

**BEFORE THE NATIONAL GREEN TRIBUNAL,  
SITTING AT NEW DELHI  
ORIGINAL APPLICATION NO. 425 OF 2023  
UNDER SECTION 18 (1) READ WITH SECTION 14 OF NATIONAL  
GREEN TRIBUNAL ACT – 2010**

**IN THE MATTER OF:**

DEEPIKA KHARI

... APPLICANT

**VERSUS**

STATE OF UTTARAKHAND  
AND OTHERS

.... RESPONDENTS

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NEW DELHI

14/10/2024

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REPORT OF AMICUS CURIE IN TERMS OF ORDER DATED  
18/04/2024

1. That in the captioned matter, the Honble Tribunal is considering the issue of burning of leaves in Badkot Forest Range on Rishikesh – Dehradun Road.
2. That vide its Order dated 18/04/2024, this Honble Court has appointed the undersigned to assist this Tribunal in the captioned matter.
3. That vide its Order dated 18/04/2024, this Honble Tribunal also directed the Uttarakhand State Pollution Control Board, State of Uttarakhand to make payment of Rs. 50,000/- to the under signed for assisting the Honble Court in the above captioned matter.

4. That accordingly, the Uttarakhand State Pollution Control Board on dated 03/05/2024 deposited Rs. 45,000/- in the account of undersigned, the same has been donated by him for welfare of leprosy affected persons.
5. That in compliance of the above directions the undersigned visited the site highlighted in the Original Application on 23/09/2024 with advance intimation to DFO, Dehradun.
6. That the following officials / persons were present during the spot inspection:
  - a. Sh. Neeraj Singh – Divisional Forest Officer
  - b. Sh. Dheeraj Singh Rawat – Forest Ranger, Badkok Range
  - c. Sh. Prakash Anthwal – Forester
  - d. Sh. Akhilesh Nautiyal – Forester
  - e. Ms. Priyanka – Forest Guard
  - f. Sh. Aman Kumar – Forest Guard

#### **OBSERVATIONS WITH RESPECT TO SITE IN QUESTION**

7. That the undersigned visited the site in question at around 5.30 pm and observed that no fire was there during the said time of inspection. **Photos showing site inspection carried out by**

**Undersigned along with Forest Department Officials of State of Uttarakhand of Site in question are annexed and marked hereto as Annexure A1/1.**

8. That on being asked about the nature of Fire reported in the above mentioned captioned matter, Mr. Dheeraj Singh Rawat, Forest Ranger, Badkot Forest Range, Dehradun Forest Division apprised the undersigned that on dated 11/03/2023, the Forest Department under the verbal instruction of Divisional Forest Division, Dehradun did the CONTROL BURNING at the inspection site.
9. That on being asked about that whether the said CONTROL BURINING was mentioned in the INHOUSE PORTAL of State of Uttarakhand namely 'FOREST FIRE REPORT MANAGEMENT SYSTEM', the Ranger Officer, Badkot Division apprised the undersigned that it was mentioned in the Register maintained by their officer.
10. Undersigned also requested the Range Officer, Badkot Forest Range, Dehradun Forest Division to show the Working Plan of Dehradun Forest Division, State of Uttarakhand.
11. It has been observed by the undersigned that as per the Working Plan 2020-2021 to 2029-30 prepared by Forest

Department, State of Uttarakhand, the Fire Season is mentioned as a Season starting from 15<sup>th</sup> of February till June of each year.

12. That Para No. 19.22.1.1.1 of Working Plan provides for 'METHODS OF ANNUAL CONTROL BURNING' and as per the same the Forest Department of State of Uttarakhand is suggested to do CONTROL BURNING during the Fire Season.
13. However, in the present case, the Forest Department has been observed to do the CONTROL BURNING during the FIRE SEASON.
14. It is also important to note that FOREST SURVEY OF INDIA is also monitoring the FIRE HOTSPOTS in Forests. Fire Hotspots are detected by Satellite Sensors and transmitted to FSI where they are processed which involved filtering of all fires. Alerts are then generated and disseminated to registered users via SMS. Uttarakhand Forest Department Officials including those at division and range level are registered with FSI and receive the Fire Alerts.
15. Undersigned requested the Forest Range Officer, Badkot Forest Range, Dehradun Forest Division to provide the details whether the Forest Survey of INDIA forwarded any Alert with

respect to FIRE INCIDENT happened on 11/03/2023. As per Forest Range Officer, Badkot Forest Range, Dehradun Forest Division, State of Uttarakhand no such alert was issued by the Forest Survey of INDIA.

**OTHER RELEVANT POINTS RELATED TO FOREST FIRE IN STATE OF UTTARAKHAND**

16. That Geographical Area of State of Uttarakhand is 53,483 square km of which 71% is Forest Area and due to large Forest Area, State of Uttarakhand is also prone to Forest Fires.
17. That the State of Uttarakhand typically exhibits Forest Fire activities from 15 February to 15 June (known as Fire Season) with a peak in Fire incidences during May and June. Forest Fire is one of the major disasters in State of Uttarakhand. These fires not only pose a significant threat to the region's ecological balance but also endanger the lives and livelihoods of its inhabitants.
18. The forests of Uttarakhand are particularly crucial for the country's water security, as they are the source of all three major river systems – the Ganga (Origin – Gangotri, Uttarkashi) , Yamuna (Origin – Yamunotri, Uttarkashi), and Saryu (Origin – From Forest Bageshwar District). Most of their tributaries also

originate from Uttarakhand's forests, supporting a large population across the country that depends on these river systems.

19. In light of the severity of the situation, it is imperative to address the critical deficiencies and violations hindering effective forest fire management in the state.

## **1. Inadequate Infrastructure:**

The state of Uttarakhand suffers from a glaring lack of essential infrastructure required for effective forest fire management. This includes a shortage of firefighting equipment (Such as Protective goggles, protective gears, weapons etc.), insufficient patrolling vehicles to access remote areas, and a dearth of communication devices such as wireless and satellite phones essential for coordination and timely response during fire emergencies.

There are 27 forest divisions in Uttarakhand with around 160 ranges, and in each range, there are 6-7 section (headed by Section Officer / Foresters) and 15-20 beats (headed by Beat Officer / Forest Guards). But in hardly 10% ranges, there is a vehicle (Bolero) for Ranger. For proper firefighting in difficult terrain and dense forests of Uttarakhand, provision of at least one four-wheeler vehicle for

every ranger and 5-10 two wheelers vehicles for Forester/Forest Guards with regular budget for fuel and maintenance should be there.

The forest department is currently facing significant infrastructure challenges. Nearly two-thirds of the staff chowkis, Forest office Buildings which are also used as Crew Stations for Fire Fighting have surpassed their intended lifespan and have neither been replaced with new structures nor expanded to meet growing demands and an increased workforce.

It is also important to highlight here that many forest guard and forester Chowkis where Women Frontline Staff have been deployed don't have basic amenities like toilet facilities, drinking water facilities etc. Apart from the same there are instances where Forest Guard and Forester Chowkis which are situated in Remote Areas and difficult terrain do not have mobile network and electricity connectivity.

It is respectfully submitted that the central government has allocated substantial funds for police modernization, even though law and order are state subjects as per Schedule 7 of the Constitution of India.

Undersigned suggest that on the same footing the Central Government can allocate the funds for Forest and Wildlife related

Issues as it falls under the concurrent list and is governed by stringent Central Laws.

## **2. Review of Fire Lines:**

The construction and maintenance of fire lines are essential for effective fire management. However, the Uttarakhand government has not reviewed its fire lines for a significant period, compromising the state's fire management efforts.

## **3. Overburdened Territorial Beats:**

Forest guards which are tasked with patrolling and monitoring vast area of territorial beats are highly overburdened by their Official Duties.

It is important to mention here that State of Uttarakhand is having around 38000 sq km of Forest (3800000 Hactare of Forests) which is further divided into 1552 territorial beat which means that average area of a beat is around 2448 hactare of Forests.

It is respectfully submitted that every beat is headed by Forest Guard only which shows that for every 2448 hectare of Forests there is only one Forest Guard who in not only continuously patrolling the

said this vast area including difficult hilly terrain but is also responsible to control Illicit felling, illegal mining, wildlife poaching and other forest and wildlife related offences.

The absence of additional support in the form of watchers exacerbates this issue, leading to inadequate coverage and surveillance, thereby increasing the likelihood of undetected fire incidents and delayed response times.

What add insult to the injury is that in State of Uttarakhand there is a system of 'Recovery' for loss of revenue due to illicit felling from the salary of Forest Guards/Foresters. Saving such a huge area amounting into 2448 hectare by the sole Forest Guard is nothing but an impossible task and the same has been forcibly imposed on the shoulders of Frontline Forest Staff.

#### **4. Lack of Insurance / Compensation Mechanism:**

Daily wage workers and non-permanent staff of the forest department lack **insurance** coverage. The absence of a proper mechanism to compensate forest department personnel who tragically lose their lives in the line of duty while combating forest fires is a glaring oversight. This not only fails to acknowledge the sacrifices

made by these individuals in the service of protecting Uttarakhand's forests but also neglects the financial security and well-being of their families.

### **5. Status of Martyrs**

Forest Department personnel do not receive Martyr Status by the Government, when they make Ultimate Sacrifice in the line of duty (like their counter part in Police Force). It is important to note that while the police insure INTERNAL SECURITY of our country, the Forest Staff not only play crucial role in safeguarding the Green habitat but also insure Ecological Security and Biodiversity of the Country. Hence it is suggested before this Honble Court to direct State of Uttarakhand to consider to provide the Status of Martyrs to those Forest Personnel who give supreme sacrifice in the line of their duty.

### **6. CAG REPORT ON THE ISSUE OF EFFECTIVE USE OF REMOTE SENSING / GEOGRAPHIC INFORMATION SYSTEM IN FOREST FIRE MANAGEMENT**

That Comptroller and Auditor General of INDIA issued a 'COMPLIANCE AUDIT REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA FOR THE YEARS ENDED 31 MARCH 2020 AND 31 MARCH 2021'.

As per the said Report CAG conducted the Compliance audit from October 2020 to June 2021 and as such examined the records of the Office of CCF-FFDM; Additional PCCF, Planning and Financial Management [APCCF (P&FM)] etc.

It is pertinent to highlight here that with respect to CONCEPT OF CONTROL BURNING, the CAG has examined the issue in following manner:

#### **'2.2.8 FSI's Forest Fire Alerts System**

Fire hotspots are detected by satellite sensors and transmitted to FSI where they are processed which involves filtering of all fires. During the process of filtering, fire hotspots are categorized whether fire is in forest area or non-forest area. Alerts are then generated and disseminated to registered users via SMS. Uttarakhand Forest Department officials including those at division and range level are registered with FSI and receive the fire alert.

### **2.2.8.1 Response to FSI's Fire Alerts**

After receiving an alert, the Forest Department is required to do ground truthing of alert *i.e.* physical verification of the fire alert by visiting the fire site. The results of such ground truthing are to be given to the FSI as feedback to enable it to improve the efficiency of fire detection. This feedback can be given in two ways: instantaneous feedback *via* a link included in the SMS fire alert and separate feedback in offline with time lag.

On cross verification from FSI, Audit learnt that Uttarakhand Forest Department was not giving instantaneous feedback unlike many other states. Meanwhile, the Department informed the Audit that divisions give feedback through in-house online portal called Forest Fire Report Management System (FFRMS) which is then shared with FSI at the end of fire season. On review of FFRMS data, Audit observed that the divisions had given partial feedback on FSI fire alerts to its Headquarters.

Further, the Forest Department was negligent to pass on even this partial feedback to the FSI. Accordingly, Audit observed that Forest Department gave feedback on FSI fire alerts in only one 40 out of three fire seasons during 2018, 2019 and 2020.

On being pointed out, the Department stated (March 2022) that in current forest fire season 2022, the process of daily uploading of FSI alerts on Department's FFRMS portal and sending the information to officials concerned, is in progress. Also, the work of connecting each forest official at field level to FSI's Fire alert system is also in progress.

#### ***2.2.8.2 Doubtful Feedback***

Audit reviewed the feedback on FSI fire alerts submitted by the divisions. On review it was revealed that the divisions had accepted forest fire in only four to 11 *per cent* of total fire alerts sent by the FSI as indicated in **Table-2.2.2** below.

