

Manang Air has conducted various safety activities as below in 2017 in addition to the periodic regulation requirements:

- Safety Bulletin 1st Issue Published in 1st January
- Safety Survey conducted on February 2017 among the staffs for the subject of Safety Culture within the Organization.
- Security Training for crew and staffs conducted on 12th and 15th of February 2017.
- Emergency Drill/Evacuation for Pilots and Staffs

16th March 2017.

- Safe Transport of Dangerous Goods Ground Classes for Pilots and Staffs on April 2017...
- AIP refresher Classes for Foreign Pilots on April 2017.
- Operations and Safety Briefings for the Pilots on 5th June 2017
- Monsoon Briefing for Helicopter Operations 6th June 2017.
- SMS Training Safety Road show conducted by Airbus helicopters SEA. August 2017.
- Winter Precautions for Helicopter Operations Briefing for Pilots and staffs on November 2017.

support the full spectrum of safety management activities, including the adoption and implementation of mitigation actions where relevant. The reporting, analysis and follow-up of occurrences is supported by a broader safety risk management process that helps to identify the main safety issues and risks. This process involves continuous dialogue between the aviation industry and their competent authorities and full engagement from all involved between the aviation industries, the state authority. This is notably includes the provision of feedback and lessons learned to improve safety. Airline shall aware of the risks it is facing and takes relevant measures to mitigate those risks. It is necessary to ensure aviation safety from a broader national perspective. In addition, it intends to ensure that the industry and regulatory are collectively informed of the risks faced and may decide, on the basis on joint analysis, the adoption of relevant mitigation actions to maintain or improve the level of aviation safety.

ENEFITS OF SAFETY REPORTING, **ANALYSIS & FEEDBACKS**

Therefore additional actions should be taken to avoid an increased number of fatalities and accidents. In that perspective, some of the ICAO contracting states have started the transition towards a more proactive, evidence-based, risk and performance oriented safety system. Such system requires a systematic and continuous collection of safety information in view for safety hazards to be identified, assessed and addressed.

It should work continuously to ensure that any new hazards or risks are rapidly identified and that mitigation actions are implemented and where found ineffective are revised. In addition, in a safety system where the state authority are aiming to focus available resources on higher risks to ensure a better safety efficiency of measures taken, safety information supports a risk-based oversight of regulated entities. The collection, analysis and follow-up of occurrences are a central element of such proactive and evidence-based safety system. Its objective is to ensure that the necessary safety intelligence is available to support the safety management efforts of the whole aviation community.

The information provided through the collection and analysis of occurrence reports should allow the industry and the regulators to be informed about the risks they are facing and to take decisions supported with relevant knowledge and information. Airline shall establish a framework. across aviation domains and at each level to ensure the collection of as complete as possible safety occurrence data and its analysis with a view to

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MANANG AT SAFETY BULLETIN

Safety Bulletins

- Message From Executive Chairman
- Safety Activities By Manang Air
- Benefits of Safety Reporting, Analysis & Feedbacks
- Monsoon Flying Precautions

MESSAGE FROM EXECUTIVE CHAIRMAN

I would like to thank to all Manang Air family to come up with the second issue of Safety Bulletin. In order to encompass the evolving operational safety and Airworthiness standard we continue to strive hard to enhance our working system by our qualified manpower in line regulatory requirement as established by our local authority.

Our people in Manang Air is prime asset, no wonder we attach higher significant to care for our resources, which is built on mutual respect and trust with friendly and motivating atmosphere.

In our foray of extending the satisfaction to the customer to the best of our quality service remaining within the limited resources we have so far achieved a miles stone in maintaining Operational Safety and Standard. Manang Air is constantly looking for greater opportunities to accelerate the growth. Our commitment to Operational efficiency and uncompromising safety standard offers competencies to cater the varied challenges in the helicopter operation in Nepal.

