

**FINAL ACCIDENT REPORT OF
ADVANCE AVIATION COMPANY, LTD'S
EUROCOPTER EC 130 B4, HS- CCN
NEAR PUTAO (NAUNG MOON)
(27- 09- 2014)**

**FINAL ACCIDENT REPORT OF
ADVANCE AVIATION COMPANY, LTD'S
EUROCOPTER EC 130 B4, HS- CCN
NEAR PUTAO (NAUNG MOON), 27-09-2014**

1. Registered owner and operator : Advance Aviation Company Ltd.
2. Aircraft type : Helicopter, Eurocopter EC 130 B4
3. Nationality : Thailand
4. Registration : HS- CCN
5. Place of accident : Near Putao (Nanug Moon)
Latitude N 27° 34' 37.80"
Longitude E 98° 1' 42.42"
6. Date& Time : 27 September 2014 at 14:40 Local time
(+6:30 UTC)
7. Type of operation : Search and Rescue
8. Phase of operation : En-route

SYNOPSIS

On 27 September 2014, the Eurocopter EC 130 B4, registered HS- CCN operated by Advance Aviation took- off from Putao (VYPT) to Tahuangdem with single Pilot, one Navigator (safety Pilot) and one passenger supply for Search and Rescue team which was working for two missing mountaineers.

At about twenty minutes after took- off, helicopter had lost contact with Putao ATC. Two AS 350 B3 helicopters of Htoo foundation which already arrived Tahuangdem camp, flown back and searched along the intended route. As for no finding evidence, searching operation continued for next days with Civil, Military helicopters and Ground team.

After 10- days later, the passenger who was survived and reported to Putao and could rescue the Pilot. The Pilot was survived but the Navigator was found expired. The helicopter was destroyed after striking to mountain.

1. FACTUAL INFORMATION

1.1. History of the flight

1.1.1) Pre-flight preparation

After received message from Htoo foundation for supply operation to Tahuangdem Search and Rescue team, the Pilot completed the flight planning and prepared the helicopter. The route was planned Putao- Machanbawn- Naung Moon- Pannadin- Dazundem- Tahuangdem. The helicopter was operated by single Pilot with one Navigator (safety Pilot) and one passenger.

