

Chapter-II

Performance Audit

CHAPTER-II PERFORMANCE AUDIT

Animal Husbandry Department

2.1 Schemes for upkeep/ improvement of livestock

A performance audit of the implementation of schemes relating to upkeep/ improvement of livestock in the State for the period 2011-12 to 2015-16 brought out weak planning, non-achievement of targets for improving livestock productivity and undue delay in execution and completion of infrastructure projects. Some of the significant audit findings are summarised as under:

Highlights:

- *The Department had not prepared Annual Action Plans detailing the implementation strategy for various activities under the schemes for upkeep/ improvement of livestock during 2011-16.*
(Paragraph 2.1.6.1)
- *Since 2002, against the objective of achieving exotic inheritance level of 50 per cent in cattle and 75 per cent in sheep, the Department achieved exotic inheritance level of 46 and 38 per cent of cattle and sheep respectively.*
(Paragraph 2.1.6.3)
- *Although the milk production targets set by the Department during 2011-16 were by and large achieved, the State average annual milk yield (11.68 lakh MT) was 13 per cent below the national average (13.38 lakh MT).*
(Paragraph 2.1.6.5)
- *Funds of ₹ 20.21 crore released during 2011-16 for construction of veterinary hospital buildings/ execution of livestock development projects remained unutilised with implementing agencies for more than 16 months to two years.*
(Paragraphs 2.1.10.2, 2.1.14.1, 2.1.15 and 2.1.16)
- *Construction of 108 institutional buildings (₹ 7.44 crore) and execution of six livestock development projects (₹ 8.95 crore) sanctioned during 2011-15 were lying incomplete as of November 2016.*
(Paragraphs 2.1.10.1, 2.1.14.4, 2.1.14.5 and 2.1.17.2)
- *During 2011-16, the success rate of calves born through artificial insemination in cows ranged between 39 and 43 per cent and that of buffaloes it ranged between 40 and 45 per cent which was below the minimum standard of protocol of 50 per cent prescribed by GOI.*
(Paragraph 2.1.14.3)

2.1.1 Introduction

The Animal Husbandry Department is responsible for all-round development of livestock in the State. The Department implements various programmes for improving the genetic potential of livestock, providing effective healthcare to livestock to prevent and control livestock diseases, improving feeding management practices and also carries out extension services in the field of animal husbandry.

The Department implements 16 State schemes¹ and 12 centrally sponsored schemes² (CSSs) through 3,393 veterinary institutions (State veterinary hospital: one, veterinary polyclinics: nine, veterinary hospitals: 333, veterinary dispensaries: 1,799 and MMAPY³ Dispensaries: 1,251) as of March 2016.

The State Government also setup the Himachal Pradesh Livestock and Poultry Development Board (HPLPDB) in November 2001 with the objectives of improving the genetic level of animals, upgrading the local non-descript buffalo breed with *Murrah* breed and boosting livestock breeding programmes including distribution of semen straws for artificial insemination (AI) in cows/ buffaloes and production and sale of feed, fodder and seeds.

2.1.2 Organisational setup

The Principal Secretary (Animal Husbandry) as the administrative head and Director of Animal Husbandry (DAH) as Head of Department is assisted by a Joint Director (Headquarters), three Deputy Directors⁴ (DDs) and Assistant Director (Extension/DDO headquarters) at State Level. At field level, there are Joint Directors (JDs) of two zones⁵, DDs, Animal Health and Breeding (AHB) of 12 districts and Assistant Directors of five other units⁶ functioning as drawing and disbursing officers. The affairs of HPLPDB under the chairmanship of Minister of the Department with Principal Secretary (AH) as Vice-Chairman and seven other members are managed by the Director, Animal Husbandry being its Member Secretary.

2.1.3 Audit Objectives

The performance audit was conducted to assess whether:

- planning processes for implementation of schemes were adequate and effective;
- sufficient funds were provided and whether they were utilised efficiently and effectively;
- capacity building and strengthening of physical infrastructure and human resource were adequate;
- implementation of the schemes was economical, efficient and effective; and
- adequate internal control mechanisms were in place and working effectively.

¹ Headquarters Establishment (Animal Husbandry), Regional Establishment, District Administration, Hospital and Dispensaries, Disease Investigation, Cattle Breeding Farms, Establishment of Semen Laboratories, Expenditure on Animal Welfare Board, Wool Analysis Laboratory, Sheep Breeding Farm Centres, Horse and Mule Breeding, Rabbit Breeding, Development of Fodder and Feed, Grant-in-Aid (GIA) to Para Veterinary Council, GIA to Himachal Pradesh Krishi Viswavidyalaya (HPKVV) and Buildings (Capital Works).

² Livestock Health and Disease Control, Grant-in-Aid to Veterinary Council, Statistical Unit, National Project on Zero Rinderpest Eradication Programme, Rashtriya Pashu Rog Suchna Pranali, Brucellosis Control Programme, Peste des Petits Ruminant, National Project on Bovine Breeding, National Livestock Mission, National Project for Cattle and Buffalo Breeding and Rashtriya Krishi Vikas Yojana and Livestock Insurance.

³ *Mukhya Mantri Arogya Pashudhan Yojana.*

⁴ Animal Protection, Epidemiology and Statistics.

⁵ Palampur and Shimla.

⁶ Sheep Development; Bharmour, Sheep Breeding Farm; Jeori, AHB; Kaza and Pangi and Cattle Production; Palampur.

2.1.4 Audit scope and methodology

The performance audit of upkeep/ improvement of livestock for the period 2011-12 to 2015-16 was conducted during April to July 2016 by test-check of records of the office of the Director, eight (out of 20) drawing and disbursing officers⁷, four (out of 12) districts⁸ and two (out of five) ADs⁹ by adopting SRSWOR¹⁰ method of sampling. Besides, records of 45 (out of 136) veterinary hospitals, 191 (out of 741) veterinary dispensaries, four (out of 11) laboratories¹¹, two (out of three) cattle breeding farms¹² (CBFs) and sheep breeding farm (SBF) Chamba (out of four SBFs) falling under the jurisdiction of the selected DDOs and HPLPDB were test-checked. In addition, 14 out of 28 schemes¹³ were also test-checked.

The audit objectives, scope, methodology and criteria were discussed in an entry conference held with the Additional Chief Secretary (AH) in May 2016. The audit findings were discussed with the Secretary (AH) in the exit conference held in November 2016 and views of the department have been incorporated appropriately in the Report.

2.1.5 Audit Criteria

The audit criteria used for assessing the implementation of the schemes was derived from the following sources:

- Government notifications, instructions and schemes guidelines issued from time to time for implementation of State and CSSs;
- Departmental Manual/ policies/ rules and regulations;
- National Livestock Policy 2013;
- State Financial Rules and Treasury Rules; and
- Procedures prescribed for monitoring and evaluation of schemes/ programmes.

Audit findings

2.1.6 Planning

2.1.6.1 Annual Action Plan

The Office Manual of the State Government requires the Directorate to prepare an Annual Action Plan (AAP) for all departmental programme/ schemes in advance in

⁷ JD: Palampur, DDsAHB: Chamba, Palampur, Sirmour and Una, ADs: Sheep Development, Bharmour, AHB, Pangi and Cattle Production Farm, Palampur.

⁸ Chamba, Kangra, Sirmour and Una.

⁹ Sheep Development; Bharmour and AHB; Pangi.

¹⁰ Simple Random Sampling without Replacement.

¹¹ Clinical Laboratories: Chamba and Kangra, Wool analysis laboratory; Chamba and quality control laboratory; Palampur.

¹² Bagthan and Palampur.

¹³ CSSs (six): National Project for Cattle and Buffalo Breeding, National Project for Bovine Breeding, Livestock Insurance, Livestock Health and Disease Control, National Livestock Mission and Rashtriya Krishi Vikas Yojana and State schemes (eight): Hospital and Dispensaries, Disease Investigation, Cattle Breeding Farms, Establishment of Semen Laboratories, Wool Analysis Laboratory, Sheep Breeding Farms, GIA to HPKVV and Buildings (Capital Works).

January every year with month-wise and quarter-wise break-up of targets in respect of each activity to be undertaken during the ensuing financial year.

Audit noticed that the Department had not prepared AAPs detailing the implementation strategy for various activities and the desired outcomes under the schemes for upkeep/ improvement of livestock during 2011-16.

2.1.6.2 Decline in livestock population

The status of livestock population in the State as per 18th Livestock Census-2007 *vis-a-vis* 19th Livestock Census-2012 is given in **Table-2.1.1** below.

Table-2.1.1: Status of livestock population

| (In numbers) | | | | |
|--------------|-----------------------------|---|---|--------------------------|
| Sl. No. | Category | As per 18 th Livestock Census-2007 | As per 19 th Livestock Census-2012 | Increase(+)/ Decrease(-) |
| 1. | Cattle | 22,69,178 | 21,49,259 | (-) 1,19,919 (5) |
| 2. | Buffalo | 7,61,589 | 7,16,016 | (-) 45,573 (6) |
| 3. | Sheep | 9,01,299 | 8,04,871 | (-) 96,428 (11) |
| 4. | Goat | 12,40,836 | 11,19,491 | (-) 1,21,345 (10) |
| 5. | Other animals ¹⁴ | 43,784 | 54,794 | (+) 11,010 (25) |
| Total | | 52,16,686 | 48,44,431 | (-) 3,72,255 (7) |

Source: Livestock Census data supplied by the Department.

Note: Figures in parenthesis indicate percentage.

As brought out above, the population of cattle, buffaloes, sheep and goats declined by five, six, 11 and 10 *per cent* respectively whereas population of other categories of animals increased by 25 *per cent*.

The Department attributed (November 2016) the decline in livestock population to reluctance of youth towards rearing of cattle.

2.1.6.3 Livestock Breeding Strategy

The State Government had finalised a breeding policy for cattle and buffaloes in February 2002 and for sheep in December 2005 which envisaged genetic upgradation of indigenous cattle, buffaloes and sheep to ensure higher milk production potential and other livestock products. However, the level of improvement of livestock productivity to be achieved was not indicated in the breeding policy.

As per the breeding policy,

- In case of cattle, the exotic inheritance of Jersey/ Holstein cattle blood was to be kept at 50 *per cent* and remaining 50 *per cent* was to be contributed by indigenous/ hill cattle.
- In case of buffaloes, the genetic makeup of the non-descript buffaloes was to be improved by grading up process using Murrah breed.
- In sheep, first progeny of cross breeding with exotic rams and indigenous inheritance was to be maintained at 50:50 levels. In second progeny and for subsequent generations, the genetic upgradation (exotic and indigenous) level was to be achieved at 75:25 levels. The position of crossbred cattle, buffaloes

¹⁴ Yak, horse and pony, mule, camel, donkey, pig and mithun.

and sheep as per the 18th Census, 2007 and 19th Census, 2012 is given in **Table-2.1.2** below.

Table-2.1.2: Position of crossbred animals as per livestock census

(Numbers in lakh)

| Category | As per livestock census- 2007 | | | As per livestock census- 2012 | | |
|----------|-------------------------------|-----------|------------|-------------------------------|---------------------|------------|
| | Total | Crossbred | Percentage | Total | Crossbred | Percentage |
| Cattle | 22.69 | 7.93 | 35 | 21.49 | 9.84 | 46 |
| Buffalo | 7.62 | 2.09 | 27 | 7.16 | Data not maintained | -- |
| Sheep | 9.01 | 2.00 | 22 | 8.05 | 3.05 | 38 |

Source: Departmental figures.

Against the objective of achieving exotic inheritance level of 50 *per cent* in cattle and 75 *per cent* in sheep in a span of ten years since 2002, the Department could achieve exotic inheritance levels of 46 and 38 *per cent* of cattle and sheep respectively.

Audit noted that the Department had not formulated activity-wise livestock breeding strategy for achieving the annual targets for each category of livestock with distinct timelines. The Department informed (November 2016) that slow pace of achieving the cross-bred was due to non-penetration of artificial insemination facilities in remote areas of the State.

2.1.6.4 Achievements of coverage of livestock and livestock products

The achievement of coverage of livestock per veterinarian, opening of veterinary hospitals and production of livestock products at the end of Eleventh Five Year Plan (2007-12) and targets for Twelfth Five Year Plan (2012-17) and achievements at the end of 2015-16 are given in **Table-2.1.3** below.

Table-2.1.3: Achievements of coverage of main livestock activities

| Item | Unit | Achievements at the end of Eleventh Five Year Plan (2007-12) | | Twelfth Five Year Plan (2012-17) | |
|--|---------|--|-----------------------------|----------------------------------|----------------------|
| | | Anticipated achievements | Actual achievements 2011-12 | Targets | Achievements 2015-16 |
| Coverage of livestock per veterinarian | Number | 13,000 | 14,952 | 8,000 | 12,486 |
| Veterinary hospital/ clinic | Number | 1,041 | 338 | 360 | 343 |
| Milk production | Lakh MT | 9.20 | 11.20 | 11.30 | 12.60 |
| Wool production | MT | 16.75 | 16.48 | 16.90 | 14.11 |

Source: Departmental figures.

It would be seen from above table that:

- The Department had not yet achieved the level of coverage of livestock per veterinarian during the Eleventh Five Year Plan (2007-12) and Twelfth Five Year Plan (2012-17) up to 2015-16 whereas the improvement during Twelfth Five Year Plan was mainly due to overall decrease (3.72 lakh animals) in livestock population as per census-2012.
- The Department had not yet achieved the level of veterinary hospitals/ clinics during the Eleventh Five Year Plan (2007-12) and Twelfth Five Year Plan (2012-17) up to 2015-16 and there was significant reduction in targets for Twelfth Five Year Plan. Even the reduced targets had not been achieved as of March 2016.

- The level of achievement of wool production was 14.11 MT upto 2015-16 against the target of 16.90 MT. The level of milk production targets had been achieved upto 2015-16.

2.1.6.5 Main livestock products

Every year, the targets for livestock production are fixed by the Department on the basis of achievements of the previous year. Audit noticed that the Department had not specified any norms for fixation of targets of livestock products taking into account the productivity as per improved breed.

The details of targets and achievements of main livestock products during 2011-16 are given in **Table-2.1.4** below.

Table-2.1.4: Details of targets and achievements of main livestock products during 2011-16

| Year | Milk production (in lakh MT) | | | Wool production (In MT) | | |
|-------------------------------|------------------------------|--------------|----------------------------|-------------------------|--------------|----------------------------|
| | Targets | Achievements | Shortfall(-) Excess (+) | Targets | Achievements | Shortfall(-) Excess (+) |
| 2011-12 | 9.20 | 11.20 | (+)2.00 | 16.75 | 16.48 | (-)0.27 |
| 2012-13 | 11.40 | 11.38 | (-)0.02 | 16.60 | 16.50 | (-)0.10 |
| 2013-14 | 11.63 | 11.51 | (-)0.12 | 16.70 | 16.57 | (-)0.13 |
| 2014-15 | 11.85 | 11.72 | (-)0.13 | 16.80 | 16.62 | (-)0.18 |
| 2015-16 | 12.10 | 12.60 | (+)0.50 | 16.80 | 14.11 | (-)2.69 |
| Total | 56.18 | 58.41 | | 83.65 | 80.28 | |
| Average for five years | | 11.68 | | | | |

Source: Departmental figures.

Audit noted that although the milk production targets set by the Department during 2011-16 were achieved, the State average annual yield of milk (11.68 lakh MT) was 13 per cent below the national average (13.38 lakh MT¹⁵).

The Department had neither set any benchmark for assessing the level of livestock productivity nor had it maintained data of production of milk in respect of cows and buffaloes separately so as to ascertain the separate average annual yield of milk of cows and buffaloes.

2.1.7 Financial outlay and expenditure

The position of budget allotment and expenditure incurred by the Department during 2011-16 is given in **Table-2.1.5** below.

Table-2.1.5: Details of budget allotment and expenditure incurred during 2011-16

(₹ in crore)

| Year | Budget allotted | | | Expenditure | | |
|--------------|-----------------|-----------------------------|-----------------|-----------------|-----------------------------|-----------------|
| | State schemes | Centrally sponsored schemes | Total | State schemes | Centrally sponsored schemes | Total |
| 2011-12 | 183.37 | 19.12 | 202.49 | 179.53 | 19.12 | 198.65 |
| 2012-13 | 219.71 | 13.29 | 233.00 | 219.89 | 13.29 | 233.18 |
| 2013-14 | 229.55 | 13.59 | 243.14 | 229.17 | 13.59 | 242.76 |
| 2014-15 | 269.26 | 21.91 | 291.17 | 268.35 | 21.86 | 290.21 |
| 2015-16 | 293.81 | 14.99 | 308.80 | 260.60 | 14.74 | 275.34 |
| Total | 1,195.70 | 82.90 | 1,278.60 | 1,157.54 | 82.60 | 1,240.14 |

Source: Departmental figures.

¹⁵ National annual average production per cow: 1,281 kg and per buffalo: 1,707 kg. Number of animals in milk in the State (Cows: 6,49,232 and buffaloes: 2,96,863). Average milk in the State as per national average: 13,38,411 MT (Cows: 6,49,232 x 1,281= 83,16,66,192 kg or 8,31,666 MT and Buffaloes: 2,96,863 x 1,707= 50,67,45,141 kg or 5,06,745 MT).

Against budget allotment for 2011-16, an amount of ₹ 38.46 crore remained unutilised. Of this, ₹ 33.21 crore pertained to State schemes during 2015-16 alone which indicated that the Department had not prepared the budget on realistic basis during that year.

Audit noticed the following financial irregularities relating to expenditure of ₹ 94.82 lakhs during test-check:

- The Deputy Director, Animal Health and Breeding (DDAHB), Chamba had not accounted for ₹ 26.89 lakh received (May 2011 to May 2015) from HPLPDB for organising 104 extension camps under the scheme *Rastriya Krishi Vikas Yojna* (RKVY) in the cash book. The amount was further released as advance (between October 2011 and February 2016) to veterinarians in the district for organising extension camps; but the adjustment thereof had not been made as of May 2016 in the absence of which it could not be verified in audit as to whether any camps were organised by the veterinarians to whom the money was advanced.
- An amount of ₹ 1.96 lakh was paid by DDAH B Chamba to a Chandigarh based firm (₹ 0.14 lakh) on account of printing of booklets and to another firm from Parwanoo (₹ 1.82 lakh) for purchase of medicines during September 2011 and December 2015 without any voucher on record.
- DDAH B Dharamshala released (October 2015) ₹ 43.50 lakh to five Sub-divisional Veterinary Officers¹⁶ (SVOs) at the rate of ₹ 8.70 lakh each for organising 150 training camps under RKVY. However, no camp was organised as of June 2016 and the amount was lying unutilised with the SVOs concerned.
- Out of ₹ 22.47 lakh¹⁷ received during 2011-15 for organising training camps, DDAH B, Dharamshala released ₹ 20.44 lakh as advance to veterinary officers for organising livestock owners' training camps. However, the adjustment of the advance had not been made as of June 2016 without which the authenticity of utilisation of the amount for the intended purpose could not be verified in audit. Further, balance of ₹ 2.03 lakh was irregularly diverted towards purchase of four computers and pen drives instead of utilising the same on training camps.

DDAH B Chamba stated (May 2016) that vouchers would be procured and action taken accordingly while DDAH B, Dharamshala stated (June 2016) that the training camps could not be organised due to delay in completing formalities and procurement of training materials and the vouchers would be duly attested in future.

2.1.8 Human Resource Management

Animal health/ breeding services are being provided by veterinarians at hospitals and para-veterinary staff including chief pharmacists, animal husbandry assistants and veterinary pharmacists at the dispensaries.

2.1.8.1 Availability of manpower

The sanctioned strength *vis-a-vis* persons-in-position as of March 2016 is given in **Table-2.1.6** below.

¹⁶ Dharamshala, Dehra, Jawali, Kangra and Nurpur.

¹⁷ 2011-12: ₹ 9.45 lakh; 2012-13: ₹ 0.42 lakh and 2015-16: ₹ 12.60 lakh.

Table-2.1.6: Details of availability of staff in veterinary institutions as of March 2016

| (In number) | | | | |
|-----------------------------|--|---------------------|---------------------|---------------------|
| Sl. No. | Category | Sanctioned strength | Persons-in-position | Shortage (Per cent) |
| Functional staff | | | | |
| 1. | Veterinarians | 430 | 388 | 42 (10) |
| 2. | Para veterinary staff | 2,597 | 2,276 | 321(12) |
| 3. | Others (Plant operator, mechanic, electrician, etc.) | 38 | 24 | 14 (37) |
| Non-functional staff | | | | |
| 1. | Gazetted Officers | 66 | 49 | 17 (26) |
| 2. | Non-gazetted staff (Class-III) | 330 | 221 | 109 (33) |
| 3. | Non-Gazetted (Class-IV) | 2,662 | 2,106 | 556 (21) |

Source: Departmental figures.

There was shortage of veterinarians, para-veterinary staff and other functional staff to the extent of 10, 12 and 37 *per cent* respectively. Shortage of non-functional staff ranged between 21 and 33 *per cent*. Shortage of veterinarians and para-veterinary staff in the veterinary institutions adversely impacted the delivery of services in veterinary institutions as 64 veterinary hospitals and 213 veterinary dispensaries in the State were running without veterinarians and veterinary pharmacists respectively as of March 2016.

Further, as per the recommendations of the National Commission on Agriculture, there should be one qualified veterinarian for 5,000 livestock population. The Department had not fixed any separate norms for opening veterinary hospital and maintaining livestock and veterinarians' ratio. Audit noticed that as per livestock Census-2012, against livestock population of 48,44,431 the livestock and veterinarians¹⁸ ratio ranged between 12,486:1 and 15,527:1 during 2011-16.

The Department informed (November 2016) that the matter of filling up of vacant posts was under active consideration of the Government.

Implementation of Schemes

2.1.9 Research in Animal Husbandry

During 2011-16, Grant-in-Aid of ₹ 92.90 lakh was released to *Chaudhary Sarvan Kumar Himachal Pradesh Krishi Vishvavidyalaya (CSKHPKV)*, Palampur, for activities relating to research and education in the field of animal husbandry. However, the Department had not ensured utilization of the funds for research by the University as no details of such activities were available in their records. The Director stated (June 2016) that the Department had only withdrawn the grant-in-aid on the receipt of expenditure sanctions from the Government and deposited it into the account of the University.

2.1.10 Infrastructure development

2.1.10.1 Status of construction of institutional buildings under State Plan

The State Government issued instructions in November 2003 for ensuring coordination between user department and executing agencies to eliminate time and cost overrun in construction works.

¹⁸ 2011-12: 324; 2012-13: 326; 2013-14: 312; 2014-15: 371 and 2015-16: 388.

An amount of ₹ 15.15 crore was sanctioned under the State Plan for construction of 221 institutional buildings¹⁹ including veterinary hospitals and dispensaries during 2011-16. The Director had released the entire amount to various executing agencies (Public Works Department, HPSIDC²⁰ and Himachal Pradesh Housing and Urban Development Authority) during the above period. However, no timeline was stipulated for completion of the works.

Audit noticed that only 95 works were completed after expending ₹ 5.90 crore and 126 works involving ₹ 9.24 crore were lying incomplete as of July 2016 of which 108 works of ₹ 7.44 crore were lying incomplete for one to five years considering one year as time taken for their completion. Further, the Director had also not maintained/updated the work-wise data of expenditure actually incurred on the works. Thus, contrary to the instructions *ibid*, there was no monitoring or coordination of activities that could ensure expeditious or timely completion of works.

2.1.10.2 Infrastructure for establishing and strengthening of veterinary institutions under Centrally Sponsored scheme

Under 'Establishment and Strengthening of Existing Veterinary Hospitals and Dispensaries (ESVHD)' component of centrally sponsored scheme (CSS), the Government of India (GOI) provides financial assistance for construction of new buildings and for additions, alterations and renovation of existing buildings on cost share basis between the GOI and the State Government in the ratio of 75:25.

In September 2014, GOI approved a project for ₹ 8.39 crore for construction of eight veterinary hospitals and 51 dispensaries (GOI: ₹ 6.29 crore and State Government: ₹ 2.10 crore) and simultaneously released ₹ 5.00 crore as first instalment to the State Government. The funds were to be utilised within the same financial year. Audit noticed that:

- The State Government took more than six months to release (March 2015) ₹ 6.67 crore (GOI: share ₹ 5.00 crore State share: ₹ 1.67 crore) to the Director who subsequently released it to HPSIDC for execution of the work;
- Out of 59 works, only two works were completed with expenditure of ₹ 0.22 crore and 22 works of ₹ 2.57 crore were in progress. Of the remaining 35 works, 12 works of ₹ 1.40 crore were not taken up for execution due to non-availability of land and 23 works of ₹ 2.57 crore were not taken up for execution as the Department was unable to complete these works as per the approved cost norms²¹ of the scheme; and
- Due to non-submission of the utilisation of the first instalment and the physical progress thereof, GOI did not release second instalment of ₹ 1.29 crore which

¹⁹ 2011-12: 33 (₹ 2.10 crore); 2012-13: 60 (₹ 4.09 crore); 2013-14: 50 (₹ 2.72 crore), 2014-15: 54 (₹ 3.95 crore) and 2015-16: 24 (₹ 2.29 crore).

²⁰ Himachal Pradesh State Industrial Development Corporation.

²¹ New building: (hospital: ₹ 17.50 lakh and dispensary: ₹ 13.70 lakh) and Renovation (hospital: ₹ 10 lakh and dispensary: ₹ six lakh).

resulted in non-execution/ non-completion of these works depriving the concerned beneficiaries of the intended infrastructure facilities.

Thus, delay in release of funds by the State Government resulted in delayed commencement of works while funds amounting to ₹ 3.97 crore remained unutilised with HPSIDC for more than 19 months due to non-availability of land or inability to meet cost norms which was indicative of poor planning and execution of projects.

The Director stated (November 2016) that the funds requirement for site development was enormous in most of the cases and the executing agency had submitted revised estimates and additional funds had been sought from GOI and State Government which was awaited as of November 2016. The fact remains that these were factors that should have been taken into account and addressed at the planning stage.