Table – 2.2.2: Details of Forest Fire Feedbacks

Year	Forest Fire feedback submitted by the Divisions	Total Feedbacks submitted by the Divisions	% of Forest Fires accepted with respect to total feedbacks
2018	511	5688	8.98
2019	537	4664	11.5
2020	24	573	4.18

To test veracity of the division's feedback we compared feedback to FSI alerts with division's daily fire reports (manually), in one of the Division h41 as detailed in **Table-2.2.3** below. The comparison showed that the division was under reporting the existence of fire by giving wrong feedback through two ways: by rejection of FSI fire alert as no fire or by stating that those fire alerts related to controlled burning done by the Department itself (Control Fires). Accordingly, 40 out of 61 fire incidents during 2018 and 2019 were

reported as control fires in the feedback on FSI alerts while these were reported as forest fire in the daily report of FFRMS.

Table-2.2.3: Comparison of Feedback and Daily Report of Narendra Nagar division for same Geo Location and Time

Year	No of Fire Alerts issued by FSI	No of Forest Fires accepted in feedback to FSI Alerts	No. of Forest Fire incident as per daily report
2018	889	0	27
2019	447	2	34
2020	12	0	0
Total	1348	2	61

The facts shown in the table above casts doubt on the veracity of feedback submitted by the divisions and also on actual ground truthing being carried out by divisions.

On being pointed out, the Department replied (March 2022) that in Fire season 2022, geotagged feedback along with photographic evidence of ground truthing is being ensured. Further, the Department also stated that the feedbacks were being sent weekly to the FSI by receiving the same from all the divisions.

That after examining the issued regarding FOREST FIRE, the CAG has made the following Recommendations:

In view of the above, following recommendations are made:

1. Fire risk zonation map should be taken into consideration for financial allocation to divisions and subsequently to ranges. The high-risk zone-1 areas should be accorded priority and funds should be made available at the beginning of the fire season so that prevention and mitigation work in the vulnerable areas do not suffer for want of funds.
2. Submission of timely feedback of fire alerts to Forest Survey of India using the online system should be

made mandatory for all divisions so that real time correct information is conveyed to Forest Survey of India. The Department should put in a mechanism like collection of photographic evidence during ground truthing, to ensure that there is a proper verification of alerts.

3. Keeping in view the rugged terrain of the State, which makes many areas not easily accessible, the areas affected by forest fire should be assessed using remote sensing technology as it has standardised methodology and can be completed in short time with least manpower. The Department should either put in action the Memorandum of Understanding with National Remote Sensing Centre regarding submission of burnt area estimates or it can access the data from state agency like Uttarakhand Space Application Centre.
4. The use of drones in forest fire management may be considered as drones give fire fighters, a bird's eye view of terrain and provide access to real time data without putting lives of personnel at risk. The drones

can capture high resolution imagery in smoke as well as at night and it can be used at all stages: pre-fire for monitoring of fire lines; during fire for decision making as well as fire extinguishing; and post-fire for assessing the damage quickly. Similar recommendations were given in Report Number 293 presented by Department Related Parliamentary Standing Committee on Science & Technology, Environment & Forest on December, 2016 in both houses of the Parliament.

**True copy of the relevant part of CAG Report is annexed and marked hereto as Annexure A1/2.**

#### **7. NODAL OFFICER DEALING WITH FOREST FIRE MUST BE A DEDICATED OFFICER HAVING NO OTHER CHARGE**

It is respectfully submitted that in State of Uttarakhand the Nodal Officer dealing with Forest Fire is Chief Conservator of Forest (Forest Fire and Disaster Management).

Many times it has been observed that Chief Conservator of Forests (Forest Fire and Disaster Management) is also having additional charges.

At a time of National Emergency when thousands of hectares of Forest is burning, allotting additional charges to a Nodal Officer who is dealing with Forest Fire is nothing but adding insult to the injury.

Hence, it is prayed before this Honble Court to direct the State to not to provide additional charges to the Nodal Officer who is dealing with Forest Fire related issues.

### **SUGGESTIONS**

In view of the facts and circumstances, as mentioned above, undersigned wishes to submit following suggestions to combat the Forest Fire in State of Uttarakhand:

- A. Direct the Ministry of Environment, Forests and Climate Change, Union of INDIA to allocate fund to Uttarakhand Forest Department for addressing inadequate basic infrastructure for effective forest fire management.
- B. Direct State of Uttarakhand to review its Fire Lines as the same has not been done for a quite long time and is essential for effective fire management

- C. Direct State of Uttarakhand to take steps to appoint adequate number of Forest Guards, Watchers and Foresters to combat Forest Fire.
- D. Direct State of Uttarakhand to frame Insurance Scheme for Daily Wage Workers and Non-Permanent staff of Forest Department.
- E. Direct State of Uttarakhand to provide Status of Martyrs for those Forest Department Personnel who make ultimate sacrifice in the line of duty.
- F. Direct State of Uttarakhand to implement the recommendations issued by Comptroller and Auditor General of INDIA in its Report titled as 'COMPLIANCE AUDIT REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA FOR THE YEARS ENDED 31 MARCH 2020 AND 31 MARCH 2021'.
- G. Direct the State of Uttarakhand to not to provide additional charges to the Nodal Officer who is dealing with Forest Fire related issues.


Drawn and Filed By



Gaurav Kumar Bansal

Amicus Curie




 **GPS Map Camera**



**Barkot Range, Uttarakhand, India**  
**Dehradun Rd, Barkot Range, Uttarakhand 248145, India**  
**Lat 30.138499°**  
**Long 78.247215°**  
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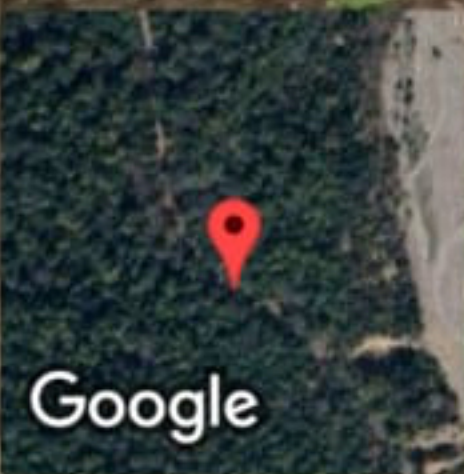
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**Dehradun Rd, Barkot Range, Uttarakhand 248145, India**  
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 **GPS Map Camera**



**Barkot Range, Uttarakhand, India**  
**Dehradun Rd, Barkot Range, Uttarakhand 248145, India**  
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 **GPS Map Camera**

**Barkot Range, Uttarakhand, India**

**Dehradun Rd, Barkot Range, Uttarakhand 248145, India**

**Lat 30.138358°**

**Long 78.247135°**

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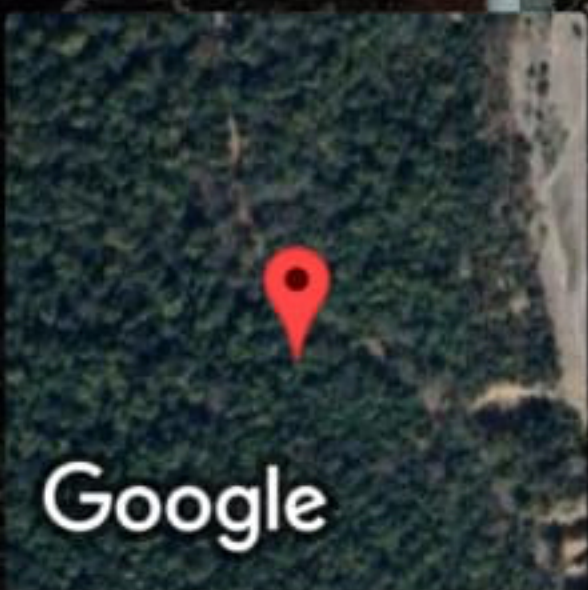


Google



 **GPS Map Camera**

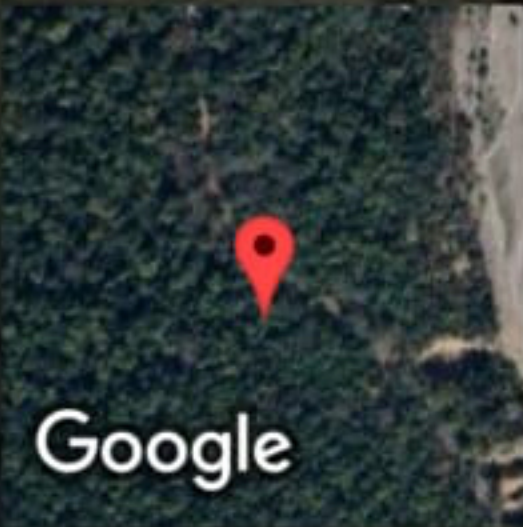
**Barkot Range, Uttarakhand, India**  
**Dehradun Rd, Barkot Range, Uttarakhand 248145, India**  
**Lat 30.138358°**  
**Long 78.247135°**  
**23/09/24 06:32 PM GMT +05:30**




**Google**



 **GPS Map Camera**



**Barkot Range, Uttarakhand, India**  
Dehradun Rd, Barkot Range, Uttarakhand 248145, India  
Lat 30.138343°  
Long 78.247167°  
23/09/24 06:27 PM GMT +05:30

 **GPS Map Camera**

**Barkot Range, Uttarakhand, India**  
**Dehradun Rd, Barkot Range, Uttarakhand 248145, India**  
**Lat 30.138359°**  
**Long 78.247152°**  
**23/09/24 06:27 PM GMT +05:30**



**Chapter-2**  
**Compliance Audit Observations**  
**Relating to Departments and**  
**Entities of Non-PSUs**



**CHAPTER-2**

**COMPLIANCE AUDIT OBSERVATIONS RELATING TO DEPARTMENTS AND ENTITIES OF Non-PSUs**

**FINANCE DEPARTMENT**

**2.1 Subject Specific Compliance Audit on Implementation of Direct Benefit Transfer in Uttarakhand**

**2.1.1 Introduction**

India, as a welfare state, has been transferring various benefits to its needy people through several welfare schemes and programs. After rapid rollout of Aadhaar, the Government of India tried to redress the existing cumbersome<sup>1</sup> implementation of schemes by launching Direct Benefit Transfer (DBT) scheme on 1 January 2013 by re-engineering delivery processes using modern Information and Communication Technology. DBT aims to transfer benefits directly to the targeted beneficiaries through their bank/postal accounts.

In Uttarakhand, there were 221 Schemes<sup>2</sup> on-boarded under DBT in 30 of 80 Departments. During the period 2017-18 to 2020-21 (up to July 2020), the number of beneficiaries in various schemes under DBT were in the range of 35.34 lakh to 55.85 lakh in the State and the total amount of ₹ 7,145.49 crore had been disbursed to these beneficiaries (*Appendix-2.1.1*).

**2.1.2 Organizational Arrangements**

State DBT Cell<sup>3</sup> is headed by Secretary (Finance) who acts as a nodal officer/coordinator for all DBT related matters in the State. He is responsible for coordination and liaisoning with the heads of various Departments who implement schemes identified under DBT spectrum. Social Welfare Department (SWD), which was selected by Audit for evaluating grassroot level implementation of DBT in its Old Age Pension (OAP) and Widow Pension (WP) schemes, is responsible for examination of all its schemes to identify specific schemes and/or their components which are suitable for DBT, identification and authentication of beneficiaries for respective schemes, maintenance of database containing scheme wise beneficiary details, seeding of Aadhaar into beneficiary database, creation of payment files for disbursements to end beneficiaries, digitization of verified beneficiary data, creation and maintenance of real time Management Information System (MIS) portal and timely updation and maintenance of data. Besides, the Finance Department (Directorate of Treasuries) is responsible for making payments, when the

<sup>1</sup> The transfer of benefits to the public was fraught with deficiencies like existence of middlemen, delays, lack of transparency, duplication, and pilferage, etc.

<sup>2</sup> 107 Centrally Sponsored Schemes and 114 State Schemes.

<sup>3</sup> The State DBT cell was established in August 2016 with the aim to work as one point for coordinating the implementation of DBT in various schemes.

payment process is initiated electronically by the SWD, to DBT beneficiaries using Integrated Financial Management System (IFMS).