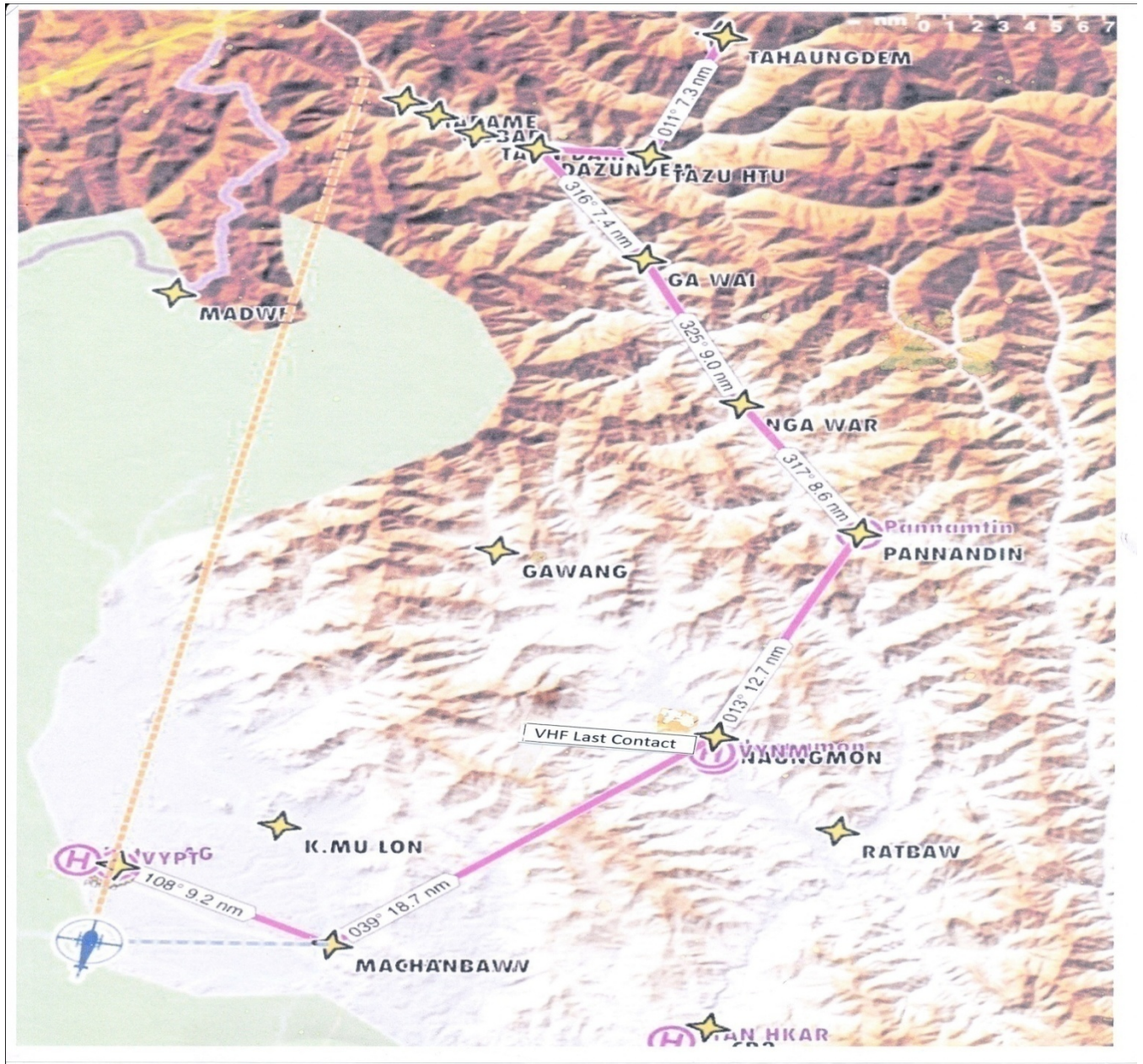


Figure 1: HS- CCN route plan

1.1.2) Took- off and En- route

The Pilot took- off from Putao airport (VYPT) at about 14:20 Local time. On board the Pilot (left seat), the Navigator (Central seat) and the passenger (Right seat). The helicopter flew along the route Machanbawn, then Naung Moon. At about 14:39 Local time Putao ATC received VHF contacted with Pilot about the information of passing Naung Moon. Next ten minutes later, Putao ATC contacted to helicopter to inform Tahuangdem weather information. As for no reply, Putao AFC messaged to return back with blind transmission.



Figure 2: HS- CCN Helicopter

1.1.3) Search and Rescue

Putao ATC reported to Tahuangdem team about the loss of contact information to helicopter. Two As 350 B3 helicopter already arrived back soon from Tahuangdem started and searching flight along the route. Search and Rescue operation continued with Civil, Military helicopters and Ground team for next days.

On 7 October 2014, the passenger who was survived arrived at Lan Sar village and contacted to Htoo foundation. Although search operation was started urgently, the Pilot could rescued but the Navigator was found expired.