2.1.11 Animal health care

2.1.11.1 Control of contagious diseases

For control of contagious diseases, GOI provides assistance under 'Assistance to State for Control of Animal Diseases' (ASCAD) component under CSS 'Livestock Health and Disease Control' (LH&DC) on cost share basis between GOI and State Government in the ratio of 75:25 (up to 2011-15) and 50:50 for 2015-16. Under this scheme, free vaccination was to be provided for the contagious diseases.

Out of ₹ 18.91 crore provided by GOI (₹ 14.18 crore) and State Government (₹ 4.73 crore) during 2011-16, an amount of ₹ 17.57 crore was utilised for vaccination and ₹ 1.34 crore was lying unutilised as of March 2016.

2.1.11.2 Target and achievement under ASCAD

Details of targets of vaccination for the control of contagious animal diseases and achievements there-against during 2011-16 are given in **Table-2.1.7** below.

Table-2.1.7: Achievements of targets of vaccination for control of contagious diseases for 2011-16
(In lakh numbers)

| Year | FMD | | | HSBQ | | | PPR | | |
|---------|-------|-------|------|-------|-------|------|------|------|------|
| | T | A | S/F | T | A | S/F | T | A | S/F |
| 2011-12 | 15.00 | 19.50 | -- | 11.00 | 12.33 | -- | 5.00 | 5.91 | -- |
| 2012-13 | 43.80 | 41.59 | 2.21 | 12.60 | 12.57 | 0.03 | 7.00 | 7.77 | -- |
| 2013-14 | 43.80 | 42.81 | 0.99 | 12.60 | 14.59 | -- | 7.00 | 7.00 | -- |
| 2014-15 | 50.00 | 46.65 | 3.35 | 12.60 | 14.75 | -- | 7.00 | 7.19 | -- |
| 2015-16 | 50.00 | 51.47 | -- | 12.60 | 11.57 | 0.03 | 7.00 | 6.71 | 0.29 |

Source: Departmental figures. Note: T: Targets, A: Achievements and S/F: Shortfalls.

Targets of vaccination for Haemorrhagic Septicaemia and Black Quarter (HSBQ) and Pestodes Petitis Ruminants (PPR) diseases had been over achieved during 2011-16 except shortfall of 0.03 lakh under HSBQ during 2012-13 and 2015-16 and 0.29 lakh under PPR during 2015-16. There was shortfall of 6.55 lakh vaccination for (Foot and Mouth disease) FMD during 2012-15.

2.1.11.3 Outbreak of contagious diseases

The Department had not been able to keep the prevalence of animal disease under control during 2011-16. As per details given in **Table-2.1.8** below, there was outbreak of contagious diseases in 29 areas affecting 3,647 animals of which 1,423 had died.

Table-2.1.8: Details of outbreak of contagious diseases in animal

(In numbers)

| Name of disease | Animals affected (deaths) | | | | | Total |
|-----------------|---------------------------|-----------------|---------------|--------------------|-----------------|----------------------|
| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | |
| FMD | 116 (4) | 270 (15) | 63 (2) | -- | 64 (5) | 513 (26) |
| HS-BQ | 10 (3) | 5 (3) | -- | 8 (5) | 62 (28) | 85 (39) |
| PPR | 1,461 (738) | 100 (10) | -- | 1,418 (585) | 70 (25) | 3,049 (1,358) |
| Total | 1,587 (745) | 375 (28) | 63 (2) | 1,426 (590) | 196 (58) | 3,647 (1,423) |

Source: Departmental figures.

The Director stated (April 2016) that the vaccination was successful but the outbreak of diseases was due to introduction of new/ migratory herds. Audit observed that the new/ migratory herds should also have been covered under vaccination.

2.1.11.4 Distribution of sub-standard medicines

Audit noticed that the Department had neither evolved any mechanism for pre-despatch testing of samples of the veterinary medicines/ obtaining of analysis reports thereof nor had devised any system for testing of samples of the medicines at field level. During random collection of samples (2011-14) by Deputy Directors of Animal Husbandry, Kangra, Solan, Bilaspur and Chamba, and test conducted by Government Drug Testing Laboratory, Jogindernagar, medicines namely Belore Powder, Blots Vet and Himachal Batisa were found sub-standard and declared unfit for animal consumption as per Drug and Cosmetic Act, 1940. It was further noticed that out of medicine of this batch valuing ₹ 54.07 lakh procured during 2011-14, medicines of ₹ 43.11 lakh had already been distributed to the farmers and remaining medicines of ₹ 10.96 lakh were destroyed or sent back to the suppliers.

The Director stated (June 2016) that performance security (₹ 2,14,700) and earnest money deposits (₹ 25,000) of the firm had been forfeited by State Cooperative Wool Procurement and Marketing Federation (SWFL). Audit observed that the major part of the sub-standard medicines had been distributed to farmers without any testing of samples thereby putting the health of animals at risk.

Animal Breeding

2.1.12 Cattle Breeding Farms

The Department has three cattle breeding farms (CBFs) at Bagthan (Sirmour), Kothipura (Bilaspur) and Palampur (Kangra) for maintaining elite cows, providing high quality breeding bulls and training to farmers in dairy and animal husbandry activities.

2.1.12.1 Capacity utilisation of cattle breeding farms

The year-wise details of rearing capacity and cattle actually reared in CBFs during 2011-16 are given in Table-2.1.9 below.

Table-2.1.9: Details of rearing capacity and cattle actually reared in CBFs during 2011-16

(In numbers)

| Year | CBF Bagthan | | CBF Kothipura | | CBF Palampur | |
|---------|-------------|-----------------------|---------------|-----------------------|--------------|-----------------------|
| | Capacity | Average cattle reared | Capacity | Average cattle reared | Capacity | Average cattle reared |
| 2011-12 | 40 | 34 (85) | 80 | 111 (139) | 100 | 154 (154) |
| 2012-13 | 40 | 35 (88) | 80 | 105 (131) | 100 | 172 (172) |
| 2013-14 | 40 | 32 (80) | 80 | 117 (146) | 100 | 179 (179) |
| 2014-15 | 40 | 31 (78) | 80 | 101 (126) | 100 | 106 (106) |
| 2015-16 | 40 | 25 (63) | 80 | 90 (113) | 100 | 123 (123) |

Source: Departmental figures.

Note: Figures in parenthesis indicate percentage.

In CBFs, Kothipura and Palampur, there was over-crowding of cattle to the extent of 06 to 79 *per cent* during 2011-16 whereas in CBF Bagthan, against the capacity of 40 cattle, the average number of cattle actually reared ranged between 25 and 35. Over-crowding adversely affected the quality of cattle in CBFs as indicated in the succeeding paragraphs.

2.1.12.2 Production of bulls in cattle breeding farms

Audit noticed that out of 183 calves (male) born in CBFs during 2011-16, only three indigenous and two exotic bulls were supplied to departmental sperm station as the other bulls did not qualify the norms of sperm station. Thus, the objective of providing of high quality bulls to sperm stations remained unachieved.

2.1.13 Sheep Breeding Farms

The Department is running four sheep breeding farms²² (SBFs) to enhance the quantity as well as quality of wool. The SBFs maintain pure bred flock of sheep of exotic origin to sell these to the sheep breeders for upgrading their indigenous sheep.

2.1.13.1 Short supply of rams/ sheep to farmers

Audit noticed that on an average, 1,470 sheep/ rams²³ were reared in excess of rearing capacity of the SBFs during 2011-16 (Rearing capacity: 6,250 and actually reared: 7,720). Even after rearing more than capacity, the SBFs were not able to meet the demand of farmers. As against demand of 3,293 sheep/ rams during above period, the SBFs supplied 1,929 sheep/ rams to farmers resulting in short supply of 1,364 sheep/ rams.

The Department stated (November 2016) that the Department was rearing sheep as per available infrastructure and budget and it was not possible to meet the demands of the farmers. Audit observed that despite the demand and over-crowding of the SBFs, the Department had no plans to expand its existing infrastructure to meet the needs of sheep breeders though it had unutilised funds of ₹ 38.46 crore during the period as brought out in Paragraph 2.1.7 above.

2.1.13.2 Establishment of artificial insemination laboratory for sheep

In December 2014, GOI had released funds of ₹ 66.78 lakh under CSS 'National Livestock Mission' (NLM) to HPLPDB for establishing a laboratory for artificial insemination (AI) of sheep at SBF Jeori which included execution of civil work (₹ 10 lakh), procurement and installation of equipment (₹ 52.78 lakh) and purchase of rams (₹ 4 lakh). The project was to be completed by March 2015.

Audit noticed that the Department had got the civil work of the project completed in March 2016 at a cost of ₹ 10 lakh. However, the equipment could not be procured and installed as of June 2016 due to non-finalisation of tenders which resulted in non-establishment of the laboratory and blocking of ₹ 56.78 lakh with HPLPDB for more than 18 months.

²² Jeori, Kaksthal, Sarol and Tal.

²³ Jeori: 812, Kaksthal: 426, Sarol:139 and Tal: 93.

The Director stated (June 2016) that the place where the laboratory was to be established was a difficult terrain and the working period is very short due to snow and harsh climatic conditions. Audit observed that the reply does not provide any justification for delays in finalisation of tenders.

2.1.14 National Project for Cattle and Buffalo Breeding

GOI launched a CSS 'National Project for Cattle and Buffalo Breeding' (NPCBB) on 100 *per cent* funding basis in November 2000 for which funds were directly released to the HPLPDB.

The project included activities of strengthening of liquid nitrogen storage, transport and distribution, sperm stations, semen banks and AI centres, acquisition of high pedigree bulls for sperm stations and for natural service in remote areas.

2.1.14.1 Availability of funds and utilisation

The details of availability of funds under NPCBB and expenditure incurred thereagainst during 2011-16 are given in **Table-2.1.10** below.

Table-2.1.10: Availability of funds and expenditure incurred under NPCBB during 2011-16
(₹ in crore)

| Year | Availability of funds | | | Expenditure | Closing balance |
|--------------|-----------------------|--------------|-------|--------------|-----------------|
| | Opening balance | Receipt | Total | | |
| 2011-12 | 6.62 | 3.00 | 9.62 | 1.34 | 8.28 (86) |
| 2012-13 | 8.28 | 0.51 | 8.79 | 2.07 | 6.72 (76) |
| 2013-14 | 6.72 | 9.41 | 16.13 | 1.61 | 14.52 (90) |
| 2014-15 | 14.52 | -- | 14.52 | 2.42 | 12.10 (83) |
| 2015-16 | 12.10 | -- | 12.10 | 3.01 | 9.09 (75) |
| Total | | 12.92 | | 10.45 | |

Source: Departmental figures. Note: Figures in parenthesis indicate percentage.

The pace of utilisation of funds under NPCBB during 2011-16 was very slow as funds ranging between 75 and 90 *per cent* remained unutilised. It was further noticed that the HPLPDB had submitted (January 2015) utilisation certificates of entire amount received during 2011-14 whereas ₹ 9.09 crore were lying unutilised for more than two years.

2.1.14.2 Production of liquid nitrogen gas

To meet the requirement of semen banks for preservation of frozen semen straws, seven Liquid Nitrogen (LN₂) gas plants²⁴ (one each at Chamba, Ghanahatti, Khaliar and Solan and three at Palampur) were installed in the State between June 1986 and November 2015 at a cost of ₹ 8.69 crore. Of the seven plants, two plants at Chamba and Palampur remained non-functional since August 2009 and January 2011 respectively and the Department had not taken any action for making these plants functional. In the remaining five plants, only 3.48 lakh litres LN₂ was produced against the installed capacity of 9.84 lakh litres LN₂. Thus, plants were functioning below their installed capacity and the Department had to purchase 31.24 lakh litres of LN₂ gas costing ₹ 5.35 crore from private suppliers to meet out the requirement during the above period.

²⁴ Month of installation: Chamba (April 1992), Ghanahatti (December 2015), Mandi (May 1997), Semen Bank Palampur (May 1997), Semen Station Palampur (September 2012) and Palampur-Holta (November 2015) and Solan (June 1986).

The Director stated (May 2016) that the plants were functioning below their installed capacity due to repeated faults. The fact, however, remains that the Department had not taken steps for improvement of the functioning of the plants as evident from their continued operation below the installed capacity.

2.1.14.3 Success rate of artificial insemination and availability of equipment

With a view to achieving high milk yield by improving the genetic level of indigenous (non-descript) cows and buffaloes, artificial insemination (AI) by frozen semen technology has been adopted in the State. The AI facility is carried out by 2,526 veterinary institutions in the State. Buffalo and cow bull semen straws for the purpose are produced at the departmental sperm stations located at Aduwal (Solan) and Palampur respectively. The details of targets and achievements of AI carried out and calves actually born thereagainst during 2011-16 are given in **Table-2.1.11** below.

Table-2.1.11: Targets and achievements of artificial insemination and calves born during 2011-16 (Number in lakh)

| Year | AI in Cows | | | AI in Buffaloes | | |
|--------------|--------------|--------------|----------------------------|-----------------|--------------|----------------------------|
| | Targets | Achievements | Success Rate (calves born) | Targets | Achievements | Success Rate (calves born) |
| 2011-12 | 6.00 | 6.31 | 2.49 (39) | 1.40 | 1.70 | 0.70 (41) |
| 2012-13 | 6.45 | 7.00 | 2.72 (39) | 1.75 | 1.90 | 0.78 (41) |
| 2013-14 | 6.75 | 7.15 | 2.96 (41) | 2.00 | 2.14 | 0.85 (40) |
| 2014-15 | 7.00 | 7.47 | 3.01 (40) | 2.10 | 2.29 | 0.96 (42) |
| 2015-16 | 7.64 | 7.65 | 3.32 (43) | 2.30 | 2.30 | 1.04 (45) |
| Total | 33.84 | 35.58 | | 9.55 | 10.33 | |

Source: Departmental figures. Note: figures in parenthesis indicate percentage against achievement of AIs.

The success rate of calves born against AI carried out in cows during 2011-16 ranged between 39 and 43 *per cent* and that of buffaloes between 40 and 45 *per cent*. The Department had not fixed any norms for success rate of calves born against AI and production of semen straws. However, the success rate actually achieved was less than 50 *per cent* required as per minimum standard of protocol prescribed by GOI.

Low success rate was mainly due to non-availability of necessary equipment for AI as 55 to 60 *per cent* institutions were not having renoscopes, 83 to 86 *per cent* institutions were not having microscopes and 83 to 86 *per cent* institutions were without temperature maintenance kits during above period.

The Director attributed (July 2016) the non-availability of equipment to non-receipt of funds. It was added (November 2016) that the conception of cows/ buffaloes and birth of calves is a complex biological process influenced by many factors like right time of AI management and nutritional and health status of animals. The reply is not tenable as sufficient funds were available under NPCBB as indicated under Paragraph 2.1.14.1 and it was incumbent upon the Department to take steps for ensuring proper time management of AI and improving the nutrition and health of the animals in the State.

2.1.14.4 Strengthening of buffalo semen station

GOI accorded sanction (December 2013) of ₹ one crore for strengthening buffalo semen station at Aduwal under NPCBB and released (December 2013) the amount to HPLPDB which in turn released (September 2015) ₹ 0.55 crore for execution of civil

works²⁵ to various executing agencies after lapse of more than 20 months. However, HPPWD had not commenced the works as of July 2016 due to non-finalisation of tenders and the HPSIDC had not incurred any expenditure on the works though started. Thus, delay in release of funds by HPLPDB to the executing agencies resulted in non-strengthening of semen station as of July 2016. Besides, funds of ₹ 0.45 crore for equipment were lying unutilised with HPLPDB for more than 30 months.

2.1.14.5 Strengthening of bull mother farm

GOI sanctioned and released (December 2013) ₹ one crore to HPLPDB for strengthening of bull mother farm at Palampur of which the HPLPDB released (between January and September 2015) ₹ 0.36 crore to BSNL for execution of civil works²⁶. The works had not been completed by the BSNL as of August 2016. Further, an amount of ₹ 0.16 crore was spent on furnishing of seminar hall of Embryo Transfer Technique (ETT) laboratory during February 2016. The remaining activities²⁷ had not been taken up for execution and ₹ 0.48 crore were lying unutilised with HPLPDB as of July 2016.

2.1.15 National Programme for Bovine Breeding

GOI launched (February 2015) a CSS 'National Programme for Bovine Breeding' (NPBB) on 100 per cent funding basis with the objective of providing quality Artificial Insemination (AI) services at farmers' door step.

In February 2015, GOI released ₹ 5.71 crore for implementation of different activities²⁸ in the State. The Director withdrew (March 2015) the amount and simultaneously released it to HPLPDB. However, none of the activities of the scheme was carried out as of August 2016 due to shortage of technical/ skilled staff and the funds remained unutilised with the HPLPDB for more than 16 months.

The Director stated (August 2016) that funds were withdrawn from the treasury to avoid lapsing of the grant.

2.1.16 Livestock Insurance scheme

With the objective of providing risk coverage to farmers and cattle breeders against loss of their animals, GOI introduced (2006-07) a CSS 'Livestock Insurance Scheme'

²⁵ HPPWD: Renovation of bull sheds (₹ 0.09 crore); repair of electricity supply (₹ 0.01 crore), renovation of roof of semen processing lab and construction of shed (₹ 0.05 crore), construction of road (₹ 0.02 crore) and HPSIDC: Construction of lab and boundary wall (₹ 0.34 crore) and Irrigation (₹ 0.04 crore).

²⁶ Construction of calf pen at Jersey Cow Breeding Banuri (₹ 0.18 crore) and office building (₹ 0.18 crore).

²⁷ Renovation of bull shed, procurement of machinery and equipment, etc.

²⁸ Baseline survey: ₹ 0.02 crore; extension of AI network: ₹ 1.03 crore; strengthening of existing AI centres: ₹ 1.26 crore; liquid nitrogen production and distribution system: ₹ 0.50 crore; upgradation and quality control of semen banks and sperm station: ₹ 0.10 crore; Conservation of indigenous breed and hilly cattle: ₹ 0.62 crore; procurement of 100 indigenous bulls for natural service: ₹ 0.06 crore; human resource development: ₹ 0.36 crore; monitoring of AI programme: ₹ 1.68 crore and managerial grant to State Implementing Agency: ₹ 0.08 crore.

on cost share basis between GOI and the beneficiaries in the ratio of 50:50 in five districts²⁹ of the State. Audit noticed the following:

- Out of ₹ 1.60 crore³⁰ released by GOI to HPLPDB for implementation of the scheme during 2011-14, expenditure of only ₹ 0.16 crore had been incurred leaving ₹ 1.44 crore unutilised for more than 27 months; and
- Only one to two *per cent* of the eligible cows and buffaloes were insured under the scheme during 2011-15 and details of animal insured during 2015-16 was not available with the Department.

The Director stated (November 2016) that the animal were insured at the interest of the farmers. The fact, however, remains that the scheme was not fully implemented in spite of availability of sufficient funds and the Department had not monitored the scheme properly at different levels.

2.1.17 Rashtriya Krishi Vikas Yojana

To achieve four *per cent* growth rate in the agriculture sector, GOI launched Rashtriya Krishi Vikas Yojana (RKVY) in the XIth Five Year Plan (2007-12) with the objectives of incentivising the State to increase public investment in agriculture and allied sectors and bringing about quantifiable changes in the production and productivity of various components by addressing them in a holistic manner. GOI provided funds to the extent of 100 *per cent* as Additional Central Assistance to State Plan up to 2014-15 and in ratio of 90:10 between Centre and State for the year 2015-16.

2.1.17.1 Expenditure against availability of funds

The details of availability of RKVY funds and expenditure incurred thereagainst during 2011-16 are given in **Table-2.1.12** below.

Table-2.1.12: Availability of funds and expenditure incurred under RKVY during 2011-16
(₹ in crore)

| Year | Availability of funds | | | | Expenditure | Closing balance |
|--------------|-----------------------|--------------|-------------|-------|--------------|-----------------|
| | Opening Balance | GOI | State | Total | | |
| 2011-12 | Nil | 20.73 | -- | 20.73 | 20.45 | 0.28 |
| 2012-13 | 0.28 | 18.84 | -- | 19.12 | 18.59 | 0.53 |
| 2013-14 | 0.53 | 16.79 | -- | 17.32 | 16.00 | 1.32 |
| 2014-15 | 1.32 | 28.55 | -- | 29.87 | 27.07 | 2.80 |
| 2015-16 | 2.80 | 8.81 | 8.42 | 20.03 | 10.57 | 9.46 |
| Total | | 93.72 | 8.42 | | 92.68 | |

Source: Departmental figures.

Against availability of RKVY funds of ₹ 102.14 crore during 2011-16, the Department had incurred expenditure of ₹ 92.68 crore leaving unspent balance of ₹ 9.46 crore with the implementing agencies as of March 2016. However, the booked expenditure merely reflected the amount withdrawn from the Government account and not the amount actually spent on the works/ activities as huge amount remained unutilised with the implementing/ executing agencies viz. HPLPDB as brought out in **Table-2.1.13** below.

²⁹ Chamba, Hamirpur, Kangra, Mandi and Shimla.

³⁰ 2011-12: ₹ 0.50 crore; 2012-13: ₹ 0.50 crore and 2013-14: ₹ 0.60 crore.

Table-2.1.13: Details of availability and utilisation of RKVY funds with HPLPDB during 2011-16
(₹ in crore)

| Year | Availability | | | Funds utilized | Unutilised funds (per cent) |
|--------------|-----------------|----------------|-------|----------------|--------------------------------|
| | Opening balance | Funds received | Total | | |
| 2011-12 | 3.53 | 12.33 | 15.86 | 5.01 | 10.85 (68) |
| 2012-13 | 10.85 | 8.89 | 19.74 | 5.71 | 14.03 (71) |
| 2013-14 | 14.03 | 11.33 | 25.36 | 2.90 | 22.46 (89) |
| 2014-15 | 22.46 | 16.11 | 38.57 | 3.03 | 35.54 (92) |
| 2015-16 | 35.54 | 15.56 | 51.10 | 10.75 | 40.35 (79) |
| Total | | 64.22 | | 27.40 | |

Source: Departmental figures.

Audit observed that the unutilised funds with HPLPDB ranged from 68 to 92 per cent during the period 2011-16.

The Director attributed (August 2016) the non-utilisation of funds to non-completion of codal formalities and availability of land and finalisation of tendering process.

2.1.17.2 Unexecuted/ incomplete projects

Audit noticed that the Director had not consolidated/ updated data of projects sanctioned, funds received, released and utilised by executing agencies, utilisation certificates received and the status of execution of works/ activities under the projects during 2011-16 without which exact position of number of projects sanctioned and executed during above period could not be ascertained.

Position of some of the projects examined during test-check was as follows:

(a) **Strengthening of Sheep Breeding Farms:** For strengthening of SBFs Jeori, Sarol, and Tal the Director had withdrawn (March 2013) ₹ 1.10 crore from treasury and released to two executing agencies for execution of three civil works³¹. Though the works were to be completed within one year, only the work of SBF Jeori had been completed and the other works were lying incomplete as of July 2016 even after a lapse of more than two years.

(b) **Augmentation of Cold Chain for Vaccines:** The State Government sanctioned ₹ 3.31 crore (November 2014: ₹ 1.65 crore and February 2015: ₹ 1.66 crore) for augmentation of cold chain for vaccines in veterinary institutions³². The Director had withdrawn ₹ 3.31 crore (November 2014: ₹ 1.65 crore and February 2015: ₹ 1.66 crore) from the treasury and simultaneously released the amount to HPLPDB for implementation of the project. However, none of the activities could be executed as of August 2016 due to non-finalisation of tenders and non-completion of codal formalities and ₹ 3.31 crore remained unutilised with HPLPDB for 17 to 20 months.

(c) **Management of Animal Waste:** The State Level Sanctioning Committee (SLSC) approved (May 2011) setting up of an animal waste plant at Baddi in Solan district by Baddi, Barotiwala and Nalagarh (BBN) Industries Association through

³¹ HPSIDC: ₹ 0.73 crore for civil works at SBFs, Jeori (₹ 0.43 crore) and Tal (₹ 0.30 crore) and HIMUDA: ₹ 0.37 crore for civil works at SBFs, Sarol.

³² Maintenance of cold chain: ₹ 2.06 crore; furniture: ₹ 0.39 crore; strengthening of training-cum-conference hall: ₹ 0.06 crore and strengthening of one polyclinic: ₹ 0.80 crore.

Himalayan Nature Cure Society (HNCS), Baddi for ₹ 1.64 crore³³. The project was required to be completed within one year. The Director had withdrawn ₹ 1.37 crore from treasury (June-July 2011) and simultaneously released the amount to HPLPDB. Of this, HPLPDB had released ₹ 1.11 crore³⁴ to HNCS Baddi for execution of work. HNCS had completed the work (August 2014) but the plant had not started functioning as of November 2016 as work was not executed as per approved project³⁵ which besides blocking of ₹ 0.26 crore with HPLPDB for more than 30 months resulted in unfruitful expenditure of ₹ 1.11 crore. Further, no Memorandum of Understanding had been signed with HNCS without which the Department could not enforce timely operationalisation of the plant. The Director stated (November 2016) that the Government had decided to conduct evaluation of the plant done by a third party viz. NABARD Consultancy Service and a MOU between the Department and the executing agency would be signed before the release of the balance amount.

(d) **Computerisation upto hospital level:** The SLSC approved a project for ₹ 90.16 lakh for computersation of the Department upto hospital level during 2011-12. On receipt of sanctions from the State Government, the Director withdrew the amount from treasury (June 2011: ₹ 59.51 lakh and July 2011: ₹ 30.65 lakh) and simultaneously remitted to HPLPDB for implementation of the project. The HPLPDB placed supply orders (November 2011) and released an advance (December 2011) of ₹ 89.52 lakh to Himachal Pradesh State Electronic Development Corporation Limited (HPSEDCL) for purchase of two laptops and 145 personal computers with software and accessories for installation at veterinary hospitals. Supply of the material was to be made within six weeks. However, the Department had received the supply of only two laptops costing ₹ 1.11 lakh upto August 2016. The details/ records of receipt/ installation of the personal computers with accessories in the hospitals were not available with the Director. The advance paid to HPSEDCL had also not been adjusted as of November 2016. The Director stated (August 2016 and November 2016) that installation of computers in the veterinary hospitals was a time consuming process and reports thereof would be obtained from field offices.

