test[10] and BBD test[11] to ascertain the correct sub-base for widening portion and crust of the existing carriage way respectively.

We noticed deficiencies regarding non-conducting of CBR and BBD tests as discussed in succeeding paragraph.

2.1.8.1 Non-conducting of CBR/ BBD tests

The Department instructed (February 2005) to conduct CBR and BBD tests for deciding crust thickness to be provided on the roads works of the scheme. We observed that in eight works of the five divisions, these tests were not conducted by the divisions. These works were completed between December 2006 and August 2008 and same were under free maintenance guarantee (FMG) period between December 2009 and August 2014 (*i.e.*, three years from the date of completion of the works). However, the roads were damaged between July 2008 and October 2013 as shown in **Table 4** below:

Table 4: Details showing CBR/BBD test not conducted

Sl. No.	Name of the Division	Name of the work	Actual date of completion/ FMG period up to	Damage noticed (Month & year)
1	R&B Division, Himmatnagar	Widening and strengthening of Idar-Shamlaji road Section km 29/0 to 32/0 and km 169/470 to 125/800	May 2007 April 2010	March 2009
2	R&B Division, Kheda (Nadiad)	Widening and strengthening of diversion road outside the Nadiad city joining Nadiad Mehmedabad, Nadiad-Kapadwanj, Nadiad Dakor.	August 2011 August 2014	August 2012

10 The California bearing ratio (CBR) test is conducted to determine the resistance of the sub grade, (*i.e.* the layer of naturally occurring material upon which the road is built) to deformation under the load from vehicle wheels.

11 Benkelman Beam Deflection (BBD) test meant for evaluating the strengthening requirement of existing road using the BBD technique.

Sl. No.	Name of the Division	Name of the work	Actual date of completion/ FMG period up to	Damage noticed (Month & year)
3		Providing approaches on Shedi bridge on Nadiad Dakor Pali Road section 86/0 to 90/0 km	June 2011 June 2014	September 2012
4	R&B Division, Bharuch	Widening and strengthening of Dahej-Sagbara road	March 2007 March 2010	September 2009
5		Widening and strengthening of Valia Netrang road section km 20/0 to 43/0	June 2011 June 2014	October 2013
6	R&B Division, Vadodara	Widening and strengthening of Vadodara- Dabhoi-Tilakwada Road Section km 8/3 to 50/0	December 2006 December 2009	July 2008
7	R&B Division, Anand	Widening and strengthening of Nadiad-Dakor –Pali road km 71/0 to 86/0	February 2009 February 2012	No damages report.
8	R&B Division, Amreli	Widening and strengthening of Chavand Lathi Amreli road km 12/0 to 29/50	September 2010 September 2013	

We further observed that in three works (Sl. No.1, 4 and 7), immediately on completion of the FMG period between March 2010 and February 2012, the Department accorded administrative approvals (AA) to the works between August 2010 and April 2012 for strengthening the road surface under various schemes such as Taluka-to-Taluka (TTT), Tribal Sub-Plan (TSP) and Special Repairs programme (SR). These works were taken up for execution between February 2011 and January 2013 and were completed at a cost of ₹ 24.04 crore between July 2011 and February 2013. Interestingly, in another case of Amreli Division (Sl. No. 8), strengthening work was executed during January 2013 to July 2013 at a cost of ₹ 7.57 crore, though the same was under FMG period up to August 2013. It is indicative that due care in ensuring quality by getting the requisite tests done before start of work, was not exercised and the roads were damaged during the FMG period. Further, as the major damages happened during the FMG period, the extra expenditure of ₹ 7.57 crore should have been recovered from the earlier contractor in accordance with the contractual conditions. To conclude, non-conducting of CBR and BBD tests, as described above, and failure to recover from the said contractors, led to extra expenditure of ₹ 31.61 crore.

2.1.9 Tendering system

As per Paragraphs 198 and 191(1) of the Gujarat Public Works Manual (Manual), tender should invariably be invited publicly for award of all the works with estimated cost of ₹ 5,000 and above and should be prepared only on regular contract forms. As per the said Manual (Paragraph 204 (b)), the tender, other than the lowest, should invariably be accepted only by the Committee at the respective levels if the lowest tenderer is not prepared to reduce the rates. Further, Paragraph 209 of the Manual and clause of tenders stipulate that the contractor should be permitted to start work after payment of requisite initial security deposits (SD). The tender clause 59 stipulates for payment of price escalation and price adjustment. The Schedule B of the agreement states quantity and rate quoted by the agency on which payment is to be regulated for execution of the item of work.

We observed irregularities in 18 works such as non-acceptance of tenders within validity period, acceptance of second lowest tender, non-invitation of tenders, and non-observance of the tenders clauses/ instructions leading to short recovery of security deposit and extra/ avoidable payment of price adjustment. Such cases are discussed in succeeding paragraphs.

2.1.9.1 Irregularities in tendering process

We observed that Department did not accept the tender within validity period in one case and tender of second lowest contractor was accepted without any recorded justification in another case. In other three cases, works were awarded without inviting tender publicly and obtaining sufficient SD. This has resulted in extra work/ extending undue financial benefit to the contractors to the tune of ₹ 10.94 crore as discussed below:

(a) Non-acceptance of tender within validity period

The tender for work of widening and strengthening of Dediapada-Sagbara Road km 67/0 to 99/4 was invited (March 2005) by the EE, R&B Division, Rajpipla. The validity period of the tender was up to 12 September 2005. The contractor M/s. G.H. Vijapura and Company, Himmatnagar quoted lowest rate of ₹ 11.12 crore against estimated cost of ₹ 12.75 crore which was not accepted within the validity period and the contractor refused (December 2005) to extend the validity period. The Government re-invited the tenders (March 2007) with revised estimated cost of ₹ 18.08 crore. Tender of ₹ 15.72 crore of M/s. Digvijay Construction Private Limited was accepted (October 2007) and the contractor completed (February 2010) the work at a cost of ₹ 15.57 crore. Thus, non-finalisation of the tender within the validity period by the Department, without any recorded reasons, led to extra expenditure of ₹ 4.60 crore (₹ 15.72 crore less ₹ 11.12 crore) to the Government.

(b) Acceptance of second lowest tender

The tender for the work of widening and strengthening Savarkundla-Rajula bypass-Hindorna junction km 32/70 to 69/0, km 0/0 to 2/60 and km 1/40 to 3/0 was invited (February 2010) by the EE, R&B Division, Amreli at a cost of ₹ 43 crore. The lowest tender of ₹ 30.72 crore from M/s. Classic Network Private Limited, Rajkot was not accepted. Instead, the Department accepted (June 2010) the tender of ₹ 35.04 crore (18.51 *per cent* below) of the second lowest contractor M/s. Kunal Structure India Private Limited, Rajkot without any recorded reasons. Non-acceptance of the lowest tender resulted in extra expenditure of ₹ 4.32 crore.

(c) Non-invitation of tenders

The Project Implementing Unit, Navsari invited quotations for the three works worth ₹ 0.40 crore[12], each exceeding ₹ five lakh. The quotations were not invited online and publicly in contravention to Government circular of July 2011 and provisions in the Manual. Further, the payments exceeding ₹ five lakh were made to contractors on the same date by splitting of the vouchers by the division. Thus, department did not avail the benefit of competitive rates.

(d) Short recovery of security deposit

In the work of providing CC road and protective walls on Savarkundla Amreli Road km 1/0 to 31/0, Amreli division obtained SD of ₹ 0.11 crore against ₹ 0.25 crore. This led to short recovery of SD of ₹ 0.14 crore.

Similarly, in work of development of Radhanpur-Shamlaji Road as a high speed corridor section Kheralu-Sipor-Valsana Km 0/0 to 17/2, the Mehsana Division obtained SD of ₹ 0.15 crore against ₹ 1.63 crore. While demanding SD, the division had considered tender cost as ₹ 2.03 crore, instead of ₹ 20.30 crore leading to short recovery of SD of ₹ 1.48 crore.

2.1.9.2 Extra/ avoidable payments of price variation

The price variation (PV) of the asphalt, steel and cement procured by agencies and price escalation (PE) applicable to works of more than 12 months duration for labour, material and petrol, oil & lubricants (POL) shall be payable or recoverable as per the clause 59A and 59 of the B-2 tender forms respectively. The payment of PV/ PE should be regulated with star rate mentioned in the tender.

In 11 works, irregularities of ₹ 1.99 crore were noticed in payment of price variations/ adjustment. The irregularities varied from payment made without restricting the rates of actual usage of asphalt with rate of asphalt actually to be used as mentioned in the Draft Tender Papers (DTPs) and adoption of incorrect Wholesale Price Index (WPI) base year *etc.* Cases of avoidable payment of PV/PE are discussed below:

(a) Incorrect consideration of star rate of asphalt for PV

Tender clause provided 80/100 grade asphalt to be used in the work of Development of Valasana-Idar Road km 0/0 to 24/0 which was awarded in December 2008 by the EE, R&B Division, Himmatnagar. The division provided rate of ₹ 27,583.40 *per* MT of 80/100 grade asphalt in the clause 59A of the tender.

[12] (i) ₹ 21.61 lakh for carry out Bore Data from soil/Soft rock/Hard Rock, (ii) ₹ 7.04 lakh for P&F hazard marker sign, P&F informatory sign and P&F chevron sign and (iii) ₹ 10.95 lakh for providing of project consultancy services for detailed survey for major, minor bridges.

We observed that contractor utilised 2,246.04 MT asphalt of 60/70 grade (which is costlier than 80/100 grade asphalt) instead of 80/100 grade asphalt in the work. However, it was noticed that for working out payment of price variation, base rate of 80/100 grade asphalt was used whereas base rate of 60/70 grade asphalt should have been used. This resulted in extra expenditure and undue favour to the contractor to the extent of ₹ 49.79 lakh.

The EE, Himmatnagar stated that bounding capacity of 60/70 grade asphalt is more and therefore, expenditure on wearing and tearing of road become less. Hence, contractor was allowed to use 60/70 grade asphalt.

However, the fact remains that PV payment should have been regulated with reference to base price of 60/70 grade asphalt and not with reference to 80/100 grade asphalt which was not utilised.

In other two cases, we noticed similar instances which led to avoidable payment of PV of ₹ 35.43 lakh as shown in **Table 5** below:

Table 5: Details showing excess payment of price variation

Name of division/ Name of work	80/100 grade asphalt to be used in work (in MT)	60/70 grade Asphalt used in work (in MT)	Star rate of 80/100 grade clause (₹ per MT)	Star rate of 60/70 grade taken (₹ per MT)	Difference (₹ per MT)	Extra payment (₹ in lakh)
R&B Division, Palanpur Development of Pipavav to Ambaji Road section Ambaghata Danta Ambaji road km 78/00 to 91/00 as high speed corridor.	891.80	478.30	29,122	33,000	3,878	18.55
R&B Division, Patan Widening and strengthening work of Viramgam Panchsar Sami Road km 106/4 to 141/2.	1,646.90	1,544.28	31,885	32,978	1,093	16.88
Total						**35.43**

(b) Incorrect adoption of WPI in payment of PV on cement and steel

New series of WPI with base year 2004-05 was introduced (14 September 2010) by the Reserve Bank of India (RBI) replacing the existing series with base year 1993-94. The Ministry of Commerce and Industry (MoC&I), Government of India instructed (12 November 2010) that data of new series of WPI (2004-05) can be used with effect from August 2010.