### 2.1.3 Nature and Scope of Audit

Audit included examination of DBT ecosystem at Government level and grassroot level implementation of two largest DBT schemes (OAP and WP) of SWD in the State. Being a welfare state, OAP and WP are the two most important tools of the Government to provide better living conditions and better survival to elderly and destitute citizens of the State. Benefits amounting to ₹ 2,110.57 crore were paid to more than 6.08 lakh beneficiaries during 2017-18 to 2020-21 (up to July 2020) in different months/instalments (*Appendix-2.1.2*).

The Compliance audit is an independent assessment of whether a given subject matter complies in all material respects with the applicable laws, rules, regulations, established codes *etc.* The subject matter “Implementation of DBT in Uttarakhand” for compliance audit was carried out during October 2020 to January 2021 covering period from 2017-18 to 2020-21 (up to July 2020) by examining the records of SWD. Besides, the required basic interventions for the implementation of DBT were also examined in State DBT Cell before scrutinizing the DBT in OAP and WP schemes in SWD. Further, data dumps related with beneficiaries of OAP and WP schemes and their payments through IFMS were also obtained from the SWD and the Finance Data Centre of the Directorate of Treasuries respectively and these were subjected to data analysis. The findings of data analysis were further validated in four implementing offices<sup>4</sup> of the SWD.

An entry conference was held on September 29, 2020 with the State DBT Nodal Officer (Secretary, Finance) and an exit conference was held with same level on May 4, 2022 in which the audit findings were discussed. The views of the Government have been suitably included in the report.

***Earlier Audits - The audit of OAP was earlier conducted during March-October 2018 covering the period 2015-16 to 2017-18 and findings reported through paragraph 1.12 of the Report number 2 of 2019 of the Comptroller and Auditor General of India for the State of Uttarakhand. The said Report contained findings like non-compliance with the guidelines/rules for providing pension to the old age persons, deficient selection process, lack of input and validation controls, excess/short payment to beneficiaries, disbursement to deceased/ineligible persons, double and delayed payments to beneficiaries, etc. In current audit too, presence of such instances highlights the fact that the SWD did not undertake corrective measures.***

<sup>4</sup> District Social Welfare Officer (DSWO), Dehradun and Haridwar, and District Probation Officer (DPO), Dehradun and Haridwar.

## Audit findings

Audit aimed to ascertain whether the necessary process re-engineering, as mandated in DBT guidelines, was done by the State Government for implementation of DBT so as to minimize intermediary levels, delay in payments to intended beneficiaries and pilferage and duplication *etc.* The factors that impacted the objectives of the DBT are discussed below:

### 2.1.4 Process of DBT

The process of DBT involves various milestones at different levels in the DBT structure. These sub processes include preparatory steps, registration on Public Financial Management System (PFMS)/State e-FMS, creation of beneficiary database, validation of beneficiary details and payment and feedback loop.

#### 2.1.4.1 Preparatory steps

As per DBT Mission norms, a DBT Cell is to be created in each State which will facilitate smooth transition of different schemes to DBT. The DBT Cell shall identify DBT schemes or components of schemes and study process/fund flow and develop Information Technology (IT) based system/MIS, create a grievance redressal unit and train officials. In the preparatory steps, Audit noticed following shortcomings:

##### ➤ *DBT applicable schemes not identified*

Although the State Government created DBT Cell (August 2016), the cell and its committees did not analyze and identify DBT applicable schemes and programs being implemented at the State level. The work of identifying such schemes and programs was left to the Departments and no guidelines/instructions were issued by DBT Cell in this regard. Lack of monitoring of this crucial aspect resulted in the number of DBT schemes remaining static during the last three years. The DBT cell could, at least once, assess all the schemes to see if there were more schemes which were fit and could be brought under the DBT mode.

The Government accepted that respective Departments identified the DBT schemes where there was scope of applying DBT.

##### ➤ *No ratio set between DBT schemes & non-DBT schemes*

As per the broad objectives of DBT schemes, all the Government payments should be made through DBT mode. The State Governments could gradually move in this direction if a ratio of payments through DBT and non-DBT payments was worked out for each Department and such ratio was monitored to see the progress in this regard. However, no such ratio between payments of DBT schemes and non-DBT schemes was worked out by DBT Cell. Further, the Departments were free to implement a scheme through DBT mode or otherwise. Hence, the transition of schemes from non-DBT mode to DBT mode suffered. The number of DBT schemes remained static as only one non-DBT mode scheme was included in DBT mode from 2017-18 (220 schemes) to 2020-21 (221 schemes).

➤ ***No dedicated resources with DBT Cell***

There was no dedicated setup (office, manpower and infrastructure *etc.*) of DBT Cell or Technical Support Group in the State. The DBT Cell and implementation support group had been constituted from the officers taken from various Departments and institutions and there were no dedicated resources available with them. This affected planning, implementation and monitoring of the DBT schemes.

➤ ***No grievance redressal system***

No grievance redressal system was developed by DBT Cell, therefore very purpose to enable incorporating the feedback of the beneficiaries, their experience with DBT and their grievances into the system was defeated.

➤ ***No timelines fixed for payment***

No timelines were fixed by the DBT cell to curb undue delays in fund transfer through DBT. This was even though the Government of India (GoI) had notified specific timelines in this regard. The Departments followed their own timelines for payment and Audit found that there were delays in disbursement of pension to the beneficiaries as discussed in ***paragraph 2.1.5.13.***

#### ***2.1.4.2 Registration on PFMS***

As per guidelines, for all DBT schemes, Central Ministries/Departments and the State Treasury will be registered on the centralized PFMS portal. In case there is a State e-FMS, it should be compatible with PFMS<sup>5</sup> to ensure establishment of a reverse feedback loop. State Advisory Board also issued (September 2016) direction for implementation of DBT through PFMS. Scrutiny of records of DBT Cell/IFMS and SWD disclosed that 217 out of 221 DBT schemes were being implemented through IFMS. Further, the IFMS did not have features comparable with the PFMS like Aadhaar and bank account validation. The IFMS, therefore, was not robust like the PFMS and failed to detect cases of double/multiple pensions on the basis of Aadhaar and bank accounts as discussed in ***paragraphs 2.1.5.9 and 2.1.5.10.***

The Government of Uttarakhand (GoU) accepted (November 2020) the facts and stated that four CSS schemes were running through PFMS. Director, Treasury also accepted (November 2020) that IFMS did not have features like Aadhaar validation and bank account validation.

#### ***2.1.4.3 Creation of Beneficiary Database***

As per DBT Mission Flyer document, universal beneficiary database was to be created to help the Government in effective scheme planning for holistic realization of subsidy outlays and national level portability of benefits and services.

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<sup>5</sup> The PFMS is a web-based online software application developed and implemented by the Controller General of Accounts, GoI. It was started with the objective of tracking funds released by GoI and real time reporting of expenditure. On the other hand, IFMS is implemented by the State Government for facilitating financial transactions from the State Treasury. However, IFMS does not have features of validation of beneficiary identity through Aadhaar verification, and his financial credentials like bank account and IFSC code verification.

During scrutiny (October 2020) of records of DBT Cell, Audit found that universal beneficiary database was not in existence in the State. The Departments maintained their own scheme-wise database of beneficiaries, which were used as a base for transferring benefits to the intended recipients. As such, benefits like help in scheme planning, rationalization of subsidies, portability of benefits and services, checking fictitious and duplicate beneficiaries and checking multiple benefits to same persons *etc.* could not be realized in absence of universal beneficiary database.

***SWD has multiple pension schemes like OAP, WP, Kisan pension and Disability pension. The Department maintained separate database for each pension scheme. However, Audit noticed that there was lack of internal integration between database of these pensions which resulted in instances of pensioners receiving benefits of multiple pension schemes as discussed in paragraphs 2.1.5.9 to 2.1.5.12.***

During the exit conference, the Government stated that the Government would move in the direction of creation of universal database after all the schemes are notified under Aadhaar Act. The Government also informed that DBT MIS might be converted into such database once it is fully functional.

#### **2.1.4.4 Validation of Beneficiary Details**

The Standard Operating Procedure (SOP) for DBT envisaged that bank accounts and Aadhaar details of beneficiaries would be validated from banks and National Payments Corporation of India respectively. Audit found (October 2020) that:

- There was no facility for validating Aadhaar and bank account number of the beneficiaries. The Social Security Pension (SSP) portal of the Department merely checked duplicity of Aadhaar and bank account numbers. Non-validation of Aadhaar and bank accounts left scope for use of fraudulent Aadhaar number and duplicate bank accounts for getting benefits. In absence of proper validation, it was found that 67 beneficiaries in State, including four beneficiaries in selected districts, were benefitted with double pension in same scheme or double pension in multiple schemes as discussed in ***paragraphs 2.1.5.9 and 2.1.5.10***. Director, SWD agreed (March 2021) with the Audit observation and attributed the shortcomings to lack of validation facility for Aadhaar and bank account numbers in the portal.
- The GoI has highlighted Aadhaar seeding in bank accounts as a pre-requisite for DBT. Aadhaar seeding of bank accounts in the beneficiary database will help in de-duplication and curbing leakages. However, Audit noticed that Aadhaar seeding status of beneficiary bank accounts was not available with the Department and the IFMS. Audit inquired about status of Aadhaar seeding of 1,71,222 out of total 1,80,173 bank accounts of beneficiaries in Dehradun and Haridwar districts from banks. However, the banks could provide details of only 1,12,886 beneficiary bank accounts, of which 39,692 bank accounts (35 *per cent*) were unseeded. Hence, the SWD/IFMS as well as banks were lagging in Aadhaar seeding.

During the exit conference, the Government stated that a Government Order had been issued for Aadhaar authentication and Department was going to use web service of Unique Identification Authority of India (UIDAI) for Aadhaar authentication of pensioners/applicants soon. Officers from the IT Cell of the SWD informed that relevant checks had been applied in the Beneficiary Management System (BMS) and it would check further anomalies in due course. The reply is not acceptable, as the relevant checks for authentication of Aadhaar were not being applied by the Department and after pointing out by the Audit, it was stated that necessary action would be taken soon.

#### **2.1.4.5 Payment and feedback loop**

For facilitating payment to beneficiaries under DBT, the Departmental IT system (in case of SWD, it is SSP portal *i.e.* <https://ssp.uk.gov.in>) is integrated with the IFMS run by the Directorate of Treasuries. SSP Portal is an aggregated portal for BMS. On the other hand, IFMS acts as a generic payment platform of GoU and facilitates payments to beneficiaries forwarded by the SSP portal as well as all other Departments.

After receipt of applications of Beneficiaries, District Social Welfare Officer (DSWO)/ District Probation Officer (DPO) enter the necessary details of pensioners in the SSP portal and process pension by importing data on IFMS portal and generate online bills at IFMS portal. IFMS portal has limit of receiving 5,000 records at a time, so pension portal has a provision for processing the data in a set of 5,000 each time. After successful generation of bills at IFMS portal, DSWOs/DPOs also send a physically signed copy of bills to treasury for payment. As soon as the treasury receives physical copy of a bill, it processes the bills for payment. Hard copies of these bills and online data are checked and tallied at Treasury Officer (TO) level. When found correct, the bill is approved by all levels<sup>6</sup> for payment. After passing of bill by TO, the payment command is uploaded to e-Kuber (RBI's system for payments) by operator and the payment goes through the same levels to the beneficiaries' bank account. If the payment is successful, consolidated fund of the State is debited and a unique transaction receipt (UTR) number is generated by RBI. If the transaction is failed due to inconsistencies in account number and IFSC code, the consolidated fund of the State is not debited and a flag for failure is generated in the system. The failure report is shown at SSP portal and DSWO can ask TO to provide demand draft (DD) for failed transactions. The DD is then deposited to the bank account of the office. When beneficiaries get their details corrected at DSWO Office, their payment is released through bank advice from the DSWO office. During examination of records of DSWOs/DPOs in test checked districts, SSP Portal and IFMS, the following shortcomings were noticed:

- SSP portal was devoid of features for automatically pushing of pension bills each quarter without manual intervention. Such automation could check delayed payment of pension and ease workload on scantily available manpower of the Department.

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<sup>6</sup> Operator (maker), Supervisor (checker) & TO (approver).