Thus, projects involving ₹ 6.95 crore aimed at strengthening infrastructure for livestock breeding could not be completed or operationalized due to administrative delay in completion of codal formalities and lack of effective monitoring and remedial actions.

2.1.18 Internal control system

Audit noticed that no mechanism was evolved for submission of periodical physical/ financial progress reports by the executing agencies. As per the Manual of Animal Husbandry Department, the Director is responsible for monitoring, inspection and

³³ Land on lease by Government: ₹ 0.26 crore; building: ₹ 0.63 crore; plant and machinery: ₹ 0.36 crore; utility equipment: ₹ 0.21 crore and other expenses ₹ 0.18 crore.

³⁴ November 2011: ₹ 0.18 crore; December 2011: ₹ 0.37 crore; April 2013: ₹ 0.29 crore and December 2013: ₹ 0.27 crore.

³⁵ Installation of plant and machinery of ₹ 5.00 lakh instead of ₹ 36 lakh; purchase of utility equipment of ₹ 1.24 lakh instead of ₹ 8.02 lakh and unauthorised payment of salary of ₹ 16.00 lakh.

evaluation of the implementation of programmes, schemes and other activities of the Department. Further, JDs of Shimla and Palampur zones were required to inspect at least 10 *per cent* of the institutions in their jurisdiction whereas the Deputy Directors (AHB) in the districts were responsible for inspection of all the institutions in his jurisdiction once a year. Audit noticed that:

- The Director had carried out inspections of 24 institutions during 2011-12 and no inspection was carried out afterwards. The Directorate did not maintain the data/ records of inspections of institutions carried out by the subordinate authorities during 2011-16; and
- In Palampur test-checked zone, against 369 inspections of 759 institutions required to be conducted during 2011-16, the JD had conducted 42 inspections (one *per cent*). In test-checked districts, against 4,950 inspections of 990 institutions in the districts required to be carried out during 2011-16, the DDs (AHB) had carried out 744 inspections of equal number of institutions resulting in shortfall 4206 inspections (85 *per cent*). Besides neither any inspection note nor any records of follow up action were produced for audit verification.

2.1.19 Conclusion

Thus, the Department had not prepared Annual Action Plans detailing implementation strategy and outcome alongwith a determined time frame for various activities that impaired its ability to plan for and implement its schemes and projects taking into account the availability of funds. The objective of improving genetic level of animals and boosting livestock breeding programmes could not be achieved as the targets of exotic inheritance in cattle, buffaloes and sheep were not met. The level of improvement of livestock productivity was not indicated in the State breeding policy and average milk production was below the average national milk yield of cows and buffaloes. Financial management was inefficient as huge schemes funds remained unutilised with the implementing/ executing agencies. Though the targets of vaccinations for contagious diseases were achieved, the Department was unable to keep the prevalence of animal diseases under control as there was outbreak of contagious diseases several times during the period covered under audit. There was no mechanism for testing of samples of veterinary medicines and there were instances of supply of substandard medicines to the veterinary institutions. Further, projects relating to different schemes were not implemented/ executed in a timely manner and a large number of works/ activities were lying incomplete for many years despite release of funds.

2.1.20 Recommendations

In light of the audit findings, the State Government may consider:

- Preparation of activity-wise Annual Action Plans with month-wise and quarter-wise break up of targets (in terms of outcomes to be achieved) of each activity of the schemes so as to facilitate their effective monitoring;

- Determining timelines and year-wise targets for upgradation of indigenous cattle, buffaloes and sheep so as to achieve their exotic level as per the State Breeding Policy;
- Establishing a system for testing of samples of veterinary medicines so as to avoid the supply of sub-standard medicines to the animal breeders and take steps to maintain cold chain; and
- Ensuring completion of all works/ projects by executing agencies in a time bound manner after release of funds to them.

The matter was referred to the Government in August 2016. The reply had not been received (December 2016).

Environment, Science and Technology Department

2.2 Environment clearance and post clearance monitoring

A performance audit to assess the implementation of the Environment Impact Assessment (EIA) Notification 2006 and the grant of environment clearance and post clearance monitoring brought out that the institutional mechanisms and procedures for environment impact assessment and identification of environmental concerns as well as monitoring and enforcement of mitigation measures was weak and required considerable strengthening. Some of the significant findings are follows:

Highlights:

- *During 2008-16, adequate staff had not been provided to the State Level Environment Impact Assessment Authority (SEIAA) and State Expert Appraisal Committee (SEAC) and there was shortage of technical and scientific staff ranging between 51 and 55 per cent in State Pollution Control Board (SPCB).*
(Paragraphs 2.2.6 (i) and (ii))
- *During 2008-16, there was a delay in appraisal of Environment Impact Assessment application by the SEAC in 19 out of 60 test-checked cases ranging between 14 days and 2.9 years and delay in grant of environment clearance by the SEIAA in 42 cases ranging between eight days and three years.*
(Paragraph 2.2.7.1)
- *Faulty planning and conceptualisation for a bio-technology park in Solan district resulted in unfruitful expenditure of ₹2.07 crore and change in biodiversity by the cutting of 897 green trees. The park was yet to be established.*
(Paragraph 2.2.7.3)
- *Out of 20 test-checked projects, project proponents of two projects had not complied with the commitments of pollution mitigation measures made during public hearing. Further, the validity of consent to operate of SPCB had expired in respect of nine projects between March 2013 and March 2016 but they were continuing to operate as of August 2016.*
(Paragraphs 2.2.8.1 and 2.2.8.2(ii))
- *SPCB had not installed online monitoring systems for continuous stack emission and effluent quality in the polluting industries. In 16 out of 20 test-checked projects, the project proponents did not ensure the air, noise and water quality as the number of monitoring systems to be installed were neither specified in EC letters nor installed by the project proponents.*
(Paragraphs 2.2.9.2 and 2.2.9.3)
- *Development of green belt in a project area was not specified in the EIA reports/ EC letters of seven selected projects and compensatory afforestation/ catchment area treatment plan was not carried out/ implemented in three selected projects though ₹18.77 crore were deposited with the Forest Department.*
(Paragraphs 2.2.10.1 to 2.2.10.3)

2.2.1 Introduction

Environment Impact Assessment (EIA) is a process to identify environmental impacts of a project prior to its approval. EIA systematically examines both beneficial and adverse consequences of a proposed project and ensures that the environmental impact

is assessed and mitigation measures are taken into account in the project design. Environment clearance is granted in terms of Government of India (GOI) EIA Notification of 2006 that imposes certain restrictions and prohibitions on new projects or activities or modernisation of existing projects or activities. Environmental clearance for eight groups of projects³⁶ has been made mandatory in the EIA Notification, 2006. In the State of Himachal Pradesh, there are four groups of projects³⁷ for which environment clearance is required. Based on threshold capacity (**Appendix-2.1**), the projects have been divided into category 'A' and 'B' for grant of environment clearance by the Union Ministry of Environment and Forests and Climate Change (MOEFCC) and the State Level Environment Impact Assessment Authority (SEIAA) respectively.

2.2.2 Organisational set-up

For category 'B' projects, the Government of India (GOI), in consultation with the State Government, constitutes a State Level Environment Impact Assessment Authority (SEIAA) consisting of Chairman, a Member and Member Secretary and State Level Expert Appraisal Committee (SEAC) comprising Chairman, nine other members and Member Secretary. The Director of Department of Environment, Science and Technology (EST) under the administrative control of the Principal Secretary (EST) is Member Secretary of SEIAA. The Directorate of EST acts as agency to provide all the financial and logistic support to the SEIAA. After the grant of Environment Clearance (EC), the State Pollution Control Board (SPCB) grants consent to establish and consent to operate to the projects.

2.2.3 Audit Objectives

The objectives of the performance audit were to assess whether:

- adequate financial and logistic support for implementation of the EIA Notification was provided by the State;
- grant of environment clearance was in conformity with the laid down procedure and was efficient, fair and transparent; and
- adequate post environmental clearance monitoring mechanism existed to ensure that the project proponents comply with the conditions laid down in the environmental clearance letter and commitments made in the EIA report.

2.2.4 Audit Scope and Methodology

The performance audit of environment clearance and post clearance monitoring covering the period 2008-15 was conducted (May-August 2016) through test-check of records of the office of the Director, EST-cum-Member Secretary, SEIAA, Member Secretary, SPCB alongwith its six (out of 11) Regional Offices³⁸. Besides, records of

³⁶ River valley and hydroelectric projects, nuclear power projects, thermal power projects, mining- coal, mining-non-coal, infrastructure, construction and industry.

³⁷ Industrial projects, construction projects, non-coal mining projects and river valley and hydroelectric projects.

³⁸ Baddi, Dharamshala, Paonta Sahib, Parwanoo, Shimla and Una.

environment clearance of 60 (out of 240) 'B' category projects³⁹ (2008-15) and post clearance monitoring/ physical verification of 20 projects⁴⁰ (Appendix-2.2) that were granted environment clearance during 2008-12 were also test-checked.

An entry conference was held with the Principal Secretary (EST) in May 2016 wherein the objectives, scope, methodology and criteria were discussed. The audit findings were discussed with the Principal Secretary (EST) in exit conference held in October 2016 and the responses of the Government have been suitably incorporated in the report.

2.2.5 Audit Criteria

The audit criteria used for the performance audit were derived from the following sources:

- Environment Impact Assessment Notifications issued by GOI in January 1994 and September 2006 alongwith amendments thereof;
- Environment Protection Act, 1986, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981; and
- Orders/ instructions of the GOI/ State Government.

Audit findings

2.2.6 Financial and logistic support

As per EIA Notification (September 2006), the GOI was to constitute State Level Environment Impact Assessment Authority (SEIAA) and State Level Expert Appraisal Committee (SEAC) for every three years and the State Government was to provide all financial and logistic support to the SEIAA and SEAC. Accordingly, the GOI had notified (October 2007, March 2011 and December 2014) the constitution of the SEIAA and SEAC in the State. However, the functioning of the Committees was impaired due to lack of staff and financial resources as below:

- (i) Though the State Government had notified (June 2008) the Department of EST as nodal agency to provide all financial and logistic support to the SEIAA and SEAC, no staff was specifically provided during 2008-16. The existing staff of the Department was assigned (December 2014) the work relating to SEIAA and SEAC in addition to their duties. SEIAA stated (August 2016) that the matter regarding deployment of the additional staff for the SEIAA had been taken up with the administrative department.
- (ii) There was a shortage of technical and scientific staff ranging between 51 and 55 *per cent* in the State Pollution Control Board (SPCB) as of March 2016 resulting in non-renewal of consent to operate and non-monitoring of post EC by the SPCB as detailed in subsequent Paragraphs 2.2.8, 2.2.8.2, 2.2.11.1 and 2.2.11.2. The Department stated (October 2016) that the requisite remedial action would be taken.
- (iii) SPCB and the SEIAA had not been provided any assistance/ funds for monitoring the compliance of conditions of the ECs during 2008-15.

³⁹ Industrial projects: six, Construction projects: nine, mining projects: 44 and hydro electric power projects: one.

⁴⁰ Category 'A': six and category 'B': 14.

2.2.7 Environment clearance

EIA Notification of September 2006 provides that, an applicant has to furnish an application for seeking prior environmental clearance alongwith pre-feasibility project report/ EIA report or conceptual plan as applicable. The environment clearance process comprises maximum of four stages (screening for 'B' category projects, scoping, public consultation and appraisal) all of which may not apply to a particular case.

2.2.7.1 Delay in grant of environment clearance

The EIA Notification *ibid* stipulates that the appraisal of an application is to be completed by the SEAC within 60 days of receipt of final EIA report and the SEIAA was to convey its decision to the applicant within 45 days of the receipt of the recommendations of SEAC or within 105 days of the receipt of final EIA report. Further, the SEAC was to meet at least once in every month for screening, scoping and appraisal of projects or activities for grant of EC.

Audit noticed that SEAC met only 41 times during 2008-16 against stipulation of 96 meetings for appraisal of Environment Impact Assessment applications for projects. The 57 per cent shortfall in EIA appraisal by SEAC led to delays in appraisals of EIAs of project applicants. Resultantly, out of 60 test-checked projects for EC, there was delay in appraisal of EIA application by the SEAC in 19 cases ranging from 14 days to 2.9 years and delay in grant of EC by the SEIAA in 42 cases ranging from eight days to three years. The Department attributed (October 2016) the delay to submission of incomplete documents/ application.

2.2.7.2 Non-renewal of Environment Clearances

The validity of EC granted to the projects other than river valley projects and mining projects is five years under the EIA notification *ibid*. EC granted to river valley projects are valid for 10 years and validity for mining projects will be as per the project life as estimated by the Expert Appraisal Committee subject to a maximum of 30 years. The period of validity can be extended by the SEIAA for a maximum period of another five years on receipt of an application in the prescribed form within the validity period.

Audit noticed that the SEIAA had not maintained records of running of projects without renewal of EC. However, during physical verification, the validity of EC of 12 out of 14 'B' category projects had expired between April 2014 and September 2015. The proponents had neither applied for renewal nor was action initiated by SEIAA against the project proponents as of June 2016 for non-renewal of ECs. Hence, the projects were operating without valid ECs.

2.2.7.3 Faulty planning and unfruitful expenditure

GOI accorded (March 2005) approval for setting up of a Bio Technology Park (BTP) at a cost of ₹ 38.66 crore on public private partnership basis. The cost of the project was to be borne by GOI (₹ nine crore), State Government (₹ 7.55 crore⁴¹) and the private partner (₹ 22.11 crore). The project was to be implemented by 2006-07 and no

⁴¹ Cash share: ₹ 1.75 crore, in lieu of cost of land: ₹ 5.00 crore and human resource cost: ₹ 0.80 crore.

funding from GOI was to be released for the project beyond March 2007. GOI had released (March 2005) ₹ 50 lakh as token grant and State Government released ₹ 2.21 crore during 2004-08. However, the Department could not involve any private partner for the project. Audit noticed the following:

- Initially, the BTP was to be set up at Kotla Barog in Solan district but no investor came up for development of the project and the project site was changed (February 2008) to Aduwal on Nalagarh-Swarghat National Highway. In the meantime, the Department had released (September 2009) ₹ 45.73 lakh to a consultant for preparation of feasibility report, business plan and selection of promoter for setting up the BTP at Kotla Barog. However, the change of the site of the project resulted in the expenditure of ₹ 45.73 lakh being rendered infructuous.
- Sanction was accorded by GOI in May 2008 for diversion of 12.424 hectares forest for non-forestry purpose for the BTP at Aduwal and the Department deposited ₹ 1.27 crore with the State Forest Department (between April 2008 and January 2009) as net present value (₹ 1.06 crore) and afforestation (₹ 0.21 crore). However, no plantation was carried out by the Forest Department as of June 2016 as the project remained in limbo.
- The Department entered (January 2009) into an agreement with a firm for preparation of feasibility report, business plan and selection of promoter for the BTP at Aduwal at an estimated cost of ₹ 43.93 lakh. It paid (March 2010) ₹ 22.12 lakh for the feasibility report. However, the firm could also not select any promoter for the project and ultimately, the work relating to establishment of BTP was transferred (December 2011) to Industry Department. The BTP had not been established as of October 2016 as the Industry Department was in the process of transfer of environment clearance and land in their name as of November 2016.
- The Department had incurred an expenditure of ₹ 12.56 lakh on enumeration of trees (₹ 0.44 lakh) through Forest Department and fencing (₹ 12.12 lakh) through Himachal Pradesh Housing and Urban Development Authority in the diverted land at Aduwal where 897 green trees were extracted for development of the BTP.

Thus, faulty planning and conceptualisation by the Department in establishing a BTP resulted in unfruitful expenditure of ₹ 2.07 crore. Besides, the bio-diversity of forest land diverted for the BTP had been changed by cutting the 897 green trees resulting in degradation of the environment of the heavily industrialised area.

2.2.8 Post environment clearance monitoring

Being the regulatory authority for grant of EC for 'B' category projects in the State, the SEIAA was responsible for monitoring of the compliance of the conditions of the ECs in terms of the EIA notification of September 2006.

Audit noticed that during 2008-15, the SEIAA remained confined to the grant of ECs and the SPCB had carried out the activities of grant of consent to establish and consent to operate besides conducting of public hearings required for ECs. Resultantly,

compliance of conditions of the ECs by the project proponents remained unmonitored in the State during above period.

2.2.8.1 Lack of monitoring of fulfillment of commitments made in public hearing

As per the EIA Notification (September 2006), after completion of public consultations, the applicant was to address all the material environmental concerns expressed during the process.

Audit noticed that in respect of Manal Lime Stone Mining Project and Sainj Hydroelectric Power Project for which the EC was granted by GOI during July 2008 and May 2009, the project proponents did not comply with the commitments⁴² made in the public hearing conducted during November 2007 and June 2008 respectively. Similarly, in Non-ferrous Metal Complex Damtal project which was granted EC by GOI in August 2010, the project proponent could not produce any records to audit in support of the fulfillment of the commitments (adoption of technology to control air and water pollution, providing medical facilities and 70 per cent employment to local people and involvement of local people for transportation) made during public hearing conducted in November 2009.

SPCB stated (September 2016) that their role was confined under the EIA Notification to conducting of public hearing and submission of proceedings containing commitments, suggestions and objections to the GOI. The reply is not acceptable as the SPCB alongwith SEIAA as regulatory authority were to carry out the monitoring of compliance of the commitments made by the project proponents for EC.

2.2.8.2 Consent to establish and consent to operate

As per condition mentioned in EC letters of each project, consent to establish (CTE) is to be obtained from the SPCB prior to establishing any industry or process. Once the industry or process plant is established alongwith the required pollution control systems, the project proponent is required to obtain consent to operate (CTO) from the SPCB. The consent granted will be valid for such period as may be specified by the SPCB and the CTO is renewed after the verification of the pollution control devices installed in the project. Audit noticed the following:

(i) Irregular grant/ renewal of consent to operate

The validity of the EC granted to eight projects by SEIAA had expired between April 2014 and September 2015. In spite of this, the SPCB had granted/ renewed the CTO of these projects upto the period between March 2015 and March 2018 beyond the validity of their EC.

SPCB stated (August 2016) that the Board did not grant the EC and it should not be linked with CTE/ CTO. The reply is not tenable as the SPCB should have granted/ renewed CTE/ CTO only after renewal of the EC as a valid EC is a pre-condition for issue of CTE/ CTO.

⁴² Manal Lime Stone Mining Project: Installation of sprinkler system to control dust and Sainj Hydroelectric Power Project: Payment of land compensation to 19 families.

(ii) Projects operating without consent to operate

The CTO in nine test-checked projects⁴³ had expired (between March 2013 and March 2016). However, neither had the project proponents applied for renewal of the CTOs nor had the SPCB taken any action against the project proponents resulting in unauthorised operation of the projects. SPCB had also not taken note of concerns relating to projects operating without valid CTOs raised (August 2013 and February 2014) by GOI representative.

2.2.8.3 Environment management plan cost

As per the EIA Notification (September 2006), the project proponent is to provide for the Environment Management Plan (EMP) cost/ item-wise activities⁴⁴ to be undertaken during the entire life cycle of the project.

Audit noticed that time bound action plan for fulfilling the EMP commitments was not mentioned in the EIA reports/ EC letters in any of the projects selected for test-check. Besides, the SEIAA had also not monitored the expenditure actually incurred on EMP by the project proponents. Further, of 20 projects selected for physical verification, the project proponents of five projects⁴⁵ had incurred expenditure of ₹ 12.49 crore on EMP activities but the shortfall could not be worked as the committed EMP cost was not mentioned in the EC letters and there was shortfall in expenditure against the committed EMP cost ranging between 10 and 93 per cent in 11 projects.

SEIAA stated (September 2016) that the detailed budget and procurement schedule of monitoring instruments was not provided in the EIA reports.

2.2.9 Monitoring of environment parameters**2.2.9.1 Ambient air particulate matter (PM 10) above the prescribed limit**

As per Section 17 (1) (a) of the Air (Prevention and Control of Pollution) Act, 1981, one of the functions of the SPCB is to plan comprehensive programmes for prevention, control or abatement of air pollution and to secure the execution thereof.

Audit noticed that as per ambient air quality monitoring carried out by the Central Pollution Control Board (CPCB), the ambient air particulate matter (PM 10) in Baddi, Damtal, Kala Amb, Nalagarh, Paonta Sahib and Sundarnagar exceeded the norm of 60 µg/m³ annual average concentration prescribed by the National Ambient Air Quality Standards 2009 consecutively during 2011-15 by 7 to 110 µg/m³. No reports of any ambient air quality tests conducted by the SPCB in selected projects could be produced to audit by the project proponents. Thus, the SPCB did not follow the mandated function as per the Air (Prevention and Control of Pollution) Act, 1981.

⁴³ Dev Bhoomi Steel, Ultratuff Cement Industries, Vocational Education Foundation, Sukam Power System Limited, K.D. Education Trust (Arni University), Home Land City, Tangnu Romai Power Generation Private Limited, Luminous Teleinfra Limited and Amar Nath Colonisers Private Limited.

⁴⁴ Monitoring instruments, pollution control devices, sewerage treatment plants, effluent treatment plants, green belt, raising of plants, water harvesting structure, etc.

⁴⁵ Expansion of Battery Manufacturing Plant, Gee City Group Housing Project, Omaxe Group Housing Project, Manal Lime Stone Mining Project and Himachal Textile Park Limited.

2.2.9.2 Non-providing of online monitoring stations

For strengthening of monitoring mechanism for effective compliance through self regulating mechanism of the 17 highly polluting industries⁴⁶ operating in the State, the CPCB had directed (February 2014) that the SPCB should install online continuous stack emission monitoring systems and effluent quality monitoring systems in the polluting industries and upload the online emission and effluent monitoring data at SPCB and CPCB server by June 2014.

Audit noticed that the directions of the CPCB *ibid* had not been implemented in the State as of August 2016. This resulted in non-monitoring of the environment parameters of all the projects online.

SPCB stated (August 2016) that online monitoring systems in 12 projects had been installed but the matter for data logging thereof had been taken up with National Informatics Centre.

2.2.9.3 Non-installation of environment monitoring stations

Audit noticed that the number of air, surface and ground water and noise monitoring systems to be installed in the project area was not specified in the EC letters relating to 16 out of 20 projects issued by the concerned regulatory authorities⁴⁷ and the project proponents had also not installed monitoring stations in their premises. In the absence of specific condition for installation of the monitoring stations, the monitoring of air, noise and water quality in the project areas was not ensured.

In the remaining four projects where the number of monitoring stations to be installed was specified in the EC letters, Audit observed a shortfall ranging between 50 to 100 *per cent* of stations actually installed as given in **Table-2.2.1** below.

Table-2.2.1: Details of ambient air quality monitoring stations to be installed and actually installed

| Sl. No. | Name of the Project | Number of monitoring stations | | Shortfall (Per cent) |
|---------|--|-------------------------------|--------------------|----------------------|
| | | Specified to be installed | Actually installed | |
| 1. | Expansion of battery manufacturing plant | 4 | 2 | 2 (50) |
| 2. | Non-ferrous metals complex | 4 | Nil | 4 (100) |
| 3. | Expansion of Manal Lime Stone Mining Project | 4 | 1 | 3 (75) |
| 4. | Valley Iron and Steel Company Limited | 3 | Nil | 3 (100) |

Source: Information supplied by the project proponents.

It would be seen from above table that against the installation of ambient air quality monitoring stations mentioned in the EC letters, there was shortfall ranging between 50 and 100 *per cent*.

⁴⁶ Cement: six, pulp and paper: three, tannery: one, pharmaceutical: five and distillery: two.

⁴⁷ Ministry of Environment, Forests and Climate Change for 'A' Category projects and State Level Environment Impact Assessment Authority for 'B' Category projects.

2.2.10 Adoption of environment protection measures

2.2.10.1 Non-development of green belt

To provide protection against particulate matter and noise, the EC letter provides for raising of green belt of the adequate width and density with local species along the periphery of the plots. Audit noticed that:

- Of 20 projects selected for physical verification, the actual area and number of trees to be planted was not mentioned in the EC letters in seven⁴⁸ projects. Green belt with local species was not developed in five⁴⁹ projects.
- Against the specifications in the EIA reports/ EC letters, there was shortfall in plantation of 3,775 trees in five projects⁵⁰.

The project proponents stated (July-August 2016) that the green belt of adequate width and density with local species along the periphery of the plots would be raised in future.

2.2.10.2 Non-implementation of activity of compensatory afforestation

As per conditions imposed by GOI for diversion of forest land for non-forestry purposes, compensatory afforestation (CA) in twice the area of land diverted was required to be carried out on degraded forests within one year of final approval to maintain the ecological balance and make good the loss to environment.

Audit noticed that the SEIAA had not specified condition of CA in the EC letters of two projects⁵¹. The project proponents had deposited ₹ 1.52 crore (Tangnu Romai Power Generation Private Limited: ₹ 0.86 crore and Phina Singh Irrigation Scheme ₹ 0.66 crore) with the State Forest Department through Himachal Pradesh State Compensatory Afforestation Fund Management and Planning Authority (CAMPA) to carry out the compensatory afforestation on the degraded forests. However, no afforestation had been carried out by the Forest Department as of August 2016. Further, in the Sainj Hydroelectric Power project, the GOI had mentioned condition of compensatory afforestation required to be carried out in 96 hectare area of the degraded forests in the EC letter (May 2009). The Project proponent had deposited (September 2010) ₹ 0.93 crore with the Forest Department but no plantation was carried out as of August 2016.

Non-compliance of the conditions of GOI with regard to the compensatory afforestation had adversely affected the maintenance of environmental stability and ecological balance.