In four works, the divisions paid/ recovered PV reckoning the new series of WPI for cement (6,956.92 MT) and steel (664.351 MT) procured during January 2009 to June 2010 *i.e.* before August 2010 for execution of the works by the contractors instead of calculating it at WPI old series. This led to payment of PV on cement and steel to the tune of ₹ 7.04 lakh instead of recovering the PV aggregating to ₹ 54.84 lakh from the contractors. Thus, excess benefit of ₹ 61.88 lakh was passed on to the contractors as shown in **Table 6** below:

Table 6: Details showing the excess payment of price variation

(₹ in lakh)

Name of division / Name of work	Approval of Draft Tender Papers	Date of Work Order / Date of completion	PV paid	PV recoverable	Excess payment
R&B Division, Amreli Widening and strengthening to 10 m of carriage width of Savarkundla Amreli Road Km 1/0 to 31/0 and Amreli bye pass Km 3/0 to 5/2 Km (PPR-1)	August 2008	09-02-2009 31-01-2011	2.93	7.70	10.63
R&B Division, Nadiad Construction of bridge across Shedi river near Dakor on Pragatipath road no-4 (Nadiad Dakor Pali Road) section 86/0 to 90/0 Km (PPR-4)	September 2008	17-12-2008 16-12-2009	1.67	29.52	31.19
R&B Division, Nadiad Work of providing approaches on shedi bridge on Pragatipath road no-4 (Nadiad Dakor Pali Road) section 86/0 to 90/0 Km (PPR-4)	November 2008	02-05-2009 30-06-2011	0.66	2.75	3.41
PIU, Navsari Widening and strengthening Navsari-Chickli Road (27.60 Km) (PPR-5)	July 2008	19-12-2008 18-12-2010	1.78	14.87	16.65
Total			**7.04**	**54.84**	**61.88**

(c) Non-observation of tender condition in payment of PV/ PE

The base WPI for labour, material and POL for payment of price escalation shall be the average WPI for the quarter in which tenders were opened. Further, as per the tender condition, the PE shall be payable for works executed after first twelve months from the date of issue of work order.

In four works, we observed irregular payment of ₹ 52.43 lakh due to payment of PV for work done during first twelve months, incorrect adoption of WPI of month in which Draft Tender Papers (DTPs) approved and payment of PV on inadmissible items as shown in **Table 7** below:

Table 7: Details showing the irregularities in payment of PE/PV

(₹ in lakh)

Name of the Division / Name of work	Date of work order	PE/ PV payable	PE/ PV paid	Avoidable payment	Observation
R&B Division, Himmatnagar Widening and strengthening of Idar-	24-11-2005	0	29.84	29.84	The progress of work was not achieved as per Schedule-C in first twelve months. The agency executed work valued at ₹ 7.73 crore till

Name of the Division Name of work	Date of work order	PE/ PV payable	PE/ PV paid	Avoidable payment	Observation
Shamlaji Road (Section 29/0 to 32/0 km and 169/470 to 125/800 km).					November 2006 against anticipated work of ₹ 15.84 crore[13] (66.67 *per cent*). The differential amount of ₹ 8.11 crore was considered for PE.
R&B Division, Palanpur Widening and strengthening of Danta - Ambaji road from km 91/0 to 112/50 and 103/0 to 110/0.	09-02-2010	11.63	17.97	6.34	The Division had paid PE for work done during first twelve months which was measured on 10 February 2011.
R&B Division, Nadiad Construction of new Khari Bridge with approaches (41/160 to 41/600 km) and retaining wall (41/205 to 41/320 km and 41/400 to 41/515 km).	03-03-2011	12.72	21.86	8.19	The division considered base WPI for the month in which DTP was approved instead of average WPI for the quarter in which tenders were opened. Further, price variation paid for cement, asphalt and steel was also not deducted from the value of work done.
R&B Division, Vadodara Widening and strengthening of Thrad- Vav- Narmada Dam section Vadodara- Dabhoi- Tilakwada Road (8/3 to 50/0 km)	06-09-2005	-	8.06	8.06	DTP (April 2005) and clause 59A of the agreement provided for payment of PV on emulsion which is an inadmissible item as the same is applicable only on asphalt, cement and steel. Incorrect provision made in the tender led to avoidable payment of PV.
Total		**24.35**	**77.73**	**52.43**	

2.1.10 Road safety

Crash barriers are designed to withstand the impact of vehicles of certain weights at certain angle while traveling at the specified speed. They are expected to guide the vehicle back on the road while containing the level of damage to vehicle as well as to the barriers within acceptable limits.

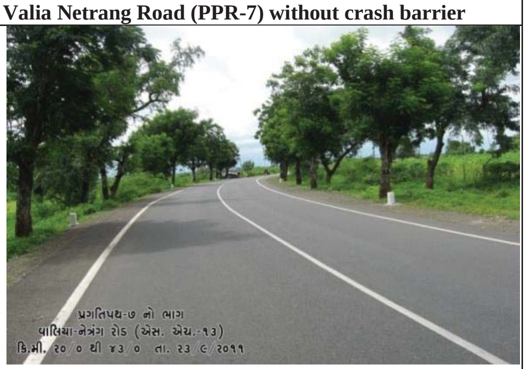
The direction boards should be installed at appropriate places. This will help to avoid accident caused by the confusion of the driver. Medians should be constructed in roads with two way traffic.

2.1.10.1 Non-installing the crash barrier

As per the Department instructions (February 2005 and June 2006) the provision of crash barriers has to be provided on embankments where height is more than three meter, on major and minor bridge approaches and sharp curves. In the approaches of structures, it should be extended up to the end of approach.

[13] 66.67 *per cent* (12 months/18 months x100) of the estimated cost of ₹ 23.76 crore = ₹ 15.84 crore.

We observed that crash barriers were not provided at 130 curves[14], 23 bridges[15] and two embankments of height of more than three meters on PPR-7 on the outer side of the curves and at the approaches of the bridges as shown in photographs below:

Valsana Idar road (PPR-1) with crash barrier	Valia Netrang Road (PPR-7) without crash barrier
	

2.1.10.2 Improper utilisation of alternate bridge due to geometrical design

Under the Scheme, PIU, Navsari constructed six alternate bridges in PPR-5. However, during the site visit, we observed that the alternate bridge constructed on Galudi Khadi (km 31/0 to 32/0) at cost of ₹ 1.46 crore, passes through curves obstructing the sight distance. Due to its geometrical design, the bridge could be utilised properly only if a proper median at approaches is provided with suitable sign boards. Further, the approaches of bridge were not properly widened to accommodate the speeding traffic on curved road.

However, we observed that no median was provided in the approaches of the bridge which could have easily diverted the traffic via new bridge either for Up direction or for Down traffic.

Right bridge was newly constructed under Pragatipath Scheme on Galudi Khadi at Chikhli-Vansada-Waghai road of PPR-5 which is not utilised properly by the vehicles.

---

[14] 69 curves on PPR-1, 48 curves on PPR-2, two curves on PPR-4, 10 curves on PPR-7 and one curve on PPR-9.

[15] 14 bridges of PPR-1, two bridges of PPR-2, three bridges of PPR-4, three bridges of PPR-7 and one bridge of PPR-9.

2.1.10.3 Non provision of overtaking prohibited traffic sign boards

As per code 2.9 of IRC-SP-73, visibility is an important requirement for the safety of travel on roads. For this, it is necessary that sight distance of adequate length is available in different situations, to permit drivers enough time and distance to control their vehicles so that chances of accidents are minimised. The curves mainly are of the locations where sight distance is lower than the plain straight road. Thus, the traffic signs depicting "Overtaking Prohibited" should be installed at all such locations on two lane roads which are constructed without structural median.

We observed that 17[16] out of 18 divisions had not installed such boards though many curved roads are passing through and bi-directional traffic is passing without median. The sign boards are required to be installed for avoiding mishap on the roads.

2.1.11 Monitoring and Evaluation

A separate monitoring and evaluation mechanism is required for smooth implementation and completion of the scheme within targeted period and cost.

The Government of Gujarat, R&B Department appointed (January 2013) M/s. Mott MacDonald Private Limited to undertake "Socio-Economic Impact Assessment of Core Road Network (CRN) on Growth of Gujarat" in 2012-13 for the entire road network of State which includes work executed under the scheme. The consultant has submitted (August 2013) draft report to the Government.

However, no specific evaluation of the Pragatipath scheme was conducted by the Department after declaration of completion of scheme in January 2014. The progress of scheme was being reviewed in routine manner. No specific monitoring system was established to review the scheme periodically.

2.1.12 Visible benefits of the scheme

- The Government has achieved widening and strengthening of 1,017.24 km of road length out of the projected road length of 1,023 kms with high speed corridor at an average speed of 80 km/hour. The corridor, however, has a bottleneck- the widening of 58 major bridges, 11 railway crossings and widening of 51.5 km of the road length is yet to be undertaken/ achieved.

- It was stated in the report of the Socio-Economic Impact Assessment of CRN on Growth of Gujarat that (i) there were improvements in savings in vehicle operating cost (ii) travel time saving (iii) reduced accidents and timely treatment due to up-gradation of road (iv) improved access to basic amenities (v) fuel efficiency and (vi) improved access to market, health care and education facilities.

---

[16] Roads and Buildings Divisions: 1. Ahmedabad, 2. Ahwa-Dangs, 3. Amreli, 4. Anand, 5. Bhavnagar, 6. CP-III, Gandhinagar, 7. Himmatnagar, 8. Kheda (Nadiad), 9. Mehsana, 10. Narmada-Rajpipla, 11. Navsari, 12. PIU, Navsari, 13. Palanpur, 14. Patan, 15. Surendranagar, 16. Surat-I and 17. Vadodara.

Conclusions and Recommendations

The performance audit on the "Pragatipath Scheme" revealed that the Government has achieved widening and strengthening of 1,017.24 kms (99 *per cent)* of road length with high speed corridor at an average speed of 80 km/hour. However, there are some areas of concern relating to implementation of scheme, which are highlighted below:

- **The funds allotted were not commensurate with the requirement of the scheme. Against the target of completion of the scheme by March 2009, only 34 *per cent* budget provisions (₹ 274.40 crore against ₹ 746 crore) were provided and funds of ₹ 250.73 crore were released during the year 2005-06 to 2008-09. Thus, the scheme did not receive the funds in time to ensure its completion within the timeframe to achieve the objective of the scheme. Consequently, the scheme which was aimed to be completed by March 2009 was actually completed in January 2014.**

  The Government may consider prioritising the availability of budget provisions and release of funds for completion of important schemes in a phased and time bound manner in future.

- **The scheme did not envisage widening of the major bridges initially on the selected corridors. This also meant that the vehicles slow down as they approach and negotiate the bridges. Only in June 2006, it was decided to include estimates of the major bridges for widening into four lanes. However, only 12 out of 70 bridges were taken up for widening.**

  The Government needs to assess if any of the remaining 58 bridges also require widening and should plan accordingly.

- **The Department incurred extra/ avoidable expenditure of ₹ 31.61 crore as CBR and BBD tests were not conducted before preparation of estimates. Further, the Department had not followed Manual provisions and tender clauses while accepting the tenders, awarding works and regulating payments to the contractors which led to excess/ extra payment of ₹ 12.93 crore.**

  The Government may ensure that requisite tests and tender specifications are complied with before preparation of estimates to prevent irregularities in ongoing or future schemes and exercise economy in expenditure.

- **Road safety tools such as crash barriers were not provided at 130 curves, 23 bridges and two embankments of height of more than three meters. Further, proper median at approaches to the bridges and traffic signs depicting "overtaking prohibited" were not provided.**

  The Government may provide the prescribed road safety tools for better and safe movement of vehicles at desired speed and for minimising road mishaps.

Agriculture and Co-operation Department

2.2 Rashtriya Krishi Vikas Yojana

Executive Summary

Rashtriya Krishi Vikas Yojana (RKVY) was launched in 2007-08 by the Government of India, Ministry of Agriculture, Department of Agriculture and Co-operation as special central assistance with the objective of achieving four *per cent* growth rate in agriculture during the Eleventh Five Year Plan (2007-12). RKVY continued in the Twelfth Five Year Plan also with a view to increase public investment in the agriculture and allied sector.

While RKVY was to supplement the State investment in agriculture, Government of India (GOI) assistance was linked to increased investment by the state governments in this sector. In Gujarat, the State's allocation, exclusive of RKVY, showed an increasing trend.

During the Eleventh Five Year Plan, the average agriculture growth rate of Gujarat was 5.49 *per cent per annum* as compared to All India average growth rate of 4.06 *per cent per annum* (both at constant prices 2004-05). The higher growth rate was attributed to higher production of bajara, groundnut and cotton crops, horticulture crops and livestock products. During the period of audit, we reviewed 38 projects under 11 sectors and found that in 21 projects, the targets were largely achieved, whereas in 17 projects, some deficiencies and shortfall were noticed in implementation leading to targets remaining underachieved and the envisaged benefits could not be drawn from the projects. This led to non-achievement of objective of RKVY to that extent.

