

दुर्घटना जाँच आयोग, २०६३

(मिति २०६३।६।७ गते ताप्लेजुङ्गमा भएको श्री एयरलाईन्स प्रा.लि.को 9N-AHJ MI-172 हेलिकप्टर दुर्घटना सम्बन्धमा गैर सैनिक हवाई उडान (दुर्घटना जाँच) नियमहरु, २०२४ बमोजिम गठित)

प.सं./च.नं.

मिति २०६३।६।१८

आयोगका पदाधिकारीहरु

अध्यक्ष :

माननीय श्री केशरी राज पण्डित
न्यायाधिश
पुनरावेदन अदालत, पाटन
ललितपुर ।

सदस्यहरु:

श्री पुष्प राज कोइराला
सह-महान्यायाधिवक्ता
महान्यायाधिवक्ताको कार्यालय

सहायक रवी (अ.प्रा.)

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श्री विजय कुमार वैद्य
टप-महानिदेशक
जल तथा मीसम विज्ञान विभाग

ब्या. प्रमोद कुमार सामा
महासेनानी
११ नं. बाहिनी

श्री सन्जीव श्रेष्ठ
इन्जिनियर
सिमिक एयर प्रा.लि.

सदस्य सचिव :
श्री यज्ञ प्रसाद गौतम
सह-सचिव
सम्बन्धित पर्वटन तथा नागरिक उड्डयन मन्त्रालय

प्रेस विज्ञप्ति

मिति २०६३।६।७ तदनुसार २३ सेप्टेम्बर २००६ का दिन ताप्लेजुङ्गको घुन्सावाट ताप्लेजुङ्गको सदरमुकाम फुडलिङ्का लागि उडेको श्री एयरलाईन्स प्रा.लि.को 9N-AHJ MI 8 MTV-1 हेलिकप्टर उडेको करीव ३ मिनेट मै ताप्लेजुङ्गको लेलेप गा.वि.स.वडा नं. ९ फलेडाँडामा दुर्घटनाग्रस्त हुँदा त्यसमा सवार २० जना यात्रु र ४ जना चालक दलका सदस्यहरुको दुःखद निधन भएको थियो । उक्त दुर्घटनाका सम्बन्धमा जाँचबुझ गरी कार्यारम्भ मितिले १५ दिनभित्र अन्तरिम प्रतिवेदन र ४५ दिनभित्र अन्तिम प्रतिवेदन पेश गर्न नेपाल सरकारले गैर सैनिक हवाई उडान (दुर्घटना जाँच) नियमहरु, २०२४ बमोजिम पुनरावेदन अदालत पाटन ललितपुरका मा.न्यायाधिश श्री केशरीराज पण्डितको अध्यक्षतामा सात सदस्यीय दुर्घटना जाँच आयोग गठन गरेको थियो । आयोगले मिति २०६३।६।२० मा कार्यारम्भ गरी १५ दिनमा नै अन्तरिम प्रतिवेदन गरिसकेको भएपनि जाँचबुझका क्रममा षटक पटकको खोजी प्रयासवाट पनि Cockpit Voice Recorder (CVR) प्राप्त हुन नसकेको र विदेशी विशेषज्ञवाट समेत पोष्टमार्टम जाँच भई प्रतिवेदन तयार भइरहेको जानकारी प्राप्त भएको र पोष्टमार्टम रिपोर्ट समेत प्राप्त गर्न समय पखन्नु परेकोले नेपाल सरकारको निर्णयानुसार आयोगको म्याद १५ दिन थप भएको थियो । आयोगले उक्त दुर्घटनाका सम्बन्धमा विस्तृत जाँच गरी तोकिएको म्यादभित्र आज मा.संस्कृति, पर्यटन तथा नागरिक उड्डयन मन्त्री श्री प्रदीपकुमार ज्ञवालीज्यू समक्ष प्रतिवेदन प्रस्तुत गरेको छ ।

उक्त दुर्घटना कसरी हुन पुग्यो भन्ने विषयमा आयोगले विस्तृत विश्लेषण गरी तयार पारेको निष्कर्ष र सुझाव यसैसाथ संलग्न छ ।

यज्ञ प्रसाद गौतम
सदस्य-सचिव

Synopsis

On 23rd September 2006, the ill-fated MI-8 MTV-1 helicopter 9N-AHJ owned and operated by Shree Airlines Pvt. Ltd., was on chartered flight to Ghunsa, Taplejung. It departed from Fungling, Taplejung at 09:32 LT and weather was cloudy with light drizzle. The helicopter during flight reached maximum altitude 3400 m. and reported on ground Ghunsa at 09:51 LT.