⁴⁸ Sainj Hydroelectric Power Project, Phina Singh Medium Irrigation Scheme, Tangnu Romai Power Generation Private Limited, Himachal Textile Park Limited, Sanjay Chauhan Stone Crusher, Home Land City Mall and Luminous Teleinfra Limited.

⁴⁹ Sainj Hydroelectric Power Project, Phina Singh Medium Irrigation Scheme, Tangnu Romai Power Generation Private Limited, Himachal Textile Park Limited and Luminous Teleinfra Limited.

⁵⁰ Himachal Cement Industries: 100, Indorama Industries Limited: 500, Sukam Power Systems Limited: 775, Valley Iron and Steel Company Limited: 1250 and Manal Lime Stone Mining Project: 1150.

⁵¹ Tangnu Romai Hydroelectric Power Project: 57.097 hectare (January 2010) and Phina Singh Medium Irrigation Scheme: 58 hectare (July 2012).

2.2.10.3 Non-implementation of catchment area treatment plan

For implementation of catchment area treatment (CAT) plan of three projects in which the environment clearance was granted between May 2009 and August 2011, the concerned project proponents had deposited ₹ 16.32 crore⁵² with the State Forest Department during 2010-13. Audit noticed that:

- The Forest Department had not started any CAT plan activities in respect of two projects (Tangnu Romai Hydroelectric Power Project and Phina Singh Medium Irrigation scheme) as of August 2016.
- In case of Sainj Hydroelectric Power Project, the Forest Department had submitted utilisation certificates of ₹ 2.37 crore to the project proponent upto May 2016. However, the details of works actually executed thereof were not furnished by the Forest Department in five cases involving expenditure of ₹ 1.68 crore. Thus, the CAT plan of the project costing ₹ 10.40 crore required to be implemented in three years (2010-13) had not been completed as of August 2016.

The Department informed (October 2016) that the CAT plan was being implemented by State CAMPA through Forest Department. The fact remains that no CAT plan activities were carried out by the Forest Department in two projects and the CAT plan in respect of Sainj Hydroelectric Power Project had not been implemented within the stipulated period.

2.2.10.4 Non-implementation of fishery development plans

Audit observed that funds amounting to ₹ 1.18 crore meant for fishery development were either diverted or remained unutilised as follows:

- (i) To compensate the losses of fish and fishery resources in the project area, the project proponent at Tangnu in Rohru tehsil of Shimla district deposited (November 2009) ₹ 68 lakh with the Fisheries Department for development of fisheries in the vicinity of the project. However, the Fisheries Department diverted (November 2012) ₹ 27.09 lakh for construction of tube well facility at departmental fish farm at Nalagarh in Solan district and ₹ 40.91 lakh were lying unutilised as of August 2016.
- (ii) Against a provision of ₹ one crore made in the EIA report for Fisheries Management Plan (FMP), the project proponent of Sainj Hydroelectric Power Project released (April 2010) ₹ 50 lakh to the Fisheries Department for implementation of the FMP. However, the funds remained unutilised with the Fisheries Department as of July 2016.

2.2.10.5 Non-providing of dispensary/ health delivery systems

As per commitment made in the EIA reports of Phina Singh Medium Irrigation Project and Tangnu Romai Power Generation Private Limited, one dispensary/ health centre was to be developed/ provided within the project areas. Doctors, para-medical staff and

⁵² Tangnu Romai Hydroelectric Power Project: ₹ 1.39 crore in March 2012 (Cash: ₹ 1.15 crore and in kind: ₹ 0.24 crore), Sainj Hydroelectric Power Project: ₹ 10.40 crore during 2010-13 and Phina Singh Medium Irrigation scheme: ₹ 4.53 crore in March 2012.

drivers for ambulance were to be deployed and the health extension activities were to be carried out in the villages situated within the command area of the Project.

As per site inspection and verification of the records of the projects, the project proponents had neither established any dispensary/ health centre nor deployed any doctor/ pharmacist in the project areas. Thus, both the project proponents had not complied with the commitments made in the EIA reports.

2.2.10.6 Improper disposal of muck generated during construction

EC letters of two selected projects⁵³ stipulated that muck including excavated material generated during construction phase should be disposed off at the sites approved by the competent authority. During physical verification of the projects, it was noticed that:

(i) For construction of the link canal of Phina Singh Medium Irrigation scheme, there was no approved muck dumping site and the muck generated during construction was being thrown along the river bank thereby directly flowing into the river. At another site, though there was approved muck dumping sites, muck was being dumped without construction of retaining walls and was also seen flowing directly into the river.

(ii) Out of seven numbers of muck dumping sites of Sainj Hydroelectric Power Project, muck was stacked at five dumping sites. The protection walls of dumping sites number two and seven were found damaged and the muck was directly flowing into the river.

The proponent of the Phina Singh Medium Irrigation Scheme stated (July 2016) that the work relating to construction of retaining walls along the periphery of the canals and muck dumping sites had been awarded and the retaining walls would be constructed.

2.2.10.7 Unauthorised storage of diesel

As per condition of the EC letters of four projects⁵⁴, for storage of diesel, permission of the Chief Controller of Explosives was to be obtained for storage of diesel in underground tanks.

Audit noticed that of the four projects:

(i) in one case, the project proponent had obtained (February 2010) the requisite permission of the Chief Controller of Explosives but no underground tank for storage of the diesel was constructed;

(ii) in another case, the project proponent had neither obtained permission nor constructed the underground diesel storage tanks and the diesel was being stored in drums at open space; and

(iii) the project proponents of the remaining two cases had not obtained permission for storage of the diesel in underground tanks which indicated that the diesel was being stored by them in an unapproved manner.

⁵³ Phina Singh Medium Irrigation scheme and Sainj Hydroelectric Power Project.

⁵⁴ Home Land City Mall at Baddi, Sukam Power Generation Systems Limited, Luminous Teleinfra Limited and Tangnu Romai Power Generation Limited.

2.2.11 Non-compliance of other conditions/ issues

2.2.11.1 Half yearly reports for compliance of environment clearance conditions

The EIA Notification (September 2006) provides for submission of half yearly compliance reports of the EC by the project management to the regulatory authorities (GOI, SEIAA and SPCB) on 01 June and 01 December every year. Audit noticed the following:

- In respect of 13 out of 14 category 'B' projects selected for post clearance monitoring where EC was granted by the SEIAA, the condition of submission of the requisite half yearly compliance report was not specified in the EC letters.
- None of the project proponents of all category projects selected for post clearance monitoring had submitted the requisite half yearly reports to the SEIAA and SPCB during 2008-15 for monitoring the compliance of the conditions of the EC due to which both the regulatory authorities in the State had not done any monitoring of the fulfillment of the conditions of the ECs by the project proponents.
- Out of 20 projects selected for post clearance monitoring, the project proponents of five projects⁵⁵ had not submitted the requisite half yearly compliance reports to GOI and only 64 out of 189 half yearly compliance reports required to be submitted were submitted resulting in shortfall of 125 (66 per cent) reports.

SEIAA stated (September 2016) that the post EC half yearly compliance reports are scrutinised by GOI. However, SEIAA had also started asking the compliance reports from the project proponents. SPCB stated (July 2016) that the SPCB was not mandated for monitoring the conditions of the EC. The replies are not acceptable as SEIAA and SPCB being the regulatory authorities in the State should have also monitored the compliance of the conditions of the ECs.

2.2.11.2 Inspections and sampling

Based on the potential of pollution in particular industries in a specified category, the SPCB had prescribed (January 2002) inspection and air-water sampling schedule⁵⁶ of such industries.

Audit noticed that the SPCB had not maintained category-wise data/ records of number of industries in the State regarding conducting of inspections during 2008-15. Sampling of water was being done occasionally and reports uploaded on the web site but the consolidated data/ records of the sampling done was not maintained. Consequently, adherence to the schedule could not be verified in audit and the presence of water pollution could not be ruled out.

⁵⁵ Gee City Group Housing project, Phina Singh Medium Irrigation scheme, Himachal Textile Park, Indorama Industries and KD Education limited (Arni University) project.

⁵⁶ **Inspections:** Red Industries (Large scale: fortnightly, medium scale: monthly and small scale: bi-monthly), orange industries (Large scale: monthly, medium scale: bi-monthly and small scale: quarterly) and green industries (Large scale: quarterly, medium scale: half yearly and small scale: yearly). **Sampling:** Red Industries (Large scale: monthly, medium scale: bi-monthly and small scale: quarterly), orange industries (Large scale: bi-monthly, medium scale: quarterly and small scale: half yearly) and green industries (Large scale: half yearly and medium and small scale: yearly).

2.2.12 Conclusion

Despite the State being environmentally sensitive with a fragile eco-system, the institutional mechanisms and procedures for environment impact assessment and identification of environmental concerns as well as monitoring and enforcement of mitigation measures was weak. The State Environment Impact Assessment Authority (SEIAA)/ State Expert Appraisal Committee (SEAC) and State Pollution Control Board (SPCB) lacked adequate manpower for scrutiny and this contributed to delay in grant and renewal of environment clearances (EC) resulting in some projects continuing to operate without the pre-requisite ECs. Neither SEIAA nor SPCB had regularly monitored compliance with conditions of the EC of the projects and some project proponents had not fulfilled the commitments made in the environment impact assessment reports/ EC letters. Required environment protection measures including development of green belt in the project areas, compensatory afforestation, catchment area treatment plan and disposal of muck generated from construction were not carried out by the project proponents though funds were allocated, committed or available for the purpose.

2.2.13 Recommendations

In light of the audit findings, the State Government may consider:

- Strengthening the State Environment Impact Assessment Authority/ State Expert Appraisal Committee and State Pollution Control Board with adequate manpower and resources to enable timely grant of environment clearance and monitoring of the conditions thereof;
- Evolving an online stack emission monitoring systems and effluent quality monitoring systems in polluting industries and uploading the online emission and effluent monitoring data at the servers of State Pollution Control Board and Central Pollution Control Board; and
- Monitoring the compliance of all conditions specified in environment clearance letters of all projects by the State Environment Impact Assessment authority and State Pollution Control Board so as to minimise environmental loss through the implementation of the projects.

The matter was referred to the Government in September 2016. The reply had not been received (December 2016).

Public Works Department

2.3 Upgradation and maintenance of National Highways

The performance audit was conducted to assess the planning and execution of works relating to upgradation and maintenance of the National Highways (NHs) in the State by the NHs wing of the State Public Works Department. The audit brought out lack of systemic annual plans with clear milestones and timelines for development and maintenance of national highways, shortfalls in achievement of targets for upgradation, repair and maintenance and undue delays in project execution. Some of the significant findings were as follows:

Highlights:

- *There was shortfall of 40 per cent in achievement of targets for widening and strengthening of the NHs during 2011-16.*
(Paragraph 2.3.5.4)
- *Against an allocation of ₹759.91 crore for original works during 2011-15, the Department could utilise ₹590.71 crore resulting in short utilisation of ₹169.20 crore.*
(Paragraph 2.3.6.2)
- *Department irregularly diverted ₹1.20 crore from funds deposited by telecommunications companies for restoration of damages to purchase of vehicles and retained ₹117.20 crore under deposit head instead of remitting to the Union Ministry of Road Transport and Highways as required under the rules. Damages in 1,316.655 kms NHs were not restored as of March 2016.*
(Paragraph 2.3.6.3)
- *Against 119 works sanctioned at a cost of ₹985.79 crore and stipulated to be completed by March 2016, 39 works on which expenditure of ₹114.23 crore had been incurred were lying incomplete as of March 2016.*
(Paragraph 2.3.7.1)
- *Six jobs of preparation of detailed projects reports for upgradation of six NHs to two lanes awarded (May-August 2010) to consultants for ₹12.52 crore and stipulated to be completed by July 2011 remained incomplete as of June 2016 after expending ₹7.50 crore.*
(Paragraph 2.3.7.2)
- *Quality control mechanism was ineffective as Executive Engineers did not conduct the required quality tests/ inspections of works and also failed to initiate action for rectification of defects pointed out by the State Quality Control Wing in 74 inspections out of 111 during 2011-16.*
(Paragraphs 2.3.10.1 and 2.3.10.2)

2.3.1 Introduction

National Highways (NHs) are developed and maintained by the Government of India (GOI) with the aim of providing a road network for safe and speedy/ free flow of traffic. The National Highways Act, 1956 empowers GOI to declare certain highways as NHs. There were 17 NHs of 2,003 kms length in the State as of March 2016.

The Union Ministry of Road Transport and Highways (MORTH) is entrusted with the overall planning, sanctioning of projects and the provisioning of funds. The activities of NHs in Himachal Pradesh are monitored by the Regional Officer (RO) of MORTH

headed by a Superintending Engineer at Chandigarh along with an Engineer Liaison Officer at Shimla who also assist the State Government in planning, field investigations, preparation of detailed project reports (DPRs) and execution of works. The NHs Wing of Himachal Pradesh Public Works Department (HPPWD) is responsible for development and maintenance of NHs in the State on nine *per cent* agency charges basis.

2.3.2 Audit Objectives

The objectives of the performance audit of upgradation and maintenance of NHs in the State were to assess whether:

- Planning for upgradation and maintenance of national highways was comprehensive;
- Allocation and utilisation of funds was economic and effective;
- Claims were preferred with GOI and reimbursement thereof received in a timely manner;
- Execution of works for upgradation and maintenance of the national highways was economical, efficient and effective;
- Contract management ensured the execution/ completion of the works according to prescribed time schedule; and
- Quality control and monitoring mechanisms were adequate and effective.

2.3.3 Audit scope and methodology

The performance audit covering the period 2011-16 was conducted from April 2016 to July 2016 through test-check of records of NHs wing including the offices of the Chief Engineer (CE), Superintending Engineers (SEs) of both the circles⁵⁷ and Executive Engineers (EEs) of all NHs divisions⁵⁸. Records of the office of Project Director (PD), National Highways Authority of India (NHAI), Shimla was also test-checked. The audit objectives, criteria, scope and methodology were discussed with the Additional Chief Secretary (ACS) in an entry conference held in April 2016. The audit findings were discussed with the ACS in an exit conference held in October 2016 and views of the Government have been appropriately incorporated in the report.

2.3.4 Audit Criteria

The audit criteria used for assessing the performance of NHs programme were derived from the following sources:

- National Highways Act, 1956;
- Central Public Works (CPW) Account Code and CPW Manual;
- Plan documents/ Annual works programmes/ Project reports;
- Guidelines, instructions and orders of GOI/ State Government; and
- Norms for deployment of labour for maintenance of NHs.

⁵⁷ Shahpur and Shimla.

⁵⁸ Hamirpur, Jogindernagar, Pandoh, Rampur, Shahpur (opened in May 2015) and Solan.

Audit findings

2.3.5 Planning process

Planning mainly covers survey and estimation with reference to time and cost, prioritisation, convergence with other agencies working on NHs and proper allotment and utilisation of funds so as to complete the different activities within the stipulated time and cost.

2.3.5.1 Status

There were 10 NHs of 1,366 kms length in the State as of April 2011 and the GOI had declared seven more NHs having length of 637 kms during 2011-16. The lane-wise details of NHs as on April 2011 *vis-à-vis* as on March 2016 are given in **Table-2.3.1** below.

Table-2.3.1: Lane-wise details of NHs as on April 2011 *vis-à-vis* as on March 2016

| (In Kms) | | | |
|--------------|-------------------|-------------------------------------|-------------------------------------|
| Sl. No. | Lane | Length of roads as on 01 April 2011 | Length of roads as on 31 March 2016 |
| 1. | Single lane | 401 | 796 |
| 2. | Intermediate lane | 174 | 295 |
| 3. | Double lane | 791 | 912 |
| Total | | 1,366 | 2,003 |

Source: Departmental figures.

Of 2,003 kms long NHs in the State as of March 2016, 912 kms long NHs (46 *per cent*) were double lane as of March 2016 whereas the remaining NHs were of single and intermediate width. However, some stretches of two NHs⁵⁹ have been taken up for developing into four lanes by NHA and the works were underway as of July 2016.

2.3.5.2 Formulation of master plans

For systematic development and maintenance of NHs in a time bound manner, long term/ master plan containing different types of activities including original works, special repair works and ordinary repairs was to be prepared by the HPPWD.

Audit noticed that long term/ master plan with clear milestones and timelines for development and maintenance of NHs in the State was not formulated. In the absence of master plan, the criteria/ periodicity for selection of works in different stretches of NHs and their relative prioritisation at the time of preparation of Annual Plans could not be verified.

2.3.5.3 Preparation of annual plans

HPPWD submits Annual Plans to MORTH indicating requirement of funds for different NHs works during each financial year. The Annual Plan is approved by MORTH and funds are allocated accordingly. Estimates for obtaining administrative, financial and technical approvals are submitted separately to MORTH throughout the year.

The details of annual plans proposed and approved alongwith allocation of funds for NHs in the State during 2011-16 are given in **Table-2.3.2** below.

⁵⁹ Parwanoo-Shimla NH (kms 67 to 156.507) and Chandigarh-Mandi-Manali NH (kms 82 to 190).

Table-2.3.2: Details of Annual Plans proposed and approved, funds allocated and expenditure incurred during 2011-16

| (₹ in crore) | | | | | |
|--------------|----------------------|----------------------|-----------------|---------------|--|
| Year | Annual plan proposed | Annual plan approved | Funds allocated | Expenditure | Excess (+)/ Short(-) allocation of funds |
| 2011-12 | 154.00 | Not available | 184.20 | 159.98 | -- |
| 2012-13 | 770.83 | 182.00 | 191.15 | 156.56 | (+) 9.15 (05) |
| 2013-14 | 857.16 | 298.86 | 224.78 | 135.06 | (-) 74.08 (25) |
| 2014-15 | 756.01 | 680.65 | 200.44 | 175.72 | (-) 480.21 (71) |
| 2015-16 | 1,124.45 | 967.75 | 221.85 | 220.11 | (-) 745.90 (77) |
| Total | 3,662.45 | 2,129.26 | 1,022.42 | 847.43 | |

Source: Departmental figures.

Note: Figures in parenthesis represent percentage of allocations against approved Annual Plans.

Details of approved annual plans for 2011-12 were not available with the Department. Against the proposal of ₹ 3,508.45 crore for 2012-16, MORTH had approved annual plans for ₹ 2,129.26 crore (61 per cent). Against the approved Annual Plans, there was excess allocation of ₹ 9.15 crore during 2012-13 and short allocations ranging between 25 and 77 per cent of ₹ 1,300.19 crore during 2013-16. Thus, there was mismatch between the approved annual plan, allocation of funds and expenditure incurred during 2012-16.

The Department stated (October 2016) that Annual Plans/ DPRs were approved for a particular year and allocation of funds depended upon scheduled period of completion of works.

2.3.5.4 Targets and achievements for upgradation components/ activities

The Department had not prepared annual action plans and fixed targets for repair and maintenance of NHs in the State during 2011-16 and the targets of widening of the NHs were not commensurate with 1,091 kms length of single and intermediate lane roads required to be developed into double lane as per details of targets and achievements for 2011-16 given in **Table-2.3.3** below.

Table-2.3.3: Details of physical targets of upgradation of NHs and achievements during 2011-16

| Sl. No. | Component | Activity | Targets | Achievements | Shortfall (Per cent) |
|---------|--|----------|---------|--------------|----------------------|
| 1. | Widening of roads including strengthening IRQP (Length in kms) | Widening | 238.521 | 143.723 | 94.798 (40) |
| | | WBM | 223.030 | 134.130 | 88.900 (40) |
| | | BM | 225.240 | 183.807 | 41.433 (18) |
| 2. | Construction of bridges (Number) | | 37 | 5 | 32 (86) |
| 3. | Periodical renewal (Length in kms) | BM | 352.739 | 122.380 | 230.359 (65) |
| | | SDBC | 452.249 | 281.430 | 170.819 (38) |

Source: Departmental figures.

Note: IRQP: Improvement of riding quality programme, WBM: Water bound macadam, BM: Bitumen macadam and SDBC: Semi dense bitumen concrete.

During 2011-16, under component 'Widening of roads', there was shortfall in achievement of targets of activities of widening (40 per cent), Water Bound Macadam (40 per cent) and Bitumen Macadam (18 per cent) while under periodical renewal component, there was shortfall in the activities of Bitumen Macadam (65 per cent) and Semi Dense Bitumen Concrete (38 per cent). Against the targets of construction of 37 bridges, only five bridges were constructed during the above period resulting in shortfall of 32 bridges (86 per cent). The low achievement of targets was attributed to limited working seasons, delay in acquisition of land, finalisation of tenders and non-completion of consultancy works for pre-feasibility study of bridges.

2.3.6 Financial management

2.3.6.1 Funding pattern and allocation of funds

Upto 31 March 2004, the State Government was to initially incur expenditure on construction and maintenance of NHs from the State budget and then get it reimbursed from MORTH. With effect from 01 April 2004, MORTH introduced Direct Payment Procedure (DPP) for construction of new roads, other road works such as on special repairs (SRs), periodical renewals (PRs) and improvement of riding quality programme (IRQP). For ordinary repairs (ORs) and flood damage repairs (FDRs), the previous system of reimbursement continued.

2.3.6.2 Expenditure against availability of funds

The details of funds allocated by the GOI and their utilisation by HPPWD during 2011-16 are given in **Table-2.3.4** below.

Table-2.3.4: Details of fund allocations and their utilisation during 2011-16

(₹ in crore)

| Year | Funds allocated | Funds utilised | Variations excess (+)/ savings (-) |
|---|-----------------|----------------|------------------------------------|
| DPP: Original works (Works of widening/ strengthening including IRQP/PR) | | | |
| 2011-12 | 176.87 | 150.33 | (-) 26.54 (15) |
| 2012-13 | 178.15 | 145.77 | (-) 32.38 (18) |
| 2013-14 | 214.54 | 126.34 | (-) 88.20 (41) |
| 2014-15 | 190.35 | 168.27 | (-) 22.08 (12) |
| 2015-16 | 205.43 | 205.43 | -- |
| Total | 965.34 | 796.14 | (-) 169.20 |
| Reimbursement procedure: Maintenance works | | | |
| 2011-12 | 7.33 | 9.65 | (+) 2.32 (32) |
| 2012-13 | 13.00 | 10.79 | (-) 2.21 (17) |
| 2013-14 | 10.24 | 8.72 | (-) 1.52 (15) |
| 2014-15 | 10.09 | 7.45 | (-) 2.64 (26) |
| 2015-16 | 16.42 | 14.68 | (-) 1.74 (11) |
| Total | 57.08 | 51.29 | |
| Grand Total | 1,022.42 | 847.43 | |

Source: Departmental figures.

It would be seen from the above table that:

- Against allocation of ₹ 759.91 crore for original works during 2011-15, the Department could utilise ₹ 590.71 crore. The percentage of unutilised funds ranged between 12 and 41 *per cent* which reflected Department's inability to achieve physical targets of widening/ strengthening of NHs and execution of works despite availability of funds.
- In respect of works relating to ordinary repairs and flood damage, there was excess expenditure of ₹ 2.32 crore against allocation during 2011-12 which resulted in non-reimbursement of expenditure by MORTH (Paragraph 2.3.6.4). During 2012-16, the Department had not utilised funds of ₹ 8.11 crore. Despite availability of unutilised funds, the Department incurred additional expenditure of ₹ 29.90 crore⁶⁰ out of the State budget for maintenance of NHs during 2011-16 for which it did not claim any reimbursement from MORTH.

⁶⁰ 2011-12: ₹ 9.20 crore, 2012-13: ₹ 7.44 crore, 2013-14: ₹ 6.35 crore, 2014-15: ₹ 4.50 crore and 2015-16: ₹ 2.41 crore.

The concerned EEs of NHs divisions attributed (May-June 2016) the short utilisation of funds to limited working season, geographical conditions and contractors' faults. Audit noted that all these aspects should have been taken into account while planning for and taking up the work for execution.

2.3.6.3 Irregular diversion of funds deposited for laying of cables

As per paragraph 6.6 of Manual of Direct Payment Procedure (DPP) for execution of NHs works, receipts from Telecommunication Department were to form part of the receipts of MORTH. Further, as per National Telecom Policy, 2012, MORTH had issued (August 2013) broad guidelines for granting right of way (ROW) to telecom service licensees/ infrastructure providers for laying of telecom cables including optical fibre cable (OFC)/ ducts on NHs land. Audit noticed the following:

- Out of ₹ 148.11 crore⁶¹ deposits made by telecommunication companies with HPPWD for restoration of damages, the NHs divisions had incurred expenditure of ₹ 21.71 crore on restoration of damages during 2011-16. Instead of remitting the balance amount to MORTH as required under the DPP, the NHs Wing irregularly diverted ₹ 9.20 crore towards departmental expenditure⁶² and unauthorisedly retained ₹ 117.20 crore under deposit head whereas damages to 1,316.655 kms out of 1,803.005 kms length of NHs remained to be restored as of March 2016.

The Department stated (October 2016) that MORTH had not objected to retention of money deposited by telecom companies for restoration of damages.

2.3.6.4 Non-reimbursement of expenditure and non-release of agency charges

The details of withheld and disallowed claims by MORTH on account of maintenance charges of NHs by NHs divisions for 2011-16 are given in **Table-2.3.5** below.

Table-2.3.5: Details of withheld and disallowed claims of NHs divisions for 2011-16

(₹ in crore)

| Year | Withheld amount | | Disallowed amount | | Total | |
|--------------|-------------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|-----------------------------|
| | Figures as per State accounts | Figures supplied by CE (NH) | Figures as per State accounts | Figures supplied by CE (NH) | Figures as per State accounts | Figures supplied by CE (NH) |
| 2011-12 | 2.54 | --- | 0.20 | 0.29 | 2.74 | 0.29 |
| 2012-13 | --- | 0.09 | 0.13 | 0.04 | 0.13 | 0.13 |
| 2013-14 | 7.04 | 6.02 | --- | --- | 7.04 | 6.02 |
| 2014-15 | 1.92 | 1.92 | 0.01 | --- | 1.93 | 1.92 |
| 2015-16 | --- | --- | --- | 0.01 | --- | 0.01 |
| Total | 11.50 | 8.03 | 0.34 | 0.34 | 11.84 | 8.37 |

Source: Departmental figures and Figures supplied by Accountant General (Accounts and Entitlement).