In the light of the facts which emerged out of this performance audit, there are certain areas of concern suggesting that some scope for improvement in implementation and evaluation of schemes/projects remains, as indicated below.

The allocated funds were not fully released in seven projects which led to either foreclosure of projects or non-achievement of envisaged targets.

Assistance was provided to the project on Biotechnological Approaches for Containment of Animal Diseases under Stream-II though the same was not an existing State Plan scheme and therefore, did not qualify for funding under RKVY.

Inadequate monitoring of the projects both at the State Level Sanctioning Committee (SLSC) level as well as at Nodal Agency level was observed in majority of the projects. Out of 26 quarterly meetings as envisaged in the scheme, SLSC held only 11 meetings during 2007-14 for review of implementation of projects.

Evaluation mechanism was absent in respect of individual projects, except for a few projects under crop development sector. The evaluation of RKVY by Institute of Social and Economic Change was stated to be in progress.

2.2.1 Introduction

With a view to boost investment in the agriculture sector and arrest the declining agricultural growth rate, Government of India (GoI) launched (May 2007) a special central assistance scheme (fully funded by GoI) known as the Rashtriya Krishi Vikas Yojana (RKVY). The scheme aimed at achieving four *per cent* annual growth in the agriculture sector during the Eleventh Five Year Plan by ensuring holistic development of agriculture and allied sectors. RKVY was continued in the Twelfth Five Year Plan also. The eligibility of GoI assistance to States depended on the funding provided in the State Plan for agriculture and allied sector over and above the baseline percentage of expenditure incurred by the State Government on the sector prescribed on the basis of certain parameters. The scheme elaborated certain focus areas[17] which would be eligible for project based assistance. In addition, the States were also free to propose innovative schemes that were important for agriculture, horticulture and allied sectors. The scheme guidelines stipulated that at least 75 *per cent* of the allocated amount was to be utilised under Stream I[18] for specific projects and remaining 25 *per cent* for Stream II[19] projects by strengthening the existing State sector schemes for filling the specific resource gaps. However, depending upon the States' need, the State could utilise entire allocation under Stream-I only.

Objectives of the scheme

- To incentivise States to increase public investment in agriculture and allied sectors;
- To provide flexibility and autonomy to States in the process of planning and executing agriculture and allied sector schemes;
- To ensure the preparation of agriculture plans for districts and States based on agro-climatic conditions, availability of technology and natural resources;
- To achieve the goal of reducing yield gaps in important crops through focused interventions;
- To maximise returns to farmers in agriculture and allied sectors;

---

[17] Development of major food crops; Agriculture mechanization; Enhancement of soil health; Development of rainfed farming systems; Research and production of seeds; Integrated Pest Management; Non farming activities; Strengthening market infrastructure and marketing development; Strengthening infrastructure to promote extension services; Enhancement of horticulture; Animal husbandry and fisheries development; Schemes for beneficiaries of land reforms and Organic and bio-fertilisers.

[18] Under Stream I, allocation is made for specific projects recommended by SLSC.

[19] Under Stream II, allocation is made for existing State sector schemes for filling the resource gaps.

- To ensure that the local needs/crops/priorities are better reflected in the agricultural plans of the States; and

- To bring about quantifiable changes in production and productivity of various components of agriculture and allied sectors by addressing them in a holistic manner.

Agrarian status of Gujarat

Gujarat is located on the west coast of India and has the longest coastline of about 1,600 km. The geographical area of the State is about 19.61 million hectares of which around 50 *per cent i.e.,* 98.01 lakh hectares of land is under cultivation. Nine districts *viz.,* Kheda, Mehsana, Amreli, Surat, Gandhinagar, Anand, Patan, Bhavnagar and Banaskantha have more than 70 *per cent* of the land under cultivation. The State has a forest coverage of 9.75 *per cent* and 10.50 *per cent* of the land is waste land. The coastal districts face the problem of saline and alkaline soil. As far as climatic conditions are concerned, the northern region of the State is marked by a dry and arid climate whereas in the south, weather remains moist owing to its proximity to Arabian Sea and Gulf of Cambay. The average rainfall varies from 33 to 152 cm. While rainfall in Saurashtra is low compared to the other parts of the State, the Rann of Kutch is a desert area and faces water scarcity.

The soil in most parts of the State is neutral and the land is fertile to take up a variety of crops like castor, cotton, wheat, bajra, pulses, cumin, onion, garlic, gram, sugarcane, mango, *etc*. There are reputed agricultural institutions for different crops engaged in research activities under four State Agriculture Universities *viz.,* Anand Agriculture University, Navsari Agriculture University, Junagadh Agriculture University and Sardar Krishinagar Dantiwada Agriculture University.

The details of production of principal crops such as paddy, wheat, jowar, bajara, cotton and groundnut, *etc.*, in the State *vis-à-vis* All India for the period 2006-07 to 2013-14 are given below in **Table 1**:

Table 1: Particulars of production of principal crops

Sl. No.	Crop	Production in Gujarat (lakh tonnes)			All India Production (lakh tonnes)		
		2006-07	2013-14	*Per cent* increase	2006-07	2013-14	*Per cent* increase
1	Rice	13.90	19.16	37.84	933.60	1,065.40	14.12
2	Wheat	30.00	48.00	60.00	758.10	959.10	26.51
3	Jowar	1.03	1.21	17.48	71.50	53.90	(-) 24.62
4	Bajara	10.19	14.16	38.96	84.20	91.80	9.03
5	Groundnut	14.35	55.27	285.15	48.64	96.73	98.87
6	Cotton[20]	87.87	95.09	8.22	226.32	365.90	61.67

Source: Socio Economic Review, GoG for the years 2006-07 and 2013-14 and Annual Report of Department of Agriculture and Co-operation, Ministry of Agriculture, GoI for the year 2013-14.

The State's contribution in bajara, groundnut and cotton was significant to the All India production during the review period.

[20] Production in bales of 170 kgs. each.

Similarly, the production of principal horticulture crops and livestock products for the period from 2006-07 to 2012-13 is given in **Table 2**:

Table 2: Details[21] of production of horticulture crops and livestock products

Sl. No.	Crop/ product	Unit	Production in Gujarat			All India Production		
			2006-07	2012-13	*Per cent* increase	2006-07	2012-13	*Per cent* increase
Horticulture								
1	Fruits	lakh tonnes	53.58	84.13	57.02	595.63	812.85	36.47
2	Vegetables	lakh tonnes	60.63	105.20	73.51	1,149.93	1,621.87	41.04
Livestock products								
1	Milk	lakh tonnes	75.33	103.15	36.93	1,026.00	1,324.30	29.07
2	Eggs	Nos. in lakh	7,757	14,558	87.67	5,06,600	6,97,300	37.64
3	Wool	lakh kgs	29.62	26.64	(-) 10.06	451.00	460.50	2.10

Source: Socio Economic Review, GoG for the years 2006-07 and 2013-14, Indian Horticulture Database 2013 and Annual Report of Department of Agriculture and Co-operation, Ministry of Agriculture, GoI for the year 2013-14.

Though the State is not a major producer of the horticulture crops and livestock products *vis-à-vis* the All-India production, nevertheless, its contribution to the overall growth has increased, *albeit* marginally.

On the whole, the State did better than the national average growth rate. During the Eleventh Five Year Plan period (2007-12), the average agriculture growth rate of Gujarat was 5.49 *per cent per annum*[22] as compared to All India average growth rate of 4.06 *per cent per annum*. The table below depicts the growth rate of Gross Domestic Product in Agriculture and Allied Sector in Gujarat, at Constant 2004-05 Prices (for the period 2007-08 to 2012-13):

2007-08	2008-09	2009-10	2010-11	2011-12	2012-13 (the first year of the 12th Plan)
8.73	(-)7.17	(-)0.74	21.64	5.02	(-)6.96

Note: The growth rate in percentage terms (increase/ decrease) in each year is with reference to the previous year's figures.

Organisational Set-up

The organisational structure for the implementation of RKVY projects at the State level is given below:

[21] The data for 2013-14 has not been compiled by the Department.

[22] All growth percentage figures are at constant prices 2004-05. Constant prices allow the figures to be represented so that effect of inflation is removed. They also measure the true growth of goods and services. Source: Planning Commission, GoI-Central Statistical Organisation data as on 31 October 2014.

Agriculture and Co-operation Department (Nodal Department)

Principal Secretary (A & C Department)

Director of Agriculture and Member Secretary, Agriculture Projects Implementation Cell

Implementing Agencies

Heads of Departments

- **Agriculture**
- **Horticulture**
- **Animal Husbandry**
- **Agriculture Rural Marketing Finance**
- **Sugar**
- **Rural Development**
- **Co-operatives**
- **Fisheries**

Companies/Corporations/ Board

- **Gujarat State Land Development Corporation Limited**
- **Gujarat State Seeds Corporation Limited**
- **Gujarat Agro Industries Corporation Limited**
- **Gujarat Sheep and Wool Development Corporation Limited**
- **Gujarat State Warehousing Corporation**
- **Gujarat State Agriculture Marketing Board**

Agriculture Universities/ Others

- **Anand University**
- **Navsari University**
- **Sardar Krishinagar Dantiwada University**
- **Junagadh University**
- **Gujarat State Seed Certification Agency**
- **Development Support Agency of Gujarat**
- **Krishi Vigyan Kendra**

A State Level Sanctioning Committee[23] (SLSC) was constituted (November 2007) under the chairmanship of the Chief Secretary of the State to sanction projects and review the implementation of the scheme in accordance with the guidelines laid down by the GoI. The State Government also created (September 2010) a separate RKVY Cell called the Agriculture Projects Implementation Cell (APIC) for smooth and effective implementation of the scheme.

2.2.2 Audit objectives

We conducted the performance audit to get a reasonable assurance that:

- Planning for the projects was effective at the district level and State level and was done in an integrated manner;
- Adequate funds were available in a timely manner and their utilisation was effective and economic;

[23] Consists of the Chief Secretary of the State as Chairman, Secretaries of all related Departments of the State Government, a representative of the Department of Agriculture and Co-operation, GoI, a representative of the Planning Commission, a representative of State Agriculture University and Principal Secretary, Agriculture.

- Implementation of the scheme was effective and that intended objectives of the projects were achieved;
- The nodal agency/Agriculture department effectively coordinated with the implementing agencies to ensure efficient and effective monitoring and control and an evaluation mechanism existed to evaluate the impact of the scheme.

2.2.3 Audit criteria

The audit criteria for assessing the audit objectives were:

- Guidelines of RKVY;
- Comprehensive State Agricultural Plan;
- Project proposals under implementation;
- Instructions issued at the State/District level for implementation of RKVY; and
- State General Financial and Accounting rules.

2.2.4 Audit scope and methodology

We conducted the performance audit of RKVY from April 2013 to October 2013 and updated the findings during September to November 2014. During 2007-14, 446 projects of Stream I involving expenditure of ₹ 2,104.89 crore were implemented. The sampling process involved selection of sectors and projects based on the expenditure incurred by the state from 2007-08 to 2013-14 and ensuring adequate geographic coverage through selection of districts. In all, under Stream I, we selected 11 out of 20 sectors under which, 36 projects involving expenditure of ₹ 776.40 crore (including eight sub-schemes[24] with expenditure of ₹ 211.89 crore) were selected for detailed examination. We also selected two projects from Stream II involving expenditure of ₹ 24 crore out of 35 projects with total expenditure of ₹ 185.62 crore. 27 abandoned projects[25] pertaining to 15 sectors were also reviewed. In terms of geographical coverage, a total of 15 districts involving projects of Stream-I and Stream-II were selected for detailed examination of project records at the field level and 107 project locations were visited for joint physical verification.

An Entry Conference was held with the Agriculture and Co-operation Department, Government of Gujarat on 20 May 2013 at the level of Additional Secretary. During the entry conference, the audit objectives, scope, methodology and criteria of audit were explained. The records relating to the implementation of the RKVY and procedures adopted/ followed in the implementation of the scheme were examined. Physical verification of selected project sites and selected beneficiaries was also carried out.