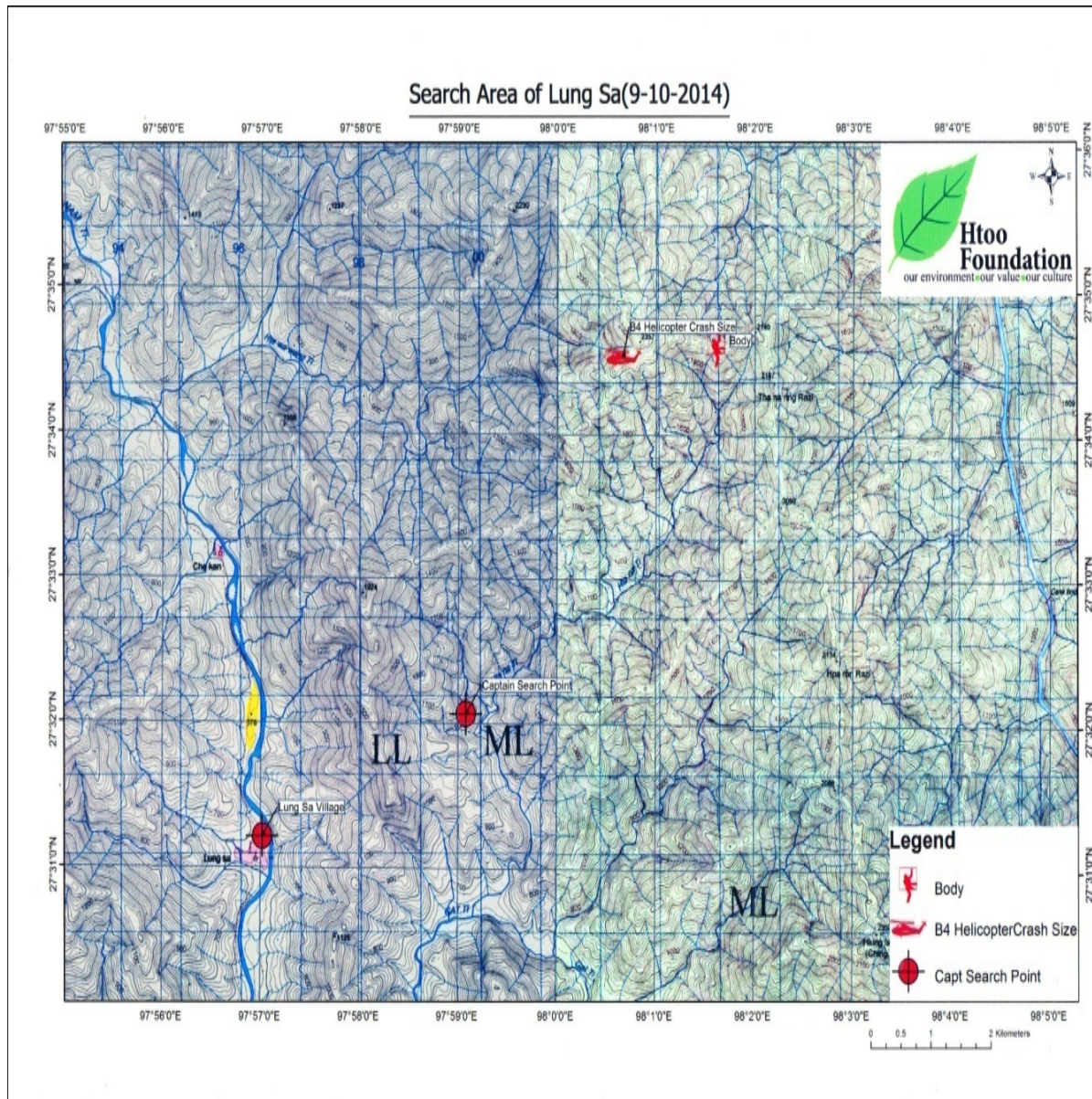


Figure 3: Crash site and other Location

1.2) Injuries to persons

Injuries	Crew	Navigator	Passengers	Other	Total
Fatal	0	1	0	0	1
Serious	1	0	1	0	2
Minor/Nil	0	0	0	0	0
Total	1	1	1	0	3

After helicopter accident, all three persons could get out from aircraft with some injuries. Next day, because of injuries, navigator rested in a cave near crash site and other two searching the way. After 9 days later, the Pilot could not walk more, the passenger continued searching alone and he arrived to Lan Sar village next day.

1.3) Damage to aircraft

Helicopter main rotor blades stroked to mountain (about 6400. fts) and fall down on the trees. It touched the ground tail first then nose followed and after that engine sudden stoppage. Electric spark came out and burned with fuel. Helicopter was fire post accident and destroyed. The location of crash site was 12-13 NM, north- east of Naung Moon (27° 34' 37.80" N, 98° 1' 42.42" E)

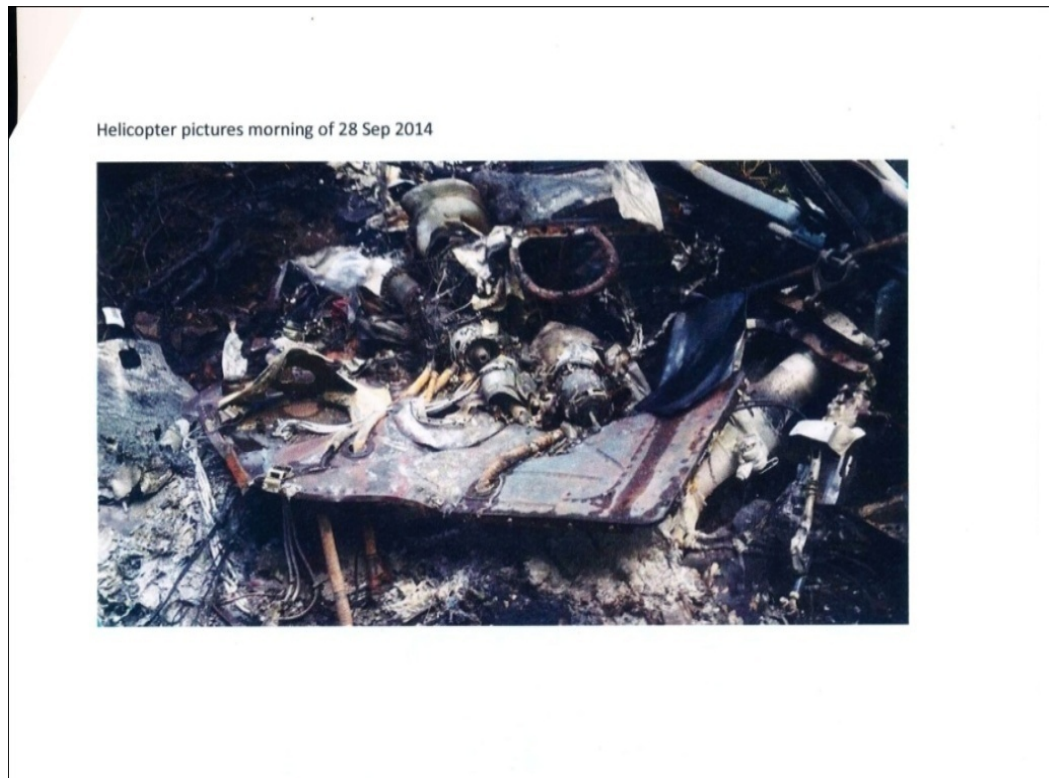


Figure: (4) Damage to aircraft

1.4) Other Damage

There was no other damage due to accident.

1.5) Personnel information

1.5.1) Pilot Flying

Age : 59
Licence : Commercial Pilot licence, Helicopter
Licence valid : 9 November 2014
Helicopter Rating : Hillen E4, EC- 135, EC 130 B4
Total hours : 10320:44 hrs
EC 130 B4 type : 702:28- hrs CPIC
Medical expire : 9 November 2014
Line Check : Valid
EC 130 B4 Base Check : Valid
Last 24 hours : 20 minutes

Remark: HS-CCN departed from Chiangmai (VTCC) on 16 September 2015 and arrived Putao (VYPT) 17 September 2014. Pilot flying operated (HS-CCN) all the flights between 24-27 September 2014.

