

## MESSAGE FROM THE MANAGING DIRECTOR

As Managing Director of Heli Everest, it gives me great pleasure to announce the publication of our Safety Bulletin for 2022 edition. After long adversity from the COVID-19 virus, Nepal's aviation industry, which had been severely impacted by the global virus pandemic, is on the comeback trail. We are delighted to bring you this newsletter in the hope that it will be useful to every client and will help to improve the overall quality of operation for everyone involved in Nepal's helicopter airline industry.

With Heli Everest's great core policy of "Safety First", we proactively develop a safe and healthy working environment within our organization by using the Safety Management System (SMS) program to mitigate human errors and ensure that there are no potential hazards for our employees and valued clients. To achieve our primary goal of elevating safety, we take the development, implementation, maintenance, and continuous improvement of strategies and procedures very seriously.

My team's cooperation and unparalleled synergy are the primary reasons our company is one of the nation's most reputable businesses. We are organizing maximum training both in Nepal and abroad, frequent site visits to busy areas for aviation operations, the interaction between various departments of the organization, regular workshops, and periodic refreshment trips to make the strength of our team more effective for safe, punctual, and smooth flight operation.

Finally, I would like to extend my heartfelt gratitude to all our well wishers who have supported us throughout the years. We are pleased to announce the addition of a third helicopter to our fleet. With this new aircraft, we continue to build a top-tier service team that will continue providing exceptional customer service and flight experience to all our valued customers who have put their trust in us.



Readers are always welcome to provide feedback and suggestions for improving our Annual Safety Bulletin. We appreciate your support and look forward to serving you in 2023 and beyond!

A stylized handwritten signature in white ink on a dark blue background.

Fur Gelje Sherpa (Phurba)  
Accountable Manager/Managing Director

# MESSAGE FROM THE SAFETY DEPARTMENT:

Safety Department is pleased to publish the third issue of the 2022 Safety Bulletin. This platform will be used to distribute valuable and informative safety-related reading materials. We believe that the aviation industry and the organization will benefit greatly from the ongoing Safety Bulletin in fostering positive safety culture. We offer the safest collective operations through continuous communications on occurrences related to safety and guarantee that we never compromise on any form or aspect of safety. If you wish to contribute or have any questions please send us an email at [corporatesafety@helieverest.com](mailto:corporatesafety@helieverest.com)

- Geeta Shrestha, Safety Manager

## HUMAN FACTORS:

Human Factors is about people in their working environment and about their relationships with other people, equipment, procedure, and the physical environment. Human Factors involve the overall performance of human beings within the aviation system.

The SHELL is used by ICAO (International Civil Aviation Organization) to illustrate the key elements of human factors.

**SCHELL** is an expanded version, which emphasizes that the entire system shapes how individuals behave. Any breakdown or mismatch between two or more components can lead to human performance problems. Human Factors Training should focus squarely on providing aviation safety critical personnel with the non-technical skills to manage the prevention/consequences of human error. Continuing to develop staff's nontechnical skills should be a priority of the organization as these skills are one of the primary defenses in reducing errors.

## VFR FLIGHT INTO INSTRUMENT METEOROLOGICAL CONDITIONS:

Inadvertent Instrument Meteorological Condition (I-IMC) is a prominent contributing factor in rotorcraft accidents as they can quickly lead to disorientation, loss of control, and/or impact with obstacles and terrain. Weather and inadvertent entry into Instrument Meteorological Conditions (IIMC) in VFR flight is the number 2 killer in aviation.

### How do you recognize I-IMC?

Pilots should assume they are in IMC conditions anytime they are unable to maintain aircraft attitude control by reference to the natural horizon, regardless of the circumstances or the prevailing weather conditions. A VFR pilot should accept that they are effectively in IMC anytime they are unable to navigate or establish geographical position by visual reference to landmarks on the surface. Such situations must be accepted by the pilot involved as a genuine emergency, requiring immediate attention.

### Conditions that cause pilots to enter IIMC include:

- Poor pre-flight planning and preparation
- Failure to update the weather brief before take-off
- Continuing the flight too long while encountering deteriorating weather conditions
- Losing situational awareness

### IIMC risk mitigation:

To prepare for IIMC, you must first make the conscious decision that continued flight under VMC is no longer possible, then decide to either turn around and if possible-land immediately.

# S

**Software:**  
the procedures and other aspects of work design

# C

**Culture:**  
the organizational and national cultures influencing interactions

# H

**Hardware:**  
the equipment, tools and technology used in work

# E

**Environment:**  
the environmental conditions in which work occurs

# L

**Liveware:**  
the human aspects of the system of work

# L

**Liveware:**  
the interrelationships between humans at work





# FUEL CONTAMINATION:

Contamination of fuel means trouble for an aircraft engine and its fuel system components. Damages include:

- Corrosion in the fuel tank
- Clogging in the fuel filtration parts
- Component failure of aircraft fuel systems
- Engine failure by damaging system components
- Blocking fuel supply to the engine

## WATER:

Water is the primary cause of fuel contamination- which can cause corrosion in the fuel systems components. When exposed to low temperatures, it can freeze up and clog various fuel filtration parts and fuel lines.