---

[24] Sub-schemes are the projects specified by Government of India.
[25] No expenditure was incurred on these abandoned projects.

An exit conference was held on 12 December 2013 at the level of Principal Secretary, Agriculture, GoG during which the main audit findings were discussed. The draft performance report was issued to the State Government in November 2013. The response of the Government was received in March 2014 and suitably incorporated in the relevant paragraphs. The draft performance report was re-issued in August 2014 to Government; their replies were awaited (December 2014).

2.2.5 Planning

As per RKVY guidelines, the State was required to formulate District Agriculture Plan (DAP) and a Comprehensive State Agriculture Plan (C-SAP) for which GoI released (January 2008) ₹ 2.20 crore to the State Government. The C-SAP was expected to be submitted to the Department of Agriculture and Co-operation (DAC), GoI by March 2008. Accordingly, the planning process started at the district level by formulation of the DAP which provided the vision for agriculture and allied sectors within the overall development of the district, the financial requirements and the sources of financing the agricultural development plans in a comprehensive way. The DAPs were prepared taking into consideration the agro-climatic conditions, availability of technology and natural resources in various parts of the State. This facilitated the local requirements of the farmers with regard to soil conditions and crops. Thereafter, a C-SAP was prepared by integrating the DAPs. Thus, the State was accorded autonomy in preparation of DAP and C-SAP.

M/s. Water and Power Consultancy Services (India) Limited, Gandhinagar (WAPCOS), a GoI undertaking, was entrusted with work of preparation of the DAP and C-SAP. WAPCOS prepared the DAP of 26 districts and C-SAP in July 2008 at the cost of ₹ 21.28 lakh. The DAP/C-SAP was approved by the SLSC on 03 August 2009. We observed that the C-SAP was submitted to DAC, GoI only in October 2010 with a delay of 30 months. However, no reasons were on record for delay in submission of the C-SAP to the DAC after its approval by the SLSC.

The Government in reply (March 2014) did not give any reasons for the belated submission of C-SAP to the DAC.

2.2.6 Financial Management

The year-wise receipts of grants from GoI and the expenditure incurred under Stream I and Stream II under RKVY during 2007-14 are given below in **Table 3**.

Table 3: Details showing receipts of grant and expenditure incurred

(₹ in crore)

Year	Receipts^			Expenditure		
	Stream I	Stream II	Total	Stream I	Stream II	Total
2007-08	35.11	12.50	47.61	35.11	12.50	47.61
2008-09	182.54	60.85	243.39	182.54	60.85	243.39
2009-10	289.64	96.55	386.19	326.12	60.07	386.19
2010-11	307.02	81.61	388.63	355.18	0.00	355.18
2011-12	413.06	102.42	515.48	521.18	27.75	548.93
2012-13	484.77	126.10	610.87	576.34	18.38	594.72
2013-14	356.86	120.03	476.89	308.49	6.07	314.56
Total	**2,069.00**	**600.06**	**2,669.06**	**2,304.96**	**185.62**	**2,490.58**

^ Funds of ₹ 2.20 crore were released (January 2008) for preparation of DAP and SAP.

The RKVY allocation to the State has shown a steady increase over the period from 2007-08 to 2012-13 except in 2013-14. The State's allocation to agriculture and allied sector (excluding RKVY fund) in the State Plan increased gradually from ₹ 590.88 crore (2006-07) to ₹ 3,159.57 crore (2013-14) which indicates increased investment envisaged in RKVY.

The audit findings on the financial management of the RKVY funds allocated to the State are as under:

- During 2007-08 to 2013-14, expenditure of ₹ 2,541.13 crore was booked under detailed head of RKVY in Appropriation Accounts (AA) of the State as against the expenditure of ₹ 2,495.10 crore reported to DAC resulting in net difference of ₹ 46.03 crore as per details given in **Appendix-2.** However, the Government did not reconcile the same with the AA.
- The Government had furnished provisional Utilisation Certificates (UC) for the years 2007-08, 2008-09 (except ₹ 16.85 crore), 2009-10, 2010-11 and 2013-14 whereas final UCs were submitted for 2011-12 and 2012-13 only. Further, UC for ₹ 2.20 crore released (2007-08) for preparation of DAP and SAP was not furnished so far.

The Government stated (March 2014) that the major difference between the AA and data furnished to DAC was due to direct release of funds of ₹ 128.88 crore by the GoI to the Director, State Agriculture Management and Extension Training Institute (ATMA/ SAMETI) during 2008-09 which would not appear in the AA. The Government, further, stated that reconciliation would be taken up with the Accountant General (A&E). The Government has, however, not yet taken any action to reconcile the figures even after a lapse of nine months (December 2014).

Regarding UCs, the Government stated (March 2014) that final UCs up to 2012-13 were submitted to GoI in October 2013. The reply is not based on facts since final UCs were furnished for 2011-12 and 2012-13 only.

2.2.7 Implementation of projects

The SLSC approved 446 projects in 20 sectors under Stream I between February 2008 and March 2014. The overall status of the RKVY projects as on 31 March 2014 is given in **Table 4**:

Table 4 : Details of amount released and expenditure on Stream I projects

Sl. No.	Sector	Financial details of projects (₹ in crore)		Physical details of projects (in Nos.)			
		Release	Expen-diture	Target	Achie-vement	Under Progress	Abandoned/ dropped
1	Natural Resource Management	523.85	521.04	50	44	6	0
2	Crop Development	214.38	206.4	39	34	2	3
3	Animal Husbandry	157.57	154.47	54	38	10	6
4	Marketing and Post Harvest Management	176.55	169.56	33	21	8	4
5	Seed	58.05	57.39	38	35	1	2
6	Fertilizers and Integrated Nutrient Management	15.03	11.97	11	9	1	1
7	Other	155.56	134.05	19	18	1	0

Sl. No.	Sector	Financial details of projects (₹ in crore)		Physical details of projects (in Nos.)			
		Release	Expen-diture	Target	Achie-vement	Under Progress	Abandoned/ dropped
8	Agriculture Research	70.45	68.45	13	8	4	1
9	Organic Farming	32.07	24.06	15	11	2	2
10	Dairy Development	58.2	58.15	25	17	7	1
11	Extension	26.17	24.65	20	12	3	5
12	Fisheries	22.89	10.9	13	7	1	5
13	Agriculture Mechanization	382.08	286.42	20	17	1	2
14	Cooperatives	7.71	7.71	2	2	0	0
15	Integrated Pest Management	21.18	20.37	13	12	0	1
16	Horticulture	177.6	152.24	51	37	5	9
17	Sericulture	0.15	0.15	2	1	0	1
18	Non-Farm Activity	36.49	28.94	9	5	3	1
19	Micro/Minor Irrigation	169.94	167.22	18	15	0	3
20	Information Technology	0.75	0.75	1	1	0	0
Total		**2,306.67**	**2,104.89**[26]	**446**	**344**	**55**	**47**

We selected 36 projects under 11 sectors under Stream I and two out of 35 projects under Stream II for detailed scrutiny. We observed that the physical targets of various projects on distribution of seeds and training, providing bulk milk coolers, Mehsana, subsidy on farm mechanization, construction of cattle shed for cattle owners, creation of road and allied infrastructure in godowns and infrastructural works at APMCs were achieved to a significant extent. However, deficiencies such as selection of unviable project without examining their feasibility, lack of initial planning resulting in shortfall in achievement of targets, non synchronization of various activities within a project and stoppage of projects before their completion date were noticed. We also observed that there were deficiencies in target setting and impact assessment of projects post their completion. The sector-wise implementation of the projects and major audit observations on selected projects are discussed in succeeding paragraphs.

2.2.8 Crop Development Sector

The main focus of the crop development sector was integrated development of major food crops such as wheat, paddy, coarse cereals, minor millets, pulses, oilseeds, *etc*. by providing assistance for making available certified/ HYV seeds to farmers, production/purchase of breeder seeds, production of foundation/ certified seeds, seed treatment, training of farmers, setting up of Farmer Field Schools at demonstration sites, *etc*. During 2007-08 to 2013-14, 39 projects were approved under the sector and total expenditure of ₹ 206.40 crore was incurred. The focus of the approved projects was mainly on strengthening infrastructure, enhancement of production of crops and reducing yield gaps in important crops through focused interventions. Of the total projects approved, 34 projects were completed, two projects were in progress and three projects were abandoned (March 2014). We reviewed three

[26] The figure of Stream I does not tally with Stream I numbers at Paragraph 2.2.10 as the above expenditure is based on actual utilisation by the implementing agencies whereas the figure shown in Paragraph 2.2.10 is as per the amount released to the implementing agencies.

projects and five sub-schemes with expenditure of ₹ 179.29 crore. Our observations on the projects and sub-schemes are discussed below:

2.2.8.1 Enhancement of summer bajara production (Project ID 320)

The main aim of this project was to distribute hybrid seeds in 900 blocks and impart trainings to farmers of 16 districts with a target of 2,700 training sessions in order to increase the production and productivity of Summer Bajara and fill the gaps between average yield and potential yield of crops. The project was implemented during 2010-11 through Public Private Partnership mode. Gujarat State Seeds Corporation Limited (GSSCL) and nine private seed producing firms were assigned the block-wise target of distribution of seeds and training.

We observed that against the total outlay of ₹ 4.97 crore for 16 districts, expenditure of ₹ 4.44 crore was incurred in 12 districts whereas no expenditure was incurred in four districts. In physical terms, the target of seed distribution was achieved to the extent of 98 *per cent i.e.* seeds were distributed in 886 blocks against the planned 900 blocks. The achievement (77.59 *per cent)* in conducting training sessions was quite satisfactory *i.e.* 2,095 trainings conducted against 2,700 as planned. As per the third party[27] evaluation of the project, the average RKVY yield of summer bajara increased to 3,613 kg/ha in 2010-11 in the six districts covered under evaluation which indicated improved productivity.

2.2.8.2 Enhancement of production of paddy, maize, bajara (bajra), mustard and moong crops (Project ID 316)

The project was to be implemented in 25 districts with a total outlay of ₹ 43.81 crore during 2011-12. As with the previous project (Enhancement of Summer Bajara production), the aim of this project was also to distribute hybrid seeds and impart trainings to the farmers to increase production and productivity of food crops and to fill the gaps between average yield and potential yield of crops such as paddy, maize, bajara, mustard and moong. However, the extent of gap to be filled was not determined while proposing the project.

We observed that against the release of ₹ 12.50 crore, the actual expenditure on the project was ₹ 9.83 crore. Against the target of 6,615[28] blocks, only 2,459[29] blocks were covered for seed distribution resulting in a physical achievement of only 37.17 *per cent*. Of this, majority of the blocks *i.e*. 2,018 blocks were covered through distribution of bajara seeds. Therefore, while the achievement was 75 *per cent* in respect of bajara, it was only 1 to 22 *per cent* in respect of paddy, maize and moong. Thus, though the current project intended to cover more crops, the emphasis was only on bajara which indicates that it was merely an extension of the earlier project on Enhancement of Summer bajara production.

---

27 Sanguine Management Services Private Limited.
28 1,060 blocks of paddy, 1,719 blocks of maize, 2,696 blocks of bajara and 1,140 blocks of moong.
29 236 blocks of paddy, 191 blocks of maize, 2,018 blocks of bajara and 14 blocks of moong.

Further, as per this project, three trainings per block were to be conducted by Agriculture Training Management Agency (ATMA). Considering 2,459 blocks covered, at least 7,377 trainings should have been conducted but against this, only 2,285 trainings were conducted.

The project also envisaged distribution of kits consisting of pesticides, fertilisers, micronutrients *etc.*, to farmers at subsidised rates. However, we observed that the component was not taken up in any of the blocks resulting in the objective of increasing yield from these crops being affected to that extent.

As per the third party evaluation, the average yield of kharif bajara was 2,550 kg/ ha in the seven districts in 2011-12 against the average yield of State of 1,861 kg/ ha during the same period.