1.5.2) Navigator (Safety Pilot)

Age : 43
Licence : Airline transport Pilot licence
Licence valid : 30 September 2014
Helicopter Rating : Bell 205, Bell 206, MI-17, AS-350 B3
Total hours : 2812:13 hrs (PIC-1800:25)
Medical expire : Valid

1.6) Aircraft information

1.6.1) General

Manufacture : Eurocopter (Airbus Helicopter)
Type : EC 130 B4
Serial number : MSN 4858

Date of Manufacture : October 2009
Total hours : 845:03 TSN (16 September 2014)
Certificate of Registration : HS- CCN Thailand DCA
Certificate of Airworthiness due: 14 May 2016
Air operator certificate due : 1 October 2017
Engine type : Arriel 2B 1, S/N- 46312
Periodical inspection : 10 September 2014

1.6.2) **Aircraft description**

EC 130 B4 is a single engine with three rotor blades small size helicopter, certificate by EASA part 29 Standards and capable of undertaking single Pilot with six passenger. Maximum take-off weight 2800 kg/6172.lb, service ceiling-3045.m/10000.ft and Max: range- 340 NM.

1.6.3) **Aircraft history**

The helicopter was registered by Thailand DCA the Certificate of Airworthiness were issued on 15 May 2013 and the Air Operator Certificate issued on 1 October 2012. On 10 September 2014 aircraft finished 12 months inspection.

1.6.4) **Recent activity**

Advance Aviation Company Ltd, was contacted by Htoo Group, requested for one helicopter to support Search and Rescue activities being conducted by Htoo foundation in searching for 2 missing mountaineers who attempt to post a record for climbing the top peak of the Khakaborazi mountain. The proposal in the form of quotation was made, but due to good relationship total number of flight hours cannot be pre-determined, the payment will be collected after the mission is completed. (**Appendix- A**)

On 16 September 2014, Aircraft departed from Chaingmain Airport (VTCC) to Mandalay Airport (VYMD) with two pilots. On 17 September, aircraft continued ferry Mandalay- Myitkyina- Putao route. On 24 September, 20 minutes flight performed for maintenance weekly ground run and 25 September operated Putao- Pannandin camp- Putao to send supplies. On 26 September, the Pilot took-off HS- CCN, for Putao- Tahuangdem route to send passenger and supplies, but due to bad weather condition over Pannandin area, he returns back.

1.6.5) Weight and balance

Advance Aviation Co.,Ltd.

Weight & Balance Sheet

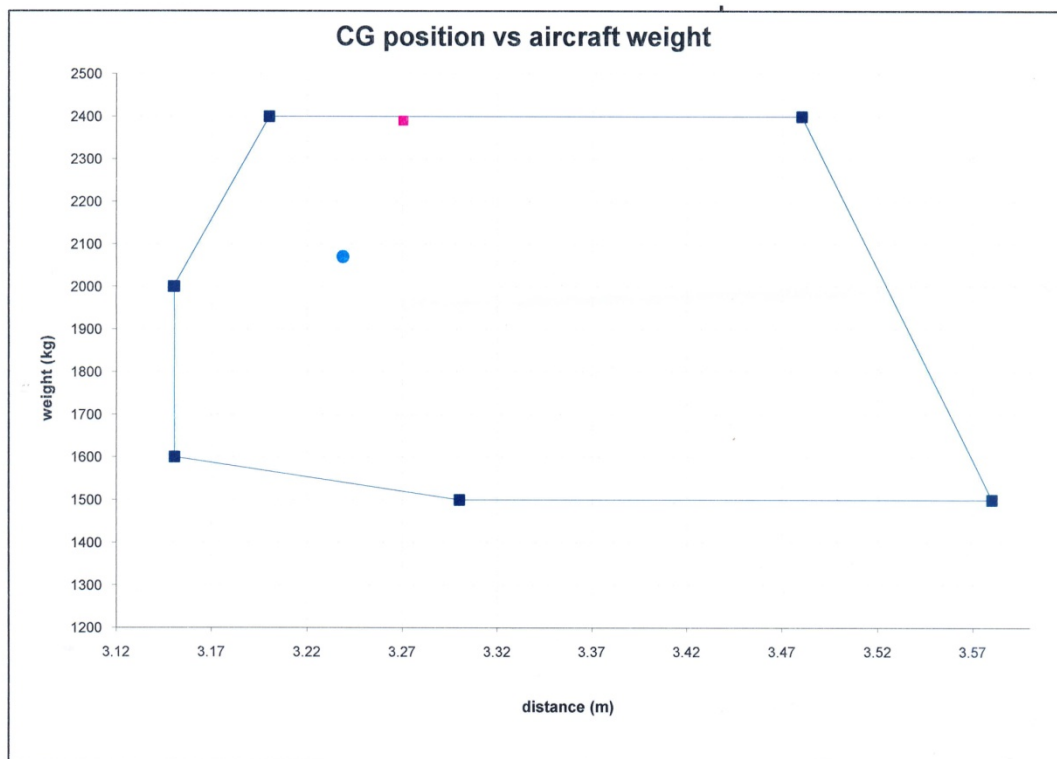
Aircraft type: EC 130 B4

27-Sep-14

Reg. No. : HS-CCN

ROUTE : VYPT - TaHaungDann

	weight (kg)	arm (m)	moment
A/C Empty weight	1470	3.57	5247.9
pilot + 1 or 2 Pax	200	1.55	310
pax back		2.415	0
FUEL	320	3.475	1112
Estimated FUEL at arrival	160	3.475	556
cargo freight layout - RIGHT pilot (A)		1.55	0
- cabin (B)	200	2.25	450
- side luggage ©	160	3.2	512
- back luggage (D)	40	4.6	184
Takeoff weight and CG	2390	3.27	7816
Zero fuel weight and CG	2070	3.24	6704
Landing weight and CG	2230	3.27	7260



Done by : Capt. Chatchawal T.