During 2011-16, MORTH had withheld ₹ 11.50 crore and disallowed ₹ 0.34 crore on account of invalid expenditure requiring re-validation, expenditure on non-permissible items and lack of supporting documents. Further, reconciliation of data regarding

⁶¹ Opening balance as on 01 April 2011: ₹ 1.36 crore and funds received during 2011-16: ₹ 146.75 crore.

⁶² Purchase of 13 new vehicles for NHs Wing: ₹ 1.20 crore and payment of material advance under World Bank package No. V (Theog-Kotkhai-Hatkoti road) through HPPWD division-III, Shimla: ₹ 8.00 crore.

withheld and disallowed amount with the Accountant General (Accounts and Entitlement) by the Department brought out a difference of ₹ 3.47 crore which indicated that proper mechanism to pursue the release of withheld/ disallowed amounts from MORTH had not been established in the Department. Due to non-release of the withheld claims of ₹ 11.50 crore, the State Government was also deprived of agency charges of ₹ 1.04 crore (at the rate of nine *per cent* of the withheld claims) which would have been admissible on admittance of the withheld claims.

Further, MORTH had issued (July 2001) guidelines for award of work within specified period on the basis of amount involved. Any deviation from the specified period or delay in execution of work without approval from the MORTH may lead to deduction of agency charges. Audit noticed that MORTH had not released agency charges of ₹ 8.77 crore (withheld: ₹ 7.96 crore and disallowed: ₹ 0.81 crore) on ₹ 109.49 crore released to contractors against 117 bills of 49 works during 2011-16 due to delay in award of works and non-approval extension of time for execution of works by the competent authority. Thus, failure of the Department to adhere to the time schedule in awarding/ completion of the works resulted in revenue loss of ₹ 8.77 crore to the State.

2.3.7 Execution of works

2.3.7.1 Status of works

Details of execution of NHs works in all the NHs divisions during 2011-16 are given in **Table-2.3.6** below.

Table-2.3.6: Details of execution of works in NHs divisions during 2011-16

| Year | Works sanctioned | | Works not started | | Works taken up for execution | | Works to be completed by March 2016 | | Works completed by March 2016 | | Works incomplete as of March 2016 | |
|----------------|------------------|-----------------|-------------------|---------------|------------------------------|-----------------|-------------------------------------|---------------|-------------------------------|---------------|-----------------------------------|---------------|
| | No. | EC | No. | EC | No. | EC | No. | EC | No. | Exp. | No. | Exp. |
| As on 31.03.11 | 68 | 650.36 | 1 | 0.58 | 67 | 649.78 | 67 | 649.78 | 54 | 436.70 | 13 | 65.46 |
| 2011-12 | 2 | 9.90 | 0 | 0 | 2 | 9.90 | 2 | 9.90 | 2 | 10.16 | 0 | 0 |
| 2012-13 | 21 | 145.98 | 0 | 0 | 21 | 145.98 | 21 | 145.98 | 16 | 79.66 | 5 | 14.23 |
| 2013-14 | 17 | 132.51 | 0 | 0 | 17 | 132.51 | 15 | 89.74 | 7 | 38.40 | 8 | 6.90 |
| 2014-15 | 32 | 593.95 | 6 | 324.76 | 26 | 269.19 | 14 | 90.39 | 1 | 6.13 | 13 | 27.64 |
| 2015-16 | 19 | 160.27 | 17 | 148.34 | 2 | 11.93 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 159 | 1,692.97 | 24 | 473.68 | 135 | 1,219.29 | 119 | 985.79 | 80 | 571.05 | 39 | 114.23 |

Source: Departmental figures. EC: Estimated Cost.

It would be seen from above table that:

- Of 159 works sanctioned at an estimated cost of ₹ 1,692.97 crore, 24 works (estimated cost: ₹ 473.68 crore) had not been taken up for execution as of March 2016 due to non-completion of codal formalities⁶³.
- Out of 119 works to be completed by March 2016, 39 works with an expenditure of ₹ 114.23 crore were lying incomplete due to site disputes, delay in approval of consultancy services and finalisation of tenders and delay by the contractors. Of this, 13 works sanctioned for more than five years were lying incomplete in spite of incurring an expenditure of ₹ 65.46 crore. Non-completion of works for long

⁶³ Non-availability of encumbrance free sites, non-approval of designs and drawings, non-completion of consultancy services for construction of bridges and delay in finalisation of tendering process.

periods raise the possibility of damage to partially executed works besides time and cost overruns.

- Of 80 works completed during 2011-16, three works sanctioned between January 2007 and March 2009 for ₹ 39.22 crore in Hamirpur NHs division were completed (March–September 2015) at a cost of ₹ 55.42 crore after a delay of 36 to 78 months which resulted in cost overrun ₹ 16.09 crore (41 per cent).

The concerned EEs stated (April to June 2016) that the works could not be executed/ completed in a timely manner due to limited working seasons, bad weather, delay in acquisition of land and finalisation of tendering process. The reply is not tenable as non-obtaining of various clearances before execution of works and delay in finalisation of tenders indicated lack of proper planning and effective pursuance of procedural formalities necessary for timely completion of projects.

2.3.7.2 Non-completion of consultancy work for up-gradation

GOI sanctioned (May-July 2010) ₹ 14.53 crore including agency charges of three per cent to HPPWD for preparation of detailed project reports (DPRs) relating to rehabilitation and upgradation to two lanes/ two lane with paved shoulders of six NHs⁶⁴ (aggregate length: 640 kms) under the National Highways Inter Connectivity Improvement Project (NHICIP). MORTH awarded (May-August 2010) the consultancy works for ₹ 12.52 crore to six consultants stipulated to be completed by April to July 2011. As per the terms of reference, the scope of works to be done by the consultants included detailed survey, alignment option, assisting the client in obtaining various clearances from concerned departments and preparation of DPRs.

Audit noticed that finalisation of the DPRs were delayed due to delays in acquisition of land and obtaining forest/ environment clearances and none of the DPRs was finalised as of June 2016. Besides, two roads (NH-20 and NH-88) were transferred (September 2016) to National Highways Authority of India for their maintenance and development as four lane. Due to non-completion of consultancy services/ non-finalisation of the DPRs, none of the projects could be taken up for execution which rendered unfruitful the expenditure of ₹ 7.50 crore⁶⁵ incurred upto June 2016 on consultancy services.

The Engineer Liaison Officer, MORTH stated (July 2016) that efforts to complete the project were being made. In the exit conference, the ACS stated that the claim for agency charges would be raised after verifying the records.

2.3.7.3 Abnormal delay in the execution of work

Widening and strengthening of Pinjor–Baddi-Nalagarh-Swarghat NH 21-A under Solan NHs division was approved (October 2009) by MORTH for ₹ 22.73 crore. The work was awarded (July 2010) to a contractor for ₹ 17.56 crore for completion within three years. The contractor executed work of ₹ 15.45 crore (88 per cent) upto May 2016. Audit noticed that the Department had not ensured forest clearance and encumbrance free land in alignment of the NHs before award of the work and land

⁶⁴ NH-20, NH-20A, NH-22, NH-70, NH-72B and NH-88.

⁶⁵ Infuctious expenditure on consultancy services/ DPRs of two roads transferred to NHAI for development into four lane: ₹ 1.81 crore and unfruitful expenditure on consultancy services/ DPRs of other four roads: ₹ 5.69 crore.

acquisition award of most of the land was passed between December 2015 and February 2016. Further, MORTH had noticed (May 2015) defects in workmanship of the executed work which was required to be rectified at the cost of the contractor. MORTH had also brought out poor contract management by the Department resulting in cost overrun due to delay and held the Department responsible for not taking any penal action against the contractor. Accordingly, MORTH proposed recovery of price escalation beyond the scheduled date of completion from agency charges and directed the Department to strictly monitor the pace of the work. In the meantime, the contractor had been released payment of ₹ 15.45 crore including escalation charges of ₹ 2.31 crore upto May 2016.

Thus, commencement of the work without completion of pre-requisite formalities of forest clearance and land acquisition resulted in non-completion of the work in a timely manner and the Department had also to bear the cost escalation charges of ₹ 2.31 crore.

2.3.8 Four laning of Parwanoo-Solan section

GOI approved (March 2015) the development of Parwanoo-Solan section of National Highway-22 (New NH-5) for ₹ 1,247.43 crore to be executed through NHAI under the National Highways Development Project (Phase III). The work was awarded (March 2015) to a firm⁶⁶ for ₹ 748.77 crore for completion within 30 months from appointed date (September 2015). A contract agreement (CA) was signed (April 2015) between the firm and NHAI. For coordination and smooth execution of the work, there existed a State Support Agreement (April 2010) between HPPWD and MORTH. Audit noticed the following:

2.3.8.1 Delay in providing land/ right of way to contractor

As per clause 8.2 and 8.4 of the CA, the contractor was to be provided right of way (ROW) by the NHAI free from encumbrances in 90 *per cent* of the total length (about 39 kms) on appointed date and in the balance length within 90 days of the appointed date. As per the CA, 10 *per cent* of the work was to be completed within 180 days from appointed date.

Audit noticed that the NHAI had made available ROW free from encumbrances in 11 kms (28 *per cent*) upto July 2016 and the remaining land could not be made available for want of land acquisition, utility shifting, tree cuttings and encroachments. Resultantly, only 2.74 *per cent* (₹ 20.49 crore) of the work could be executed as of June 2016 against 10 *per cent* required as per CA. Further, due to failure of NHAI to provide the required ROW, the contractor invoked (June 2016) the provisions of the CA for deemed withdrawal from the balance works and lodged claim for damages on the plea of financial loss due to idle men and machinery.

NHAI stated (July 2016) that the delay was due to felling of trees and court cases. Reply is not acceptable as land free from all encumbrances should have been provided to the contractor to achieve milestones as per CA.

⁶⁶ M/s G R Infraprojects Limited.

2.3.8.2 Non-compliance of conditions of contract by the contractor

Audit noticed that the contractor/ NHAI had not complied with the conditions of the contract agreement/ environment clearance as indicated below:

- As required under Rules 72, 75 and 79 of Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015, the contractor had not secured permission from State Industries Department for transportation and utilisation of minerals as of June 2016. Further, against demand of royalty of ₹ 1.80 crore raised (June 2016) by the Industries Department, the contractor paid (June 2016) only ₹ 60 lakh as advance.
- In violation of condition of environment clearance (May 2007) granted by the GOI, Ministry of Environment and Forests under Environment Impact Assessment Notification, 1994, there was unscientific and unregulated digging along the road being maintained by the NHAI which reportedly resulted in a land slide near Saproon Chowk, Solan.
- Against 20 dumping sites at five locations identified for approximately 6,50,000 cum of surplus muck, only three dumping sites had been approved as of June 2016. Resultantly, the muck generated was being disposed off in unscientific manner at unapproved sites causing damage to the ecology/ environment.

NHAI stated (June and July 2016) that necessary approval for utilisation of minerals sought (April 2016) from the Industries Department was awaited and the contractor had been asked to pay damages to the Forest Department.

2.3.9 Contract management

Contract management includes negotiating the terms and conditions of contract and ensuring their compliance as well as documenting and negotiating any changes that may arise during its implementation.

2.3.9.1 Avoidable cost due to change in conditions and re-tender of work

As per MORTH instructions of October 2011, use of batch type hot mix plant was mandatory from April 2013 for all original bituminous works. However for States in hilly region, Chief Engineer of the concerned project zone in MORTH was to decide on it at the time of sanctioning the estimates on case to case basis. MORTH accorded (January 2013) administrative approval and expenditure sanction of ₹ 12.10 crore for improvement of riding quality work of NH-21 under NH division Pandoh stipulated to be completed by March 2014.

Audit noticed that the CE invited (February 2013) tenders including condition of use of hot mix plant as part of plant and machinery. However, while awarding (July 2013) work to a contractor for ₹ 9.70 crore, the Department stipulated condition of use of batch type hot mix plant and the work was to be completed by July 2014. The contractor sought (July 2013) revision in the awarded rates due to the modification of the stipulations mentioned in the tender and the unviability of this type of plant costing ₹ three crore to ₹ four crore for bituminous work of approximately only ₹ three crore.

The Department thereafter cancelled (November 2013) the tender and re-invited (December 2013) fresh tenders with the same requirement of hot mix plant as in the first instance. Response was received only from the above same contractor. The work was awarded (September 2014) to this same contractor for ₹ 10.75 crore for completion by March 2016. The contractor commenced the work in October 2014 and had executed work of value of ₹ 8.51 crore upto June 2016.

Audit observed that inclusion of requirement of batch type hot mix plant that was not in the NIT at the time of award of work was both irregular and injudicious. Further, instead of cancelling the tender, the Department could have removed the additional stipulation added at the award of work stage and awarded the work on the terms and conditions stipulated in the original NIT. Re-inviting tender was unnecessary. Thus, inclusion of condition not mentioned in NIT and thereafter cancellation of tender and seeking fresh bids instead of commencing work as per the original NIT resulted in avoidable additional cost of ₹ 1.05 crore⁶⁷.

The EE, NH Division, Pandoh stated (June 2016) that extra cost was due to hike in price of material during the time involved for re-tendering process. The reply is not tenable as batch type hot mix plant was not viable for hilly region and the Department should have assessed its viability at the time of initial award of the work.

2.3.9.2 Non-recovery of royalty from contractor and agency charges on cost escalation

Work of widening/strengthening of existing single/intermediate NHs Jalandhar-Mandi with geometric improvement to two-lane carriageway in kms 58.400 to 105.0 (except in kms 69 to 71.400) of NH-70 under Hamirpur NHs division was approved (June 2010) by MORTH for ₹ 99.06 crore. The work was awarded (March 2011) to a contractor for ₹ 63.86 crore for completion by April 2013. Audit noticed that:

- The work was taken up for execution by the contractor in May 2011 and completed in September 2015 at a cost of ₹ 88.86 crore after a delay of 16 months. The Department had allowed payment of ₹ 11.88 crore to the contractor on account of cost escalation. However, MORTH had not released agency charges of ₹ 1.06 crore against the payment made for cost escalation and the Department had not taken action for release of the agency charges from MORTH by pursuing the matter with full justification of extension of time.
- The contractor had used 3,36,981 MTs of minor minerals on execution of the work upto 34th running bill but had not submitted 'M form' as evidence of payment of royalty as per instructions of the State Government. However, payment for the work executed was released to the contractor without deduction of royalty for ₹ 1.35 crore from running bills.

The Executive Engineer stated (June and August 2016) stated that the contractor was granted time extension on genuine reasons and due to large quantity of minor minerals involved in the work, it was not possible to maintain proper records of each 'M' form of the contractors. The reply is not acceptable as MORTH had not taken cognizance of

⁶⁷ Initially awarded amount: ₹ 9.70 crore, subsequent awarded amount: ₹ 10.75 crore and difference: ₹ 1.05 crore.

the extension of time and withheld the agency charges of ₹ 1.06 crore against the payment made for cost escalation. Further, it was obligatory for the department to obtain proper bills/ 'M' form while releasing the payments.

2.3.10 Quality control and monitoring

2.3.10.1 Quality assurance tests of works

The MORTH guidelines (September 2002) provides for establishment of three levels of supervision by the State PWD. Independent tests are to be conducted by concerned Engineer-in-Charge under level-I, 10 *per cent* of such tests in the presence of concerned EE under level-II and quarterly visits of works by concerned SE and recording detailed inspection results about the quality and progress of works under level-III.

Audit noticed that independent tests were conducted by the Engineers-in-charge in respect of only original works. However, 10 *per cent* of such tests were not ensured in the presence of EEs as stipulated under the rules. Further, against 103 inspections required to be conducted by the SEs during 2011-16 only 35 inspections were conducted resulting in shortfall of 68 inspections (66 *per cent*).

2.3.10.2 ATRs on Inspection Notes

A Quality Control and Design Wing (QCDW) headed by Engineer-in-Chief (E-in-C) was established in the HPPWD to deal with matters pertaining to quality control of works executed. During 2011-16, 111 inspection notes were issued by the QCDW pointing out deficiencies in execution of works with the directions to rectify the same. Of these 111 inspection notes, Action Taken Reports (ATRs) were required in 74 cases (67 *per cent*). However, the concerned NHs divisions had not submitted any ATRs during above period negating the objective of quality inspections made by the QCDW.

2.3.10.3 Engagement of quality control consultant by contractor

To ensure quality of construction operations, the Standard Bidding Document (SBD) requires the contractor to engage a competent and independent quality control consultant approved by the CE (NHs). The payment of quality control consultant was to be borne by the contractor. In case the contractor failed to engage the consultant for whole or part of the period of execution, the CE (NHs) could order employment of consultant at the cost of the contractor or order the departmental staff to carry out the quality control checks and deduction at the rate of 1.5 *per cent* of the total cost of work was to be made from contractor's bills.

Audit noticed that no quality control consultant was engaged by the contractors in periodical renewal work of NH 22 (kms 200 to 224) under Rampur NHs division completed (March 2016) at a cost of ₹ 3.98 crore and improvement of riding quality work of NH-21 (kms 262 to 273 and kms 284.920 to 286.020) under Pandoh NHs division executed to the extent of ₹ 8.51 crore upto June 2016. The Department had also not deducted ₹ 18.73 lakh (NH-22: ₹ 5.97 lakh and NH-21: ₹ 12.76 lakh) from contractors bills for the quality control inspection in respect of these works carried out (September 2014 and April 2016) by the SE (QCDW) and EE of NH Pandoh division

respectively. In the inspection notes, the SE (QCDW) and EE had pointed out certain deficiencies⁶⁸ in the work and termed the quality of the work as poor and unsatisfactory.

The E-in-C (QCDW) stated (June 2016) that the status of removal of defects by the contractor was awaited from the concerned NHs division.

2.3.10.4 Monitoring mechanism

As per MORTH guidelines, the contractor is required to furnish a working programme of execution of every contracted work to the division for monitoring and necessary action for removal of bottlenecks and slippages by the EEs/ SEs concerned. A consolidated statement is further required to be sent to MORTH by the respective SEs of the Department. Audit noticed that although working programmes for execution of works by the contractors were being submitted, no consolidated statements with regard to action taken for removal of bottlenecks and slippages were submitted to the MORTH by the concerned SEs during 2011-16 as required.

Further, a separate Planning and Monitoring cell in the office of the E-in-C is functioning to monitor periodical reports on physical and financial achievements received from the field offices. Audit noticed that monitoring of periodical progress reports for suitable directions to the field offices had not been done at apex level during 2011-16 which led to non-prioritisation of incomplete works for speedy completion.

2.3.11 Conclusion

The performance audit highlights the lack of systemic annual plans with clear milestones and timelines for development and maintenance of national highways and shortfalls in achievement of targets for upgradation, repair and maintenance. Financial management was weak as the Department failed to utilise the GOI allocations optimally and there were instances of irregular diversion of deposits towards departmental expenditure and public works deposits, non-reimbursement of expenditure on maintenance and non-release of agency charges by GOI. Execution of works was marred by delays in preparation/ finalisation of detailed project reports, lack of synchronization of allied activities, failure to obtain requisite clearances in a timely manner and unfruitful expenditure and cost overruns. Failure to effectively monitor and ensure adherence to stipulations relating to quality control tests and inspections and non-engagement of quality control consultants provided no assurance as to action taken to rectify defects and the quality of the works done.

⁶⁸ NH 22: Non-maintenance of quality control and temperature registers at site, non-conducting of tests, thickness of semi dense bitumen macadam of 20 mm instead of 25 mm at kms 203.060, low bituminous content, etc., and NH 21: Absence of technical staff, non-conducting of quality control tests, etc.

2.3.12 Recommendations

In light of the audit findings, the Government may consider:

- Preparing a comprehensive plan which provides an overall template for upgradation and maintenance of the national highways (NHs) with clear milestones and timelines and fixing annual targets of widening and strengthening accordingly;
- Preparation and compliance with all checklists regarding availability of land, forest clearances and other codal formalities before approval and award of road works so as to ensure their execution within the stipulated period; and
- Ensuring strict compliance with regard to quality control tests/ inspections to be exercised at various stages by different authorities and rectifying defects pointed out during quality control checks.

The matter was referred to the Government in September 2016. Its reply had not been received (December 2016).

Revenue Department

2.4 Preparedness for Disaster Management in Himachal Pradesh

A performance audit of disaster management with specific focus on earthquake and fire was conducted to ascertain the preparedness of the State in respect of reducing vulnerabilities, disaster prevention, mitigation and response. The review brought out weaknesses in the functioning of institutional structures and processes as well as inadequate disaster preparedness that undermined the ability of the State machinery to quickly and effectively respond to disasters. Some of the significant audit findings are as under:

Highlights:

- *State Disaster Management Plan/ District Disaster Management Plans were not updated annually as required under Disaster Management Act, 2005. Of 41 main Departments in the State, 28 Departments have not prepared disaster management plans as of June 2016.*
(Paragraph 2.4.6.1)
- *An amount of ₹ 18.96 crore was irregularly diverted from the State Disaster Response Funds for works not related to natural calamities.*
(Paragraph 2.4.7.3 (a))
- *Emergency Operation Centers were yet to be fully equipped with necessary communication systems and Village Disaster Management Committees were not established in every district. Capacity building/ training on disaster preparedness was not imparted to doctors and para-medical staff as of June 2016.*
(Paragraphs 2.4.8.1, 2.4.9.2 and 2.4.9.3 (i))
- *Lifeline buildings had not been identified for retro-fitting to withstand seismic activity. Construction of seismic resistant buildings/ houses in rural areas had not been ensured as of June 2016. Training to engineers, builders and artisans on construction of seismically safe buildings was not adequate.*
(Paragraphs 2.4.10.1, 2.4.10.2 and 2.4.10.3)
- *Techno-legal regime with regard to follow up of construction of buildings on slope above maximum permissible limit of 45 degree had not been established. Action was not taken to act upon the cases of unauthorised/ haphazard constructions. Structural safety audit of lifeline buildings had also not been conducted as of July 2016.*
(Paragraphs 2.4.10.4 and 2.4.10.5)
- *There were 3,243 gram panchayats in the State. However, fire posts were established in only 24 gram panchayats. Only 71 per cent fire vehicles were in good condition.*
(Paragraphs 2.4.11.3 and 2.4.11.4)

2.4.1 Introduction

The State of Himachal Pradesh is prone to various types of disasters causing destruction of life and property. Government of India (GOI) had identified 33 types of hazards of which the State is prone to 25 hazards. Seismic sensitivity of the State is high and seven⁶⁹ out of 12 districts in the State have over 25 per cent of their area falling in seismic zone V (very high damage risk zone). The remaining part of the State

⁶⁹ Bilaspur (25 per cent); Chamba (53 per cent); Hamirpur (91 per cent); Kangra (99 per cent); Kullu (53 per cent); Mandi (97 per cent) and Una (37 per cent).

falls in seismic zone IV (high damage risk zone). The State also experiences disasters in the form of forest and building fires with overall 8,534 fire incidents reported during 2011-16 causing an estimated loss of property valued at ₹ 451.30 crore. A total of 6,345 persons lost their lives and 30,184 cattle heads perished in disasters during 2011-16 in the State. A performance audit of disaster management in the State was taken up with the view to assessing the level of preparedness of the State to handle disaster and mitigate its impact.

2.4.2 Organisational set-up

The State Disaster Management Authority (SDMA) under the chairmanship of the Chief Minister is responsible for co-ordinating and implementing all disaster management affairs in the State. The SDMA is run through a State Executive Committee (SEC) with Chief Secretary as its chairman and four other members. At district level, Deputy Commissioner (DC) as Chairman of District Disaster Management Authority is assisted by Additional District Magistrate in co-ordination with other line departments. At *Panchayat* level, Village Disaster Management Committees function under the control of the *Pradhan* of *Gram Panchayat*.

2.4.3 Audit Objectives

The objectives of the performance audit were to ascertain whether:

- strategic and annual plans were prepared covering all major aspects of disaster management;
- proper institutional mechanism had been set up for pre-disaster preparedness (risk assessment and reducing vulnerability) and effective response (rescue, relief and rehabilitation);
- awareness and capacity building (funds, infrastructure, equipment, training and drills) was adequate; and
- adequate monitoring and evaluation mechanism existed.

2.4.4 Audit Scope and Methodology

The performance audit covered the period 2011-16 and was conducted from April 2016 to June 2016 through test-check of records in the Disaster Management Cell (DMC) and four⁷⁰ out of 12 districts (33 *per cent*) in the State selected by adopting PPSWOR⁷¹ method of sampling taking population of the district as a sampling parameter. Information and data was collected from five Departments⁷² in selected districts.

The audit objectives, criteria and scope of audit were discussed with the Additional Chief Secretary (Revenue) in an entry conference held in May 2016. The audit findings were discussed in an exit conference held with the Additional Chief Secretary (Revenue) (ACS) in November 2016. The views of the State Government have been appropriately incorporated in the Report.

⁷⁰ Chamba, Kangra, Kullu and Shimla.

⁷¹ Probability Proportional to Size without Replacement.

⁷² Fire, Health and Family Welfare, Police, Public Works and Town and Country Planning.

2.4.5 Audit Criteria

The audit criteria were derived from the following sources:

- Disaster Management (DM) Act, 2005;
- Himachal Pradesh State Policy on Disaster Management, 2011;
- Himachal Pradesh State Disaster Management Rules, 2011;
- State Disaster Management Plan and Departmental Manual/ Policies/ Circulars/ Rules and regulation;
- National Disaster Management guidelines (scaling, type of equipment and training of fire services), 2012; and
- National Disaster Management Guidelines (Management of earthquakes), 2007.

Audit findings

2.4.6 Planning

The National as well as State Disaster Management Policy recognizes the importance of preparedness and planning for disaster. A paradigm shift in approach has taken place from the erstwhile relief-centric response to a proactive prevention, mitigation and preparedness-driven approach aimed at conserving developmental gains and minimizing losses to lives, livelihood and property.