## MICROORGANISMS:

The growth of microorganisms in fuel tanks becomes inevitable if air and moisture are present inside. These microorganisms feed on the hydrocarbons in the fuel and produce a sludge-like substance that can clog fuel filters. Some microorganisms also produce acid by-products that can accelerate metal corrosion inside the tank.

## PARTICULATES:

Particulates are all particles suspended in air or fuel.

### Common are:

- Sand and dirt particles getting in through open parts and vents
- Rust and corroding matter from different parts of the aircraft, even the fuel system itself.

Usually, these particles are filtered out by filters. However, if their maintenance and inspections are not done regularly, they can potentially clog various fuel system parts resulting in the blockage of fuel supply to the engine and ultimately causing the failure of the system. It is important to keep in mind that the total elimination of fuel contamination might not be possible. But, regular maintenance and inspection can control the contamination and prevent it from causing major damage to the aircraft.

# CONFINED AREA OPERATIONS:

Helicopters can land almost anywhere- at least, that is the commonly-held belief. Most people who are not familiar with rotary flying think that you can simply lift your helicopter into a hover, take off vertically, and fly. Then, when you arrive at your destination, you come straight down and plonk the machine into any old bit of ground.

However, it is not true that helicopters can land anywhere. In fact, it is very difficult to land one in a small space, generally known in the aviation world as a "Confined Area". In reality, confined area operations are quite difficult and can be dangerous, for there are a great many things that can go wrong.

## What is a Confined Area?

It is any space and area in which the flight of the helicopter is limited in some direction by terrain or the presence of obstructions, natural or manmade.

## Difficulties of landing in Confined Areas:

- One of the most important factors is maintaining a clearance between the rotors and obstacles forming a confined area.
- Might fly into something or try to land on an unsuitable surface (obstacles are very difficult to see from the air).
- Frequently needing to take off and land vertically or nearly so- this is a dangerous condition in which the helicopter can quickly get out of control and get into an accident.
- Need to be very careful about power requirements.

## Common errors of operations in Confined Areas:

- Failure to perform, or improper performance of, a high or low reconnaissance.
- Approach angle that is too steep or too shallow for the existing conditions.
- Failing to maintain proper rotor RPM.
- Failure to consider emergency landing areas.
- Failure to select a specific landing spot.
- Failure to consider how wind and turbulence could affect the approach.
- Improper takeoff and climb technique for existing conditions.
- Failure to maintain safe clearance distance from obstructions.

# SAFETY CULTURE:

Safety culture refers to the enduring value, priority, and commitment placed on safety by every individual and group at every level of the organization. Safety culture reflects the individual group and organization attitudes, norms, and behaviors related to the safe provision of air navigation services. An organization with a strong safety culture values:

- The importance of safety
- Recognizes that safety is a business imperative
- Safety is afforded the highest priority over commercial, operating, environmental and social pressures
- Commitment to Safety
- Safety issues receive the attention warranted by their significance





## WIRE STRIKES

Any aircraft flying at a low level is at risk of a wire strike. Wire strikes remain one of the leading fatal accident causes in low-level helicopter operations. Wire strikes often occur in fine weather when there is good visibility. In many cases, the pilots knew the wires were there. Many pilots mistakenly believe that just watching for wires will provide sufficient reaction time. Statistics show that all pilots flying low are susceptible to a strike, regardless of experience and ability.

### WIRE HAZARD MITIGATION:

- Avoid low-level flight whenever it is not essential to the operation
- Become familiar with all known hazards in the operations area prior to low-level flight
- Brief all crew and passengers to speak up and be specific if they see power lines, towers, or other obstacles
- Look for all indicators of a power line
- Assume that wires are always present in any unfamiliar operations area until proper high reconnaissance confirms otherwise.
- Remember that wires are thin and often nearly impossible to see until it is too late.
- Stay focused and avoid distractions- anything that causes the presence of the wires to fade from the pilot's awareness is hazardous.
- Be mindful that the number of flight hours does not lower the chance of a wire strike, as most wire strike accidents statically occur to experienced pilots with more than 2000 flight hours and good knowledge of the area.
- Understand the risk of wire strikes by taking the necessary precautions, especially when flying at low altitudes.
- Prepare the flight thoroughly and review any known cable installations on the planned flight path.
- Maintain situational awareness during the whole flight.

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