- The Department was not harnessing data of beneficiaries available at BMS for processing pension automatically in a centralized manner at Department level. Instead, pension was processed each quarter by DSWOs/DPOs in each district which was not required/ warranted due to availability of centralized data of beneficiaries. Hence, the full potential of DBT was not realized in letter and spirit which could curtail work load on district offices and prevent delays in disbursement of pension.
- IFMS was not capable of validating authenticity of bank accounts and IFSC codes. It was the major reason of transaction failures at e-Kuber level. Such failures could be avoided by enabling suitable features in IFMS.
- Scrutiny of records (December 2020) of DSWOs/DPOs in sampled districts revealed that pension amount, undisbursed due to transaction failures, of ₹ 2.82 crore (0.39 per cent of disbursements in sampled districts during audit period) relating to OAP and WP schemes was provided by treasury to the DSWOs/DPOs concerned in the form of DD for payment to 7,286 pensioners, whose pension installment had failed, during audit period. However, audit could not derive any assurance regarding timebound payment to these pensioners because DSWOs/DPOs neither maintained the records of number of re-processed cases nor the amount actually paid to such beneficiaries. Hence, a foolproof system for payment of failed amounts was absent in the Department.
- Withdrawal of funds from consolidated fund of the State by TO for providing DDs to DSWOs/DPOs and further deposit of these amounts in the bank accounts of DSWOs/DPOs was in violation of guidelines of the State Government for maintaining financial discipline.
- Transactions initiated by BMS get response from IFMS in the form of transaction reference number and date in respect of each transaction. However, Audit noticed during analysis of BMS data that 82,034 transactions (60,609 transactions<sup>7</sup> of OAP and 21,425 transactions<sup>8</sup> of WP) did not have automated insertion of transaction reference number or dates received from the IFMS. This indicated instances of malfunctioning in integration-service between the BMS and IFMS.
- There were no features for downloading the data of transaction success or failure by DSWOs/DPOs using BMS in consumable formats like Excel or Comma Separated Value. These processed data of payment from IFMS were not further used for identifying and reprocessing failed transactions after corrections. As such, the Department was unable to provide to Audit the data regarding further processing of failed transactions.

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<sup>7</sup> DSWO, Dehradun: 106, DSWO, Pauri: 170, DSWO, Tehri: 34,891, DSWO, Udham Singh Nagar: 5,430 and DSWO, Uttarkashi: 20,012.

<sup>8</sup> DPO, Bageshwar: 14, DPO, Chamoli: 07, DPO, Dehradun: 3,984, DPO, Haridwar: 01, DPO, Pauri: 1,537, DPO, Tehri: 8,081 and DPO, Udham Singh Nagar: 7,801.

- Integration of BMS with death registration authorities would have provided significant help in stopping the pension of the deceased beneficiaries in time. However, no such integration was in place in the Department. As a result, the instances of release of pension to the deceased beneficiaries were noticed (*paragraph 2.1.5.16*).
- Government order (May 2016) stipulates entry of correct mobile number in the software so that up-to-date information about pension disbursement can be made available through Short Message Service (SMS) to all the beneficiaries. Besides, the move was in line with the objective of GoI to leverage all DBT payments with JAM (Jandhan bank accounts, Aadhaar & Mobile) trinity. However, Audit noticed a large number of incorrect mobile numbers<sup>9</sup> were frequently used for 8,661 beneficiaries in OAP and 3,102 beneficiaries in WP in the State in the database. For example, mobile number 59XXXXXX07 was used for 103 beneficiaries and mobile number 11XXXXXX11 was used for 4,217 beneficiaries. Besides, valid looking mobile numbers were also used for multiple beneficiaries *i.e.* mobile number 96XXXXXX27 was used for 100 beneficiaries and mobile number 98XXXXXX00 was used for 1,517 beneficiaries. Such anomalies in recording of mobile number of pensioners in database defeated the objective of providing information to the beneficiaries through the facility of SMS and an opportunity for payment feedback. Thus, it shows that correct mobile numbers have not been updated in the records of all pensioners.

Director, SWD stated (March 2021) that the portal had mandatory provision for entering mobile number which led to entry of incorrect mobile number in case of those beneficiaries who had not furnished their mobile numbers. The reply is not acceptable, as SWD has not taken any step for updating the mobile numbers of beneficiaries.

### **2.1.5 Implementation of DBT in Old Age and Widow Pension**

Audit evaluated implementation of DBT at grassroot level by examining working of OAP and WP schemes of SWD, SSP portal (BMS of SWD) and IFMS portal (payment platform) in two selected districts. Audit found that the objectives set by the GoI for DBT could not be achieved in the State in a holistic manner. Besides, the audit findings also highlight the inadequacies and inconsistencies from system perspective. The audit observations are as under:

#### **2.1.5.1 Lack of survey to identify eligible beneficiaries**

SOP for DBT and National Social Assistance Program (NSAP) guidelines stipulate that the responsibility for identification and authentication of the beneficiaries for DBT schemes rests with the Department.

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<sup>9</sup> 11XXXXXX11, 12XXXXXX90, 59XXXXXX34, 59XXXXXX64, 18XXXXXX09, 12XXXXXX89, 12XXXXXX95, 59XXXXXX43, 45XXXXXX45, 59XXXXXX07 and 14XXXXXX14.

Scrutiny of the records (December 2020) of test checked DSWOs/DPOs revealed that no survey/exercise was ever undertaken by the Department for identification of beneficiaries. The beneficiaries themselves applied for pension schemes and got the verifications done at various stages before the pension was sanctioned. In this process, the onus was on the beneficiaries to prove their eligibility. This was in violation of the SOP issued by GoI as well as provisions of NSAP guidelines.

During the exit conference, the Government stated that camps were held in poor habitations *etc.*, so that eligible persons could be benefitted from SSP schemes. It is also stated that Department would ensure to formulate mechanism for timely survey for identification of beneficiaries. The reply is not acceptable, as the Department failed to identify and authenticate the beneficiaries, which was its responsibility as per NSAP guidelines.

### **2.1.5.2 Exclusion of eligible population**

As per State Government instructions (May 2016), applications for pension were to be forwarded to the DSWOs/DPOs after recommendations of Block Development Officer (BDO) and Sub-Divisional Magistrate (SDM) in rural and urban areas respectively. These forms were also examined/scrutinized by the Assistant Social Welfare Officers (ASWOs). The application forms of beneficiaries found eligible after scrutiny were entered into pension portal for further processing of pension.

Scrutiny and analysis of data (December 2020) related to Audit period revealed that a total of 450 applicants<sup>10</sup> in the selected DSWOs/DPOs and 1,008 applicants<sup>11</sup> in the State, whose application forms were found appropriate and whose details were entered into the portal after scrutiny for processing of pension, were not paid pension. Audit found (December 2020) that out of 450 applicants, 295 applicants were actually ineligible due to not fulfilling eligibility criteria<sup>12</sup> of scheme. Out of the remaining 155 applicants<sup>13</sup>, 110 applicants were rejected without recording any definite reasons while the remaining 45 applicants were rejected because of procedural shortcomings like lack of endorsement from Gram Sabha (01), details of bank account (26), copy of pariwar register (03), Aadhaar card (03), Below Poverty Line (BPL) certificate (03), Income certificate (03) and mention of income from all sources of applicants having adult son (06). However, no remedial measures were taken by the Department and these 155 applicants remained excluded from the social security schemes and were deprived of significant financial support till date.

<sup>10</sup> DSWO, Dehradun: 209 applicants, DSWO, Haridwar: 121 applicants, DPO, Dehradun: 65 applicants and DPO, Haridwar: 55 applicants.

<sup>11</sup> OAP: 688 applicants and WP: 320 applicants.

<sup>12</sup> For OAP: minimum age- 60 years, income- BPL persons or persons with maximum monthly income of ₹ 4,000 from all sources and endorsement of Gram Sabha. For WP: minimum age-18 years, sex-female, income-BPL persons or persons with maximum monthly income of ₹ 4,000 from all sources and endorsement of Gram Sabha.

<sup>13</sup> DSWO, Dehradun: 100 applicants, DSWO, Haridwar: 31 applicants, DPO, Dehradun: 11 applicants and DPO, Haridwar: 13 applicants.

On this being pointed out, the DSWOs and DPOs stated (November-December 2020) that the beneficiaries were not paid pension due to certain deficiencies in their application forms. The Director, SWD also supported (March 2021) the view of the DSWOs and the DPOs. However, Audit could not derive any assurance due to lack of clear reasons and Department's inability to provide application forms of the above beneficiaries.

### **2.1.5.3 Results of review of the selection process**

As per Government Order (June 2016), the eligibility criteria for pension benefits were fixed and pension benefits were to be provided as per the eligibility criteria and in compliance with extant guidelines. The existing selection process of beneficiaries under OAP and WP schemes was reviewed/analyzed during audit in the selected offices (DSWOs and DPOs of Dehradun and Haridwar districts) and it was noticed that:

- There was no facility/provision available to the beneficiaries for applying online either via mobile application or web application. Besides, there was no provision for existing beneficiaries which could enable them to check the details of their profile and payment history and initiate any corrections, if needed.
- The Government had capped maximum income at ₹ 4,000 per month for a beneficiary from all the sources. However, there was no rationale on which income was assessed. This led to instances where income assessed by the revenue sub-inspector was less than the income declared by the beneficiaries themselves in the ration cards.
- As per paragraph 3.1.4 of the NSAP guidelines, the States may designate a Verification Officer or Verification Team under an authorized officer to verify the applications with reference to facts related to eligibility within two weeks from the date of receipt of the application. However, Audit noticed that such teams for verification of applications were not constituted in any of the test-checked districts.

Audit verified 1,688 (5 per cent) out of 33,667 application forms<sup>14</sup> in selected districts and noticed deficiencies in the forms of 821 beneficiaries<sup>15</sup> (49 per cent). These deficiencies included sanction of pension without recommendation by BDO/SDM (301 cases), expired income/BPL certificates (54 cases), beneficiaries' self-declared family income in excess of ₹ 4,000 (99 cases), not taking into account adult sons/daughters' income (09 cases), absence of death certificate of husband (05 cases), not attaining required age of 60 years (03 cases), submission of bank account of other people (02 cases), absence of monthly income certificates of family from all sources (132 cases), beneficiaries husband name different (02 cases), absence of required documents<sup>16</sup> (214 cases). Hence, pension benefits were provided to these beneficiaries despite not fulfilling the eligibility criteria of documentation.

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<sup>14</sup> Approved during the period 2017-21 (up to July 2020) in sampled districts.

<sup>15</sup> DSWO, Dehradun: 144 cases, DSWO, Haridwar: 394 cases, DPO, Dehradun: 182 cases and DPO, Haridwar: 101 cases.

<sup>16</sup> Pariwar register/ration card, death certificates, Aadhaar card, BPL card, income certificate, bank passbook and proposals of gram panchayat.

During the exit conference, the Government, while accepting the facts, informed that Department had developed a module and integrated with SSP portal in which applicant would apply and upload documents directly online. In this new module, all the verifying officers will do the verification online on portal. Mobile app also is in progress with the help of UMANG Team.

#### **2.1.5.4 Not maintaining supporting documents in digital format**

State Government issued directions (May 2016) for scanning and uploading of the attached documents of the eligible beneficiaries in the BMS for disbursement of pension. The aim behind the order was to digitally maintain the evidence of eligibility of beneficiaries.

Audit, however, found (November 2020) that the required documents were not being uploaded in the pension portal during online entry of details of beneficiaries. Uploading of necessary documents could provide the Department permanent evidence for future verification, if required. Besides, there were instances of hard copies of the application forms and documents being misplaced and difficult to locate due to large number of applications as was evident in the Department's inability to provide supporting documents of beneficiaries sought by Audit. The Department could provide supporting documents of only 131 beneficiaries (19 per cent) against applications/ documents of 694 beneficiaries<sup>17</sup> sought by Audit (November 2020 and April 2021).

On this being pointed out, the Director, SWD stated (November 2020) that presently there was no provision on pension portal to upload the required documents of beneficiaries. However, the Department could get such an option enabled in the portal through National Informatic Centre keeping in view the instructions of the Government.

#### **2.1.5.5 Lack of business process re-engineering for simpler flow of information**

DBT intends to achieve the goal of simpler flow of information and funds by re-engineering of Government processes. Hence, success of DBT activities may be assessed against the criterion of reduced number of intermediate administrative levels as a result of implementation of DBT.

During examination of records (December 2020) of selected DSWOs/DPOs, it was noticed that the beneficiaries had to get their applications passed through Pradhan/ Ward member, Gram Panchayat Vikas Adhikari, ASWO and BDO/SDM before the form was submitted to the DSWO/DPO. The same process was applicable before the rollout of DBT. As such, there was no re-engineering of Government processes and thereby no reduction in the number of intermediate administrative levels after implementation of DBT.