The Government stated (March 2014) that due to staff shortage at ATMA, targeted trainings could not be conducted. The fact remains that Director of Agriculture (DoA) did not monitor the training component. With regard to distribution of kits, the Government stated that the basic requirement under the project was seeds. The reply should be viewed in the context that distribution of pesticides, fertilizers, micronutrients, *etc*., was also important component of the project.

2.2.8.3 Strengthening infrastructure for industrial enhancement of cluster bean utility under subsistence and high input farming (Project ID 213)

The project sanctioned (August 2008) with total outlay of ₹ 1.90 crore envisaged construction of research station with laboratory equipments for the purpose of undertaking research on cluster bean. The project was implemented by the Sardar Krishinagar Dantiwada Agriculture University (SDAU) at a cost of ₹ 1.79 crore. SDAU constructed (September 2010) the laboratory building (₹ 1.12 crore), purchased laboratory equipment (₹ 0.55 crore) and contingencies (₹ 0.13 crore). The equipment have been put to use.

2.2.8.4 Sub-schemes

In the sector, five sub-schemes were implemented by the DoA. Our audit findings are discussed in the **Table 5** below.

Table 5: Audit findings on sub-schemes

Sl. No.	Name of the Sub-scheme	Audit findings
1	**Special initiative for pulses and oilseeds in dry land areas**	The sub-scheme was implemented during 2010-11 in the rainfed areas growing pulses and oilseeds. Under the scheme, a set of farm implements *viz.*, tractors, rotavators and ridge furrow planter along with working capital were to be provided to the farmers. Financial target of ₹ 27 crore as well as physical targets of providing 540 farm machineries/ implement were achieved and the equipment were put to use.
2	**Accelerated fodder development programme**	The sub-scheme implemented during 2011-12 and 2012-13 aimed to accelerate production of fodder through promotion of integrated technologies and processes for enhancing the availability of fodder throughout the year. The mini kits were to be distributed to the farmers.

Sl. No.	Name of the Sub-scheme	Audit findings
		Against the target of 2,20,250 mini kits, 2,25,069 mini kits were distributed at a cost of ₹ 53.08 crore.
3	**Initiative for nutritional security through intensive millets promotion**	The sub-scheme implemented during 2011-12 and 2012-13 aimed at enhancing production of millets and demonstrate the improved production and post harvest technologies in an integrated manner with visible impact. An expenditure of ₹ 18.88 crore was incurred during the period. Only four components *viz.*, demonstration, mini-kits, training, seed production, out of the seven components of the project, were implemented. The remaining three components *viz.*, technical assistance for production programme and clusters, and seed production were not taken up.
4	**Integrated development of pulses**	The sub-scheme was implemented during 2011-12 and 2012-13 with the objective to accelerate production and productivity of pulses. Against the physical target of 8,409 nos. in respect to three components *viz.*, new pond, accelerated pulse production and market link support, the actual achievement was 8,264 nos. at a total cost of ₹ 14.27 crore during 2011-13. The work on fourth component *viz.*, old pond lining was not carried out as the same was not required.
5	**Rainfed area development programme**	The sub-scheme implemented during 2011-12 and 2012-13 aimed to increase agricultural productivity of rain fed areas in a sustainable manner by adopting appropriate farming system based approaches. The scheme envisaged undertaking two components of work *viz.*, farming system and other activities. An expenditure of ₹ 50 crore was incurred on the scheme. A total of 9,899 hectares of land were covered against the target of 21,612 hectares of land. The shortfall was due to short release of fund for the scheme.

To sum up, the targets envisaged in the individual projects and sub-schemes under the sector were substantially met and thereby the objectives were largely achieved.

2.2.9 Seed Sector

The Seed sector envisaged providing assistance for production and purchase of breeder seeds/foundation seeds/ certified seeds/ high yield variety seeds, seed treatment and providing funds to State farms for both research and seed production. During 2007-14, the SLSC had approved 38 projects in the sector and a total expenditure of ₹ 57.39 crore was incurred. Of the 38 projects, 35 projects were completed, one project was in progress and two projects were abandoned (March 2014). The focus of the approved projects was on infrastructure creation, modernization/ upgradation of seed farms and production of quality seeds. We test checked two projects with an expenditure of ₹ 7.28 crore and our observations are as follows:

2.2.9.1 Quality seed production of Groundnut, Wheat and Pearl Millet (Project ID 12)

The SLSC sanctioned (August 2008) the project with an aim to provide quality seeds to the farmers to help enhance productivity of wheat, groundnut and pearl millet by creation of infrastructure, purchase of farm equipment *etc.*, to achieve a production of 19,000 quintals of quality seeds of wheat, groundnut and pearl millet. The quality seed so produced were to be sold to the farmers at reasonable rates. The project had a total outlay of ₹ 3.54 crore and was targeted to be completed by March 2012. Junagadh Agriculture University (JAU) was identified as the implementing agency.

We observed that against the targeted production of 19,000 quintals of quality seed of groundnut, wheat and pearl millet, the actual production was only 5,524 quintals and the same was sold to the farmers. Thus, notwithstanding the expenditure of ₹ 3.54 crore, the ultimate objective of seed production was achieved to the extent of 29.07 *per cent* only. Further, no evaluation was done to ascertain the extent of improved productivity by providing quality seeds to the farmers.

The Government stated (March 2014) that shortfall in production of quality seeds was due to lower seed multiplication ratio in case of groundnut and erratic climatic conditions in case of wheat and pearl millet. However, the fact remains that the factors like low seed multiplication ratio and climatic conditions were known while fixing the targets.

2.2.9.2 Development of Allied infrastructure at various godowns (Project ID 234)

The project was sanctioned (August 2008) for implementation by the GSSCL with a total outlay of ₹ 3.74 crore during 2008-09. The project aimed to create allied infrastructure like roads, street lights, rain water drainage in four godowns of GSSCL and providing 5,000 pallets[30] at the godowns with the aim to reduce seed spoilage/ wastage. GSSCL carried out the road and allied infrastructure works (₹ 2.08 crore) during April to July 2009 and purchased 5,500 pallets (₹ 1.64 crore) during August to November 2010.

We observed that no targets were fixed for reduction in spoilages/ wastages. As a result, whether the expenditure led to fulfillment of the objective could not be assessed by us. Further, no post evaluation was done to assess the impact of the project.

The Government stated (March 2014) that the objective of reduction in wastage/ spoilage in the godowns was achieved. However, the Government did not provide any data in support of their argument.

To conclude, the targets in one project (Quality seed production) were not achieved whereas the achievement of envisaged objective could not be ensured in both projects in absence of evaluation of the projects.

2.2.10 Horticulture

The Horticulture sector envisaged taking up activities of horticultural production and popularization of micro irrigation systems, providing assistance for nursery development including marketing and drip/ sprinkler irrigation. During 2007-14, the SLSC had approved 51 projects in the sector and a total expenditure of ₹ 152.24 crore was incurred. Of the 51 projects, 37 projects were completed, five projects were in progress and nine projects

30 The structural foundation of a unit load which allows handling and storage efficiency.

were abandoned (March 2014). We test checked three projects and two sub-schemes with an expenditure of ₹ 69.71 crore. Our observations on three projects and two sub-schemes implemented by Director of Horticulture are discussed below***:***

2.2.10.1 Production of quality planting/seedling/ seed material (Project ID 379)

The project was sanctioned (March 2013) with the aim to strengthen Government nurseries to reduce the demand and supply gap of good quality planting material, set up high tech tissue culture laboratory and plug nursery to produce good quality planting material, in addition to production of vegetable seeding to increase the productivity. The project was implemented during 2013-14 at a cost of ₹ 9.96 crore on strengthening of Seed seedling head office, Government nurseries and vegetable plug nurseries. The infrastructure created was put to use.

2.2.10.2 New initiatives for vegetable cultivation in peri urban clusters (Project ID 381)

The project was sanctioned (April 2012) with the objective to increase productivity and enhance production of vegetables. The aim was to reduce demand and supply gap, mobilization of producers group, mass demonstration, formation of production clusters, ensure linkages with the supply chain and support vegetable seed production. It would develop modern infrastructure for scientific seedling and improve the socio economic condition of the farmers. The project was implemented in peri-urban area of identified cities and town at the cost of ₹ 26.79 crore during 2012-13 and 2013-14. We observed that out of eleven components, only three components *viz.*, vegetable cultivation, protected cultivation and post harvest management were implemented. The remaining components were not taken up due to inadequate funds.

2.2.10.3 Mission Mode Horticulture Development in non-NHM districts (Project ID 121)

The project was implemented during 2010-11 with the aim to increase the farm income and ensure sustainability of income in the arid, semi-arid, tribal and coastal area development through horticulture development. The project envisaged creation of additional facility for production of horticulture grafts/plants by establishing 10 nurseries, production of flowers and spices under fruit crops, establish post harvest and cold storage infrastructure to avoid post harvest losses and add value to the horticulture produce. Expenditure of ₹ 13.47 crore was incurred on the project. Five, out of the six, components were undertaken under the project due to fund constraints.

2.2.10.4 Sub-schemes

In the sector, two sub-schemes were implemented by the Director of Horticulture. Our audit findings are discussed in the **Table 6** below.

Table 6: Audit findings on sub-schemes

Sl. No.	Name of the Sub-scheme	Audit findings
1	**Special programme on oil palm area expansion**	The sub-scheme implemented during 2011-12 and 2012-13 aimed at augmentation of production of palm oil. The activities such as distribution of planting material, increasing cultivation area, drip irrigation, inputs for inter-crop, besides, providing diesel pump set, vermi compost and construction of bore wells were undertaken. An expenditure of ₹ 4.15 crore was incurred under the scheme. A total of 1,37,041 hectares were covered against the target of 1,51,419 hectares. Further, 154 nos. of diesel pump sets were provided, 27 vermi compost and 107 bore wells were constructed against the target of 1,100, 130 and 157 respectively.
2	**New initiatives for vegetable initiative for urban clusters**	The sub-scheme was implemented during 2011-12 and 2012-13 with the objective to enhance vegetable production, improve nutritional security and income support to vegetable farmers with expenditure of ₹ 15.34 crore. During 2011-12, out of eleven components, only four components *viz*., vegetable cultivation, protected cultivation, promotion of nutrient management and training of farmers were taken up. Similarly, out of 12 components, only three components *viz.*, vegetable cultivation, protected cultivation and post harvest management were taken up during 2012-13. The remaining components were not taken up due to lack of funds.

In all, targets were achieved in one project under the sector. Other projects and sub-schemes were not fully implemented for want of funds and the targets remained unfulfilled to that extent.

2.2.11 Animal Husbandry sector

The major focus areas in the Animal Husbandry sector were providing assistance for improvement in fodder development, genetic upgradation of cattle and buffaloes, enhancement of milk production, enlarging raw material base for leather industry, improvement of livestock health, poultry development, *etc*. During 2007-14, SLSC approved 54 projects and expenditure of ₹ 154.47 crore was incurred. Of this, 38 projects were completed. 10 projects were in progress and six projects were abandoned (March 2014). The project activities focused on creating infrastructure for animal care services, animal disease control programmes, providing artificial insemination services, cattle feed, *etc*. We reviewed four projects involving expenditure of ₹ 44.52 crore and our observations are discussed as under:

2.2.11.1 Establishment of 140 Integrated Livestock Development (ILD) centres in Vadodara district (Project ID 106)

The project was aimed to provide artificial insemination (AI) and animal care services, infertility treatment and to help farmers improve the milk yield in Vadodara district. A sum of ₹ 5.76 crore were released to Development Support Agency of Gujarat (DSAG) under the Tribal Development Department for taking up the project till 31 March 2013. The DSAG entrusted (October 2009) the work to J K Trust, a Non-Government Organisation which undertook a similar project in the Narmada district. Under the project, J K Trust was required to set up 140 Integrated Livestock Development (ILD) centres equipped with the required infrastructure by training lady "Gopals"[31] to achieve a target of 21,000 born calves over the project period. J K Trust was released ₹ 7.06 crore till March 2013 (₹ 5.76 crore: RKVY and ₹ 1.29 crore: GoI Special Central Assistance for Tribal Sub Plan).

