PART A: SECTION 2: SAFETY MANAGEMENT PROGRAMME

2.1 SAFETY STATEMENT

The **SSN** subscribes to all operational safety standards as contained in ICAO Annex 19, related documents and Part 140 of the Namibia Civil Aviation Regulations and Technical Standards.

The Accountable Manager is ultimately accountable for the overall safety for the overall safety of operations of the **SSN**.

The **SSN** is committed to ensure safety of all soaring activities conducted under its auspices. To attain this, the **SSN** shall ensure that all officials and nominated post holders are adequately qualified and experienced to fulfill their duties and responsibilities in accordance with its ARO approval.

 Similarly, it is incumbent on all pilots to conduct their soaring activities in a safe and responsible manner at all times.

The **SSN** takes cognizance of the definition of safety as being the "managing of risk."

The SSN accepts that there can never be a risk-free environment is aviation as soaring activities are conducted in varying conditions by humans in aircraft designed and manufactured by humans.

It is the objective of the **SSN** to develop and introduce measures which will lead to effective risk management, thereby reducing the likelihood of incidents and accidents and establishing a safety culture throughout the organization and its affiliated clubs.

This section of the Manual of Procedures represents the safety risk management system of the **SSN**.

ACCOUNTABLE MANAGER

1.0 SAFETY MANAGEMENT PROGRAMME

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1.2 SAFETY FACTORS

In order to effectively manage risk, cognizance must be taken of the factors that have an impact on safety. These are:

- Qualifications and experience of key personnel;
- Qualifications and experience of pilots;
- Qualifications and experience of maintenance personnel;
- Operational procedures;
- Maintenance procedures;
- Airworthiness of aircraft;
- Fatigue;
- Human factors e.g. stress, health etc.
- Base facilities such as aerodromes;
- Communication;
- Air space utilisation;
- Meteorological conditions;
- Environmental conditions;
- Corporate (**SSN** and club) culture.

1.3 SAFETY RESPONSIBILITY

The Accountable Officer has the ultimate responsibility for safety within the **SSN**.

The structure of the **SSN** provides for the appointment of a Quality Assurance and Safety Officer (QASO). His/her duties and responsibilities are fully described in Section 01, point 2.4 of this manual.

Apart from the above, each and every member of the **SSN,** its affiliated clubs and all pilots are required to buy into the safety culture and have a responsibility to put safety first in all their actions and activities.

1.4 SAFETY CULTURE

Developing a safety culture starts at the top of the organisation. Often, safety related incidents/accidents can be traced back to what is termed "the organisational accident." This simply means that systems and/or processes within an organisation may have embedded laws that remain hidden for a considerable period, only to be uncovered when an unfortunate event occurs.

In order to cultivate a safety culture, the **SSN** utilizes web-based information, daily briefings, well defined processes and procedures, interpersonal communications and regular quality checks.

Following are the traits of a positive culture:

- INFORMED – people are informed of all the factors that determine the safety of the system as a whole;
- REPORTING – people are prepared to report their experiences (and errors);
- FLEXIBLE – people can adapt to varying conditions and scenarios;
- LEARNING – people have the willingness and competence to draw conclusions from safety information systems and the will to implement major reforms;
- JUST CULTURE – people are encouraged for providing essential safety related information without fear of retribution or punitive actions. However, a just culture must not be confused with a weak culture.

1.5 SAFETY MANAGEMENT

For safety management to be effective, it relies on the gathering, analysis and dissemination of data. This is achieved by the following means:

HAZARD REPORTS: All personnel and pilots must identify and report hazards in the conducting of their activities. For this purpose a **SSN** hazard report form is attached to this manual as Addendum __ . Paragraph 1.2 above provides guidance for the identification of hazards.

Hazard identification can either be pro-active or reactive.

Pro-active identification requires continuous vigilance and relates to identifying hazards which might have adverse consequences although these have not yet occurred.

Reactive hazard identification relates to an event that has occurred and which requires further analysis. This type of identification requires the completion of an incident report form, attached to this manual as Addendum ___ .

INCIDENT REPORTS: Once completed, the incident report form must be forwarded to the QASO.

RISK ANALYSIS: It is the duty of the QASO to establish whether the identified hazard poses a safety risk and thereafter to analyse the risk in terms of probability (likelihood of occurrence) and severity (severity of occurrence).

The following matrix provides the methodology for risk analysis:

INSERT RISK ANALYSIS MATRIX.