The DSWOs/DPOs accepted (December 2020) that there was no change in the process of selection/approval of beneficiaries and process of disbursement of pension before and

<sup>17</sup> DSWO, Dehradun: (sought: 330, received: 33), DSWO, Haridwar (sought: 204, received: 03); DPO, Dehradun: (sought: 86, received: 21) and DPO, Haridwar: (sought: 74, received: 74).

after implementation of DBT. Director, SWD also accepted (November 2020) that there was no process re-engineering in pension schemes for implementation of DBT. This resulted in not achieving of one of the major objectives of the DBT of simpler flow of information.

#### **2.1.5.6 Failure to notify DBT schemes under Uttarakhand Aadhaar Act, 2017**

Section 4 of the Uttarakhand Aadhaar Act<sup>18</sup>, 2017 requires State Government to notify, within three months from the commencement of the Act, the list of schemes, subsidies, benefits or services for which such (Aadhaar) authentication or proof is required. The Act was intended to achieve the objective of efficient, transparent and targeted delivery of subsidies, benefits and services to the beneficiaries. These provisions were in consonance with section 7 of Aadhaar Act, 2016 which was also upheld by the Supreme Court on 26 September 2018.

Scrutiny of records of DBT Cell and SWD revealed that only nine out of 221 DBT schemes were notified under Section 4 of the State Aadhaar Act. All nine schemes pertained to Animal Husbandry Department and none of the schemes of SWD had been notified under the Act. Thus, the very purpose of authentication of beneficiaries using Aadhaar, as envisaged by Central/ State Aadhaar Act, was defeated. Due to failure to notify schemes under Aadhaar Act, beneficiaries were not bound to furnish Aadhaar. During the exit conference, the Government, while accepting the facts, stated that 113 schemes had been notified till now under Aadhaar Act and the work was under progress in other schemes.

#### **2.1.5.7 Inadequacies in the Beneficiary Management System of SWD**

An evaluation of the BMS revealed following deficiencies:

- An applicant can be enrolled as a beneficiary only after attaining the age of eligibility *i.e.* 60 years in the case of OAP and 18 years in the case of WP. However, the portal is unable to prevent pension payment to an enrolled beneficiary with retrospective effect. A beneficiary becoming eligible in 2021, therefore, could be paid pension retrospectively from a year, as back as 2011, when he/she was not eligible. Besides, an enrolled beneficiary eligible at the time of enrolment could also be scheduled for payment of pension from prospective dates (up to 2025).
- There is no option for automatic calculation of pension arrears in BMS by entering the arrear period in the system. The arrear to a beneficiary is required to be entered manually by the user and any amount, irrespective of the due period, can be entered in the arrear column of the portal.
- The SSP portal/BMS accepted any 10-digit number as mobile number. Such anomaly in recording of mobile number of pensioners in database defeated the objective of providing information to the beneficiaries through the facility of SMS.

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<sup>18</sup> Notified in January 2018.

- SSP Portal allows enrolment of a beneficiary on the basis of duplicate BPL ID. This is contrary to the provision of Government Order requiring payment of only one pension.
- There is no provision of income certificate for BPL beneficiaries in SSP portal. However, the portal accepts enrolment of a beneficiary only after income column is filled. Hence, in the case of BPL beneficiaries, fictitious figures are filled in the income column to facilitate registration and such figures can be up to ₹ 9,99,999 despite the fact that persons with income over ₹ 4,000 per month can't be provided the benefit of pension schemes.
- The SSP Portal contains fields for entering details of occupation of beneficiary and date of deposit of application form. However, these fields remain disabled and entries in these fields can't be made at SWD level.
- The BMS database was not clean, as it had incorrect data in the form of incorrect mobile numbers, income details *etc.* Besides, it did not have Aadhaar seeding capacity and bank account validation to ensure that benefits were going to the correct and eligible beneficiary, as pointed out in *paragraph 2.1.4.4, 2.1.5.9 to 2.1.5.12.*

During the exit conference, the Government stated that Department was going to use web service of UIDAI for Aadhaar authentications of pensioners/applicants soon and accordingly relevant checks had been applied in the BMS and it would check further anomalies in due course.

#### **2.1.5.8 Use of beneficiary Aadhaar number**

As per instructions (May 2016), every applicant shall enclose certified copy of his Aadhaar with application form for pension. Audit noticed cases of incorrect capturing of Aadhaar numbers in the database in test checked districts. The instances are elaborated below:

- (a) Aadhaar numbers used for enrolment of 1,12,151 beneficiaries of OAP and WP in the whole State during the period 2017-21 (up to July 2020) were examined through Verhoeff Algorithm<sup>19</sup> method. Out of these Aadhaar numbers, the data entered for 2,430 Aadhaar numbers<sup>20</sup> (2.17 per cent), was not found valid during verification by audit. This may be due to incorrect entry of Aadhaar numbers by the Data Entry Operator, non-validation of Aadhaar numbers by the Department or incorrect capturing of Aadhaar numbers in the system. Thirty-three per cent of them (805<sup>21</sup>) belonged to the test-checked districts.
- (b) For further authentication of Aadhaar numbers recorded during entry of details of beneficiaries in selected districts, audit verified 2,453 randomly selected Aadhaar

<sup>19</sup> Verhoeff Algorithm is a checksum formula for error detection developed by the Dutch mathematician Jacobus Verhoeff. It is used by UIDAI for validating Aadhaar numbers.

<sup>20</sup> OAP: 1,852 cases and WP: 578 cases.

<sup>21</sup> DSWO, Dehradun: 294 cases, DSWO, Haridwar: 418 cases, DPO, Haridwar: 49 cases and DPO, Dehradun: 44 cases.

numbers<sup>22</sup>, including 50 beneficiaries already verified through Verhoeff algorithm, on the UIDAI website <https://resident.uidai.gov.in/verify> and the following results were noticed:

- Forty-six of these Aadhaar numbers<sup>23</sup> were declared incorrect by UIDAI website.
- In 69 cases<sup>24</sup>, sex mentioned in the Aadhaar website was found different from that entered by the Department in its database.
- Age declared in Aadhaar was found below the prescribed age limit of 60 years in 47 cases<sup>25</sup> in OAP scheme. These beneficiaries were, therefore, ineligible for the benefits under OAP scheme.
- In 15 cases<sup>26</sup>, Aadhaar numbers belonged to people residing in other States like Uttar Pradesh, Delhi, Maharashtra, Rajasthan, Bihar, etc., while the pension was being provided to these beneficiaries in Uttarakhand.

***On being requested by Audit to provide copies of Aadhaar cards of the above 177 cases, the DSWOs/DPOs could furnish copies of only 51 Aadhaar cards (29 per cent), which were further verified from UIDAI website and it was found that four Aadhaar numbers were incorrect while rest of them were entered incorrectly in the BMS. Out of the four incorrect Aadhaar numbers, copies of two Aadhaar numbers had 'Government of Indiya' imprinted on them. It proved beyond doubt that fraudulent Aadhaar cards/numbers were being used for availing benefit of pension schemes.***

Director, SWD stated (March 2021) that there was no facility for validation of Aadhaar on SSP portal. It was added that the data might have been incorrectly entered and the district offices would be directed to investigate the issue in detail and take corrective measures.

The Department may fix responsibility of concerned employees for not exercising due diligence to rule out possible errors.

#### **2.1.5.9 Multiple pensions on same Aadhaar numbers**

The GoI has identified JAM Trinity (*Jan-dhan bank accounts, Aadhaar and Mobile*) as the chief enabler to transfer benefits in a leakage-proof, well targeted, cashless and timely manner. The State Government Order permits (June 2016) only single pension to an eligible beneficiary. Hence, only one person should be allowed to avail benefits under a particular Aadhaar-Bank Account pair.

During analysis of database of 6.21 lakh beneficiaries of OAP & WP, it was noticed (December 2020) that 17 pensioners were sanctioned an amount of ₹ 3.48 lakh through

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<sup>22</sup> DSWO, Dehradun: 972 cases, DSWO, Haridwar: 500 cases, DPO, Dehradun: 421 cases and DPO, Haridwar: 560 cases.

<sup>23</sup> DSWO, Dehradun: 27 cases and DSWO, Haridwar: 19 cases.

<sup>24</sup> DSWO, Dehradun: 55 cases, DSWO, Haridwar: 12 cases and DPO, Haridwar: 02 cases.

<sup>25</sup> DSWO, Dehradun: 11 cases and DSWO, Haridwar: 36 cases.

<sup>26</sup> DSWO, Dehradun: 04 cases, DSWO, Haridwar: 04 cases and DPO, Haridwar: 07 cases.

26 pensions (**Appendix-2.1.3**) based on 13 Aadhaar numbers indicating multiple pensions to the beneficiaries as detailed in **Table-2.1.1** below.

**Table-2.1.1: Aadhaar numbers indicating multiple pensions to the beneficiaries**

No. of persons	Aadhaar numbers	No. of Pensions	Type of pension scheme	Remarks
09	09	18	OAP, WP & Kisan	Each person linked with double pension leading to leakage of benefits.
08	04	08		Each Aadhaar linked with double pension leading to dubious identification and targeting of beneficiaries.

*Source: Extracted from data provided by SWD IT Cell.*

The SSP portal, therefore, was not able to detect duplicity on the basis of Aadhaar numbers in the existing database of the Department.

**After the issue was pointed out by audit, SWD blocked 10 multiple pensioners on 1 April 2021.**

#### **2.1.5.10 Multiple pensions on same bank account number**

Bank account of a beneficiary not only facilitates benefits under DBT, it is also an important tool of identification of beneficiaries. Analysis of database of 6.21 lakh beneficiaries of OAP & WP (January 2021) revealed that 50 beneficiaries (**Appendix-2.1.4**) had availed pension of ₹ 26.92 lakh through 76 pensions in 38 bank account numbers in the whole State as detailed in the **Table-2.1.2** below.

**Table-2.1.2: Multiple pensions on same bank account number**

No. of beneficiaries	Bank account numbers	No. of pensions	Type of pension scheme	Remarks
26	26	52	OAP, WP and Kisan	Each person linked with double pension leading to leakage of benefits.
24	12	24		Each bank account linked with double pension leading to dubious identification and targeting of beneficiaries.

*Source: Extracted from data provided by SWD IT Cell.*

During field validation in selected districts, it was found that, out of two beneficiaries, both were getting double benefits under more than one schemes (both OAP as also Kisan pension scheme and WP as also Kisan pension scheme) which is not permitted as per extant Government order of June 2016.

**Contrarily, audit noticed in four cases (two in Dehradun and two in Haridwar) that ₹1.21 lakh pension of otherwise eligible beneficiaries had been paid to bank accounts of other people.**

#### **2.1.5.11 Multiple pensions on same BPL ID**

Government order (June 2016) provided that BPL persons or persons whose monthly income from all the sources was not more than ₹ 4,000 per month would be eligible for

OAP or WP (as the case may be). Besides, it was also provided that only one person (husband or wife) in a family would be eligible for availing benefit of OAP and WP.

Analysis (December 2020) of data of 2.04 lakh beneficiaries of sampled districts revealed that 49 beneficiaries<sup>27</sup> (**Appendix-2.1.5**) had availed benefit of OAP and WP schemes by drawing an amount of ₹ 14.49 lakh on the basis of 23 BPL IDs. Audit validated all 49 beneficiaries in the selected districts and observed that nine BPL IDs (*at Serial No. 1 to 3, 24 to 26 and 45 to 47 of Appendix-2.1.5*) were linked with three pensions and rest 40 BPL IDs were linked with double pension leading to leakage of benefits.

Director, SWD attributed (March 2021) such instances to lack of validation facility/ checks in the SSP portal and assured for corrective measures.

#### **2.1.5.12 Payment of double pensions**

Analysis (December 2020) of database of 6.21 lakh beneficiaries of OAP & WP revealed that 16 beneficiaries (**Appendix-2.1.6**) had drawn double pension of ₹ 6.70 lakh in the whole State and in test checked districts, two cases were noticed (December 2020). Audit verified these two cases and found that one beneficiary in Haridwar district was getting widow pension in two different bank account numbers (as mentioned in **Appendix-2.1.6** at Serial Number 23 and 24).