We noticed that the work was entrusted to J K Trust without any formal agreement on the plea that the agency had executed a similar project in Narmada district. We also observed that of the 140 ILD centres established by J K Trust, 13 ILD centres were not functioning on a continuous basis due to resignation of trained lady Gopals. During 2009-13, 74,960 artificial insemination (AI) were done of which 22,862 pregnancies were confirmed under the project. Till March 2013, 11,194 calves were born out of confirmed pregnancies against the target of 21,000 calves. We observed that data on availability of cattle management services, improved animal health, reduction in infertility problems and increased milk yield to the farmers was not available to assess the impact of the project.

The Government stated (March 2014) that due to resignation of trained lady Gopals, it was difficult to find lady candidates desiring to be a Gopal in their place and, therefore, the centres remained vacant. The reply should be seen in the light of the fact that J K Trust had trained 209 lady Gopals to have sufficient back up in case of Gopals resigning or leaving the centres. Non-functioning of ILD centres on a continuous basis meant that the objectives of the project were not achieved to that extent.

2.2.11.2 Kawant Livelihood Project (Project ID 243)

The SLSC sanctioned (August 2008) the project with a total outlay of ₹ 25.71 crore to provide livelihood opportunities to double the income of 20,000 tribal beneficiaries of Kawant taluka of Vadodara district over the period of five years from 2008-09 to 2012-13. DSAG was entrusted the task of implementing the project through Deepak Foundation, a Non-Government Organisation. The project intended at doubling the income of 20,000 families of Kawant taluka by undertaking activities like watershed development, agriculture/ horticulture, animal husbandry/ dairy, *etc*. An expenditure of ₹ 10.08 crore was incurred on agriculture and horticulture (₹ 6.45 crore), dairy development (₹ one crore), watershed (₹ 0.38 crore) and other administrative expenses (₹ 2.24 crore) during 2008-09 to 2010-11. The project was closed in April 2012 without completion of physical targets as the funding under RKVY was not forthcoming.

We observed that no data showing impact of the expenditure was available to assess whether the objective of doubling income was achieved. The project also envisaged constitution of an advisory group for monitoring of the project. However, the advisory group was not constituted. No third party evaluation was conducted. We also noticed deficiencies in implementation of the project due to inadequate planning. For instance, wadi cultivation[32] activity was one

[31] Gopal refers to a person entrusted with the work of providing services in the ILD centres.

[32] Wadi cultivation activity includes providing saplings of mango plants, drumstick plants, teak plants and other fruit plants.

of the activities envisaged for doubling the income of the families of Kawant taluka. For this, drip irrigation facilities were to be created with the help of farmers' participation through their contribution. Against the allocation of ₹ 3.58 crore, expenditure of ₹ 39.02 lakh only was incurred for purchase of fruit grafts[33]. However, the survival rate of the saplings was only 8 to 10 *per cent* as this activity was not properly synchronised with the creation of drip irrigation facilities which had to be done simultaneously for achieving the objective of the project.

The Government stated (March 2014) that there was year wise increase in the yield of various crops with consequent increase in income. It was also stated that as farmers could not arrange funds, the drip irrigation system required for wadi cultivation could not be installed. Further, due to unwillingness of farmers to adopt good cultivation practices, the project was not successful. However, the Government did not furnish any data in support of increase in the income of the tribal beneficiaries.

2.2.11.3 Assistance for cattle sheds to livestock owners in tribal areas (Project ID 224)

The project was sanctioned (August 2008) with a total outlay of ₹ 58.85 crore for its implementation during 2008-2012. The objective of the project was to construct cattle sheds and other livestock inputs for one tribal cattle owner per village in 5,884 villages *per* year in seven tribal districts. We observed that the project was implemented for two years (2008-10) with total expenditure of ₹ 29.42 crore by constructing 11,863 cattle sheds and other livestock inputs extending the benefit to both tribal and non-tribals in six talukas of tribal districts. The approval of the SLSC for this deviation was also not obtained.

The Government stated (March 2014) that due to administrative inconvenience in selection of one tribal *per* village, directions were issued to extend the benefit to cattle owners of all categories.

2.2.11.4 Fodder development in various districts (Project ID 250)

The project was implemented by the Forests Department in nine districts during 2008-09 to 2010-11 with a total outlay of ₹ 9.08 crore to counter drought and shortage of grass/ fodder by enhancing grass production on forest land through people's participation, its storage and supply of good quality seeds for production of grass/ fodder. The project aimed to cover 1,430 hectares of land for grass cultivation and construction of nine seed stores. We observed that 1,080 hectares of forest land were covered for grass cultivation besides construction of seven seed stores (₹ 5.97 crore).

To conclude, while in one project the implementation was satisfactory, in the remaining three projects, the targets remained largely unachieved. Further, no data was available to assess the benefits accrued to the cattle owners.

---

[33] A bud, shoot or scion of a fruit plant inserted in a groove, slit or the like in the stem or stock of another fruit plant in which it continues to grow.

2.2.12 Agriculture Mechanisation sector

This sector was meant to provide assistance for farm mechanization through improved and gender friendly tools, implements and machinery other than tractors. During 2007-14, the SLSC had approved 20 projects at a total outlay of ₹ 382.08 crore. Of this, 17 projects were completed, one project was in progress and two projects were abandoned. The approved projects included projects relating to increase in farm mechanization, creation of awareness and training on modern implements. Out of the expenditure of ₹ 286.42 crore incurred under the sector, ₹ 110.56 crore was incurred on two completed projects selected for audit. The findings in relation to the two selected projects are as follows:

2.2.12.1 Popularisation of farm mechanisation in Saurashtra-Kutch region (Project ID 123) and Improving work efficiency of farmers through farm mechanisation (Project ID 314)

The project ID 123 (April 2010) and project ID 314 (May 2011) were implemented by the Director of Agriculture (DoA) during 2010-11 and 2011-12 respectively. The objective of both the projects was to encourage farm mechanization by providing farm machinery/ implements by granting subsidy to improve productivity, efficiency and minimise production cost. In all, eight and 26 districts were covered under the two projects respectively.

We observed that under Project ID 123, against the envisaged coverage of 14,719 beneficiaries, 36,992 beneficiaries were covered at a cost of ₹ 15.56 crore. Similarly, in Project ID 314, against the targeted 40,540 beneficiaries, 75,607 beneficiaries were covered with the fund of ₹ 95 crore. In both the projects, more beneficiaries were covered with the available funds as assistance was provided for more number of low value plant protection equipments than targeted based on the actual needs of the farmers.

To sum up, the targets were met and more beneficiaries were covered.

2.2.13 Micro/minor Irrigation sector

The sector envisaged the activities relating to creation of irrigation facilities, upgrading technology *etc.,* in the rain-fed areas. During 2007-08 to 2013-14, SLSC approved 18 projects involving expenditure of ₹ 167.22 crore. The focus of the projects was mainly on increasing crop production and promoting micro irrigation systems to help improve the farmers in the rain-fed areas. Of the 18 projects, 15 projects were completed and three projects were abandoned. We reviewed two projects involving expenditure of ₹ 101.23 crore for detailed scrutiny and our observations are given as under:

2.2.13.1 Increasing crop production and water use efficiency through MIS cluster base cotton growing area and low water table area (Project ID 365)

The project was sanctioned (May 2012) with a view to increase water efficiency, increase in income of farmer through increased production and to provide drip irrigation technology through demonstration and educating farmers. Under the project, farmer groups located in 20 cotton growing districts were to be provided subsidy for drip irrigation unit and water tank. Funds of ₹ 85.53 crore was released to the Director of Agriculture for implementing the project during 2012-13 and 2013-14. Against the target of providing subsidy of ₹ 20,000 *per* hectare (maximum 2 hectares) *per* farmer for covering 40,225 hectares of land under drip irrigation and 5,075 water storage tanks, 42,645 hectares of land were covered under drip irrigation. We observed that no subsidy was provided for water tanks for which no reasons were available on record. An expenditure of ₹ 85.42 crore was incurred on the project. However, no evaluation was carried out to assess the benefit accrued out of the project.

2.2.13.2 Precision farming in Banana Cultivation (Project ID 380)

The project was sanctioned (May 2012) with objective to promote adoption of high tech culture practices including Tissue cultured plants, micro irrigation for benchmark production and improve the quality and its export support and water efficiency with an outlay of ₹ 14 crore. We observed that the Director of Horticulture incurred expenditure of ₹ 15.81 crore for providing subsidy for tissue culture plant, drip irrigation incentive and export support in 12 districts.

Overall, though the targets were largely achieved, the impact of the projects could not be assessed in absence of evaluation studies.

2.2.14 Dairy Development sector

The Dairy Development sector aimed at improving milk procurement infrastructure, providing milk protein intake, augmentation and modernization of dairy processing plants, enhancing milk production, *etc*. The milk production in the State was 79.12 lakh Metric Tonne (MT) in 2007-08 and increased to 111.13 lakh MT during 2013-14. During 2007-14, SLSC had approved 25 projects under the sector and a total expenditure of ₹ 58.15 crore was incurred. The approved projects focused on providing milk infrastructure and integrated dairy development. Of these, 17 projects were completed, seven were in progress and one project was abandoned. We reviewed three projects and one sub-scheme with expenditure of ₹ 39 crore. Our observations on the projects and one sub-scheme are discussed below:

2.2.14.1 Installation of Milk Chilling Centre (modified project on Bulk Milk Cooler), Sagbara (Project ID 102)

The project was sanctioned (August 2009) by the SLSC with an outlay of ₹ two crore and initially aimed at setting up of a Milk Chilling Centre with a capacity of 20,000 litres per day (LPD) at Sagbara to reduce the milk sourage, enhance milk quality and help milk producers get more return for the milk. However, as the project was found to be not viable owing to low inflow of raw milk, it was modified (April 2010) by the SLSC to install 20 bulk milk coolers (BMCs) of 3,000 LPD in Sagbara and Dediapada taluka of Narmada district. The project was assigned to the Director of Animal Husbandry and implemented by the Dudhdhara Dairy, Bharuch.

We observed that the allocated funds of ₹ two crore were utilized for installation of 20 BMCs in Sagbara taluka only though the allocation was meant for both Sagbara and Dediapada talukas. Reasons for not installing any BMC in Dediapada taluka were not available on record. Further, we observed that none of the BMCs installed in Sagbara taluka were put to use for want of electricity connection and inadequate milk procurement. Thus, in the absence of a proper feasibility study, the installed BMCs were lying idle thereby rendering the expenditure unfruitful.

The Government stated (March 2014) that though milk procurement was not at par with the installed capacity, BMCs were installed considering future prospects and expansion of dairy activities in the area.

2.2.14.2 Integrated Dairy Development-Valsad, Dharampur and Kaprada (Project ID 170)

The SLSC sanctioned (April 2010) the project with an outlay of ₹ 40.53 crore with contribution from RKVY funds to the extent of ₹ 21.91 crore during 2010-11 and 2011-12. The remaining funds of ₹ 18.62 crore were to be given by Vasudhara Dairy (Implementing agency) and Gujarat Tribal Development Corporation (GTDC) in the form of loan to the beneficiary for their contribution. The project aimed at creating full time employment opportunities for doubling the income of the scheduled tribe families by providing cattle management and livestock improvement services. The project was expected to result in uplifting 80 *per cent* of the participating BPL beneficiaries above poverty line, 30 *per cent* growth in milk collection and ensure survival of 75 *per cent* of heifer[34] provided to the beneficiaries. DSAG implemented the project through Vasudhara Dairy in Valsad, Dharampur and Kaprada talukas of Valsad district. As on 31 March 2012, expenditure of ₹ 8.42 crore was incurred of which only ₹ two crore was the RKVY component. The balance amount of ₹ 6.42 crore was met through Special Central Assistance.

We observed that the physical targets set for the two years included providing 6,000 new cattle, 3,000 cattle shed and 10,500 heifer to the beneficiaries. The achievement there against was 2,200 new cattle, 957 cattle shed and 1,900 heifer as the project was started late only in December 2010 and closed in March 2012. No data was available on upliftment of beneficiaries above poverty line, growth in milk collection and survival rate of heifer to assess the extent of benefits accrued to the tribals under the project. Further, no third party evaluation was done to assess the impact of the project and achievement of objective of doubling the income of the beneficiaries.