RISK ANALYSIS: Once the risk has been analysed, the next step is to report the analysis to the **SSN** Safety Committee (SC). The SC is a permanent committee and comprises the following persons:

- Accountable Officer (**SSN**);
- CFI (**SSN**);
- PRM (**SSN**);
- QASO (**SSN**);
- Club CFI's
- Club QASO's

The SC will assess the risk analysis and determine whether it is acceptable (no further action required), acceptable with mitigation (further actions required to mitigate the risk) or unacceptable (the operation is prohibited until the risk has been sufficiently mitigated). All risks are assessed at the hand of the ALARP (As Low As Reasonably Possible) principle.

RISK MITIGATION: The SC will decide the nature and level of mitigation actions to be taken and the **SSN** QASO will communicate these to all members in writing as well as a posting on the **SSN** website.

The SC shall meet at least twice per annum – prior and subsequent to any soaring season. These are structured meetings and must be conducted at the hand of an agenda. All decisions must be contained in minutes of the meeting.

Due to the vast geographical separation of committee members, tele- or video conferences will constitute a meeting.

It stands to reason that a meeting of the SC is also compulsory in the event of a serious incident or accident or at any time when the QASO of the **SSN** deems it necessary.

In all instances it remains the responsibility of the **SSN** QASO to convene meetings of the SC.

IMPLEMENTATION OF RISK MITIGATION: The final step in safety management is to ensure that risk mitigations are implemented, adhered to and their effectiveness assessed. This is achieved by direct follow up as well as during scheduled audits as per the Quality Assurance system of the **SSN**.

1.6 REPORTABLE INCIDENTS

A reportable incident is any event, not being an accident, by which the safety of an aircraft or person is, or could have been, jeopardised by an occurrence. The following is a list given for guidance and is not exhaustive. If in doubt FILE A REPORT

Technical Incidents:

- Fire;
- False fire warning;
- Engine failure;
- Smoke or development of poisonous or harmful gas;
- Exceeding engine limitations;
- Exceeding airframe limitations including speeds;
- Serious fuel loss, leakage or fuel supply or distribution problems;
- Landing with less than planned fuel;
- Failure to landing gears, landing gear doors or landing gear indication systems;
- Failure to brake systems, which decreased effectiveness of braking action;
- Failures to systems causing difficulty in aircraft handling;
- Failures to systems, equipment and components causing special measures;

- Rejected take-off, return after take-off or diversion, emergency descent, etc.).
- System failures leaving one critical system remaining;
- Technical failures, which (could have) caused injuries to occupants;
- Other technical failures, defects or damage, which (could have) jeopardised the safety of flight.

Operational and Environmental Incidents:

➢ When an aircraft does not land at its planned destination for any reason other than the weather, or ATC diversions.
➢ When (ground based or airborne) emergency equipment or procedures are used or when an emergency is declared.
➢ When a take-off is rejected.
➢ Exceeding of operating limitations.
➢ Significant loss of engine RPM.
➢ Significant track error.
➢ Activation of GPWS, TCAS (RA), windshear warning.
➢ An encounter with severe turbulence, windshear or a lightning strike.
➢ Bird strikes.
➢ Collision or risk of collision, with any vehicle, terrain or obstacle.
➢ Significant fuelling error or a critically low in-flight fuel quantity.
➢ Significant load sheet or loading error, or load insecurity.
➢ Crew Incapacitation.
➢ Seriously ill or incapacitated passengers.
➢ Injury to passengers while on board.
➢ Difficulties with disruptive or drunk passengers.
➢ When an aircraft causes third party injury or damage.
➢ When an aircraft is intercepted by another aircraft.

Air Traffic Incidents

Air Traffic Incidents are incidents caused by serious occurrence involving air traffic or air traffic control service, such as:
➢ Aircraft proximity (Airprox).
    Serious difficulty caused by:
➢ Faulty procedures or lack of compliance with applicable procedures.
➢ Failure of ground facilities.

➢ Misunderstanding or misinterpretation of any clearance, instruction or other information issued by Air Traffic Services (ATS)

After an occurrence, regardless of its nature, it is mandatory that the person(s) involved notify the QASO. Any event where safety standards may have been compromised and any useful information which can be provided to enhance flight safety must be noted in the Reporting Form.