> -Mr. Satis Pd. Pradhan Accountable Manager/Executive Chairman



Abstract:

This bulletin establishes an information about the safety related issues in the aviation sector. The purpose is to continuously contributing to the safety issues in an effective manner & enhancing safe helicopter operations.

n behalf of Manang Air, we would like to thank all our members, clients and our travelers for their valuable contribution to enhance safety. We look forward for continuous support as usual for journey ahead.

MONSOON FLYING PRECAUTIONS

Every year in Nepal monsoons are expected to hit the eastern part of Nepal by 10 June and by 10 July, whole country would be under the monsoon spell. In addition to the cooling of temperatures, most needed relief to the agriculturist and the problem of water shortage diminishing, monsoons pose number of hazards to the aviators.... (Contd on Page 2)

BENEFITS OF SAFETY REPORTING. ANALYSIS & FEEDBACK

While air transport remains one of the safest forms of travel, the expected air traffic growth foreseen in coming days presents significant challenge to the aviation if it wants to prevent air accidents from increasing. However, the current aviation safety system is mainly a reactive and prescriptive safety system, in which safety improvements are essentially resulting from technological progresses, compliance with prescriptive regulations and lessons learned from aircraft accidents..... (Contd on Page 4)



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MONSOON FLYING PRECAUTIONS

- Monsoons are associated with heavy rain, strong gusty winds, strong up and down drafts, squalls, poor visibility, low clouds, lightning, hailstorms, thunderstorms, icing etc.
- On reviewing past data, during monsoon months, number of accidents have taken place in our country.
- Loss of visual reference, disorientation/visual illusions, colliding with static obstructions, failure to go around in the event of unstabilized approach or diverting in time and failure to land at a suitable place in no go situation in case of Helicopters have been some of the main causes of accidents during monsoon months.
- Personal ego, overconfidence, pressure to undertake the task and get homeitis have been some of the contributory factors towards occurrence of accidents.
- It is prudent to get to know about the monsoon hazards and precautions to be taken lest we fall prey to these and add to the accident statistics.
- ❖ Nepalese aviation Safety Authority and stakeholders are conscious of the fact that the pilots and engineers manning aircraft fleet are highly experienced, knowledgeable, professional and concerned about the flight safety. Nevertheless, all concerned would like to refresh the memory and cover important aspects, which needs to be kept in mind during monsoon flying as below:

GENERAL

- Brush up your knowledge about loss of Situational Awareness, Spatial Disorientation, prevention of CFIT etc. Be knowledgeable about use of onboard Nav and Landing Aids. It is advised to go through precautionary landing procedures by helicopter pilots.
- Flying during monsoons in Terai, Northern Himalayan and mid hilly areas demands additional alertness on part of the aircrew.
- Early mornings, afternoons are more likely to have thunderstorm. Keep this aspect in mind.
- Normally adverse phase of thunderstorms lasts around 30 Mts. to 1 Hour but in the case of regenerating thunderstorms it may continue for hours

- Knowledge of terrain is very vital particularly during monsoons and adverse weather conditions. Study the terrain thoroughly.
- Flying in the hills is most dangerous during monsoons and great care must be exercised.
- High altitude flying is very demanding during monsoons. Exercise special caution and take no chances with weather particularly during monsoons which are quite severe in the areas of high altitude operations.
- Be current in instrument flying/simulator flying and know the limitation of aircraft and your own limitations.
- Ensure serviceability of your weather radar, wind screen wipers, nav aids, communication equipment, radio altimeter, ELT, flying instruments, nav and flashing beacons, etc.
- It is very essential to plan the flight meticulously keeping in mind the weather conditions, availability of diversionary airfields. On number of occasions due to widespread thunderstorms; it may not be possible to reach your destination and even the diversionary airfield.
- Carry out thorough preflight briefing, covering the aspect of CRM, terrain awareness, weather conditions and contingency plans in case of adverse weather.