Further, the beneficiary contribution *per* person *i.e.* ₹ 20,000 stipulated to be arranged through loan from GTDC, was arranged from the Corporation Bank at three *per cent* higher rate of interest. This led to imposition of additional interest burden of ₹ 10.91 lakh[35] on the beneficiaries.

---

[34] Young cow over one year old that has not produced a calf.

[35] Worked out on the basis of differential rate of interest charged by the said bank and normal rate of interest.

The Government stated (March 2014) that since the project was already delayed and procedure of getting loan from GTDC was lengthy, the Vasudhara dairy arranged loans from the Corporation Bank. It was further stated that Vasudhara dairy adjusted the subsidy amount of ₹ 10,000 in the loan and on the balance amount of ₹ 10,000, nine *per cent* interest does not create financial burden. However, the fact remained that even after adjusting the subsidy of ₹ 10,000, the beneficiaries were burdened with additional burden of ₹ 10.91 lakh by way of higher rate of interest.

2.2.14.3 Installation of Bulk Milk Cooler, Mehsana (Project ID 194)

The project sanctioned (April 2010) with outlay of ₹ 4.98 crore was implemented by Dudhsagar Dairy, Mehsana with aim to install Bulk Milk Coolers (BMC) in the milk co-operative societies to improve procurement of raw quality milk, reduction in milk sourage and better price to farmers. The target of installing 120 BMCs in the milk co-operatives societies was achieved (November 2012) with the available fund. The BMCs were put to use.

2.2.14.4 Sub-scheme on National mission for protein supplements

The sub-scheme implemented by Director of Animal Husbandry through dairy co-operative unions during 2011-12 and 2012-13 aimed at ensuring nutritional balance for consumers in terms of milk protein intakes, growth in milk production and holistic development of Animal Husbandry and Dairy sector. The financial assistance (up to 38 *per cent*) was provided to the dairy co-operative unions for each component under RKVY. An expenditure of ₹ 30.02 crore was incurred on the scheme. The physical targets of all eight dairy components were achieved during 2011-12 and 2012-13.

To summarise, while the project on BMC at Mehsana was successfully implemented, the similar project at Sagbara remained unviable. The targets of sub-scheme were also achieved. In Integrated Dairy Development project in Valsad district, the targets were not achieved.

2.2.15 Natural Resource Management

The main focus of the Natural Resource Management sector was to take up works related to amelioration of soils affected with conditions such as alkalinity and acidity. Of the 50 projects approved by the SLSC during 2007-14, while 44 projects were completed, six projects remained in progress. An expenditure of ₹ 521.04 crore was incurred on the sector. The focus was on activities such as salinity ingress prevention, water shed management for rainfed areas, reclamation of saline, alkaline and degraded soil, restoration of fertility in water logged areas, *etc*. We reviewed three projects involving expenditure of ₹ 78.90 crore and our observations are discussed as under:

2.2.15.1 Reclamation of Saline and Alkaline soil to increase crop production (Project ID 133)

The SLSC sanctioned (April 2010) the project at a total outlay of ₹ 29 crore to be implemented during 2010-11 and 2011-12. The aim of the project was to check further expansion of saline alkaline area and make it productive by applying soil improvement techniques, maximise rainwater harvesting and decrease salinity and alkalinity hazards in seven districts. Gujarat State Land Development Corporation Limited (GSLDCL) was identified as the implementing agency.

We observed that though the project had the target of taking up the work of soil treatment in 19,335 hectares of land in seven districts during 2010-11 and 2011-12, only 7,233 hectares of the land were treated during 2010-11 only in six districts at a cost of ₹ 10.84 crore. The work involved construction of reclamation bund, recharge structures and soil treatment. The work of reclamation bund was to be carried out before taking up the work of recharge structures.

Of the three districts test checked by us, we noticed that in Anand district it was targeted to construct 4,660 RMT of reclamation bund, 284 recharge structures and treat 2,751.09 hectares of land. However, no reclamation bund was constructed while 116 recharge structures were constructed and 452 hectares of land was treated. In the absence of reclamation bund, expenditure incurred (₹ 1.86 crore) on recharge structures and treatment of land did not yield desired benefits. Further, training to beneficiaries about conservation of natural resources and maintenance of assets created was not imparted, though the same was essential for the success of the project.

No data regarding land made available for cultivation after soil treatment, increased land productivity and resultant increase in income of the farmers was available. Further, third party evaluation or socio economic survey of the project was not carried out before and after treatment of land to ascertain the impact of the project.

The Government stated (March 2014) that the farmers and gram panchayats did not give their consent to construct the proposed reclamation bund, recharge structure and treatment of land and hence, the target achieved was lower. The Government further stated that the implementing agency had given understanding to the beneficiaries in village level/gram panchayat meetings regarding utility of created assets/ water bodies and maintenance of created assets. However, no records were made available to audit in support of such meetings.

2.2.15.2 Checking of Salinity Ingress in the coastal area of Gujarat State (Project ID 93)

The project was sanctioned (August 2009) with aim to check the sea water intrusion/ ingress, increasing rainwater recharge potential by constructing recharge structures and field bunding, improve soil condition, ground water quality and increasing agriculture productivity. GSLDCL implemented the project during 2009-10. We observed that against the targeted 32,499 hectares of land for soil treatment in 13 districts, the soil treatment was carried out in 14 districts covering 32,655 hectares of land at a cost of ₹ 60.41 crore.

In the test checked Vadodara district (expenditure ₹ 5.23 crore), against the target of 3,329 RMT of reclamation bund, 1,952 hectares of soil work and 182 recharge structures, the work of 220 RMT of reclamation bund, 561 hectares of soil work and 658 recharge structures was carried out. We observed that out of eight villages in the district, the reclamation bund of 220 RMT was constructed in one village only. It was necessary that work of soil conservation and recharge structures be carried out only after construction of reclamation bund. The construction of recharge structures was high at 361 *per cent* which indicated that there was no synchronization of the activities thereby rendering the expenditure unfruitful.

The Government stated (March 2014) that there was strong demand for recharge structures than reclamation bund and soil management aspect. However, the fact remains that no benefit accrued on account of construction of recharge structures without reclamation bund.

2.2.15.3 Restoration of fertility of water logged area in the state (ID 135)

The project was sanctioned (April 2010) with the aim to sustain fertility and productivity of the water logged areas, reclaim water logged land by constructing networks of surface drainage, reduce salinity hazard through harvest and conservation of good quality water in three identified districts. The project was implemented in Bharuch, Navsari and Anand districts by GSLDCL during 2010-11 at a cost of ₹ 7.65 crore.

We observed that only 2,833 hectares of the land were treated against the target of 4,000 hectares of land for soil treatment. Further, the work was taken up in Anand district instead of Valsad district as envisaged in the approved project.

To sum up, the targets were only partially achieved in all the three projects. Moreover, no benefits accrued to the farmers in two projects wherein recharge structures were constructed without construction of reclamation bunds. The project on restoration of fertility of water logged area was not taken up in Valsad district.

2.2.16 Marketing sector

The Marketing sector was meant to strengthen market infrastructure and market development by providing assistance for setting up of cold storages, cold chains, godowns, formation of farmer's Self Help Groups (SHGs), setting up collection centres, *etc*. During 2007-14, SLSC approved 33 projects under the sector and total expenditure of ₹ 169.56 crore was incurred. The approved projects focused on providing assistance for infrastructural works in Agriculture Produce Marketing Committees (APMCs), setting up laboratories for food testing and quality control, farmer training centres, *etc*. Of these, 21 projects were completed, eight projects were in progress and four projects were abandoned/ dropped. We test checked two projects on which expenditure of ₹ 51.36 crore was incurred and our observations are as under:

2.2.16.1 Convergence of State Plan (Kisan Kalpvriksha Yojana) with RKVY (Project ID 274)

The project was sanctioned (May 2011) by SLSC with a total outlay of ₹ 39.54 crore for creation of essential infrastructure in APMCs during 2011-12 and 2012-13 for the benefit of farmers and APMCs. The existing State Plan project- Kisan Kalpvriksha Yojana (KKVY) in operation since June 2009 was converged with RKVY and covered 29 infrastructural works. The funds released were placed at the disposal of District Registrar (DR) for onward disbursement to the beneficiary APMCs. The DR also monitors the progress of work undertaken by the APMCs. Funds of ₹ 39.54 crore were released to Gujarat State Agriculture Marketing Board (GSAMB) till March 2014.

We observed that in the test checked districts of Gandhinagar, Patan and Valsad, against the 46 targeted works to be completed in eight APMCs by December 2012, only 27 works were completed by March 2013. Of the balance 19 works, 13 works were not even started whereas six works were in progress.

The Varahi APMC of Patan district was provided (November 2011/May 2012) with RKVY funds of ₹ 80 lakh for carrying out seven infrastructural works at new location. We observed that the funds were utilised only for purchasing land of ₹ 17.50 lakh and constructing an office building for ₹ 4.99 lakh. However, the remaining infrastructural works like godowns, sheds, shops, roads *etc.*, were not constructed till date. Under KKVY and RKVY, assistance for acquisition of land was not admissible. Further, the KKVY guidelines required the beneficiary APMC to have its own land. Thus, release of funds of ₹ 17.50 lakh to Varahi APMC for land was not admissible and was outside the scope of KKVY and RKVY guidelines.

The Government stated (March 2014) that this project was monitored by the DR who has been directed to look into the matter on priority.

2.2.16.2 Creating essential infrastructure in Agriculture Produce Marketing Committees (Project ID 174)

The project was sanctioned (April 2010) for creation of essential infrastructure in APMCs. GSAMB implemented the project in 26 districts. The project provided for grant of financial assistance of 50 *per cent* to Category 'A' and 'B' APMCs and 65 *per cent* to Category 'C', 'D' and Tribal region APMCs for four infrastructure works such as concrete floor, godowns, auction sheds and compound wall. The balance 50/35 *per cent* was to be borne by respective APMCs. The GSAMB was provided with funds of ₹ 11.82 crore during 2010-11 to 2013-14. In turn, amount of ₹ 11.76 crore were released to 45 APMCs. We observed that 35 out of 45 APMCs completed the envisaged works and in balance 10 APMCs the works were in progress.

Overall, the target for creation of infrastructure in APMCs was largely achieved in both the projects, with some works in progress.

2.2.17 Integrated Pest Management sector

The focus of the sector was on training of farmers through Farm Field Schools on pest management practices and printing of literature/ other awareness programmes. During 2007-14, SLSC had approved 13 projects on which expenditure of ₹ 20.37 crore was incurred. The approved projects include creation of infrastructure for development of eco-friendly pest management strategies, rodent management, production of bio-pesticides, strengthening of pesticide testing laboratories, *etc*. Of these, twelve projects were completed and one project was abandoned. We selected two projects involving expenditure of ₹ 3.69 crore for detailed scrutiny and our observations are as under.

2.2.17.1 Production of bio-pesticides and their eco-friendly use in plant disease management (Project ID 19)

The project was sanctioned with the aim to develop the protocol for mass multiplication of bio-agents, find native strains of bio-agents from soils of South Gujarat area, produce bio-pesticides, demonstrate the effective bio-pesticides and educate the farmers over a period of five years (2008-09 to 2012-13). The project was implemented by Navsari Agricultural University at a total cost of ₹ 2.31 crore mainly by creating infrastructure of laboratory building (₹ 0.97 crore) and purchase of lab equipments (₹ 75.09 lakh).

We observed that against the targeted production of bio-pesticides of eight lakh packets, 16,416 kgs of bio-pesticides were produced. As the target of production of bio-pesticides was fixed with reference to number of packets without specifying their weight, the achievement could not be compared with the target due to adoption of different units of measurement.

The Government stated (March 2014) that the achievement of production of bio-pesticides was given in weight as it was very realistic in comparison to the number of packets.