2.4.6.1 Institutional Set-up

The Disaster Management Act, 2005, envisages establishment of designated agencies and dedicated structures with defined role and responsibilities for management of disasters at the State and district levels. Audit found gaps in the establishment and functioning of the institutional mechanisms as summarised in **Table-2.4.1** below.

Table-2.4.1: Institutional set-up for disaster management

| Authority | Mandate/ Activities | Audit findings |
|--|---|--|
| State Disaster Management Authority (SDMA) | <p>SDMA headed by Chief Minister and eight other members was constituted in June 2007 and was to meet as and when necessary.</p> <p>The State Authority has the responsibility for laying down policies and plans for disaster management in the State and approve the State/ Departmental Disaster Management Plans.</p> | <ul style="list-style-type: none"> • SDMA first met in December 2011 after four years of its constitution and thereafter four meetings were held during 2013-16. The decisions taken in the meetings such as establishment of State Disaster Response Force, updating of plans and setting up of emergency operation centres have not been fully implemented. • The State Disaster Management Plan prepared in the year 2012 was to be updated annually to identify vulnerability of areas in the State to different forms of disasters, measures required for prevention and mitigation of disasters and roles and responsibilities of various departments in responding to disaster situation. The Plan had, however, not been updated as of October 2016. • Departmental disaster management plans have been prepared by only 13 out of 41 departments in the State. Of these, plans of five departments were approved by the State Executive Committee (SEC) in January 2016 but could not be implemented as of June 2016 for want of approval of SDMA. |

| | | |
|--|--|--|
| State Executive Committee (SEC) | SEC was required to be constituted in the State. SEC consisting of Chief Secretary and four other Secretaries as its members was to assist SDMA in discharge of its functions and was required to meet twice every year. | SEC was constituted in May 2009 and met only on three occasions during 2011-16 against the required ten meetings. Due to non-conducting of required meetings, decisions taken (establishment of State Disaster Response Force, updating of plans and setting up of emergency operation centres) during 2012-13 by the SDMA were not implemented as of March 2016. |
| State Advisory Committee (SAC) | The SAC to be constituted consisting of experts in the field of disaster management to make recommendations on various aspects. | SAC was constituted in September 2014 by nominating seven members. Of these, only three members have submitted their expertise/ experience resume to the SDMA as of June 2016. Four meetings of the committee were also held during 2014-16 but the recommendations made by the committee relating to training of first responders (local community) were not fully adhered to. As against the target training of 400 first responders during 2015-16, only 22 persons were provided training as of July 2016. |
| District Disaster Management Authorities (DDMAs) | DDMAs were to prepare the District Disaster Management Plan and coordinate and monitor the implementation of the National/ State Policy and the National/State/ District Plan. | The State Government had established DDMAs headed by the Deputy Commissioners (DCs) of the districts concerned in June 2007. Though the district disaster management plans (DDMPs) of all 12 districts had been prepared between 2012-13 and 2014-16, these were not updated annually as per the Disaster Management Act, 2005. |

The Department stated (November 2016) that targets for training of first responders could not be achieved due to non-preparation of training modules and non-availability of resource persons and added that all the remaining departments have been directed to prepare disaster management plans immediately.

2.4.7 Financial Management

The State Disaster Response Fund (SDRF) comprising Central and State share in the ratio of 90:10 was set up in April 2010 for financing post calamity relief assistance as per the recommendations of the 13th Finance Commission. A National Disaster Response Fund (NDRF) was also created at the national level by the GOI with the objective of supplementing State's efforts in providing relief assistance during severe calamities. The funds received under SDRF/ NDRF during the period 2011-16, year-wise expenditure and closing balances are given in **Table-2.4.2** below.

Table-2.4.2: Year-wise position of funds received and expenditure thereagainst during 2011-16
(₹ in crore)

| Year | Opening Balance | Central share | | State share | Total (3+4+5) | Grand Total (2+6) | Expend-iture (8) | Closing Balance (7-8) |
|--------------|-----------------|---------------|---------------|--------------|------------------|----------------------|---------------------|--------------------------|
| | | SDRF (3) | NDRF (4) | | | | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 2011-12 | 8.32 | 123.57 | 42.91 | 13.73 | 180.21 | 188.53 | 184.68 | 3.85 |
| 2012-13 | 3.85 | 129.75 | 45.98 | 14.42 | 190.15 | 194.00 | 184.97 | 9.03 |
| 2013-14 | 9.03 | 136.24 | 95.84 | 15.14 | 247.22 | 256.25 | 247.20 | 9.05 |
| 2014-15 | 9.05 | 143.06 | 63.88 | 15.89 | 222.83 | 231.88 | 222.83 | 9.05 |
| 2015-16 | 9.05 | 212.40 | 71.53 | 23.60 | 307.53 | 316.58 | 315.42 | 1.16 |
| Total | | 745.02 | 320.14 | 82.78 | 1,147.94 | | 1,155.10 | |

Source: Information supplied by the Disaster Management Cell.

2.4.7.1 Investment of balances available under SDRF

GOI guidelines prescribe that the SDRF shall be constituted under the interest bearing section of the Public Account. The State Government was to invest the balances under SDRF and pay interest to the SDRF at the rate applicable on over drafts under the scheme of Reserve Bank of India. The interest was to be credited on a half yearly basis.

Audit noticed that the State Government had neither made any investment from the SDRF nor paid any interest to the SDRF. There were closing balances ranging between ₹ 3.85 crore and ₹ 9.05 crore during 2011-15 under SDRF in the Public Account which could have been invested. Audit analysed that the State Government thereby suffered a potential loss of interest of ₹ 2.33 crore⁷³.

2.4.7.2 Constitution of State/ District Disaster Mitigation Fund

As per Section 48 of the Disaster Management Act, 2005, the State Government was required to establish State and District Disaster Mitigation Funds in order to meet expenditure on projects for mitigation, prevention and preparedness for disaster. It was noticed that State and District Disaster Mitigation Funds have not been constituted even after a lapse of more than 11 years since the enactment of the DM Act, 2005.

The Department assured (November 2016) that budget provision for the establishment of State/ District Disaster Mitigation Fund would be made shortly.

2.4.7.3 Irregular utilisation of funds from SDRF

Guidelines of SDRF issued in September 2010 provided that expenditure on works relating to disaster preparedness and mitigation and regular maintenance and repairs should not be met from the SDRF/ NDRF but should be carried out through the State budget. SDRF funds are meant only for post disaster relief assistance and rehabilitation. Audit noticed the following:

(a) ₹ 18.96 crore⁷⁴ meant for damaged works/ relief measures were diverted (2011-16) for execution of works that did not qualify as natural calamities as no reports on damages from Revenue authorities as required under Relief Manual were found on record. Of these, funds amounting to ₹ 15.19 crore⁷⁵ were spent on 694 works of repair of residential buildings and Government office buildings and ₹ 3.77 crore⁷⁶ were expended on 209 fresh works like construction of roads, water storage tanks, water supply schemes, playground, footpath, car parkings and beautification works which are not permissible under SDRF. The Deputy Commissioners of Chamba and Kangra stated (June 2016) that the expenditure was met out of disaster funds due to non-availability of funds while CEO Kullu stated that

⁷³ Computed on yearly basis on the opening balances of the respective years by taking into account the average repo rate of RBI.

⁷⁴ Chamba: ₹ 2.69 crore (126 works); Kangra: ₹ 3.36 crore (241 works); Kullu: ₹ 7.32 crore (216 works) and Shimla: ₹ 5.59 crore (320 works).

⁷⁵ Chamba: ₹ 2.69 crore (126 works); Kangra: ₹ 2.89 crore (223 works); Kullu: ₹ 5.93 crore (209 works) and Shimla: ₹ 3.68 crore (136 works).

⁷⁶ Kangra: ₹ 0.47 crore (18 works); Kullu: ₹ 1.39 crore (seven works) and Shimla: ₹ 1.91 crore (184 works).

the buildings were damaged due to heavy rain, landslide, mild turmoil, etc. The replies are not acceptable as such works are not admissible under SDRF guidelines.

(b) As per instructions (April 2015) of GOI, utilisation of SDRF on repair of damaged higher secondary schools/ colleges and other educational institutions/ buildings except damaged primary school buildings is prohibited. However, ₹ 33.40 lakh was sanctioned by the CEOs of Chamba and Kangra districts during 2015-16 for repair of 24 Government High and Senior Secondary Schools and one private school in violation of above instructions. The CEOs of Chamba and Kangra stated (June 2016) that the instructions could not be adhered to due to rush of work.

2.4.8 Adequacy of Infrastructure for response to disaster

2.4.8.1 Setting up of Emergency Operation Centres

The Himachal Pradesh State Policy on Disaster Management, 2011, provides for setting up of Emergency Operation Centres (EOCs) at the State and district level. The main objective of setting up of the centres was to disseminate and share data relating to disasters and vulnerable areas with the line departments and other organisations/ stakeholders. These EOCs were to act as nerve centres for supporting, co-ordinating and monitoring the disaster management activities.

The State Government entered (October 2013) into an agreement with a firm for setting up of EOCs at State and district level for ₹ 60 lakh with a validity period of three years and the firm was paid ₹ 24 lakh as of June 2016. Audit noticed that:

- The State Government had incurred an expenditure of ₹ 20.26 lakh⁷⁷ for setting up of State Emergency Operation Centre (SEOC) at HP Secretariat as of June 2016. However, only office equipment such as computers, EPABX and LCDs had been installed and communication equipment *viz.*, satellite phones, VSAT, HAM radio sets and decision support system were yet (June 2016) to be procured for making the Centre fully operational.
- Funds of ₹ 2.55 crore were released (October 2014-February 2016) to DCs of 12 districts for establishment of District Emergency Operation Centres (DEOCs) with delay ranging between 12 and 28 months from the date of signing of agreement with the firm.
- In the four test-checked districts, against ₹ 1.05 crore⁷⁸ provided (October 2014-February 2016) for establishment of DEOCs, only ₹ 0.56 crore⁷⁹ (53 *per cent*) had been utilised as of June 2016. Out of this expenditure, only office equipment was provided at the Centres and communication equipment was yet to be procured.

2.4.8.2 State Disaster Response Force

The State Policy on Disaster Management provides for establishment of State Disaster Response Force for the purpose of specialised response to a threatening disaster situation or disaster emergencies.

⁷⁷ Equipment: ₹ 10.06 lakh and Building: ₹ 10.20 lakh.

⁷⁸ Chamba: ₹ 20 lakh, Kangra: ₹ 20 lakh, Kullu: ₹ 19.28 lakh and Shimla ₹ 45.55 lakh.

⁷⁹ Chamba: ₹ 19.13 lakh, Kangra: ₹ 9.84 lakh, Kullu: ₹ 11.33 lakh and Shimla ₹ 15.60 lakh.

The State Government released (February 2015) ₹ 1.15 crore to Centre of Excellence, Pandoh (₹ one crore) and Police Training Centre, Daroh (₹ 15.35 lakh) for procurement of training equipment for imparting training on disaster management to new entrants into the Police Services. However, neither was the State Disaster Response Force constituted nor were the funds utilised on purchase of equipment required for training of new entrants into the Police services. The entire amount of ₹ 1.15 crore remained unutilised as of June 2016.

The Department stated (November 2016) that matter for refund of unspent amount would be taken up with the Police Department as State Disaster Response Force had not been established.

2.4.9 Disaster prevention and preparedness activities

2.4.9.1 Capacity building

As per GOI instructions (April 2015), funds to the extent of five *per cent* of annual SDRF allocation can be utilised for capacity building. It was noticed that against allocation of ₹ 236 crore under SDRF during 2015-16, funds of ₹ seven crore (three *per cent*) were allocated for capacity building activity resulting in short allocation of ₹ 4.80 crore (two *per cent*) of required provision which indicated that the approach of the State was more relief centric as opposed to greater focus on capacity building.

Audit also observed that the State Government released ₹ 68.25 lakh⁸⁰ between April 2013 and February 2016 to DDMA Kullu and Shimla for capacity building on disaster management in the respective districts. Of this, only ₹ 9.34 lakh was utilised and balance amount of ₹ 58.91 lakh was lying unutilised with both the DDMA's as of June 2016. Non-organising of awareness camps, not conducting/ providing training and non-updating of DMPs indicated that these districts had not given serious attention to capacity building.

2.4.9.2 Community based disaster preparedness

The HP State Disaster Management Policy states that communities are not only the first to be affected in disasters but are also the first responders. Community participation ensures local ownership, addresses local needs and promotes volunteerism and mutual help to prevent and minimise damage. Networking of youth and women based organisations was to be done and training was to be provided on various aspects of response such as first aid, search and rescue, management of community shelters, psycho-social counselling, distribution of relief and accessing support from Government/ agencies. Community plans were to be integrated into the *Panchayat*, Block and District plans. Audit observed the following:

- There were 3,243 *Gram Panchayats* (GPs) consisting of 20,960 villages in the State as of March 2016. No village disaster management committee (VDMCs) had been established in these GPs except in Kullu district.

⁸⁰ Kullu: ₹ 36.25 lakh and Shimla: ₹ 32.00 lakh.

- In the four test-checked districts, there were 1,588 GPs consisting of 8,821 villages. Village response teams were not formed in any of these villages as of March 2016.

Thus, non-constitution of VDMCs and village response teams indicates lack of serious efforts towards ensuring community participation in disaster management as envisaged under the State Disaster Management Policy, 2011.

2.4.9.3 Medical preparedness for disaster

HP State Policy on Disaster Management states that medical preparedness is a crucial component of any disaster management plan and it includes formulation of disaster management plans for all hospitals and medical colleges for handling mass casualties, arranging for training and capacity building of medical teams, paramedics in trauma and psycho-social care, mass casualty management and triage. Audit noticed the following:

- (i) Disaster Management Plan in Health Department was prepared in 2014 but no training on mass casualty management, trauma care and emergency medicine had been imparted to doctors and para medical staff as of June 2016;
- (ii) There were 7,553 Accredited Social Health Activists (ASHA) in the State but training relating to disaster management had not been imparted to them;
- (iii) No database of trained medical staff like doctors, para-medical staff, etc., had been maintained and it could not be ascertained in audit as to how in the event of any disaster would health services be managed;
- (iv) Health Department had not fully formulated procedures for Emergency Casualty Management Preparedness (ECMP) and had only two trauma centres at Bilaspur and Kullu whereas vulnerable districts of Chamba, Kangra and Mandi falling in seismic zone V and prone to earthquakes had no trauma centre; and
- (v) In Chamba, there were only two ambulances and the trauma centre established at Kullu was running with existing staff from the district hospital.

The Department assured (November 2016) the establishment of trauma centres in the remaining districts shortly.

2.4.9.4 Search and Rescue

As per the State Policy, the SDMA and DDMA were to coordinate with civil, defence, National Cadet Corps (NCC), National Social Service (NSS), Nehru *Yuva Kendras* (NYKs), sports and youth clubs, women based organisations and Non-Governmental Organisations (NGOs) for disaster management. The members of these organisations were to be trained in various aspects of disaster management and more particularly in Search and Rescue (SAR) and medical first aid. Audit noticed that:

- Training on SAR was given only to personnel of Police and Home Guards. Personnel of other lead departments like Health, Public Works and Irrigation and Public Health were not provided training on SAR;

- Training on SAR was organised for only 27 participants/ coordinators of NSS, NCC, Scout and Guide of Education Department and representatives of NYKs and NGOs from the State in the year 2015. Apart from this, no SAR training was conducted for above organisations during 2011-16;
- The role of NGOs and local people to ensure their involvement and participation was not ensured while preparing the training module for youth volunteers; and
- Annual review of the standard operating procedure framed in 2012 for response to disaster by various stakeholders had not been carried out during 2013-16.

The Department stated (May 2016) that they had conducted a meeting on Government-NGO coordination and formation of an inter-agency group during 2011 but the matter could not be pursued due to shortage of technical staff.

2.4.10 Earthquake preparedness

2.4.10.1 Non-functioning of Hazard Safety Cells

As per the SDMP, a Building Safety Cell (BSC) headed by a Superintending Engineer (SE) was to be established at the headquarters of the Public Works Department (PWD) and in all district headquarters for dissemination of information to public for proper implementation of building codes. The BSC was to act as (i) an advisory cell to the State Government on the different aspects of building safety and (ii) consultant to the SDMA for retro-fitting of lifeline buildings such as hospitals, schools and office buildings.

The State Government had established State level hazard safety cell in July 2015 to ensure compliance of building byelaws and safe construction practices. It was also to provide technical support to the State Government in carrying out retro-fitting of lifeline buildings and systems. However, neither was advice regarding building safety aspects provided nor were lifeline buildings identified by this cell for retro-fitting as of June 2016.

HPPWD confirmed (July 2016) that vulnerable buildings have not been identified so far. It added that the design cell was pre-occupied with safe design activities of Government buildings and no advice has been conveyed to the Government.

2.4.10.2 Construction standards and status of houses in the State

As per the DM Act, 2005, the SEC was to examine the construction quality in the State and direct the district/ local authority concerned to secure compliance of rules and standards.

As per Census of 2011, there were 14.77 lakh houses (urban: 1.66 lakh and rural: 13.11 lakh) in the State. Construction of houses in urban areas is regulated by the provisions of the Town and Country Planning Act, Municipal Corporation Act and local bodies' regulations and building bye-laws. However, construction of buildings/houses (**Table-2.4.3**) falling under rural areas (89 *per cent* of total houses) is not regulated by any act or regulation. Construction of seismic resistant buildings in rural areas has, thus, not been ensured as of June 2016.

Table-2.4.3: Category/ make-wise number of houses in the State as per census 2011

(In numbers)

| Type of category | No. of houses in area | | Total | Percentage | |
|------------------------------|-----------------------|-----------------|------------------|------------|-----------|
| | Rural | Urban | | Rural | Urban |
| Mud and un-burnt brick walls | 2,57,506 | 8,412 | 2,65,918 | 17.44 | 0.57 |
| Stone wall | 4,96,902 | 15,453 | 5,12,355 | 33.65 | 1.05 |
| Burnt bricks wall | 5,15,330 | 1,35,602 | 6,50,932 | 34.90 | 9.18 |
| Concrete wall | 12,206 | 2,567 | 14,773 | 0.83 | 0.17 |
| Wood wall | 16,869 | 1,175 | 18,044 | 1.14 | 0.08 |
| Other material | 11,725 | 2,834 | 14,559 | 0.79 | 0.19 |
| Total | 13,10,538 | 1,66,043 | 14,76,581 | 89 | 11 |

Source: www.censusindia.gov.in

The Department stated (June 2016) that the *Panchayati Raj* Department had been directed to take immediate action for implementation of guidelines for construction of hazard resistant buildings in rural areas. The fact remained that 89 per cent of houses in the State are currently out of the ambit of rules/ regulations relating to safe construction, thereby posing risk to inhabitants in the event of disaster.

2.4.10.3 Training on construction of seismically safe buildings

The HP State Disaster Management Policy states that “Earthquakes do not kill people, inadequately designed and badly constructed buildings do”. The first step to improve the construction, quality and safety level of buildings is to prepare manpower trained in earthquake/ fire resistant construction technology. As such, engineers, architects, small builders, construction managers and artisans i.e. black smiths, carpenters, wire binders, etc., need to be trained. Audit observed the following:

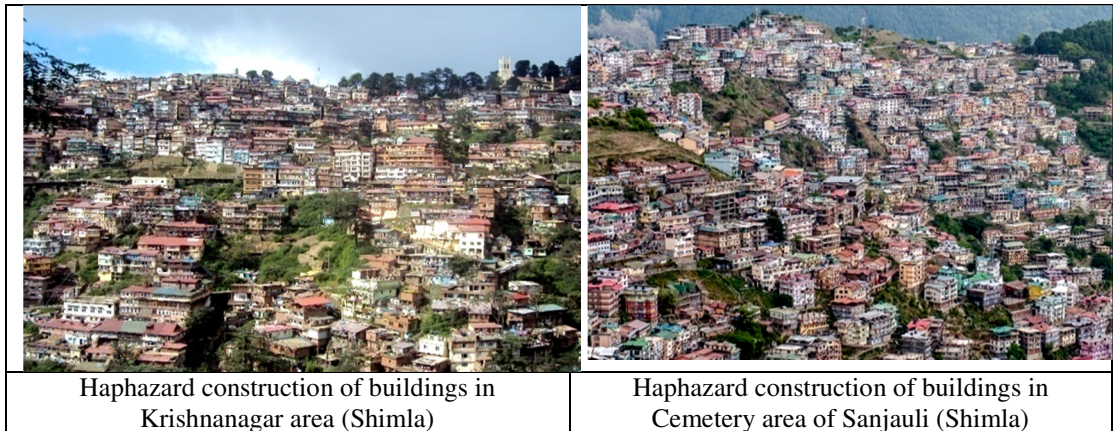
- Earthquake-related training was imparted to only 173 engineers and 48 architects/ draughtsmen during 2011-16 whereas no training was provided to small builders, construction managers and artisans in Government sector or private sector.
- After conducting (February 2013) mock exercise for earthquake preparedness in the State, the NDMA recommended training to engineers on rapid visual screening of buildings in every district and setting up of alternative communication systems in the State as well as in the districts. However, neither had such training been conducted in the State for engineers nor had alternate communication systems other than those provided by BSNL been set up as of June 2016.

2.4.10.4 Techno-legal regime for earthquake risk reduction

The NDM guidelines provide that State Government/ SDMA shall establish the necessary techno-legal mechanism to ensure that all the stakeholders like builders, architects, engineers and Government departments adopt regulation and enforcement for earthquake safe construction practices and provide for seismic safety in all design and construction activities. Audit noticed the following:

- The HP Town and Country Planning (TCP) Rules provides that maximum acceptable slope for construction of a building shall be 45 degree. Audit observed that the Municipal Corporation (MC) Shimla and TCP Department had not maintained records pertaining to enforcement of the regulation *ibid* on maximum acceptable slope in respect of 2,459 buildings constructed in cemetery

area of Sanjauli, Krishna Nagar, Kangnadhhar and other areas of Shimla falling under their jurisdiction during 2011-16. Thus, compliance with the regulation had not been established either by the MC Shimla or the TCP Department. Haphazard construction of buildings with no space for providing relief and rehabilitation may result in abnormally high casualties during disaster.



- Data relating to unauthorised constructions falling under the jurisdiction of MC Shimla was not available with MC. There was no mechanism to inspect and ascertain the number of unauthorised constructions. However, a complaint room had been set up where public could submit complaints relating to unauthorised constructions. During 2011-16, 526 cases of unauthorised construction came to notice of MC Shimla on the basis of public complaints and after issuing notices and giving reasonable opportunities of showing cause, 72 cases were decided by the MC by effecting recovery of ₹ 2.93 lakh and 454 cases were lying pending with the MC Shimla as of July 2016. Thus, ineffective enforcement of regulations enabled flourishing of unauthorised construction of buildings that were subsequently regularised by payment of fines jeopardizing provision of quick relief and assistance in the event of any calamity or disaster.
- Under six retention policies⁸¹ framed by the State Government between 1997 and 2009, 5,149 cases⁸² of unauthorised constructions were received for regularisation. Of this, 2,106 cases were regularised after making structural amendments and charging compounding fee while the remaining 3,043 cases were rejected because the deviations in these cases exceeded the permissible limit allowed in the respective policies. However, no action had been taken on these cases of unauthorised/ haphazard construction as of October 2016 and these structures pose a grave threat to life and property in case of earthquake.

Audit observed that extant policies and the manner of implementation of safety codes and building regulations had given a fillip to unauthorised constructions as there was a broadly increasing trend in the number of cases received for regularisation of unauthorised constructions.

⁸¹ For regularisation of irregularities such as additional storeys, deviation in setbacks, under size plots, lack of standard width paths and deviation from the approved building plan.

⁸² 1997: 747; 1999: 602; 2000: 899; 2002: 665; 2004: 929 and 2009: 1307.

2.4.10.5 Structural safety audit of lifeline structures

As per NDM guidelines, the State Government/ SDMA was to carry out rapid visual screening of lifeline structures for assessment of their vulnerability in the event of disaster.

Audit noticed that structural safety audit of lifeline structures in the State had not been carried out by the Town and Country Planning (TCP) Department as of July 2016. However, as per a study conducted (April 2014-July 2015) by MC Shimla through the National Institute of Technology, Hamirpur, of 300 lifeline buildings selected for study in Shimla city, 249 (83 per cent) were found unsafe. In the absence of an authoritative structural safety audit of lifeline buildings in the State, the vulnerability of buildings to disaster could not be assessed thus posing danger to life and property in the eventuality of any disaster.

The Department assured (November 2016) that structural safety audit of lifeline structures would be done by the Department in conjunction with the Town and Country Planning Department.

2.4.11 Fire Services

In order to respond to fire disaster, one Fire Training Centre, 22 Fire Stations and 15 Fire Posts have been established in the State under the overall control of Director, Fire Services. During 2011-16, 8,534 fire incidents occurred in the State causing an estimated loss of property valued at ₹ 451.30 crore as given in **Table-2.4.4** below.

Table-2.4.4: Position of fire incidents that occurred in the State during 2011-16

(₹ in crore)

| Year | No. of fire incidents | Estimated loss of property |
|--------------|-----------------------|----------------------------|
| 2011-12 | 1,235 | 86.76 |
| 2012-13 | 2,435 | 75.58 |
| 2013-14 | 1,488 | 127.76 |
| 2014-15 | 1,682 | 89.10 |
| 2015-16 | 1,694 | 72.10 |
| Total | 8,534 | 451.30 |

Source: Departmental figures.

2.4.11.1 Fire safety clearances

The NDM guidelines stipulate that there should be mandatory clearance from the Fire Service Department for all high rise buildings, residential clusters, colonies, business centres, malls, etc., to prevent fire hazards and avoid loss of life and property thereof. The State Government was also to charge a token fee for inspecting and giving fire clearances besides imposition of penalties for violation of rules.