Accepted by :

(PIC)

Date: 27 Sep 2014

(Chatchawal Thanthong)

Date 27 Sep 2014

1.6.6) **Avionics**

HS- CCN (Previous France register F-OKFD) was installed following Avionics. There were no reported about the avionics equipments service debility in previous and occurrence days. There was no ELT activated and no signal recorded during accident.

- Thales H 321 EHM Gyro Horizon -1
- Thales H 321 EGM Stand- by Gyro Horizon -1
- Honeywell KCS 55A/ KI 252A Gyro- compress system with HS1 -1
- UI 9560 Turn of Bank indicator -1
- Honeywell KX 165 A VHF/ VOR/ LOC/ GS -1
- Garmin GNS 430 VHF/ VOR/ LOC/ GS/ GPS -1
- Garmin GT 327 Transponder (mode A+C) -1
- Shadin 8800T Altitude Encoder -1
- Garmin GMA 340 LCS + Pax: interphone -1
- KANNAD 406 AF- H ELT -1
- Honey well KR 87/ K1 227 ADF- 1

1.7) **Meteorological information**

Putao, has automatic weather observation system. The weather reported at Putao airport on 13:30- 14:30 local time, Temperature 29°C, Cloudy, Visibility 3- 4 miles, Cloud Amount Broken 1000' -1500' feet and Broken- 4000- 5000- feet, QNH-1013, mb, wind calm. The weather focus was at Tahuangdem at 14:39 local time, Cloudy, Visibility- 3000' feet. The weather reported at route (Rat bow) at 14:39 local time, cloudy, raining.

1.8) **Aid to navigation**

Putao airport was equipped with a Non Directional Beacon for use on approach and landing

1.9) **Communication**

Putao airport has VHF and HF communication. Two ATC frequencies with VHF for Approach and Tower and during SAR operation VHF (118.7) frequency. There were no recording facilities for either frequency.

For, Myanmar AOC holder, Department of Civil Aviation, Myanmar issued Myanmar Civil Aviation Requirement, Part 7 to be stalled (HF) Communications equipment. (**Appendix- H**)

1.10) Aerodrome information

Putao has one main runway (17°/ 35°), with a length of 7000' x 100' at an elevation of 1509 ft above mean sea level and is certified for both VFR and IFR. An ATC control tower was controlling Class C air space with no radar surveillance capability.

1.11) Wreckage, site and impact information

Due to weather condition was deterioration, the Pilot climbed to 7600 ft to avoid weather but visibility was very poor and become worsen. He descent to 6000 ft and turned helicopter back to along track. As for cloudy and raining, visibility was very limited, and he reduced speed to nearly hovering speed.

At that moment, Main rotor blades hit to the trees and helicopter slid tail down through the mountain tree branches then nose followed. Helicopter engine was sudden stopped.

As soon as all the persons evacuated, helicopter started burning with electrical spark and fuel. Then helicopter was destroyed post fire.

The coordinates of accident site one Latitude N 27° 34' 37.8", Longitude E.98° 1' 42.42".

Crash Site and other locations coordinates

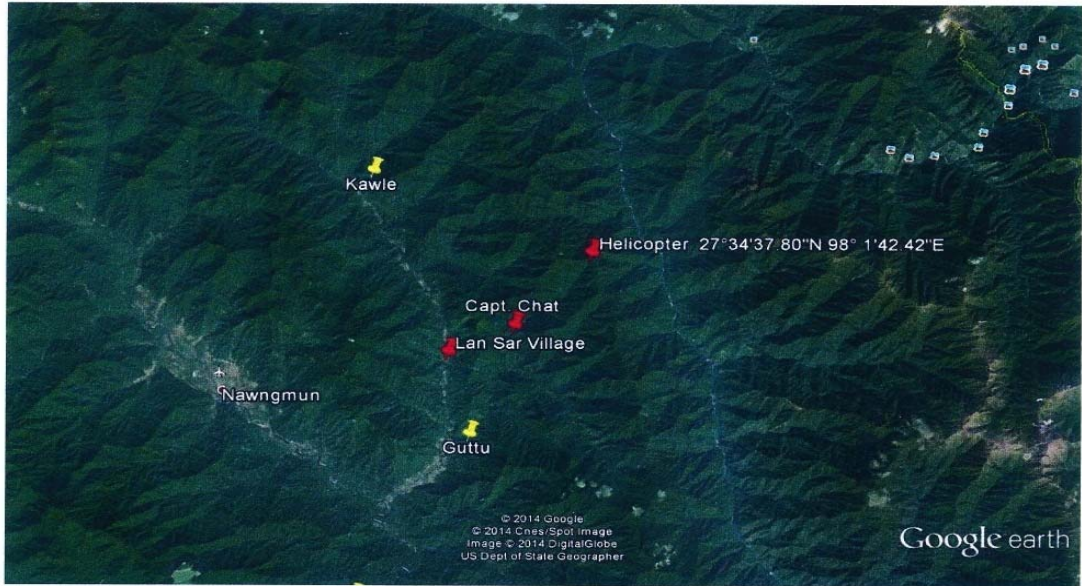


Figure 5: Wreckage site map

1.12) Medical and Pathological information

- The Pilot suffered multiple injury with 18% superficial burn, fracture at 7th to 11th ribs on left side and 10th and 12th ribs on right side.
- The Navigator suffered head injured, skull bone fracture and multiple abrasions. He was expired for next days due to serious injuries by accident.
- The Passenger suffered multiple obtrusions and left 7th rib into minimal displacement, 9th rib incomplete fracture.