On being pointed out by Audit, DPO, Haridwar accepted (December 2020) the facts and recovered (December 2020) an amount of ₹ 17,800 from the beneficiary. Director, SWD stated (March 2021) that this was due to receipt of multiple applications for pensions at various times and assured that necessary corrective action would be taken.

**Three more cases of double pensions were noticed during offline scrutiny of records in DSWO, Dehradun (two cases) and DPO, Haridwar (one case). However, the beneficiaries had surrendered the excess amount (₹ 45,000) received.**

During the exit conference, with regards to **paragraphs 2.1.5.8 to 2.1.5.12**, the Government, while accepting the Audit observations, instructed IT Cell of SWD to conduct de-duplication exercise frequently along with ported legacy database.

#### **2.1.5.13 Delay in payment of pension**

DBT is implemented to ensure a better and timely delivery of benefits to the people by speeding up payments and enhancing financial inclusion. As per order (March 2011) issued by SWD, pension should be paid to the beneficiaries by the month end of each quarter in four instalments *i.e.* first, second, third and fourth instalment should be paid by the end of June, September, December and February respectively. However, no timelines were fixed for payment by the State DBT cell to curb undue delays in fund transfer through DBT. This was despite the fact that the GoI had notified specific timelines in this

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<sup>27</sup> DSWO, Dehradun: 22 cases, DSWO, Haridwar: 05 cases, DPO, Dehradun: 20 cases and DPO, Haridwar: 02 cases.

regard. The Departments followed their own timelines for payment and no uniform timelines were in place across the Departments. Hence, the objective of timely payments was defeated.

Analysis of the data (November 2020) revealed that during 2017-21 (up to July 2020) pension to 1,334 beneficiaries amounting to ₹ 43.63 lakh was paid without delay and for remaining 5,96,539 beneficiaries, the amount of ₹ 2,080.51 crore (99.98 per cent of total pension paid) was paid with delays up to 283 days. In selected districts, only 86 beneficiaries were paid pension amounting to ₹ 2.58 lakh without any delay and the remaining 2,02,116 beneficiaries were paid pension amounting to ₹ 699.24 crore (99.99 per cent of total pension paid) with delay up to 272 days. The delay was attributable at every level *i.e.* drawing and disbursing officer to actual payment (up to 283 days) and treasury to actual payment to beneficiary (up to 279 days) as detailed in **Appendix-2.1.7 A & B**. Such delays defeated the objective of providing timely help to the deserving and enlisted citizens.

On this being pointed out, the Director, SWD accepted (March 2021) the audit observation and stated that the delay was due to overload of work and delayed availability of budget.

#### **2.1.5.14 Excess payment of pension to the beneficiaries**

The amount of pension payable to a beneficiary was ₹ 1,000 per month during the period from May 2016 to December 2019 and thereafter it was revised to ₹ 1,200.

To examine whether the beneficiaries were paid correct amount of pension, Audit analysed the database, with reference to those beneficiaries for whom the date of start of pension fell in the audit period. It was noticed (December 2020) that excess payment of ₹ 85.85 lakh was made to 2,722 beneficiaries in selected districts whereas excess amount was ₹ 201.85 lakh for the State during the period 2017-21 (up to July 2020). The excess payments were determined by Audit on the basis of quarterly entitlements including additional compensation amount granted by the GoI to Indira Gandhi National Old Age Pension scheme beneficiaries under *Pradhan Mantri Garib Kalyan Yojana* (a special package provided during Covid-19 pandemic).

On this being pointed out, Director, SWD stated (March 2021) that ₹ 1,000 per pensioner was given to the beneficiaries as provided in the *Pradhan Mantri Garib Kalyan Yojana* and rest of the excess payment could be due to manual calculation and entry of arrears. The reply of the Department is not acceptable as the excess payment was calculated by Audit after adjustment of ₹ 1,000 for *Pradhan Mantri Garib Kalyan Yojana*. Besides, the eligible amount was calculated for each pensioner based on date of start of pension and, therefore, there was no question of any further arrear amount.

#### **2.1.5.15 Short payment of pension to the beneficiaries**

Following the methodology discussed in *paragraph 2.1.5.14*, it was found (December 2020) that 6,062 beneficiaries were paid pension of ₹ 1,407.46 lakh instead of eligible amount of ₹ 1,658.92 lakh during 2017-21 (up to July 2020). This resulted in short payment of ₹ 251.46 lakh to these 6,062 beneficiaries under OAP and WP schemes. The short payment of pension amounting to ₹ 722.44 lakh to 26,155 beneficiaries was calculated by Audit for the whole State.

On this being pointed out, Director, SWD stated (March 2021) that disbursement of pension was stopped to beneficiaries who had not produced Aadhaar number, and it was restarted after the Aadhaar number was furnished. As a result, no pension was given in the gap period which led to short payment of pension. The reply is not acceptable as schemes of SWD were not notified under Aadhaar Act by the State Government till the date of audit. IFMS without Aadhaar validation and many schemes remaining un-notified led to transfer of benefit without properly ascertaining the identity of the beneficiaries.

During the exit conference, with regards to *paragraphs 2.1.5.13 to 2.1.5.15*, the Government, while accepting the facts, instructed the SWD to make every possible effort for ensuring timely payment of pension and proper checks to be built in the portal to enable automatic calculation of arrears so that excess and short payments can be stopped.

#### **2.1.5.16 Pension to deceased persons**

Government order (June 2016) stipulated physical verification of beneficiaries twice each year to ascertain whether beneficiaries are alive. Further, as per paragraph 3.6.3 (vii) of NSAP guidelines, the Gram Panchayats/Municipalities were required to report every case of death of beneficiaries to the designated sanctioning authority.

Audit noticed (December 2020) that physical verification of beneficiaries was not carried out twice each year by the DSWOs/DPOs of selected districts. Further, intimation of death of beneficiaries was not provided by the concerned Gram Panchayats and life certificates in respect of beneficiaries were also not obtained each year. As a result, during the period 2017-21 (up to July 2020), 4,298 beneficiaries were credited pension in their bank accounts after their death. Out of these deceased beneficiaries, an amount of ₹ 29.61 lakh of 398 beneficiaries was later recovered but ₹ 29.89 lakh for 410 beneficiaries could not be recovered. The amount paid to remaining 3,490 deceased beneficiaries could not be calculated by Audit as ASWOs/relatives of deceased beneficiaries did not mention the date of death.

During the exit conference, the Government, while accepting the facts, assured that corrective actions would be taken by the Government on this issue. Further, the Government stated that Department was also planning to integrate with Registrar General of India/local bodies/hospitals/ crematorium/web services of e-Services *etc.*

**2.1.5.17 Results of physical verification/cross validation with voter list**

The State Government issued (June 2016) directions that only one pension shall be granted to either husband or wife in a family and priority would be given to the female member. A joint physical verification (November 2021) as well as verification through voter list of beneficiaries in Sultanpur village of Laksar Block in Haridwar district revealed that 172 couples (344 pensioners) were granted OAP during 2012 to 2020 and pension was paid continuously to these couples till July 2020 as detailed in **Table-2.1.3** given below.

**Table-2.1.3: Details of pension granted to couples**

Name of village inspected	Total no. of beneficiaries in village	Couples granted pension as per physical verification	Couples granted pension as per voter list	Ineligible male pensioners	
				Male persons	Payment (₹ in lakh)
Sultanpur	1,749	77 (154 pensioners)	95 (190 pensioners)	172	110.38

Although, such cases were already highlighted by Audit in earlier Audit Report for the year ended March 2018, no corrective action were taken by the Department to prevent occurrence of such cases.

During the exit conference, the Government, while accepting the facts, intimated that the State Government had allowed both (husband & wife) for old age pensions recently.

**2.1.6 Conclusion**

The Direct Benefit Transfer cell did not analyze and identify Direct Benefit Transfer applicable schemes and programs being implemented at the State level. Progress of implementation of Direct Benefit Transfer in various schemes remained static during the Audit period. No universal beneficiary database was available in the State to fulfil Direct Benefit Transfer mandate. Integrated Financial Management System did not have features of Aadhaar and bank account validation. The Beneficiary Management System was running with functional inefficiencies like lack of verification/validation of Aadhaar and bank account number, incorrect entries of beneficiaries and no option for calculation of pension arrears. Since the schemes are not yet notified in the Aadhaar Act, validation should be done otherwise cleaning the database will be difficult to carry out and possible leakages will remain without rectification. No grievance redressal system was developed by Direct Benefit Transfer Cell.

Inefficiencies of the Beneficiary Management System resulted in instances of multiple pensioners existing both within and between pension schemes. There were instances of delay in payment of pension, excess/short payment of pension and pension to deceased persons *etc.* Ineligible population, which did not meet the eligibility criteria, had been wrongfully included in the pension schemes and this could be attributed to scheme

design deficiencies, weak process controls and deficient procedures. Lack of survey to identify beneficiaries and proper verification of application forms were also found absent. This resulted in both husband and wife getting Old Age Pension continuously.

### **2.1.7 Recommendations**

1. The progress of transition of schemes from non- Direct Benefit Transfer mode to the Direct Benefit Transfer mode needs to be closely assessed and monitored to ensure that the gains of Direct Benefit Transfer are realised in more Government schemes.
2. A universal database of beneficiaries cutting across multitude of Departments may be created to eliminate duplication of efforts and enable aggregation of subsidies to individuals. Such database should invariably be capable of Aadhaar authentication and periodic bank account validation facilities.
3. Periodic verification/validation of Aadhaar, bank account details and mobile numbers should be carried out to clean the data.
4. Beneficiary Management System database should be integrated with death registration authorities to stop pension of deceased beneficiaries in time.
5. SSP portal may be modified for automatically pushing of pension bills at the end of each quarter without manual intervention. Such automation may be enabled to process pension centrally at Department level through a single Drawing and Disbursing Officer code.
6. Direct Benefit Transfer schemes of all Departments may be instantly notified under Aadhaar Act providing legal support to the Departments to enable them to require and obtain Aadhaar for providing social benefits.
7. Process of pension sanction and payment may be re-engineered for reduction of intermediate administrative levels.
8. Grievance redressal system may be developed by Direct Benefit Transfer Cell to incorporate the feedback of the beneficiaries, their experience with Direct Benefit Transfer and their grievances into the system.

## **FOREST DEPARTMENT**

### ***2.2 Subject Specific Compliance Audit on Effective Use of Remote Sensing/Geographic Information System in Forest Fire Management.***

#### **2.2.1 Introduction**

The geographical area of Uttarakhand is 53,483 square kilometres of which 71 *per cent* is forest area. Due to large forest area, Uttarakhand is prone to forest fires. The State typically exhibits forest fire activities from 15 February to 15 June (Fire Season), with a peak in fire incidences during May and June. Forest fire is one of the major disasters in Uttarakhand. During 2018-20, total area affected from forest fire was 7,634.28 Hectare (Ha) and loss thereon amounting to ₹ 146.55 lakh. Many indigenous and endangered

floral and faunal species are adversely affected due to forest fires. Forest fires in Uttarakhand are caused by combination of factors like Weather; Topography; Fuel and People (*factors are elaborated in Appendix-2.2.1*).

### 2.2.2 Role of Remote Sensing/Geographic Information System in Forest Fire Management

Remote sensing is a process of detecting and measuring the physical characteristics of an area from a distance through use of sensors fitted on devices and Geographical Information System (GIS). GIS refers to computer software and sensors for capturing, storing and displaying all kind of spatial or geographical data. In the context of forest fire, remote sensing/GIS can be used at three stages of forest fire management, viz, pre-fire, during fire and post-fire. Stage wise use of remote sensing/GIS is given in **Table-2.2.1** below.

**Table-2.2.1: Stage wise use of remote sensing/GIS**

Stages of forest fire	Role of Remote Sensing/GIS at each stage	The Current Arrangements
<b>Pre-Fire Stage</b>	Fire risk zonation using GIS (Fire risk zonation is used in identification of forest areas vulnerable to forest fires. It provides a scientific basis for identifying areas of priority for resource allocation and management interventions).	Mapping of fire sensitive areas: For planning purpose identification of fire prone areas is done using the previous 10 years forest fire location data all over the state. The past forest fire locations were loaded into GIS layer and highly sensitive fire prone areas were identified district and tehsil wise. Forest Department has prepared fire sensitive map for all the divisions using past 10 years (2005-15) fire incident data from Forest Survey of India (FSI) and Chief Conservator of Forest (Vigilance) of Uttarakhand.
<b>During Fire Stage</b>	<ul style="list-style-type: none"> <li>Detection of forest fires through remote sensing.</li> <li>Processing of satellite data using GIS and generation of fire alerts.</li> </ul>	National Remote Sensing Centre <sup>28</sup> (NRSC) transmits data of fire hotspots to FSI electronically. This data is processed <sup>29</sup> automatically by FSI using GIS software. Alerts are then generated and disseminated to the registered end users via SMS.
<b>Post-Fire Stage</b>	Burnt Area Assessment through remote sensing.	Remote sensing data can be used to assess burnt area in addition to existing methods. Currently, Government organizations like Uttarakhand Space Application Centre <sup>30</sup> (USAC) & Indian Institute of Remote Sensing (IIRS) are generating independent burnt area assessment.