Audit noticed that no such mechanism had been put in place by the Department for fire safety clearances of buildings and imposing penalty against the defaulters as of June 2016. Resultantly, the Fire Department was not in a position to take any effective action against the defaulters. Besides, no survey/ rating of fire vulnerable buildings was conducted as of August 2016 due to which no preventive measures for fire vulnerable buildings could be initiated.

2.4.11.2 Establishment of Fire Stations

As per norms fixed by GOI (September 2014), one fire station is to be set up for a population of two lakh in the State. The population of the State as per Census 2011

was 68.57 lakh. As such, 35 fire stations were required to be established. Against this, only 22 fire stations (63 *per cent*) have been established as of June 2016.

The Chief Fire Officer Shimla stated (July 2016) that fire stations and fire posts were being opened in phased manner to fulfill the requirement.

2.4.11.3 Establishment of Fire Posts at block/ GP level

NDM guidelines provide for setting up of Fire Posts (FPs) at the block/ GPs level to improve the reach of the fire services. The monitoring of these FPs was to be done either through civil defence volunteers from the village or home guards. Audit observed that there were 3,243 GPs in the State as of March 2016 but FPs had been set up in only 24 GPs.

2.4.11.4 Availability of fire fighting vehicles

The State Government had approved (April 2014) requirement of 154 fire fighting vehicles to manage fire disasters in the State. Position of requirement and availability of vehicles is as detailed in **Table-2.4.5** below.

Table-2.4.5: Position of availability of vehicles in fire services as of June 2016

(In numbers)

| Sl. No. | Particulars | Approved fleet strength | Holding as of June 2016 | Shortfall (<i>per cent</i>) |
|---------|--|-------------------------|-------------------------|-------------------------------|
| 1. | Fire station at district headquarters | 90 | 71 | 19 (21) |
| 2. | Fire station at place other than district headquarters | 45 | 46 | -- |
| 3. | Fire post at sub-divisional headquarters | 13 | 24 | -- |
| 4. | Directorate of fire services department | 2 | 0 | 2 (100) |
| 5. | Fire training centre Baldeyan | 4 | 4 | -- |
| | Total | 154 | 145 | |

Source: Departmental figures.

Out of 145 vehicles, 25 vehicles were more than 20 years old and 11 vehicles were under condemnation process. Thus, the actual availability of good condition vehicles with the Department was 109 which was 71 *per cent* of the approved fleet strength.

The CFO stated (June 2016) that matter for deployment of approved fleet strength had been taken up with the Government.

2.4.11.5 Communication equipment

For better co-ordination, each fire vehicle and fire station should be equipped with communication devices such as static wireless set, mobile wireless set, walky-talky sets and megaphones. Similarly, each rural/ urban Fire Posts (FPs) should be equipped with one mobile wireless set and walky talky.

Audit noticed that except landline telephones, no other communication equipment was available with the CFO or in the test-checked District Fire Stations/ FPs. These communication devices were neither demanded nor provided by the Department. Non-availability of these equipment is likely to have an adverse effect on communication in the event of fire incidents. The CFO admitted (June 2016) that working of the Fire Department had been affected to some extent due to non-availability of required communication equipment.

2.4.11.6 Availability of personal protective equipment for fire fighting

National Disaster Management Guidelines (Scaling and type of equipment and training of fire services) prescribe the requirement of personal protective equipment for fire fighting staff. The position of requirement and holdings of above equipment in test-checked districts was as given in **Table-2.4.6** below.

Table-2.4.6: Requirement and holdings of personal protective equipment in test-checked districts (In numbers)

| Personal protective equipment | Fire stations | Requirement | Holding | Shortfall |
|---|---------------|-------------|---------|-----------|
| Helmet | 3 | 74 | 62 | 12 (16) |
| Water bottle with sling | 3 | 74 | 0 | 74 (100) |
| Eye protection | 3 | 74 | 0 | 74 (100) |
| Ear protection | 3 | 74 | 0 | 74 (100) |
| Safety Steel-toe boots | 3 | 74 | 0 | 74 (100) |
| Safety whistle | 3 | 74 | 47 | 27 (36) |
| Knee pads | 3 | 74 | 0 | 74 (100) |
| Work gloves | 3 | 74 | 31 | 43 (58) |
| Overall fire resistant suit/ fire entry suit/ fire proximity suit/ fire approach suit | 3 | 74 | 3 | 71 (96) |
| Personal safety line (sash cord) 15" length | 3 | 74 | 1 | 73 (99) |
| Gum boot/ safety boot/ fire fighting boot | 3 | 74 | 63 | 11 (15) |
| Firemen axe | 3 | 74 | 32 | 42 (57) |
| Breathing apparatus | 3 | 39 | 9 | 30 (77) |

Source: Data supplied by the test-checked Fire Stations. Figures in parenthesis denote percentage.

There was shortage of personal protective equipment against the requirement which ranged between 15 to 100 *per cent*. Non-availability of required equipment could put at risk the life of fire fighting officials.

2.4.11.7 Response time

As per norms fixed by the Standing Fire Advisory Committee (SFAC), a fire station (FS) should be equipped and manned in such a way that a fire party reaches an incident site within three to five minutes in urban areas and 20 minutes in rural areas.

Audit scrutiny of complaint registers of fire stations of Chamba, Kangra, Kullu and Shimla showed that during 2011-16, 1,353 fire incidents⁸³ occurred in the areas falling under the jurisdiction of these fire stations. Complaint receipt time, movement time of fire party to the place of incident was found recorded but the distance between fire station and place of fire and actual arrival time was not recorded in the complaint registers. As such it could not be ascertained whether the norms fixed by the SFAC for response time were adhered to or not.

2.4.11.8 Mapping of fire hydrants

As per NDM guidelines, fire hydrants need to be checked regularly to ensure that they are functional. Maps plotting the area wise location of Fire Hydrants (FHs) should be available with the local FSs, police stations and revenue offices.

⁸³ Chamba: 224, Kangra: 415, Kullu: 532 and Shimla: 182.

In the four test-checked districts, there were 813 FHs⁸⁴ as of March 2016. Of these, only 380 FHs were in working condition and 433 (53 per cent) were non-functional as of June 2016. In Municipal Council (MC) area of Dharamshala and Kangra, out of 60 FHs, only 12 (20 per cent) were in working condition and of the remaining 48 FHs, six were not in working condition and 42 were untraceable. Further, FO, Kangra intimated that due to scarcity of water/improper connectivity of FHs with water supply, the water was fetched from an open water source which was 10 km away from the FS, Kangra. Further, the maps plotting area-wise locations of FHs were not available with Chief Executive Officers of these districts. Thus, non-functioning of 53 per cent of FHs in three districts (except Kullu district where all the fire hydrants were in working condition), proper safety from fire related disasters could not be ensured.

2.4.11.9 Issuance of no objection certificate

HP Fire Fighting Services Act, 2000, provides that building plan in respect of buildings of height above 15 metres as well as industrial units and commercial establishments dealing with or using explosive and highly inflammable substances shall require 'No objection certificate' (NOC) from Director of Fire Services. It was, however, noticed that no database of high rise buildings was maintained during 2011-16 by any of the units test-checked. Evidently, adherence to the provisions of the Act was not being enforced and vulnerability of such buildings to fire disasters could not be addressed.

2.4.12 Post-disaster activities

2.4.12.1 Excess payment of gratuitous relief

The GOI and State Government fixed items and norms⁸⁵ for assistance from State Disaster Response Fund in July 2009 (subsequently revised in January 2012, July 2012 and April 2015).

Audit noticed that Sub-Divisional Officer-Civil (SDO), Banjar, Kullu and Manali paid ₹ 57.46 lakh on account of gratuitous relief to 249 affected/ victims during April 2011 to July 2012 whereas a sum of ₹ 12.43 lakh was to be paid as per norms. This resulted in over payment of ₹ 45.03 lakh in violation of norms fixed by GOI.

The SDOs stated (June 2016) that amount of relief was paid to all the victims as per the norms fixed. The replies were not acceptable as the payment was made by applying rates incorrectly.

2.4.12.2 Payment of ex-gratia/ gratuitous relief

As per the instructions (September 2012 and June 2013) of GOI, the payment of ex-gratia/ gratuitous relief is required to be made within 30 to 90 days of the incident. Audit noticed that:

- 132 cases of ex-gratia/ gratuitous relief involving ₹ 1.54 crore were lying pending with the Sub-Divisional Magistrate Chamba with effect from February

⁸⁴ Chamba: 104, Kangra: 60, Kullu: 59 and Shimla: 590.

⁸⁵ **Cattle loss:** Assistance for small milch animal: ₹ 1,000 subject to maximum for four milch animals i.e. ₹ 4,000 and **House loss:** Assistance for fully damaged katcha house ₹ 10,000 (revised to ₹ 1,01,900 in April 2015) severely damaged house: ₹ 2,500 (revised to ₹ 1,01,900 in April 2015) and partially damaged house: ₹ 1,500 (revised to ₹ 12,500 in April 2015).

2014 to February 2016 with delay ranging between three months and more than two years as of June 2016.

- In the four test-checked districts, financial assistance from SDRF/ NDRF of ₹ 6.85 crore on account of human loss/ injury, dwelling units, cow sheds and cattle loss in 1,423 cases was provided to affected families/ people after a lapse of period ranging upto more than four years. Delay in payment of financial assistance deprived the affected families of the gratuitous relief in time.

The CEOs of Chamba and Shimla stated (June 2016) that the payments could not be released within the stipulated period due to non-fulfillment of formalities such as non-submission of death certificate in case of loss of cattle and damage reports in case of damaged houses by the affected families.

2.4.12.3 Short payment of ex-gratia to bereaved families

Ex-gratia payment was admissible to the families of the deceased at the rate of ₹ 1.50 lakh with effect from January 2012 which was revised to ₹ four lakh in April 2015. It was noticed that there was short payment of ₹ 17 lakh in 10 cases to the families of the deceased due to incorrect application of rates by the district authorities of Kangra and Chamba. CEO Kangra stated (June 2016) that matter will be looked into and financial assistance to the quarter concerned will be made shortly whereas District Revenue Officer, Chamba stated (June 2016) that due to rush of work the implementation of revised rates was overlooked and matter will be reassessed and payment will be made to the families of the deceased.

2.4.13 Internal audit

As per instructions issued (August 1987) by the Finance Department, the services of personnel deployed from Finance Department were to be utilised for the purpose of conducting internal audit, checking of accounts, supervising clearance of outstanding objections, physical verification of store and stock, etc.

Audit scrutiny showed that a retired Joint Controller has been deployed by the Government for carrying out the internal audit functions of the Department. However, internal audit, required to be conducted annually, had not been conducted during 2011-16.

2.4.14 Conclusion

Fire and earthquake are two major hazards that the State is most vulnerable to; yet the State Government had not put in place measures to reduce the vulnerabilities of the State to these disasters. Institutional mechanisms envisaged under the Disaster Management Act while constituted were not functioning regularly weakening monitoring and control. State Disaster Management Plan/ District Disaster Management Plans were not updated annually and departmental disaster management plans have not been prepared or implemented. Measures that are intended to minimize damage and losses in the event of a disaster were not pursued or implemented including seismic retrofitting of lifeline buildings (hospitals, schools and offices), setting up of fully equipped and operational Emergency Operation Centers, enforcement of regulations relating to construction of buildings on slope above maximum permissible limit of 45 degree and prevention of unauthorised construction

was also inadequate. Haphazard construction of buildings in Sanjauli and Krishnanagar area of Shimla provided no space for providing relief and rehabilitation which may result in abnormally high casualties during disaster. Further, critical infrastructure like trauma centres and communication systems was limited in the State while availability of fire fighting equipment was far less than the stipulated norms.

2.4.15 Recommendations

In light of the audit findings, Government may consider the following:

- Annual updating of the State Disaster Management Plan/ District Disaster Management Plans as per the Disaster Management Act and directing all departments to prepare their disaster management plans for disaster preparedness;
- Augmenting steps for capacity building in all relevant departments and agencies including civil defence and home guards to respond to disasters;
- Actively involve the local communities through the gram panchayats in spreading awareness of measure to deal with disasters including first aid and search and rescue;
- Ensure adherence to construction bye laws relating to retro-fitting of buildings to withstand earthquakes and to prevent haphazard and unauthorised constructions; and
- Strengthen the Fire Department with establishment of fire stations, modern fire fighting equipment and personal protective equipment to deal with fire disaster effectively and promptly.

The audit findings were referred to the Government in August 2016. Its reply had not been received (December 2016).

Rural Development Department

2.5 Integrated Watershed Management Programme

The Integrated Watershed Management Programme was launched in April 2008 by Government of India to restore ecological balance by harnessing, conserving and developing natural resources such as soil, vegetative cover and water and to provide sustainable livelihoods for the people residing in the watershed areas. The performance audit of the implementation of the programme brought out deficient planning and slow pace of utilization of funds and progress of schemes. Some of the significant audit findings are as below:

Highlights:

- *Perspective plan was prepared (January 2009) at State level without considering block and district level watershed development plans. Against 5.91 lakh hectares of land required to be treated during 2009-16, only 0.86 lakh hectares (15 per cent) was treated as of March 2016.*
(Paragraphs 2.5.6.1 and 2.5.8.2)
- *38 to 87 per cent of available funds remained unutilised with the State Level Nodal Agency during 2011-16. Government of India did not release any funds during 2014-15 under IWMP due to non-spending of required 60 per cent funds during 2013-14.*
(Paragraph 2.5.7.1)
- *District Watershed Development Authority, Chamba, Shimla and Solan and District Rural Development Agency, Kinnaur had spent ₹88.21 crore on treatment of land under various activities during 2011-16 but no evidence of area actually developed/ treated was kept in record.*
(Paragraph 2.5.8.3)
- *Due to non-adherence to cost norms for watersheds, seven project implementing agencies spent ₹7.59 crore under drought prone area programme in excess of the permissible limit.*
(Paragraph 2.5.10.5)
- *In Solan district, 5,579 hectares of land targeted for treatment at a cost of ₹8.06 crore overlapped with the area being treated under other programme executed by Forest Department.*
(Paragraph 2.5.10.6)
- *Monitoring and evaluation mechanism was not effective as inspections of works, meetings of State Level Nodal Agency and impact analysis of programme was not conducted to the desired level.*
(Paragraph 2.5.12)

2.5.1 Introduction

The Integrated Watershed Management Programme (IWMP) was launched in April 2008 after consolidation of the Drought Prone Area Programme (DPAP), Desert Development Programme (DDP) and Integrated Wastelands Development Programme (IWDP) of the Department of Land Resources into a single modified programme called Integrated Watershed Management Programme (IWMP) for optimum use of resources, sustainable outcomes and integrated planning. The envisaged outcomes of the programme are prevention of soil run-off, re-generation of natural vegetation, rain water harvesting and re-charging of ground water table to enable multi-cropping and

introduction of diverse agro-based activities besides providing sustainable livelihood to people living in respective watershed areas.

The Desert Development Programme (DDP) had been in operation in the cold desert areas of the State from 1977-78 in three Development Blocks of Kinnaur and Lahaul and Spiti districts and IWDP had been in operation from 1992-93 in 62 blocks of nine⁸⁶ districts for the development of waste/ degraded lands in those areas whereas DPAP had been in operation from 1994-95 in 10 Development Blocks of Bilaspur, Solan and Una districts which are drought prone. In October 2015, the Government of India (GOI) launched the *Pradhan Mantri Krishi Sinchayee Yojana* (PMKSY) aimed at expanding the irrigation in every village by bringing the existing irrigation schemes including watershed development under one platform.

2.5.2 Organisational set-up

At State level, the Principal Secretary, Rural Development (RD) is the chairperson of the State Level Nodal Agency (SLNA) constituted in May 2008 for watershed development in the State and is assisted by Director, RD Department as Chief Executive Officer (CEO) of SLNA. At district level, the Programme is implemented by Project Directors (in five⁸⁷ districts) of District Watershed Development Agencies (DWDAs) and Project Officers (in seven⁸⁸ districts) of District Rural Development Agencies (DRDAs) who are assisted by District Planning Committees of the respective districts. At block level, the programme is implemented by the Block Development Officers as Project Implementing Agencies (PIAs) assisted by watershed development teams, and *Gram Panchayats* (GPs) are executing agencies.

2.5.3 Audit objectives

The objectives of the performance audit were to ascertain whether:

- planning was comprehensive and designed to achieve the desired outcomes for establishing watersheds;
- watershed projects were implemented within the cost and time;
- project implementation, operation and maintenance was effective, economical and as per guidelines of the programme; and
- adequate monitoring and evaluation mechanism for effectiveness of the programme exists.

2.5.4 Audit scope and methodology

The performance audit covered implementation of the programme in the State during the period 2011-16. The audit methodology involved scrutiny (March 2016 to July 2016) of records in the State Level Nodal Agency (SLNA), four⁸⁹ out of 12 districts and nine⁹⁰ out of 23 Project Implementation Agencies (PIAs) in the selected districts. The records maintained by 42 *Gram Panchayats* (GPs) under the selected PIAs were also scrutinised both for pre-IWMP and IWMP phases.

⁸⁶ Chamba: Seven; Hamirpur: Six; Kangra: 14; Kinnaur: Two; Kullu: Five; Mandi: 10; Shimla: Nine; Sirmour: Six and Solan: Three.

⁸⁷ Chamba, Mandi, Kangra, Shimla and Solan.

⁸⁸ Bilaspur, Hamirpur, Kinnaur, Kullu, Lahaul and Spiti, Sirmour and Una.

⁸⁹ Chamba, Kinnaur, Shimla and Solan.

⁹⁰ Chamba, Kunihar, Mashobra, Salooni, Nalagarh, Narkanda, Nichar, Pooh and Rampur.

The audit objectives, criteria, and scope of audit were discussed with Principal Secretary (RD) in an entry conference held in March 2016. The audit findings were discussed in the exit conference held with the Secretary (RD) in November 2016. The views of the Government have been appropriately incorporated in the Report.

2.5.5 Audit criteria

The audit criteria used for assessing the implementation of the programme was derived from the following sources:

- Common Guidelines for Watershed Development Projects;
- Detailed Project Reports (DPRs);
- Guidelines to engage the Watershed Development Team Members (WDTs) under IWMP;
- Departmental Manual/ Policies/ Circulars/ Rules and regulations; and
- Procedures prescribed for monitoring and evaluation of scheme/ programme.

Audit findings

2.5.6 Planning

2.5.6.1 Perspective and strategic plan

As per the common guidelines for IWMP, perspective and strategic plan for watershed development in the State was to be prepared based on block and district level plans. Audit noticed that the Perspective Plan (PP) was prepared (January 2009) at State level without considering block and district level watershed development plans. Thus, the entire planning had been done at the State level without the involvement of grass root level functionaries.

As per this plan, out of the total geographical area of 55.67 lakh hectares in the State, 31.12 lakh hectares of area was identified for watershed treatment within a period of 10-15 years at an estimated cost of ₹ 4,668.71 crore. On an average, it was planned to take up coverage of about 2.07 to 3.11 lakh hectares under IWMP every year.

2.5.6.2 Annual action plans (AAPs)

As per the IWMP guidelines, States are required to submit AAPs to GOI by the end of February every year indicating ongoing liabilities as well as new projects proposed to be taken up. While AAPs for 2011-13 were not sent to GOI, the AAPs for 2013-16 were sent after a delay ranging between 96 and 230 days. This resulted in delay in approval of projects, release of funds and consequently implementation of programme.

2.5.7 Allocation, release and utilisation of funds

2.5.7.1 Availability of funds and expenditure thereof

IWMP is funded in the ratio of 90:10 by GOI and State Government. Funds are released by GOI directly to SLNA based on proposals sent by it. As per IWMP guidelines, the duration of a watershed project is 4-7 years. Funds are released by SLNA for all three phases (preparatory, works and consolidation) of implementation of projects spread over the project period⁹¹. From June 2012 onwards, the first instalment

⁹¹ 20 per cent on sanction, 50 per cent on completion of preparatory phase and balance when 75 per cent of the released funds had been expended.

equivalent to 60 per cent of estimated annual fund requirement was to be released unconditionally and balance was to be released when 60 per cent of the first instalment was expended. Details of funds received by SLNA during 2011-16 and expenditure incurred there against was as given in **Table-2.5.1** below.

Table-2.5.1: Position of funds received and expenditure incurred there against during 2011-16
(₹ in crore)

| Name of programme | Year | OB | Funds received | | Misc. receipt | Total availability of funds | Exp. | Closing balance |
|-------------------|--------------|--------|----------------|--------------|---------------|-----------------------------|---------------|-----------------|
| | | | GOI | State | | | | |
| IWMP | 2011-12 | 78.09 | 44.92 | 6.94 | 2.72 | 132.67 | 17.27 | 115.40 (87) |
| | 2012-13 | 115.40 | 12.03 | 1.79 | 4.52 | 133.74 | 39.29 | 94.45 (71) |
| | 2013-14 | 94.45 | 46.08 | 5.46 | 6.91 | 152.90 | 57.88 | 95.02 (62) |
| | 2014-15 | 95.02 | 0 | 0 | 13.03 | 108.05 | 62.87 | 45.18 (42) |
| | 2015-16 | 45.18 | 20.00 | 2.22 | 1.35 | 68.75 | 25.67 | 43.08 (63) |
| | Total | | 123.03 | 16.41 | 28.53 | 246.06 | 202.98 | |
| IWDP | 2011-12 | 23.66 | 14.77 | 1.40 | 1.67 | 41.50 | 20.21 | 21.29 (51) |
| | 2012-13 | 21.29 | 3.85 | 0.49 | 1.39 | 27.02 | 13.92 | 13.10 (48) |
| | 2013-14 | 13.10 | 1.45 | 0.16 | 1.12 | 15.83 | 7.58 | 8.25 (52) |
| | 2014-15 | 8.25 | 0 | 0 | 0.19 | 8.44 | 2.99 | 5.45 (65) |
| | 2015-16 | 5.45 | 0 | 0 | 0.20 | 5.65 | 0.75 | 4.90 (87) |
| | Total | | 20.07 | 2.05 | 4.57 | 50.35 | 45.45 | |
| DPAP | 2011-12 | 23.90 | 8.66 | 3.60 | 0.31 | 36.47 | 15.50 | 20.97 (57) |
| | 2012-13 | 20.97 | 0.32 | 0.74 | 0.65 | 22.68 | 14.05 | 8.63 (38) |
| | 2013-14 | 8.63 | 0.53 | 0.18 | 0.22 | 9.56 | 4.48 | 5.08 (53) |
| | 2014-15 | 5.08 | 0 | 0 | 0.23 | 5.31 | 2.16 | 3.15 (59) |
| | 2015-16 | 3.15 | 0 | 0 | 0 | 3.15 | 0.53 | 2.62 (83) |
| | Total | | 9.51 | 4.52 | 1.41 | 39.34 | 36.72 | |
| DDP | 2011-12 | 18.13 | 0 | 1.55 | 0.79 | 20.47 | 7.38 | 13.09 (64) |
| | 2012-13 | 13.09 | 0 | 0.40 | 0.59 | 14.08 | 4.07 | 10.01 (71) |
| | 2013-14 | 10.01 | 6.81 | 2.43 | 0.50 | 19.75 | 6.72 | 13.03 (66) |
| | 2014-15 | 13.03 | 2.01 | 0 | 0.50 | 15.54 | 7.22 | 8.32 (54) |
| | 2015-16 | 8.32 | 0 | 0.34 | 0.40 | 9.06 | 3.79 | 5.27 (58) |
| | Total | | 8.82 | 4.72 | 2.78 | 34.45 | 29.18 | |

Source: Figures supplied by SLNA; figures in parenthesis denote percentage of unspent balances.

Analysis of the data showed the following:

- Against total availability of ₹ 370.20 crore, the Department spent ₹ 314.33 crore during 2011-16. The percentage of unspent balances ranged between 38 and 87 per cent during 2011-16. Similarly, the percentage of unspent balances in test-checked districts ranged between 18 and 84 per cent during 2011-16. Implementation of programme in the State remained slow due to more time taken for preparatory works involving institutional set up at State, district and PIA levels, sensitisation of watershed committees, formation of user groups, self help groups and preparation of DPRs. GOI did not release any funds during 2014-15 under IWMP due to non-spending of 60 per cent funds during 2013-14 which adversely impacted implementation of the programme.
- Further, GOI had issued instructions (July 2011) to close pre-IWMP projects and refund unspent balances at the close of December 2015 to GOI. However, the pre-IWMP projects were neither closed nor were unspent balances of ₹ 12.79 crore⁹² refunded to GOI as of June 2016.
- As per instructions of GOI, the State Government was to release the State share within 15 days from the sanction accorded by GOI and the SLNA was to release the funds alongwith State share to DRDAs within 15 days. Audit noticed that the

⁹² IWDP: ₹ 4.90 crore; DPAP: ₹ 2.62 crore and DDP: ₹ 5.27 crore.

State Government had released its matching share with persistent delay of 13 to 116 days during 2011-16. Release of funds to the DRDAs concerned was also delayed by SLNA with delay ranging between 22 and 158 days which slowed the implementation of IWMP projects in the State.

2.5.7.2 Diversion of funds

The expenditure under the programme is to be restricted on the various components as envisaged in the IWMP guidelines. The position of expenditure on various components during 2011-16 is given in **Table-2.5.2** below.

Table-2.5.2: Position of expenditure on various components of IWMP upto March 2016

(₹ in crore)

| Component | Major activities under component | Required Expenditure | Expenditure required to be incurred | Actual expenditure | Excess (+)/ Less (-) |
|-------------------------------------|--|----------------------|-------------------------------------|--------------------|----------------------|
| Livelihood | Dairy, small ruminants, petty business, skilled business, etc. | 9 per cent | 18.27 | 10.40 | (-) 7.87 (43) |
| Production and micro enterprises | Fertility and animal health camps, supply of trevices, castrators, milk testing machines, etc. | 10 per cent | 20.30 | 10.72 | (-) 9.58 (47) |
| Administration | Salary/ TA/DA and contingent expenditure of WDTs and on projects. | 10 per cent | 20.30 | 26.13 | (+) 5.83 (29) |
| Institutional and Capacity Building | To develop Watershed Committees, Self Help Groups and user groups at village level and build capacities of different stakeholders. | 5 per cent | 10.15 | 20.80 | (+) 10.65 (105) |

Source: Data supplied by the Department.