2.2.17.2 Use of microbes using Fungbact[36] Kit in sugarcane farms (Project ID 269)

The project was implemented during 2011-12 with the objective to increase soil fertility, soil mass, improve fertiliser uptake by crop, reduce salt formation in soil and reduce harmful pesticide application for higher sugarcane yield and higher sugar recovery. The project envisaged providing assistance of 50 *per cent* of the total cost to sugar co-operatives for distribution of fungbact kits to the sugarcane farmers. Director (Sugar) distributed 22,500 fungbact kits to the sugarcane farmers through nine sugar co-operatives in five districts at the cost of ₹ 1.38 crore.

We observed that no evaluation was carried out to study the impact and the benefit of use of fungbact kits in terms of increased production, improved productivity, improved soil conditions, *etc*.

[36] It provides all beneficial bacterial as well as fungal culture with a view to increase soil fertility in sugarcane fields.

To conclude, the target of distribution of fungbact kits was achieved. However, impact of the projects could not be assessed for want of relevant data.

2.2.18 Other sectors

The other sectors include the activities which are not covered under specific agriculture and allied sectors identified under the RKVY scheme. During 2007-14, the SLSC approved 19 projects under the sector on which expenditure of ₹ 134.05 crore was incurred. The approved projects focused on activities related to sustainable agricultural development, development of agro forestry, wadi and agriculture diversification, *etc*. Of the 19 projects, 18 projects were completed and one project was in progress. We reviewed two projects involving expenditure of ₹ 80.18 crore and our observations are as under:

2.2.18.1 Integrated Wadi and Agriculture Diversification (Project ID 092)

The SLSC sanctioned (October 2009) the project with RKVY outlay of ₹ 68.18 crore increased to ₹ 72.78 crore (30 January 2012). The RKVY contribution formed 20 *per cent* of the total outlay of ₹ 348.39 crore on the project and balance 80 *per cent* contribution was to come from other contributors[37]. DSAG implemented the project through the NGOs. The objective of the project was to increase the area under irrigation, increase the productivity of land and water by crop diversification and increase the income of the beneficiaries and better post harvest management. The project envisaged taking up different works such as upgradation/ construction of check dams with lift irrigation, micro irrigation and taking up wadi and agriculture diversification activities besides, formation and nurturing community groups.

Under the project, coverage of 6,48,550 beneficiaries, construction of 40 check dams and creation of 80 lift irrigation facilities was targeted. Against this, 5,25,721 beneficiaries were covered, 30 check dams were constructed and five lift irrigation systems were created during 2009-12. The above activities were completed at a cost of ₹ 72.81 crore.

On scrutiny of the records of 19 new check dams constructed at the cost of ₹ 7.06 crore, we noticed that the RKVY component in the cost of check dams was only ₹ 1.59 crore *i.e.*, 22.06 *per cent* as per cost sharing. However, entire cost of check dams was met from RKVY funds. Similarly, against the expenditure of ₹ 5.44 crore in wadi and agriculture diversification component, the RKVY funds component should have been ₹ 1.36 crore *i.e.*, 25 *per cent* as per cost sharing. However, the entire cost was met from RKVY funds.

The work of construction of 11 check dams was awarded to NGOs at an estimated cost of ₹ 6.54 crore. As per the terms, 20 *per cent* of the cost was to be borne by the NGOs. Against the estimated cost, the work was completed at

---

[37] National Rural Employment Guarantee Scheme, Gujarat Green Revolution Company Limited, Tribal Development Department and Institutional credit through Gujarat Tribal Development Corporation.

the cost of ₹ 5.32 crore. The admissible amount to be paid to NGOs worked out to ₹ 4.25 crore (*i.e.* 80 *per cent* of ₹ 5.32 crore). However, NGOs were paid ₹ 5.23 crore which resulted in excess payment of ₹ 0.98 crore.

We observed that DSAG did not conduct any impact survey on construction of check dams, creation of lift irrigation systems and benefits accrued to the beneficiaries in form of increased productivity of land, crop diversification and resultant increase in income.

2.2.18.2 Sunshine-II for diversified agriculture in tribal areas of North Gujarat (Project ID 172)

The project was sanctioned (April 2010) with the aim to augment the agriculture related income of BPL ST families, increase irrigation potential of 3,100 acres, providing micro irrigation systems in 2,850 acres of land and formation of user groups for managing project assets post project. The project included various components such as soil and water conservation, water resources development, agriculture diversification activities, community participation through user groups, training and capacity building, institutional credit, *etc*. The project was implemented by the DSAG during 2010-11 and 2011-12 at the cost of ₹ 7.37 crore. As per the last progress report (March 2012), the average production of Potato and Cotton increased by 25 tons *per* ha and 15 quintals *per* acre respectively. Similarly, the average Tuvar and Mustard production increased by 6 quintals *per* acre and 5 quintals *per* acre respectively.

To sum up, the targets were not fully achieved. Besides, the benefits accrued as a result of implementation of the projects could not be assessed in absence of evaluation.

2.2.19 Stream II projects

Under RKVY, the State can utilise up to 25 *per cent* of the funds made available for strengthening the existing State sector schemes and filling the specific resource gaps under Stream-II. During 2007-14, 35 State Plan projects were approved for assistance under RKVY on which an expenditure of ₹ 185.62 crore was incurred from RKVY funds. We reviewed two projects involving expenditure of ₹ 24 crore and our observations are as under:

2.2.19.1 Biotechnological Approaches for Containment of Animal Diseases

The project was approved during 2008-09 with a total outlay of ₹ 23.20 crore for a period of four years. The objective of the project was to identify causes of diseases of genetic and non-genetic origin, development of vaccines against bacterial and viral pathogens and developing markers for screening breedable population for genetic diseases. The project was implemented by the Anand Agricultural University (AAU). As per RKVY guidelines, the amount under Stream-II would be available for strengthening the existing State sector schemes and filling the resource gaps.

We observed that this project was not an existing State Plan scheme and thus, did not qualify for funding under Stream II. However, funds of ₹ four crore were released during 2008-09 from RKVY. Further, we observed that the RKVY funds were used to purchase scientific instruments mainly *viz.,* High Thoughput Genome Sequencer (HTGS) worth ₹ three crore and other ancillary instruments worth ₹ one crore related to research. The HTGS instrument was to be used to analyse DNA segments of Jaffarabadi buffalo and had the potential to generate huge data on animal and plant species for enhancement of productivity of livestock and agriculture. Under the project, AAU analysed more than 64,000 DNA segments of Jaffarabadi buffalo. However, due to non-provision of further funds by State Government and under RKVY, further activities like DNA analysis, research data on animals and plant species to help improve livestock productivity could not be taken further as envisaged. The project was discontinued in March 2009.

The Government stated (March 2014) that though the project was discontinued in March 2009, the HTGS was being used for research projects funded by different research agencies and for training the students.

2.2.19.2 Strengthening farm power for agriculture mechanisation through mini tractor

The project was approved for ₹ 20 crore for purchase of mini tractor (18 HP or less) in the form of gap funding for AGR 50 (State Plan scheme) in the year 2011-12. The objective of the scheme was to counter farm labour problems and increase agricultural productivity through mechanisation. The project provided for subsidy at the rate of ₹ 45,000 *per* mini-tractor or 25 *per cent* of cost of mini-tractor, whichever is less with a target to provide subsidy to farmers for purchase of 4,444 mini-tractors in all districts of the State. Against this, subsidy was provided for purchase of 4,452 tractors.

To conclude, the target in respect to one project was fully achieved while the other project was discontinued after one year without fulfilling the objectives.

2.2.20 Monitoring and Evaluation

2.2.20.1 Monitoring at Nodal agency level

The Agriculture and Co-operation Department, Government of Gujarat was the nodal department for monitoring the implementation of the RKVY till August 2010. Thereafter, Agriculture Projects Implementation Cell (APIC) was entrusted with the work of ensuring smooth and result oriented implementation of various projects. The mandate of APIC was to provide assistance in project formulation as per GoI guidelines, project appraisals, ensure effective implementation of projects, scrutiny of progress reports and online data entry of expenditure, output, variation, targets and achievement, beneficiary data *etc*., in the RKVY website.

We observed that the role played by APIC was very limited. APIC did not monitor the progress of the projects with reference to both financial and physical targets. Progress reports received from implementing agencies were not evaluated so as to enable mid-course correction, if any, required for proper implementation of projects.

2.2.20.2 Monitoring at SLSC level

As per the RKVY guidelines, the SLSC was required to meet at least once in a quarter. Against 26 meetings (one *per* quarter) required to be held during 2007-08 to 2013-14, only 11[38] meetings were held.

2.2.20.3 Evaluation

During the Eleventh Five Year Plan (2007-12), the agricultural growth rate of Gujarat was on an average 5.49 *per cent per annum*. The agriculture and allied sector is affected by several factors such as rainfall, cropping pattern, land under cultivation, irrigation facilities, soil fertility, availability of quality seeds, storage facilities, pest management, marketing facilities and the pains taken by individual farmer himself. Further, agriculture growth includes contribution of the plan/ programmes implemented under State Plan. The State achieved the average growth rate of 5.49 *per cent per annum* which was higher than the All India average growth rate of 4.06 *per cent per annum* during the Eleventh Five Year Plan.

In the absence of relevant data or evaluation studies, the impact of RKVY on agriculture and allied sector and the extent to which the programme facilitated the overall growth of agriculture in the State could not be assessed by us.

The State Agriculture Plan provided that concurrent and impact survey should be carried out through third party during the implementation of the projects. Of the 38 completed projects test checked in audit, we observed that the evaluation was done only in case of two PPP projects of crop development sector. No evaluation was initiated in case of remaining projects.

The Government stated (March 2014) that RKVY funds helped to achieve the average growth rate in spite of natural calamities. The Government further stated that the evaluation of RKVY by Institute of Social and Economic Change (ISEC) was in progress. Further, evaluation was got done through third party Sanguine Management Services Private Limited (SMSPL) in the second half of 2012.

We noticed that the evaluation report of ISEC was awaited. The evaluation done by SMSPL was in respect of selected projects on crop sector implemented in PPP mode.

38 1st SLSC (18.02.2008), 2nd SLSC (04.08.2008), 3rd SLSC (03.08.2009), 4th SLSC (23.04.2010), 5th SLSC (26.05.2011), 6th SLSC (30.01.2012), 7th SLSC (03.05.2012), 8th SLSC (10.09.2012), 9th SLSC (26.03.2013), 10th SLSC (27.10.2013) and 11th SLSC (25.03.2014).

Conclusions and Recommendations

The State achieved average agriculture growth rate of 5.49 *per cent per annum* as against All India average growth rate of 4.06 *per cent per annum* (both at constant prices 2004-05) during Eleventh Five Year Plan (2007-12) *vis-à-vis* All India target of four *per cent*. The State's contribution in bajara, groundnut and cotton was significant to the All India production during the review period. Audit reviewed 38 projects under 11 sectors. It was noticed that in 21 projects, the targets were largely achieved whereas in 17 projects, deficiencies were noticed in their implementation leading to shortfalls in achieving targets. This led to non-achievement of objective of RKVY to that extent. Audit scrutiny revealed certain areas of concern with regard to implementation and evaluation of schemes/ projects as given below:

- **The allocated funds were not fully released in seven projects which led to either foreclosure of projects or non-achievement of envisaged targets.**

  The Government/SLSC may consider release of funds in full in order to derive maximum benefits from the projects.

- **Assistance was provided to the project on Biotechnological Approaches for Containment of Animal Diseases under Stream-II though the same was not an existing State Plan scheme and therefore, did not qualify for funding under RKVY.**

  The SLSC may observe RKVY guidelines in approving the funds for Stream-II projects. The Government may consider continuing the project on Biotechnological Approaches for Containment of Animal Diseases from the State Plan funds.

- **Inadequate monitoring of the projects both at the SLSC level as well as at Nodal Agency level was observed in majority of the projects. Out of 26 quarterly meetings as envisaged in the scheme, SLSC held only 11 meetings during 2007-14 for review of implementation of projects.**

  The SLSC may consider close monitoring of the implementation of projects according to laid down norms.

- **Evaluation mechanism was absent in respect of individual projects, except for a few projects under crop development sector. The evaluation of RKVY by ISEC was stated to be in progress.**

  The Government may get the evaluation study expedited and take suitable corrective measures to further fine-tune the implementation of the programme.