### 2.2.3 Roles and Responsibilities of the Forest Department

The State Forest Department is the custodian of the forests and responsible for forest protection and conservation including fire prevention and mitigation. The Chief

<sup>28</sup> MODIS (Moderate Resolution Imaging Spectroradiometer) is a sensor on board NASA's Terra and Aqua satellites used to scan the Earth's surface for fires on a daily basis. Since 2012, the Visible Infrared Imaging Radiometer Suite (VIIRS) on board the Suomi NPP (National Polar Orbiting Partnership) satellite has contributed to this effort by producing higher resolution images of the Earth's surface. The thermal band of MODIS has a 1,000 meters resolution per pixel whereas VIIRS has a 375 meters resolution per pixel. This higher resolution enables VIIRS to detect fires that MODIS overlooks.

<sup>29</sup> Data processing involved filtering of all the fire hotspots other than forest fires using a custom filter and appending of attributes like District, Circle, Division, Range, etc. to the fire locations.

<sup>30</sup> USAC is a nodal agency in Uttarakhand State for space-technology related activities and has the mandate to employ space-technology for the benefit of the State and its people.

Conservator of Forests, Forest Fire & Disaster Management (CCF-FFDM) under Principal Chief Conservator of Forest-Head of Forest Force (PCCF-HoFF) is responsible for forest fire related responsibilities in the Headquarters. At division level, Divisional Forest Officers (DFOs) prepare and then submit the 'Fire Action Plan' of their respective divisions to CCF-FFDM, who compiles these to form a 'State Crisis Management Plan'. The technical support related to remote sensing and GIS is provided by Information Technology and Geo-informatics Centre (ITGC) which is housed at Headquarters of the Department in Dehradun.

#### **2.2.4 Audit Objectives**

The Audit was conducted to assess whether the Department utilized remote sensing /GIS effectively during all three stages of forest fire management.

#### **2.2.5 Audit Criteria**

The audit criteria are derived from various sources:

1. National Action Plan on Forest Fires, 2018.
2. Fire plans of divisions selected for audit.
3. Instructions and orders related to forest fires, issued by the Government and the Department.

#### **2.2.6 Audit Scope and Methodology**

The compliance audit was conducted from October 2020 to June 2021 in phased<sup>31</sup> manner owing to Covid-19 covering fire season from 2018 to 2020. The records of the office of CCF-FFDM; Additional PCCF, Planning and Financial Management [APCCF (P&FM)]; ITGC along with four divisions<sup>32</sup> were examined. The divisions were selected keeping in view parameters like their vulnerability to forest fires; poor response to FSI alerts; and areas affected by forest fires. Further, Audit also engaged with expert institutions like FSI, USAC and IIRS to supplement the audit findings.

#### **Audit findings**

The audit findings are discussed in succeeding paragraphs.

#### **2.2.7 Fire risk zonation during resource allocation not considered**

As per paragraph 3 of National Action Plan on Forest Fire, forest fire risk zonation provides a scientific basis for identifying areas of priority and for allocating resources to these priority areas.

Based on the frequency of forest fires and other factors like forest types *etc.*, ITGC in Forest Department had classified all forest beats<sup>33</sup> as sensitive, moderately sensitive and highly sensitive in terms of vulnerability to forest fires. However, audit scrutiny of

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<sup>31</sup> Phase 1: October 2020 to January 2021; Phase 2: April 2021 to June 2021.

<sup>32</sup> Dehradun, Narendra Nagar, Almora and Bageshwar out of 29 territorial divisions.

<sup>33</sup> Beat is the smallest administrative area in a division.

records of APCCF, (P&FM)<sup>34</sup> and four selected divisions revealed that despite identification of highly vulnerable forest areas by ITGC, APCCF (P&FM) was allocating the fund based on fire index<sup>35</sup>. Fire risk zonation was not being used during allocation of funds for forest fire management to the concerned high-risk divisions and ranges. Meanwhile, the Department could not demonstrate relationship between fire index and fire risk zonation.

The ignorance of fire risk zonation in resource allocation for fire mitigation at Division/range levels was noted by the Audit at the ground level also. During joint physical inspection conducted in the middle of fire season (April 2020), Audit noticed scarcity of necessary equipment for firefighting in highly vulnerable divisions like Almora and Bageshwar. For instance, in five crew stations<sup>36</sup> of Bageshwar division and in two crew stations<sup>37</sup> of Almora division, firefighting teams did not have basic safety gear<sup>38</sup> and basic equipment like torch. Also, no firefighting equipment and safety gear had been purchased by the Almora and Bageshwar divisions since 2017-18.

On this being pointed out, the Department accepted the Audit observation and stated (March 2022) that necessary directions have been issued to ensure that henceforth, fire risk zonation would be used during allocation of funds.

## 2.2.8 FSI's Forest Fire Alerts System

Fire hotspots are detected by satellite sensors and transmitted to FSI where they are processed which involves filtering of all fires. During the process of filtering, fire hotspots are categorized whether fire is in forest area or non-forest area. Alerts are then generated and disseminated to registered users via SMS. Uttarakhand Forest Department officials including those at division and range level are registered with FSI and receive the fire alerts.

### 2.2.8.1 Response to FSI's Fire Alerts

After receiving an alert, the Forest Department is required to do ground truthing of alert *i.e.* physical verification of the fire alert by visiting the fire site. The results of such ground truthing are to be given to the FSI as feedback to enable it to improve the efficiency of fire detection. This feedback can be given in two ways: instantaneous feedback *via* a link included in the SMS fire alert and separate feedback in offline with time lag.

On cross verification from FSI, Audit learnt that Uttarakhand Forest Department was not giving instantaneous feedback unlike many other states. Meanwhile, the Department

<sup>34</sup> APCCF, Planning and Financial Management (P&FM), is responsible for planning and allocation of funds received under various schemes to all offices and divisions of the Department and DFOs are responsible for allocating fund to Range Officer under their control.

<sup>35</sup> Forest divisions are categorised under one to five indexes for allocation of funds by APCCF (P&FM) which is not related with zonation mapping.

<sup>36</sup> Ghirauli, Rakhauli, Kanda, Dharamghar and Chhatina.

<sup>37</sup> Almora and Sameshwar.

<sup>38</sup> Fire resistant uniform and shoes.

informed the Audit that divisions give feedback through in-house online portal called Forest Fire Report Management System (FFRMS) which is then shared with FSI at the end of fire season. On review of FFRMS data, Audit observed that the divisions had given partial<sup>39</sup> feedback on FSI fire alerts to its Headquarters. Further, the Forest Department was negligent to pass on even this partial feedback to the FSI. Accordingly, Audit observed that Forest Department gave feedback on FSI fire alerts in only one<sup>40</sup> out of three fire seasons during 2018, 2019 and 2020.

On being pointed out, the Department stated (March 2022) that in current forest fire season 2022, the process of daily uploading of FSI alerts on Department's FFRMS portal and sending the information to officials concerned, is in progress. Also, the work of connecting each forest official at field level to FSI's Fire alert system is also in progress.

### 2.2.8.2 Doubtful Feedback

Audit reviewed the feedback on FSI fire alerts submitted by the divisions. On review it was revealed that the divisions had accepted forest fire in only four to 11 *per cent* of total fire alerts sent by the FSI as indicated in **Table-2.2.2** below.

**Table-2.2.2: Details of Forest Fire Feedbacks**

Year	Forest fire feedback submitted by the divisions	Total feedbacks submitted by the divisions	Percentage of forest fires accepted with respect to total feedbacks
2018	511	5,688	8.98
2019	537	4,646	11.5
2020	24	573	4.18

To test veracity of the division's feedback we compared feedback to FSI alerts with division's daily fire reports (manually), in one of the Division<sup>41</sup> as detailed in **Table-2.2.3** below. The comparison showed that the division was under reporting the existence of fire by giving wrong feedback through two ways: by rejection of FSI fire alert as no fire or by stating that those fire alerts related to controlled burning done by the Department itself (Control Fires). Accordingly, 40 out of 61 fire incidents during 2018 and 2019 were reported as control fires in the feedback on FSI alerts while these were reported as forest fire in the daily report of FFRMS.

**Table-2.2.3: Comparison of Feedback and daily report of Narendra Nagar division for same geo-location and time**

Year	No. of fire alerts issued by FSI	No. of forest fires accepted in feedback to FSI alerts	No. of forest fire incidents as per daily report
2018	889	0	27
2019	447	2	34
2020	12	0	0
<b>Total</b>	<b>1,348</b>	<b>2</b>	<b>61</b>

*Source: Information collected from selected divisions and ITGC.*

<sup>39</sup> 45 *per cent* for 2018 and 49 *per cent* for 2019.

<sup>40</sup> Fire season 2018.

<sup>41</sup> Narendra Nagar.

The facts shown in the table above casts doubt on the veracity of feedback submitted by the divisions and also on actual ground truthing being carried out by divisions.

On being pointed out, the Department replied (March 2022) that in Fire season 2022, geotagged feedback along with photographic evidence of ground truthing is being ensured. Further, the Department also stated that the feedbacks were being sent weekly to the FSI by receiving the same from all the divisions.

### 2.2.8.3 High percentage of False Alarms

On review of feedback to FSI fire alerts, Audit observed that the divisions had reported that there was no fire in 18 to 26 *per cent* fire alerts, as detailed in **Table-2.2.4** below. This proportion was doubtful for following reasons. The FSI during discussion with Audit stressed the point that satellite detection has very high accuracy. Secondly, other States like Telangana had reported only 1.49 *per cent* of total FSI alerts as false alarm against 18-26 *per cent* in Uttarakhand. Further, there was wide fluctuation in proportion of false alarms even within Uttarakhand.

**Table-2.2.4: Details of false alarm feedbacks**

Year	Total feedbacks submitted by divisions	False alarm feedback	Percentage of false alarms with respect to total feedbacks
2018	5,688	1,014	17.82
2019	4,646	1,182	25.44
2020	573	147	25.65

Source: Information collected from ITGC.

On being pointed out, the Department stated (March 2022) that the satellite fire detection also counts the fire drills and controlled burning done by forest staff, as forest fires. The reply of the Department is not acceptable as these activities are done before the start of fire season. Moreover, expert agency IIRS, has clarified that mock drills and control fire have different satellite signatures in comparison to forest fires.

### 2.2.8.4 Misreporting of location of the fires

On review of feedback to FSI fire alerts, Audit observed that the divisions had reported that fire alerts pertained to fires outside of the forest area in 11 to 31 *per cent* of total feedbacks as detailed in **Table-2.2.5** below.

**Table-2.2.5: Details of number of feedbacks under the heading ‘Fire in Agriculture/Non-Forest land’ and ‘Fire outside Reserve Forest’ with respect to total number of feedbacks submitted by all divisions**

Year	Total feedbacks submitted by divisions	Feedbacks claiming fire outside forests <sup>42</sup>	Percentage of feedbacks claiming fire outside forests with respect to total feedbacks
2018	5,688	1,787	31.42
2019	4,646	497	10.70
2020	573	76	13.26

Source: Information collected from ITGC, Forest Department.

<sup>42</sup> It includes sum of feedback as fire in agriculture/ non-forest land and fire outside reserve forest.

To check the veracity of the feedback, Audit cross checked<sup>43</sup> 30 random cases where divisions had reported fire to be outside the reserve forest. On cross checking, 19 out of 30 above mentioned cases were found to be within the reserved forest area. The divisions had, therefore, given wrong feedback to avoid the responsibility of controlling fires which occurred under their jurisdiction.