The flight was in command of Capt. Klim Kim and this was his first flight to Ghunsa. The weather at Ghunsa was cloudy. The helicopter, with 4 crew members and 20 passengers and TOW 10,344 kg, took-off at 10:45 LT (0500 UTC) and entered into cloud while clearing Ghunsa valley. Then helicopter climbed up to 3885 m. with air speed 62 km/hr in 2 min 30 seconds and flight was into clouds. At this moment, pilot observed that helicopter was only 60 m. above the ground, which indicated that peak was somewhere around them. Flying in IMC, he decreased the airspeed and tried to achieve high rate of climb with application of maximum power. Helicopter reached up to 4033 m. and this moment speed dropped to 31 km/hr. The combined effect of speed below 31 km/hr, low main rotor RPM, helicopter weight at that altitude and flying into the cloud (IMC) contributed to sink the helicopter from 4033 m. In 13 seconds, the helicopter descended to 3990 m. with further drop in airspeed of 12 km/hr and main rotor RPM 91% and faced impact in steep rugged mountain terrain. Fire was immediately registered in helicopter. All other parts were found in limited area in burnt conditions. No survival was found.

The Commission has determined the primary contributing factors for this accident are entering the cloud intentionally in the unfamiliar terrain of high altitude mountains, poor crew coordination and poor area map information. This helicopter was certified only for Visual Flight Rules (VFR).

The Commission has presented its safety recommendations needed to be adopted by the Civil Aviation Authority of Nepal, Shree Airlines and other Airlines. The objective of these recommendations is the prevention of the accident of this nature in future.

<u>Injuris to Person</u>	<u>FATAL</u>	<u>Seriously injured</u>	<u>Minor injured</u>	<u>Non injured</u>
Crew -	04	00	00	00
Passenger -	20	00	00	00
Other -	00	00	00	00

3. Conclusion

3.1. Findings

1. Weather condition of Fungling, Taplejung at the time of departure was cloudy with frequent drizzle.
2. Weather condition of Ghunsa was cloudy with light rain. The visibility was poor and surrounding hills were completely covered up except to the north where the visibility was slightly better.
3. Ghunsa helipad being an unmanned station, further details of weather and communication with the helicopter was not possible.
4. This was the first flight of Capt. Kim to Ghunsa so he was not familiar with the terrain and its surroundings.
5. 9N-AHJ had reported its position to Bhojpur and Kathmandu on HF while it was flying from Fungling to Ghunsa. But it didn't call any station for the departure from Ghunsa to Fungling.
6. Without analysing the weather condition, the helicopter took-off from Ghunsa and intentionally entered into the cloud.
7. The helicopter was not certified for Instrument Flight Rules (IFR). So entering into cloud intentionally in high mountainous area is not only the wrong judgment but also the violation of Flight Operations Requirement (FOR).
8. After 2 min 58 seconds from take-off, the helicopter faced impact on steep rugged surface terrain at the altitude of 3990 m. and immediately caught fire.
9. Pre-flight briefing and proper crew coordination among crew members were not found to be followed.
10. Location of crash-site is a rocky steep cliff and ordinarily inaccessible.
11. Cockpit and passenger compartment of helicopter was completely burnt.
12. Though the take-off weight for the flight from Ghunsa was not out of limit, take-off from high altitude helipad with high rate of climb in such bad weather condition late morning with unpredictable wind condition was poor judgment on the part of crew members.
13. As per FDR report, the power plant and helicopter systems were functioning normally till the impact.
14. As per helicopter documents, the helicopter was equipped with a Emergency Locator Transmitter (ELT) but the signal of ELT was not received by any stations.
15. As per technical documents, all maintenance works were carried out as per Approved Schedule Inspection Program and service Bulletins of designer.
16. Pilots were certified and qualified in accordance with present regulations.

17. The flight crew were physically and mentally fit and had passed the medical assessment.
18. Flight crew were adequately rested and had normal breakfast in the morning.
19. It is not confirmed that the flight crew had used oxygen at Ghunsa and during flight.
20. There is no evidence of unlawful interference.

3.2. Causes

The Commission has concluded that the probable cause of the accident is the cumulative effect of the followings :

- a. Without analyzing the local weather condition, pilot took-off from Ghunsa helipad in poor visibility and immediately disappeared into the cloud and continue flight in bad weather on IMC condition violating the visual flight regulation in such weather.
- b. This was first flight of Capt. Kim, so he was not familiar to the terrain around Ghunsa and local weather condition mainly in rainy season.
- c. Pilot could not maintain the normal rate of climb and speed after reaching to 4033 m. though the engine power was maximum. The combined effect of low speed, low main rotor RPM, helicopter weight at that altitude and flying into cloud (IMC) resulted the helicopter to sink and finally hit the rocky cliff at 3990 m. The helicopter was severely damaged and burnt and all 4 crew members and 20 passengers died in this accident.
- d. Lack of crew coordination among the pilots and lack of situational awareness, pilot took-off from Ghunsa and climb for high altitude and hypoxic effect.