1.13) Fire

There was no in flight fire. Helicopter was destroyed after striking mountain and post fire.

1.14) **Survival aspects**

As soon as helicopter fell down on the ground and engine was stopped suddenly, all the persons opened doors and could get out from aircraft but all were seriously injured from the medical reports. They brought some food and water from accident aircraft. Next day the Navigator rested in a cave near crash site and could not further walk due to serious injuries. The Pilot and passenger continued searching to find way and they struggled to find way difficulty for next days.

At 9th days, the Pilot seriously suffered pain, the passenger left him in a safe place and continued searching to find ways alone to nearest village.

On 10th day, he arrived to Lan Sar village and could contact to Htoo foundation. After urgently rescue operation the Pilot could survive but the navigator was found expired.

1.15) **Search and rescue organization**

As soon as loss of contact with Helicopter, Putao reported to Htoo Search and Rescue teams. Two AS 350 B3 returned back to searching flight along the route. Military helicopter MI.17, Civil helicopters As 350 B3 and Ground team were searching for next days.

1.16) **Organizational and management information**

1.16.1) The operator Advance Aviation

Advance Aviation Company, Limited was established in December 2006, AA service as private charter, sightseeing, film shooting, medical flight service etc. Aircraft fleets are two EC- 135, and one Gulfstream G 200. Company organization is:

(**Appendix -B**)

- Board of Directors
- Vice chairman
- General Manager
- Flight operation, Engineering, Administration, Marketing directors.

Flight Operation Director is the nominated post holder accepted to the Authority for the flight operation. He is responsible for the smooth operation of all fleets and to set up flight operation standard and practices. Pilots in Command is responsible to carrying out company policy directives and ensuring that operation standards, regulation and documents. Advance Aviation issued Operations Manual (Rev. 2, 28 September 2012). In OM part 3, section 3 mentioned for operating at all Weather operation. (**Appendix-B**)

Company agreed aircraft insurance with QBE Insurance (Thailand) Co. Ltd to insure against loss, damage or liability, arising out of an Aircraft. (**Appendix- C**)

1.16.2) Department of Civil Aviation, Thailand

According to ICAO, Annex. 2 chapter- 4 Standards and Recommended Practices of Visual Flight Rules, Department of Civil Aviation, Thailand (Civil Aviation Authority) issued AIP, (ENR 1.2.1,10 December 2008) for Visual flight Rules (**Appendix- E**) and approved the Minimum Equipment List for EC 130 B4, S/2- 4601 and 4858 (**Appendix -D**)

1.16.3 Department of Civil Aviation, Myanmar

According to ICAO, Annex- 2, Chap-4, Rules of the Air Standards and Recommended Practices, Department of Civil Aviation, Myanmar issued MCAR, part-5 Air Navigation Services, seet-1, Rules of the Air, Chap-4 visual flight Rules. (**Appendix- G**). Myanmar regulation related to the availability of High frequency (HF) communication for Myanmar AOC holder on MCAR Part-7 Para 7.3. (**Appendix- H**)

1.17) Additional information

1.17.1) Testimony of the Pilot

The pilot stated that after checking the aircraft, original passenger manifests, weight & balance sheets were carried out on board. HS- CCN departed from Putao at approximately 14:00 local time to Tahuangdem with two passengers (one Navigator, one passenger). The route was planned from Putao, first report over Machanbaw, and then over Naung Moon. Around 20 minutes after departure, aircraft was flying North of Naung Moon at about 7000 ft.

A few minutes later, the Weather condition was deteriorating, he climbed to 7600 ft to avoid weather but the visibility was very poor, so he requested to descend to 6000 ft and decided to abort the mission and return to Putao. During turning the aircraft back tracking, another cloud suddenly came and became very limited visibility, so he reduced the speed to almost hovering. But visibility had not improved so he tried to land the helicopter at or around that location. At that moment the main rotor tip touched the tree and slid tail down through the tree branched. Then Helicopter touched the ground tail first then nose followed and flipped to the left with engine stopped.

He noticed all three persons were alive and managed to leave the aircraft. While two passengers were able to bring out some of their belongings, but his belongings were all in back cargo hold. At that time fire had already started at after of the aircraft. The aircraft was burned slowly and continuously through the whole night. He and two passengers spent whole night near aircraft and started to walk on the next day. Next morning they left the navigator in a safe cave with some food and water due to his serious injuries. After 10 days later, the search and rescue team arrived at there and recognized that he was expired.