During Flight

- Do not get pressurized for any reason and take no chances with weather. Don't hesitate to say NO regardless of pressures. No show off, false sense of pride, ego, macho attitude. Number of aircrew has lost their lives while taking chance with weather.
- Never fly VFR in IFR conditions. Be vigilant while transiting from VFR to IFR and from IFR to VFR.
- As far as possible avoid bad weather areas using weather radars and or visual clues. If get caught unintentionally in bad weather, then do not press on. Return to your base, divert and if unable, then find a suitable airfield and land. Don't worry about the consequences of unplanned landing since authority permits landing by helicopter in such contingencies.

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- All flying by helicopters is VFR. Ensure that flying is undertaken with ground contact. Keep a very sharp look out for obstructions like pylons, cables, TV towers, Communication poles/towers, high rise buildings, tall trees, high ground etc. If forced to descend low due to clouds then reduce speed and keep a sharp look out for these obstructions. If unable to maintain safe height, then it is better to land at suitable place then continue at low heights in poor visibility.
- It is suggested to set personal minima's for yourself in terms of the height to which descend in order to remain below clouds and when you should make a decision to divert/carry out precautionary landing.
- Maintain your route safety altitude.
- Trust your instruments and do not look outside while flying on instruments.
 Have good CRM in the cockpit.
 Remember the phenomenon of spatial disorientation and apply the knowledge about it intelligently.
- With weather, no amount of experience or heroism works. Never be overconfident, respect weather and prepare well for your sortie. Do not press on regardless of whether even if you are highly experienced.
- Most of the accidents during the bad weather occur during approach and landing. As far as possible, carry out ILS approach, if available. Otherwise, Continuous Descent Final Approach (CDFA) in case of Non Precision Approach. Chances of accidents in Non Precision Approaches are 5 times more than during ILS approaches.
- Fixed wing pilots in particular to remember the landing techniques on wet, contaminated runways, be familiar with risk of hydroplaning, cross wind landing techniques, essential aspects of estabilized approach, use of reverse thrust, spoilers and should never hesitate to go around if situation demands.
- Never hesitate to go around or divert if the situation demands. Follow the SOP meticulously. Take the decision to divert in time before it is too late.



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SAFETY BULLETIN

Post Flight

- Rain water and high humidity during monsoons have adverse effects on electronics equipment. Ensure protection by parking inside hangars. Use suitable covers when parking in the open.
- Ensure that the aircraft is properly sealed when parked. Danger of reptiles entering the aircraft are high during monsoons due flooding.
- Birds are known to make nest in the areas of air intakes, exhaust and other available space on aircrafts even with in a very short duration.
 Carry out proper externals.
- Make sure that soft parts of the aircraft like stabilizers/antennas etc are covered while parked with proper covers to prevent damage due to hail storms.
- Proper lashing of aircraft is essential to prevent damage due to strong gusty wind conditions.
- Ensure the bonding of aircraft is intact to prevent lightning strikes.
- Take great care during refueling lest water enters fuel tanks. Proper bonding during refueling needs no emphasis.
- Grassy landing surface becomes soggy during rains. Ensure due caution during landing, parking. Wheels/skids getting stuck on wet surface may lead to dynamic roll over conditions. Skidding while fast taxying/turning is expected on wet surfaces.

Exercise caution:

- Ensure that the aircraft are not parked in low lying areas which are prone to flooding, water logging specially in high rain density areas.
- AMEs, technicians to exercise due caution while servicing the aircraft since chances of slipping are high due to wet surfaces.
- Carry out special checks on parts/equipment which are likely to get affected due to rain water. Rusting of the parts is another hazard. All aviation concerned should put efforts to include all the aspects related to monsoon flying. Above points are only not enough for monsoon flying as there as there may be some points which might have been missed out. All airlines, supervisors, aircrew, maintenance staff are requested to include those which have been missed out or particularly applicable in their respective area of operations. Let us all involve ourselves to ensure safe flying during monsoons.

BE AWARE, ON THE GROUND
AND ON THE AIR !!!

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