4. Safety Recommendation

4.1 TO CAAN

1. Every pilot should take refresher training as per FOR. CAAN should ensure the effectiveness of these trainings.
2. CAAN should ensure the installation and serviceability of FDR, CVR, ELT, GPS in aircrafts.
3. Most of the accidents occurred in Nepal were in monsoon seasons especially by flying IMC condition by VFR certified aircrafts. To prevent this, CAAN should develop a format for daily performance report of the pilot and circulate it to the airlines and make periodic audit.
4. CAAN should instruct the helicopter company to issue the supplement in their Operation Manual to calculate the pay load with further safe margin rather than calculating from nomogram for flight, in monsoon with possibility of high rate of climb over difficult terrain.

5. On the basis of analysis, findings and recommendation of "serious incident" or "accident" investigation reports, CAAN should conduct awareness programmes with the respective airlines operating same type of aircraft.
6. FOR should include oxygen use in high altitude flights. CAAN should scrutinize the company Flight Manual and SOP Manual and make uniform regulation regarding oxygen use in high altitude flights.

4.2 TO Shree Airlines

1. Pilot should be aware of Standard Operation Procedure (SOP) and Operation Manual of their company through an awareness program conducted by the concerned airline preferably every 3 months. This should include the following:
 - (a) Flying in IMC by a helicopter certified for VFR should be strictly prohibited.
 - (b) Preflight planning by the crew should first be conducted on the ground at the place of origin before undertaking any flight, which should cover the entire information regarding the route, weather, altitude, terrain, obstacles and helipad characteristics specially those flights to difficult helipads and the helipads where the crew members have never been before.
 - (c) Detailed study of concerned area map should be carried out and discussed among crew members before take-off.
 - (d) The pay load of the helicopter during monsoon at high altitude helipads should be calculated taking into consideration the possibility of high rate of climb and increase bank angles in narrow valleys.
 - (e) Communication with stations to be established compulsorily prior to take-off, en-route and landing.
 - (f) Engineer should be available for Daily Inspection of helicopter, if it is going to make night stop other than the base for more than 24 hours.
2. Company should provide their pilots refresher classes of FOR, CRM, Meteorology and technical/performance of helicopter by instructors authorized by CAAN.
3. Company should review their SOP for monsoon and high altitude flight and they should conduct interaction programme for their pilots in every 3 months interval.
4. Operation Director, Chief Pilot and Safety Director should monitor the flight performance and behaviour of their pilots regularly. If any pilot is found to conduct flight in IMC, it should be investigated internally. Such a case should be taken as 'incident' and must be strictly discouraged. Pilots should be encouraged to report in writing 'near misses' or 'events' or even 'violation of regulations and reason to do so' without fear of having punitive actions from management.
5. Engineering and Quality Assurance Department should improve the documentation process and validity of any inspection period should be strictly followed with.

4.3 For all Concerns

- (a) Aircraft certified for Visual Flight Rules (VFR) should not enter into cloud.
- (b) Flight details before departure and landing report from unmanned airport/helipad should be reported to the nearest airport.
- (c) Flight at high altitude during monsoon and bad weather condition should be conducted by experienced pilots familiar with terrain and weather condition.
- (d) Meteorological Forecasting Division (MFD) at TIA provides weather forecast for next 24 hour and mountain weather forecast in their web site www.mfd.gov.np with satellite image. Aircraft flying high altitude helipad in monsoon and bad weather should be provided weather forecast report by Airlines.
- (e) The commanding pilots of domestic flights must get Met briefing from TIA Met Weather Briefing especially during bad weather situation.
- (f) Meteorological Office must be established in important aerodromes such as Lukla, Syangboche, Taplejung, Jomsom and others for which CAAN should take initiative as required.
- (g) Airline should regularly conduct CRM courses, dealing theoretical aspects and practical or role-playing in various situations.

4.4 To the Ministry of Culture, Tourism and Civil Aviation

1. The Civil Aviation (Accident Investigation) Rules, 2024 B.S should be amended in the context of open sky policy of the Government, the establishment of CAAN and the Nepali commitment in the international forum.
2. The Rules should incorporate the formation of the Accident Investigation Commission, its accountability, minimum qualifications of the members, compensation for their services, etc.
3. Expert Development Program should be initiated in the field of aeronautical engineering, aviation security, aviation medicine, meteorology, air law and investigation techniques, etc. and a roster of Accident Investigation Experts should be maintained in the Ministry.
4. Accident Investigation Management Unit should be established in the Ministry to monitor the implementation of the Commissions' recommendations and to maintain the archives.
5. As to conduct the Accident Investigation is the State obligation, instead of levying the cost to the concerned operator, Ministry should provide logistics, budget and other essentials to the Commission.
6. A clear national policy should be developed to regulate the helicopters certified to Cargo Version for transporting revenue passengers to enhance their safety.