On being pointed out, the Department replied (March 2022) that due to satellite's resolution, more than one fire alerts are received for single forest fire incidence. Similarly, when the fire is on the boundary of reserve forests and revenue land, the alert is reported for reserve forest even though the incidence occurred in revenue land. The Department also stated that from the fire season 2022 geotagged photograph of the location will be uploaded at FFRMS portal.

The reply is not acceptable, as the FSI alerts are issued after necessary location filters and as clarified from FSI, the above technicalities could not lead to such high percentage of 'fire outside reserve forest' majority of which, as shown above, fall within the boundary of reserve forests.

### **2.2.9 Burnt Area Assessment**

Post fire, the divisions assess burnt area manually. This is followed by calculation of economic loss based on rates fixed by the Department<sup>44</sup>. As stated earlier, in addition to manual methods, the remote sensing can be used to assess burnt area.

#### **2.2.9.1 Under-reporting of loss due to forest fires by ₹ 43.32 crore**

Audit found that despite signing a Memorandum of Understanding (MoU) with NRSC, Hyderabad<sup>45</sup> in 2015 which included burnt area assessment using remote sensing, the Department was still collecting the burnt area data through manual process.

To assess accuracy of burnt area assessment carried by the Department, Audit compared this data with the burnt area assessed by USAC<sup>46</sup>, for the year 2018 and 2019 and found that the Department had significantly under reported burnt area by 1,297 *per cent* in 2018 and 5,751 *per cent* in 2019.

To verify the credibility of USAC figures for the year 2018, they were compared with data of independent assessment carried by another remote sensing agency IIRS. As evident from comparison shown in **Chart-2.2.1** below and details given in **Appendix-2.2.2**, the burnt area assessment done through remote sensing by two different organizations is almost similar, while the manual assessment by the Department is hugely under-estimated.

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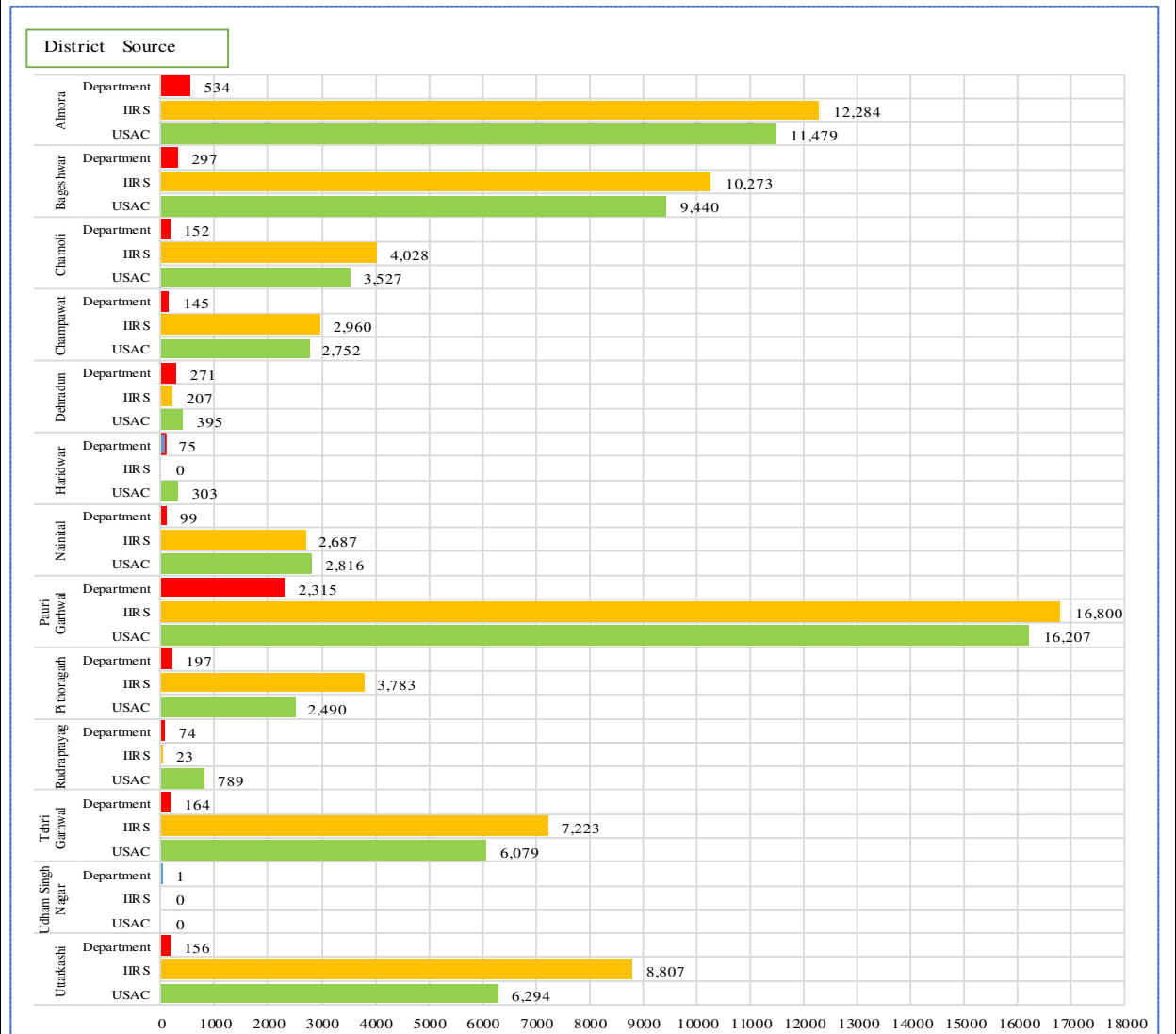
<sup>43</sup> They were given to Forest Department's ITGC, to ascertain whether the particular location fell under the category of "within reserve forests" or "outside reserve forests" boundary.

<sup>44</sup> CCF Working Plan.

<sup>45</sup> Centre connected with ISRO.

<sup>46</sup> Burnt area for fire season 2020 was not assessed by USAC.

Chart-2.2.1: Variation in burnt area assessment done by the Department, IIRS and USAC



**Chart-2.2.1:** Comparison of district wise burnt area (in Ha) as assessed by Department (Red); IIRS (Orange) and USAC (Green) for fire season 2018.

The implications of under assessment of burnt area resulted in under-reporting of economic loss by ₹ 43.32 crore, as detailed in **Table 2.2.6** below.

**Table-2.2.6: Details of difference in area burnt as per Department and USAC**

Year	Area burnt as per Department (in ha)	Area burnt as per USAC (in ha)	Difference in burnt area in ha (percentage)	Loss declared by the Department (in ₹)	Rate of loss due to forest fire (₹/ha)	Loss under reported (₹ in crore)
	1	2	3=2-1	4	5=4÷1	6 = 5*3
2018	4,480.04	62,571.00	58,090.96 (1,296.66)	86,05,374.50	1,920.83	11.16
2019	2981.55	1,74,457.00	1,71,475.45 (5,751.22)	55,92,587.50	1875.73	32.16

Source: Information collected from ITGC and USAC.

Thus, continuing to assess the burnt areas through manual process despite having a MoU with NRSC, resulted in under-estimation of burnt area and underreporting of economic loss by approximately ₹ 43.32 crores.

The Department stated (March 2022) that financial estimation of losses due to forest fire is done as per the standing orders issued by APCCF, Working Plan. However, collaboration with IIRS has been made (February 2022) for burnt area assessment and the loss will be estimated on the basis of remote sensing/GIS in future.

#### **2.2.10 Conclusion**

The State Forest Department conducted fire risk zonation exercise using remote sensing which categorized the forest according to their sensitivity to forest fires. However, this categorization was not used as a basis for resource allocation, resulting in misallocation of funds. Fire prone areas lacked basic safety equipment. Despite the arrangements made by Forest Survey of India for instantaneous submission of feedback on fire alerts generated by it, the Department did not submit feedback to Forest Survey of India. Analysis of feedback data as uploaded by divisions on Departmental reporting system *i.e.* Forest Fire Report Management System revealed serious inaccuracies and put doubt on the fact whether 'ground truthing' of alerts was actually being done by forest staff. Massive under reporting of burnt area and subsequent underestimation of economic loss was observed after comparison with the data from independent expert organisations. Post-fire, the burnt area assessment was being done manually by the Department, despite having a Memorandum of Understanding with National Remote Sensing Centre in 2015, which resulted in underreporting of burnt area.

#### **2.2.11 Recommendations**

In view of the above, following recommendations are made:

1. Fire risk zonation map should be taken into consideration for financial allocation to divisions and subsequently to ranges. The high-risk zone-1 areas should be accorded priority and funds should be made available at the beginning of the fire season so that prevention and mitigation work in the vulnerable areas do not suffer for want of funds.
2. Submission of timely feedback of fire alerts to Forest Survey of India using the online system should be made mandatory for all divisions so that real time correct information is conveyed to Forest Survey of India. The Department should put in a mechanism like collection of photographic evidence during ground truthing, to ensure that there is a proper verification of alerts.
3. Keeping in view the rugged terrain of the State, which makes many areas not easily accessible, the areas affected by forest fire should be assessed using remote sensing technology as it has standardised methodology and can be completed in short time with least manpower. The Department should either put in action the Memorandum of Understanding with National Remote Sensing Centre regarding submission of burnt area estimates or it can access the data from state agency like Uttarakhand Space Application Centre.

4. The use of drones in forest fire management may be considered as drones give fire fighters, a bird's eye view of terrain and provide access to real time data without putting lives of personnel at risk. The drones can capture high resolution imagery in smoke as well as at night and it can be used at all stages: pre-fire for monitoring of fire lines; during fire for decision making as well as fire extinguishing<sup>47</sup>; and post-fire for assessing the damage quickly. Similar recommendations were given in Report Number 293 presented by Department Related Parliamentary Standing Committee on Science & Technology, Environment & Forest on December, 2016 in both houses of the Parliament.

### CIVIL AVIATION DEPARTMENT

#### 2.3 Failure to realise handling fees of ₹2.69 crore

***Uttarakhand Civil Aviation Development Authority failed to recover an amount of ₹2.69 crore as handling fees from Heli companies.***

The Uttarakhand Civil Aviation Development Authority (UCADA) was established on 30 May 2013 with the objective of operating aeroplanes and helicopters to facilitate tourists in the State. To fulfil the objective, the UCADA granted permission (April 2015 and April/May 2016) to Heli Companies<sup>48</sup> (HCs) for helicopter shuttle service to Shri Kedarnathji for the year 2015 and 2016 with condition that all operators would have to pay a fixed amount of ₹ 1,000 per flight to Shri Kedarnathji as handling fees to UCADA. UCADA was required to obtain details of each day's flights from District Magistrate (DM) Rudraprayag as well as from the HCs. The invoices were to be raised on the HCs concerned for recovery of handling fees after verification of the details received from DM, Rudraprayag and the HCs.

Scrutiny of records (January 2020) of UCADA revealed that neither it was collecting information about daily flights being operated by helicopter services to Shri Kedarnathji, nor was collecting any revenue in accordance with contract conditions. At the instance of Audit (21 January 2020), UCADA obtained (31 January 2020) details of shuttle services from the DM, Rudraprayag and raised (July 2020) demand on HCs towards handling fees of ₹ 2.51 crore<sup>49</sup> (including 18 per cent GST) against 14,924 and 6,310 flights during the years 2015 and 2016 respectively.

<sup>47</sup> Fire extinguishing drones can be first responder in case of fire. With payload capacity of around 10-15 kg, these can carry and spray fire extinguishing material/balls and reach the location faster.

<sup>48</sup> **For the year 2015:** Indocopter, Sim Sam, Global Vectra, Aryan Aviation, Pinnacle Air, UT Air, Pawan Hans, Transbharat, Sumit, Himalayan Heli Services, Heritage Aviation and Prem Air.

**For the year 2016:** Arrow Aircraft, Godhawat, Global Vectra, Aryan Aviation, Pinnacle Air, UT Air, Pawan Hans, Transbharat, Sumit, Himalayan Heli Services and Heritage Aviation.

<sup>49</sup> [₹ 1,76,10,320 {₹ 1,49,24,000 (14,924 flights x ₹ 1,000) + ₹ 26,86,320 (18 per cent GST on ₹ 1,49,24,000)} for the year 2015] + [₹ 74,45,800 {₹ 63,10,000 (6,310 flights x ₹ 1,000) + ₹ 11,35,800 (18 per cent GST on ₹ 63,10,000)} for the year 2016] = ₹ 2,50,56,120 (say ₹ 2.51 crore).