1.17.2) Testimony of the first witness (The passenger)

The passengers stated that, he worked in Htoo Group Company. He was assigned to assist the Search and Rescue team for supply. On that day 14:20 local time, after loading the supplies, the aircraft departed from Putao with the Pilot (left seat), the Navigator (central seat) and him (right seat). After 20 minutes later the aircraft disconnected with ATC. The Pilot tried to pass Pannandin range due to bad weather and climbed to 7000 ft. Because of weather condition the pilot turned back to Putao, at that moment aircraft stroked with mountain trees and fall down. All three persons were survived and got out from aircraft. At that time raining and the aircraft just started fire with electrical spark and fuel. They rested near aircraft the whole night. Next days due to serious injuries they left the navigator in a safe cave near damage aircraft with some food and water. Then he and the pilot continue searching to find ways. They struggled to find way difficultly for next days. After 9 days later the pilot could not walk further due to injuries, he continued alone. Next day he arrived Lar Sar village and contacted to Htoo foundation. After urgently rescue operation the captain was survived but the Navigator found already expired.

1.17.3) **Testimony of the second witness**

Putao ATC in-charge stated that, on 26 September 2014, HS- CCN departed to Tahaungdem but returned back to Putao, due to bad weather.

On 27 September 2014 14:16 local time HS-CCN took off to Tahaunderm and reported the ETA 15:18 local time. At 14:34 local time, controller contacted to aircraft for it's position with VHF. Next 5 minutes (14:39 local time) asked again aircraft position, the Pilot reported passing Naung Moon.

On 14:49 local time he contacted to the aircraft to inform Tahaungdem weather information but no reply, messaged with Blind Transmission to return back. He reported to Yangon ACC and Tahaungdem search and rescue team without delay. On 16:00 local time two AS 350 B 3 helicopter already arrived at Tahaunderm and return back to Putao for searching flight along the HS- CCN route. Search and rescue operation continued with MI-17 Military helicopter AS-350 B₃ Civil Helicopter and ground team for next days. After ten days later, he received the information about the passenger had arrived back to Lan San village. Communication reports between ATC Controller and Pilot flying. (**Appendix- I**)

1.17.4) **Testimony of the third witness**

Operating manager of Advance Aviation stated that company was contacted by Secretary, chairman of Htoo Group requesting for one helicopter to support search and rescue activities being conducted by Htoo foundation in searching for 2 missing mountaineers who attempt to post a record climbing the top peak of the Khakoborazi mountain. The scope of flight was for transport passengers and supplies to the camp (Tahaungdem) approximately 55 NM from Putao. The proposal in the form of quotation was made but due to good relationship between, total number of flight hours could not be pre-determined the payment will be collected after the mission is completed.

After granted permit by Thai DCA on 16 September 2014 the aircraft was ferried from AA base (Chiangmai) to Mandalay International Airport with two pilots. On 16 September 2014, continued ferry Mandalay- Myitkyina Airport- Putao Airport. On 18-23 September 2014 HS- CCN was on standby status accordingly weather was not permitted for operation. On 24 September 2014, 20 minutes flight was performed by Capt Catchawat (Pilot) for maintenance weekly run. On 25 September 2014, HS- CCN operated Putao- Pannandin- Putao to send supplies. On 26 September 2014, HS- CCN departed from Putao to send passengers and supplies the route Putao- Tahaungterm- Putao but due to bad weather condition over Pannandin area returned back.

On 27 September 2014, HS- CCN departed Putao- Tahaungterm- Putao route to send passenger and supplies, after 20 minutes later, he received message about lost of contact.

1.17.5) **Testimony of the fourth witness**

Search and Rescue team leader stated that, on 10 September 2014, two AS 350 B₃ helicopter arrived Putao based comp. According to the instruction of Htoo Company the aircrafts operated ferry flight to send passenger and supplies.

(HS-CCN) had arrived to Putao on 17 September 2014. Because of Thai captain was not skillful the area, nominated one navigator who was already experience to assist him.

On 25 September 2014, two AS 350 B₃ had already arrived at Tahaungdem and based. On 27 September 2014, during they were waiting the Weather, they received the information about HS- CCN. After received instruction from Htoo foundation, two AS 350 B₃ returned back to Putao for searching flight along the route. Cargo lists carried on board was (**Appendix- J**)

2. ANALYSIS

2.1) Introduction

The analysis showed that accident was due to unsafe condition and/ or unsafe act. To improve operational safety, we need to focus not just on individuals, but on the local hazards and local threats.

2.2) Related information

2.2.1) Occurrence events

On 26 September 2014, HS-CCN operated by the designated Pilot to send passengers and supplier on the route Putao- Tahuangdem- Putao. But due to bad weather condition, aircraft returned back and mission is not completed. Next day, after boarding he departed along the route Putao- Machanbawn- Naung Moon- Pannandin- Tahuangdem- Putao. Putao region is northern part of Myanmar, it is high mountains area and weather condition was rapidly changed.

2.2.2) Aircraft information

There was no reported and recorded about the deficiency and difficulty with aircraft system, engine, navigation and communication equipments occurrence in previous days. Airworthiness certificate and air operator certificate were also valid. Periodical inspection was finished at 10 September 2014. There was not received any signal from Emergency locator Transmitter of this helicopter.

2.2.3) Potential for Pilot incapacitation

Information available from witness statements and VHF communication provided the evidence there was no potential for pilot incapacitation in flight.