The expenditure on livelihood and production/ micro enterprises activities was only 57 and 53 per cent of the required expenditure respectively whereas there was excess expenditure on institutional and capacity building to the extent of 105 per cent. Further, out of ₹ 20.80 crore (institutional and capacity building component), ₹ 3.50 crore was diverted for payment of salaries⁹³ of SLNA/ test-checked DWDA staff (₹ 2.55 crore), evaluation and monitoring of projects (₹ 0.44 crore), payment of vehicle charges (₹ 0.32 crore) and other inadmissible expenses (₹ 0.19 crore).

The Department stated (April 2016) that expenditure on production/ micro enterprise and livelihood components remained below the desired level due to more time taken for sensitisation, awareness campaign and formation of Self Help Groups. It added that the overall expenditure under administrative component had shown marginal increase in proportion to the overall expenditure.

2.5.8 Programme implementation

The duration of each watershed project is 4-7 years⁹⁴ depending upon the size of the cluster which could be anywhere between 1,000-5,000 hectares. The activities of projects are sequenced into (i) preparatory, (ii) works and (iii) consolidation and (iv) withdrawal phase. The preparatory phase includes taking up entry point activities to establish rapport with village community and institution and capacity building to

⁹³ SLNA: ₹ 0.53 crore, Chamba: ₹ 1.00 crore, Shimla: ₹ 0.36 crore and Solan: ₹ 0.66 crore.

⁹⁴ Preparatory phase: 1-2 years, works phase: 2-3 years and Consolidation and withdrawal phase: 1-2 years.

develop watershed committees, Self Help Groups (SHGs) and user groups at village level and build capacities of different stakeholders and preparation of DPRs in respect of all identified projects.

2.5.8.1 Status of projects

Details of projects sanctioned during 2009-15 and the status of their implementation as of March 2016 are given in **Table-2.5.3** below.

Table-2.5.3: Status of projects sanctioned during 2009-15

| Year | Batch | Projects approved by GOI | Project cost (₹ in crore) | Treatable area (hectares in lakh) | Funds released (₹ in crore) | Expenditure (₹ in crore) |
|--------------|-------|--------------------------|---------------------------|-----------------------------------|-----------------------------|--------------------------|
| 2009-10 | I | 36 | 305.75 | 2.04 | 107.81 | 87.00 |
| 2010-11 | II | 44 | 356.48 | 2.38 | 90.87 | 78.36 |
| 2011-12 | III | 30 | 222.86 | 1.49 | 30.31 | 28.67 |
| 2012-13 | IV | 21 | 150.08 | 1.00 | 19.74 | 9.28 |
| 2013-14 | V | 15 | 105.91 | 0.71 | 0.82 | 1.60 |
| 2014-15 | VI | 17 | 118.88 | 0.79 | 0.44 | 0.65 |
| Total | | 163 | 1,259.96 | 8.41 | 249.99 | 205.56 |

Source: Figures supplied by SLNA.

Note: No project was sanctioned during 2015-16 due to non-release of funds by GOI during 2014-15.

After bringing all watershed programmes for implementation under a common set of guidelines from 2008, GOI sanctioned 163 watershed development projects for the State of which 83 projects were sanctioned during 2011-15.

2.5.8.2 Targets and achievements

During 2009-16, 5.91 lakh hectares of land was targeted to be treated through 110 projects under IWMP against which only 0.86 lakh hectares (15 per cent) was treated resulting in shortfall of 5.05 lakh hectares (85 per cent).

The Department stated (August 2016) that the programme was new to the Department and more time was taken for activities involving institutional set up at State, district and PIA level, sensitisation of watershed committees, formation of user groups, SHGs, preparation of DPRs, etc.

2.5.8.3 Absence of basic record of area treated

GOI approved 94 watershed projects⁹⁵ during 2009-13 at a cost of ₹ 411.18 crore involving treatment of 2.74 lakh hectares area by four test-checked DWDAs/ DRDA. In the four test-checked districts, an expenditure of ₹ 88.21 crore⁹⁶ was incurred during 2011-16 on treatment of land under various activities but there was no evidence of area of land actually developed/ treated in the basic record (MBs/ work registers) in support of expenditure incurred. Similarly, in five test-checked blocks,⁹⁷ ₹ 15.29 crore were spent on treatment of land under various activities but there was no evidence of area actually developed/ treated in the basic records in support of expenditure incurred.

The Department stated (November 2016) that instructions would be issued to all executing agencies/ PIAs to record entry of measurement of area required to be treated and actually treated in MBs, work registers and Muster-rolls.

⁹⁵ Chamba: 14, Kinnaur: 47, Shimla: 27 and Solan six.

⁹⁶ Chamba: ₹ 26.25 crore; Kinnaur: ₹ 6.80 crore; Solan: ₹ 15.80 crore and Shimla: ₹ 39.36 crore.

⁹⁷ Kunihar: ₹ 1.06 crore; Nalagarh: ₹ 6.03 crore; Nichar: ₹ 2.10 crore; Pooh: ₹ 2.27 crore and Salooni: ₹ 3.83 crore.

2.5.9 Preparatory Phase

The major objective of this phase is to build appropriate mechanisms for adoption of participatory approach and empowerment of local institutions (Watershed Committees, Self Help Groups and User Groups). Preparatory phase of the IWMP included entry point activities, institution and capacity building and preparation of Detailed project Report (DPR).

2.5.9.1 Entry Point activities

Entry Point Activities (EPAs) include taking up works based on urgent needs of the local community like revival of common natural resources, drinking water, repair and upgradation of existing common assets. Four *per cent* of the cost of project is earmarked for EPAs with a stipulation for completion within 1-2 years of project period. Scrutiny of records of SLNA showed that an amount of ₹ 42.75 crore was earmarked during 2009-16 for conducting of 3,358 activities under EPA in 163 projects in the State as depicted in **Table-2.5.4** below.

Table-2.5.4: Position of EPAs sanctioned during 2009-15 and completed as of March 2016

(₹ in crore)

| Year | Batch | No. of Project | Sanctioned EPAs | Sanctioned cost | EPA completed | EPA incomplete | Total Expenditure |
|--------------|-------|----------------|-----------------|-----------------|---------------|----------------|-------------------|
| 2009-10 | I | 36 | 963 | 12.24 | 930 | 33 | 12.33 |
| 2010-11 | II | 44 | 1,169 | 14.26 | 1,126 | 43 | 14.05 |
| 2011-12 | III | 30 | 747 | 8.89 | 694 | 53 | 8.21 |
| 2012-13 | IV | 21 | 387 | 5.97 | 242 | 145 | 5.65 |
| 2013-14 | V | 15 | 61 | 0.97 | 3 | 58 | 0.48 |
| 2014-15 | VI | 17 | 31 | 0.42 | 0 | 31 | 0.09 |
| Total | | 163 | 3,358 | 42.75 | 2,995 | 363 | 40.81 |

Source: Departmental figures.

The executing agencies had completed 2,995 activities while 274 activities remained incomplete owing to slow pace of execution of works and implementing agency could not undertake 89 activities under 32 projects for want of funds. An expenditure of ₹ 40.81 crore was incurred on completed and incomplete activities as of March 2016. In the test-checked districts, against 1,577 activities sanctioned for ₹ 18.23 crore during 2009-13, 1,429 activities had been completed and 148 activities were lying incomplete due to slow pace of execution of works after expending ₹ 16.53 crore as of May 2016. Non-completion of EPAs relating to revival of common natural resources, drinking water, repair and upgradation of existing common assets deprived the public of the intended benefits.

2.5.9.2 Detailed Project Reports (DPRs)

According to guidelines, one *per cent* of the project cost was allocated for DPR preparation. DPR were to include basic information on watershed viz. rainfall, soil, forests, land use pattern and was to be in tune with the perspective plan. It was to be approved in *Gram Sabha* for onward submission to District Watershed Development Agency (DWDA) by Project Implementing Agency (PIA).

Scrutiny of records of 83 projects sanctioned by GOI during 2011-15 brought out that DPRs of 53 projects of 2012-15 were either not prepared (32 projects) by PIAs due to

non-release of funds by SLNA or finalised (21 projects) by the SLNA after lapse of one to four years from sanctioning of project due to defects in their preparation.

SLNA stated (May 2016) that the State Level Technical Expert Committee had scrutinised the 21 DPRs between February 2015 and May 2016 and sent them to the PIAs concerned for compliance of observations but the same had not been received as of May 2016 and DPRs of 32 projects had not been prepared due to lack of funds.

2.5.9.3 Formation of Watershed Development Teams (WDTs)

The guidelines envisaged that each PIA shall carry out its duties through a multi-disciplinary team designated as WDTs consisting of at least four members; one each from the disciplines of agriculture, soil science, water management, social mobilisation and institutional building. At least one of the WDT members should be a woman. Scrutiny of records of DWDA, Chamba, Shimla and Solan showed that:

- Fifty six watershed projects⁹⁸ were carried out in 334 GPs through 21 WDTs against the required 56 WDTs. WDTs had only 70 members (25 Junior Engineers, 25 community organisers, four Subject Matter Specialists and 16 data entry operators) against the required 224 members. Further, there were only 12 woman members against a requirement of 56 members in WDTs.
- WDTs had four members having professional qualifications in Shimla district whereas there was no member with professional qualifications in the fields of agriculture, water management and soil science in Chamba and Solan districts.

2.5.10 Watershed Works Phase

The Watershed Works phase is when the DPR is implemented and mainly involves (i) Natural Resources Management (NRM) activities like watershed development works including ridge area treatment, drainage line treatment and development of water harvesting structures, (ii) livelihood activities for asset-less people and (iii) production system and micro enterprise. As per the common guidelines of the GOI, the duration for the watershed works phase is 2-3 years.

2.5.10.1 Natural Resource Management (NRM) works

The NRM works include water harvesting structures like low-cost farm ponds, *nallah* bunds, check-dams, percolation tanks and ground water recharge through wells, bore wells and other measures like plantations. Fifty six *per cent* of the programme funds were to be spent on this component. The details of NRM works sanctioned during 2009-12 is given in **Table-2.5.5** below.

Table-2.5.5: Details of NRM works sanctioned during 2009-12 and completed as of March 2016
(₹ in crore)

| Year | Batch | Total projects | Works sanctioned | Sanctioned cost | Works completed | Works lying incomplete | Expenditure incurred |
|--------------|-------|----------------|------------------|-----------------|-----------------|------------------------|----------------------|
| 2009-10 | I | 36 | 6,178 | 34.14 | 5,252 | 926 | 39.38 |
| 2010-11 | II | 44 | 3,164 | 26.63 | 2,278 | 886 | 32.06 |
| 2011-12 | III | 30 | 818 | 6.03 | 639 | 179 | 8.29 |
| Total | | 110 | 10,160 | 66.80 | 8,169 | 1,991 | 79.73 |

Source: Departmental figures.

⁹⁸ Chamba: 14; Shimla: 34 and Solan: eight.

A total of 10,160 works under 110 projects were sanctioned (₹ 66.80 crore) and initiated during 2009-12 for execution on which ₹ 79.73 crore were spent. Out of 10,160 works, 8,169 works were completed and remaining 1,991 works (20 per cent) were lying incomplete as of March 2016.

The Department stated (August 2016) that Department could claim only 30, 23 and 12 per cent funds under IWMP as of August 2016 out of which very meagre funds were earmarked for work component which resulted in majority of sanctioned works remaining incomplete. The reply is not tenable as funds ranging between 42 and 87 per cent had remained unspent during 2011-16.

2.5.10.2 Soil and moisture conservation activities

Soil conservation works, construction of harvesting structures and afforestation/horticulture activities were taken up only under projects of batch-I and II during 2009-16.

i. Soil conservation works: In 80 projects, soil conservation works were done on 816.07 hectares of land against the target of 6,801 hectares. Activity-wise achievement ranged between two and 17 per cent involving contour bunding (four per cent), graded bunding (two per cent), benching trenching (nine per cent) and staggered trenching (17 per cent) during 2009-16 which reflected poor achievement of targets under the programme.

ii. Water Harvesting Structures: As per DPRs, 11,958 water harvesting structures viz. low cost farm ponds, *nallah* bunds, check dams, percolation tanks and ground water recharge structure were required to be executed in 80 projects during 2009-16 against which only 1,672 (14 per cent) structures were created.

iii. Afforestation and Horticulture activity: Activities like plantations of timber, fuel wood, fruit plants, etc., were required to be done on 0.16 lakh hectares of land (Afforestation: 0.06 lakh hectares and Horticulture: 0.10 lakh hectares) against which only 0.03 lakh hectares land was treated which resulted in shortfall of 0.13 hectares (81 per cent). Similarly, 2.15 lakh cubic metres of vegetative and engineering structures were required be constructed against which only 0.26 lakh (12 per cent) structures were constructed as of March 2016.

The Department stated (November 2016) that targets under aforesaid activities would be achieved shortly.

2.5.10.3 Projects not commenced

Instructions issued (June 2012) by GOI provide that the funds shall ordinarily be released in two⁹⁹ instalments every year. Scrutiny of records showed that 32 projects were sanctioned for ₹ 224.79 crore¹⁰⁰ by GOI during 2013-15 for treatment of 1,49,860

⁹⁹ 1st instalment: 60 per cent of the estimated annual fund requirement of SLNA including unspent balances of previous financial year or fund requirement for six months, whichever is less. The next instalment was to be released after utilisation of 60 per cent of the funds of 1st instalment.

¹⁰⁰ 5th batch: 15 projects (₹ 105.91 crore) and 6th batch: 17 projects (₹ 118.88 crore).

hectares of land in 11 districts of the State. GOI had not released any funds to these projects due to non-spending of funds to the desired level of 60 per cent of total funds available under all projects. The State/ PIAs had however spent (February 2015) ₹ 35.84 lakh on these projects for preliminary activities by way of inter-intra transfer of funds from one batch to another. The DPRs had not been prepared and Entry Point Activities of these projects also had not been started as of March 2016. Thus, these projects had not been started even after lapse of more than one to two years from the date of sanction of these projects by GOI due to ill planning of the Department and deprived the beneficiaries of intended benefits of the projects.

SLNA stated (March 2016) that in order to implement all projects simultaneously, the Department had given directions to all districts to take up the preparatory phase activities under IWMP-5 and IWMP-6 batches by adopting inter-intra transfer of funds. The fact remains that SLNA failed to ensure commencement of these projects as of March 2016.

In the three test-checked districts (Chamba, Shimla and Solan), 149 works such as construction of check dams, *Bowali*, *Kuhl* and plantation works were sanctioned for ₹ 1.31 crore¹⁰¹ during 2003-15 and funds of ₹ 0.37 crore were released to different micro watersheds but all these works were lying uncommenced as of June 2016.

2.5.10.4 Incomplete works under IWMP

Audit noticed that 427 works such as plantation, roof harvesting tanks, brush woods and check dams were sanctioned for ₹ 7.14 crore¹⁰² in three test-checked districts between July 2013 and September 2015. The PDs (Project Directors) of these test-checked DWDAs had released ₹ 4 crore for execution of these works to different GPs between July 2013 and September 2015 out of which funds of ₹ 3.86 crore were spent for execution of these works and funds of ₹ 3.28 crore were lying unspent with the DWDA/ executing agencies as of April 2016.

The PDs attributed (April-May 2016) their non-completion to non-submission of bill vouchers, snowfall, short working season and delay in receipt of funds.

2.5.10.5 Non-adherence to cost norms

Haryali Programme guidelines (2003) prescribed per hectare cost norm of ₹ 6,000 for treatment of land. Scrutiny of progress reports of 10 projects¹⁰³ completed during 2011-16 showed that against the cost norm of ₹ 6,000 per hectare in DPAP and Haryali Programme for first and subsequent batches respectively, seven PIAs¹⁰⁴ (BDOs) incurred ₹ 45.53 crore at a rate of ₹ 7,200 per hectare leading to an excess expenditure of ₹ 1,200 per hectare aggregating to ₹ 7.59 crore on treatment of 63,238 hectares land.

The Department stated (August 2016) that the projects continued for six to seven years after stipulated period due to inadequate people participation and limited working

¹⁰¹ Chamba: 14 (₹ 0.20 crore); Shimla: 90; (₹ 0.83 crore) and Solan: pre-IWMP: 45 (₹ 0.28 crore).

¹⁰² Chamba: 178 (₹ 2.49 crore); Shimla: 189 (₹ 2.40 crore) and Kinnaur: 60 (₹ 2.25 crore).

¹⁰³ DPAP-6th: April 2001; DPAP-7th: 2001-02; DPAP-8th: 2003-04; Haryali-1st: 2003-04; Haryali-2nd: 2004-05; Haryali-3rd: 2005-06; Haryali-4th: 2006-07; IWDP-IV: Bhatiyat; IWDP-V: Pangi and IWDP-VI: Chamba and Tissa.

¹⁰⁴ Bhatiyat, Bilaspur, Chamba, Ghumarwin, Jhandutta, Pangi and Tissa.

seasons which resulted in increase of material and labour cost. The reply is not tenable as the PIAs should have adhered to the per hectare norms for treatment of land.

2.5.10.6 Overlapping of projects

The State Government had neither undertaken any survey to avoid overlapping of projects nor prepared plans based on details furnished by the ground level units. Audit noticed that area taken up for development under the IWMP in 24 GPs of four districts¹⁰⁵ during 2011-16 overlapped with area being treated under Mid-Himalayan Watershed Development Projects executed by the Forest Department under World Bank sponsored scheme. It was further noticed that 5,579 hectares area targeted for treatment at a cost of ₹ 8.06 crore in Solan district overlapped with work executed under Mid-Himalayan Watershed Development Projects.

The Department stated (August 2016) that the Department had taken up the matter with the authorities of Mid-Himalayan projects to avoid overlapping of area in those GPs which have been taken by RDD for implementation under the IWMP.

2.5.11 Consolidation and Withdrawal phase

The Consolidation and Withdrawal Phase includes activities (stipulated completion period one-two years) for completion of various works and sustainable management of natural resources during post project period.

2.5.11.1 Revolving fund

As per operational guidelines for 'Livelihood for landless/ asset less' and production system/ micro enterprises' components of IWMP, each Self Help Group shall be provided ₹ 25,000 as revolving fund required to be refunded in a maximum period of 18 months. A total of 1,822 SHGs had been formed in Chamba and Solan districts as of March 2016 and ₹ 1.95 crore were released to 781 SHGs between December 2012 and March 2016. Audit noticed the following:

- In Chamba district, out of ₹ 1.31 crore provided to 523 SHGs, only ₹ 0.28 crore was recovered leaving ₹ 1.03 crore unrecovered in spite of lapse of maximum period of 18 months.
- In Solan district, ₹ 0.64 crore was provided to 258 SHGs. However, no database of revolving fund recovery and reinvestment in the same or other SHGs was maintained by the DWDA concerned.
- Further in Solan district, 2,176 SHGs were required to be formed against which only 744 (34 per cent) were constituted as of July 2016. Moreover, ₹ 1.86 crore was required to be provided to these 744 SHGs as revolving fund against which only ₹ 0.65 crore was given to 258 SHGs denying the benefit of revolving fund of ₹ 1.21 crore to 486 SHGs to start livelihood activity.

PD, DWDA Chamba stated (May 2016) that recovery is in progress while PD, DWDA Solan stated (July 2016) that the revolving fund and other related assistance was provided to SHGs as per availability of funds and receipt of required documents from the SHGs.

¹⁰⁵ Chamba, Mandi, Sirmaur and Solan.

2.5.11.2 Non-levy of user charges

The *Gram Sabha* through the Watershed Committees (WCs) is required to put in place a mechanism for collecting user charges except from landless, destitute or disabled/ widow headed households for work done on private or public land. The user charges collected shall be credited to the Watershed Development Fund (WDF) for maintenance of assets created during the project. Audit noticed that none of the *Gram Panchayats* of test-checked districts covered under IWMP had imposed user charges for the assets created in the watershed area concerned.

2.5.12 Monitoring and evaluation

2.5.12.1 Functioning of SLNA

The SLNA was constituted in May 2008 and was required to meet twice a year to oversee the implementation of IWMP and pre-IWMP and to ensure co-ordination among various Government departments/ institutions and voluntary agencies. Audit noticed the following:

(a) SLNA held only seven meetings against the required 16 meetings during 2008-16. As a result, execution of works under IWMP and pre-IWMP programmes could not be monitored effectively and this adversely affected the implementation of watershed in the State.

(b) SLNA had not obtained Quarterly Progress Reports from districts during 2011-16. Further, online monitoring by the SLNA was not ensured at any stage. The data on MIS at the Watershed Cell-cum-Data Centre (WCDC) did not match with the data shown in UCs and audited statements submitted to GOI for further release of funds. Thus, monitoring mechanism at each level remained weak. SLNA stated (March 2016) that implementation is reviewed on monthly basis at PIAs, WCDCs and Departmental level.

(c) GOI had developed a web based Process Management Software (PMS) for IWMP and circulated (June 2015) it to all States for use during implementation of the project. The software is useful for project management, scheduling of activities, tracking of progress, efficient deployment of resources and decision making as per the status of implementation of the project. Audit noticed that PMS had not been implemented in the State as of July 2016. SLNA stated (March 2016) that delay in implementation of the PMS was due to PRI election and the Department had completed registration of agencies for PMS except Lahaul and Spiti district and which would be updated shortly.

(d) GOI had developed (September 2014) Public Financial Management System (PFMS) for fund management/ tracking, e-payment/ Direct Benefit Transfer (DBT) to individual beneficiaries, accounting and Management Information System. Processing of payment files/ transactions on PFMS necessitates registration of implementing agencies. Scrutiny of record of SLNA showed that account registration of all the 69 PIAs and SLNA had been done (June 2015) on PFMS whereas only 1,179 GPs accounts out of 1,223 GPs were registered as of March 2016. It was further noticed that the PFMS was not used to book expenditure or release of funds to the PIAs/ WCs and individual beneficiaries. The expenditure incurred out of programme funds was

also not updated on the PFMS portal. Thus, real-time accounting, funds transfer, DBT/ e-payment to individual beneficiaries had not been ensured as of March 2016. SLNA stated (May 2016) that the reconciliation of receipts, releases and expenditure at various level was in progress.

(e) Monitoring and Evaluation on regular basis is essential from project management point of view as it allows to cross check the status of the projects, identify drawbacks and strengths and offer paths of correction/ revision. SLNA signed (December 2014) an agreement with Water and Power Consultancy Services (WAPCOS) Limited and assigned (February 2015) the Monitoring, Evaluation, Learning and Documentation (MELD) of Batch III and IV Projects to WAPCOS Limited. Audit noticed that WAPCOS had not submitted various¹⁰⁶ reports required to be furnished within a period of one month to 6-8 months from the date of signing of agreement. Baseline survey to assess the impact of the various interventions of programme alongwith video documentation of projects required to be completed within a period of six months had also not been done as of May 2016. SLNA stated (May 2016) that the agency had been directed from time to time to submit these reports timely and regularly.

(f) Audit noticed that post evaluation of 50 projects (IWDP: 22, DPAP/ Haryali: 10 and DDP: 18) had not been conducted before their closure to ascertain their impact with reference to factors like soil conservation, water conservation, afforestation and mitigation of adverse effects of extreme climatic conditions. Further, work phase evaluation of 80 projects (Batch-I: 36 and Batch-II: 44) sanctioned during 2009-11 and preparatory/ work phase evaluation of remaining 51 projects sanctioned under Batch III (30) and IV (21) during 2011-13 had not been conducted as of March 2016.

2.5.12.2 Inspection of works

For effective implementation of the programme, the Director-cum-Special Secretary (Rural Development Department) had prescribed¹⁰⁷ (September 2001) yearly inspection schedule. The State Government also circulated (April 2015) schedule of inspections which stipulates that RD Department would inspect all 12 DRDAs/ DWDA, 32 blocks and the rest of the blocks would be inspected by the concerned DCs and District level Officers.

It was noticed that against the required 990 inspections, only 137 (14 per cent) inspections were carried out by the PIA, DWDA Chamba which resulted in shortfall of 853 (86 per cent) inspections. The record of inspections conducted by the Officers of RD, PD, SLNA and test-checked districts and blocks¹⁰⁸ like inspection notes pointing out observations, solution and suggestions to the WDTs/ GPs to rectify the shortcomings if any in execution of works was not maintained during 2011-16.

¹⁰⁶ Inception, preliminary, progress (indicator-wise), process monitoring, evaluation and thematic studies reports.

¹⁰⁷ WDT members: 100 per cent, PIA: 50 per cent, PO: 25 per cent, PD: 15 per cent and CEO: 10 per cent.

¹⁰⁸ Chamba, Narkanda, Nichar, Pooh, Rampur, Salooni and Solan.

2.5.13 Conclusion

Planning and preparatory work for identification of treatable areas under IWMP was deficient as perspective plan and annual action plans were prepared without inputs from the field functionaries and as a result IWMP projects overlapped with those taken up under other programmes. Pace of programme implementation and utilisation of funds was slow which resulted in non-release of funds by the GOI. There was also delay in finalisation of DPRs and non-adherence to cost norms that resulted in excess expenditure under drought prone area programme. The impact of the programme in terms of increase in water table, yield of crops, and decrease in desertification, drought prone area and waste/ degraded lands was not assessed by the State Government.

2.5.14 Recommendations

In light of the audit findings, the State Government may consider:

- Preparation of plans with inputs from the grass root level so that needs of the people with regard to implementation of projects may be identified and to avoid possibility of overlap between watersheds being covered under other programmes;
- Ensuring greater participation of beneficiaries in the programme implementation by constituting village-wise watershed committees or sub-committees at GPs level;
- Maintenance of proper records of the watershed works completed, areas covered and structures made so as to make their assessment possible; and
- Strengthening the monitoring mechanism as per extant instructions and ensure prompt corrective action.

The audit findings were referred to the Government in September 2016. Its reply had not been received (December 2016).