2.3) Overview of the flight

2.3.1) Handling of Pilot

The Pilot was hold Commercial Pilot license. Helicopter and medical checked was finished. Total flying hour (10320:44) including EC 130 B4 type hour (702:28) and qualify for PIC. On 27 September 2014, after received weather information original passengers manifests, weight and balance sheets were carried on board, HS- CCN was departed with single pilot from Putao at approximately 14:00 local time for Tahuangdem with two passengers and supplies. On the route, if the weather is so unfavorable, he may abort the mission. The route was planned for Putao, first report over Machanbaw, then over Naung Moon.

2.3.2) Action during en-route

Around 20 minutes after departure, aircraft was flying North of Naung Moon at 7000 ft. The Pilot has contacted Putao ATC with VHF communication. A few minutes later, the weather condition was deteriorating, the Pilot climbed to 7,600 ft to avoid weather. As for visibility was poor he descend to 6000 ft and decided to abort the mission and to return back. During he turned aircraft back tracking, weather is suddenly clouded and visibility is very limited so the Pilot reduced the aircraft speed and try to land. At that moment, aircraft stroked to mountain trees.

2.3.3) Potential Analyze

The investigation considered different scenarios to explain altitude was conducted-

- (a) A potential scenario is that, the previous day due to bad weather, aborted the mission and for that day other two AS 350 helicopters was already arrived, he was burden to complete the mission.
- (b) A second potential scenario Putao region is high mountain area and weather changes was fast and the pilot was not familiar for that area.
- (c) A third potential scenario, the Pilot climbed to 7,600 ft to avoid weather but weather still worsened and he descend to 6000 ft. Naung Moon area, mountains high were above 6000 ft. The Pilot who was not early decided to turn back and took unnecessary risk. The above scenarios were considered contributory factors, there had led to accident.

2.4) Local condition

It is likely that the Pilot was not skillful that area and also Putao was mountainous area and weather changes was very fast.

Putao airport had an Air traffic control tower controlling class C airspace with no radar surveillance capability. The Helicopter could contact to ATC within VHF communication range only.

However HS-CCN had not HF communication during search and rescue operator. It is also needed both customer and operator to full fill the standards of ICAO Annex-18. (The Safe Transport of Dangerous Goods by Air) (**Appendix- G**)

2.5) **Risk Control**

Several risk controls were identified as being safety factors. Hazard is a condition with potential of causing loss and risk is the chance that something is going to happen and the consequence if it is does.

- **Human factor**

Human behaviors and performance are cited as caused factors in the majority of aircraft accident. It is an inappropriate or undesirable human decision or behavior that reduces or has the potential for reducing the (effectiveness, safety, system performance). Contributing factor to the crash was the pilot's motivation to complete the search and rescue mission which increased the risk and affected his decisions.

However, during bad weather condition the Pilot take unnecessary risk.

2.6) **Organizational influences (Advance Aviation)**

Organizational structure of Advance Aviation is Board of Directors, Vice chairman, General Manager, Flight operation, Engineering, Administration, and Marketing directors and managers. Advance Aviation issued operations manual (Rev.2, date 28 September 2012). OM part- 3 section 3 mentioned for operating at all weather operation. (**Appendix- D**)

However Advance Aviation operation needed to oversize their Pilots and further instruction at bad weather operation.

2.7) **Organizational influences (Authority)**

According to ICAO, Annex.2, Chap.4, Visual flight Rules, Department of Civil Aviation, Thailand had issued AIP (ENR.1.2.1, date 10 December 2008) and Announcement on the operations of Helicopter of AOC holders B. E 2557, dated 6. February 2014 specifics the Visual Flight Rule. (VFR).

3. CONGLUSIONS

3.1) Findings

- There are no indication of aircrafts, engine, navigation and communication equipments problems.
- There is no indication of potential for pilot incapacitation before accident.
- The Pilot license, medical check and type rating are finished and validated.
- Helicopter weight and balance are within acceptable range.
- There was received no signal of Emergency locator Transmitter.
- Both customer and operator to fulfill the Annex-18, Standard and recommended practice.
- Putao ATC and HS-CCN could contact within the range of VHF communication.
- The weather reports of ATC, Tahaungdem team and other information, there were cloudy, raining and visibility is limited.
- Putao area is high mountain area and weather changes was rapidly.
- During en-route, due to weather condition was deteriorating, Pilot climbed to 7,600 ft, but visibility was very poor then he descend to 6,000 ft and turn back the helicopter to return Putao.
- During the pilot try to land, the helicopter rotors were by stroked mountain trees and fall down.
- The helicopter engine sudden stopped and first just started with electrical spark and fuel.
- During bad weather and poor visibility condition the Pilot should return back early.
- The Pilot took the unnecessary risk.

3.2) Cause

The Pilot took the unnecessary risk during bad weather and limited visibility condition.

4. SAFETY RECOMMENDATION

To reduce and eliminate of accidents and serious incidents, MAIB recommended following recommendations-

- Advance Aviation operation need to ensure their Pilots for Safety Management System, Human Factors and Recurrent Training.
- Advance Aviation need to ensure to further instructions with the operation of bad weather condition and oversight the Pilots.
- During such flights over hostile environment, all the operators to carry survival equipments such as (portable ELT, portable radio, medical case, signaling devices like flares) inside the helicopter.

Investigator - in – charge