1.7 MANDATORY OCCURRENCE REPORTS (MOR):

Accidents and certain serious incidents are mandatory to be reported to the NCAA. Once the QASO has received a report, it shall be assessed to determine whether it falls under mandatory reportable incidences as per NAMCARS and the MOP and will be submitted to the NCAA as soon as practicable within 72 hrs of the occurrence. Once the incident has been adequately addressed, the corrective action will be sent to the NCAA to indicate that the incident is closed. The following is a list given for guidance:
➢ Accidents
➢ Near collisions requiring an avoidance manoeuvre to avoid a collision or an unsafe situation or when an avoidance action would have been appropriate.
➢ Controlled flight into terrain only marginally avoided.
➢ Aborted take-offs on a closed or engaged runway.
➢ Take-offs from a closed or engaged runway with marginal separation from obstacle(s).
➢ Landings or attempted landings on a closed or engaged runway.
➢ Gross failures to achieve predicted performance during take-off or initial climb.
➢ Fires and smoke in the compartment, or engine fires, even though such fires were extinguished by the use of extinguishing agents.
➢ Events requiring the emergency use of oxygen by the flight crew.
➢ Aircraft structural failures or engine disintegrations not classified as an accident.
➢ Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.
➢ Flight crew incapacitation in flight.
➢ Fuel quantity requiring the declaration of an emergency by the pilot.
➢ Take-off or landing incidents. Incidents such as undershooting, overrunning or running off the side of runways.
➢ System failures, weather phenomena, operations outside the approved flight envelope or other occurrences which could have caused difficulties controlling the aircraft.
➢ Failures of more than one system in a redundancy system mandatory for flight guidance and navigation.

- ➢ Fires or smoke on-board an aircraft;
- ➢ Terrain and obstacle clearance incidents;
- ➢ Flight control and stability problems;
- ➢ Bird strikes;
- ➢ An encounter with severe turbulence, winds hear or a lightning strike;
- ➢ Activation of TCAS(RA), wind shear warning;
- ➢ Rejected take-off, return after take-off or diversion, emergency descent, etc.) and
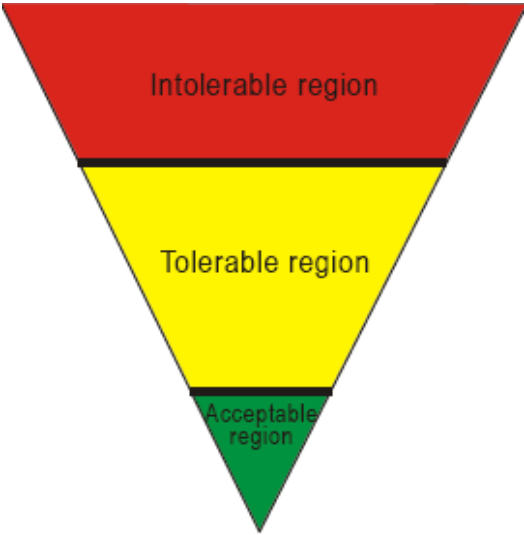
OPERATIONAL CONTROL & SUPERVISION

1.8 FOLLOW UP AND CLOSURE OF REPORTS

The QASO, with the assistance of the SC, will conduct a root cause analysis and apply risk management techniques, including taking corrective action, to effect closing of incidences.

Some reports can be closed on receipt. If follow-up is required, action will be monitored to ensure desired the outcome has been achieved. This includes elimination of the hazard by ensuring that the risks have been eliminated or reduced to an acceptable level.

Risk probability	Risk severity				
Rating Injury	A Catastrophic	B Hazardous	C Major	D Minor	E Negligible
5 Frequent	5A	5B	5C	5D	5E
4 Occasional	4A	4B	4C	4D	4E
3 Remote	3A	3B	3C	3D	3E
2 Improbable	2A	2B	2C	2D	2E
1 Extremely improbable	1A	1B	1C	1D	1E

Safety risk tolerability matrix:

Criteria	Risk Assessment Index	Criteria
Intolerable region	3A, 4A, 4B, 5A, 5B, 5C	Unacceptable under existing circumstances
Tolerable region	1A 2A, 2B, 2C, 3B, 3C, 3D, 4C, 4D, 4E 5D, 5E	Acceptable based on risk mitigation.
Acceptable region	1B, 1C, 1D, 1E, 2D, 2E, 3E 4E	Acceptable

1.9 MANAGEMENT OF CHANGE

Organisational or operational changes within the **SSN** may affect the level of safety and quality and may require amendment of the existing safety/quality procedures.

For this reason a safety review/risk assessment is performed as part of the decision-making process regarding the intended changes.

The safety review/risk assessment is performed in case of one or more of the following intended changes:
* Change in organizational structure/chart
* Change of scope of work
* Change in locations/facilities

Intended changes must be approved by the SC before implementation.

The SC will perform a safety review/risk assessment regarding the intended change.

After completion, the SC will decide on the appropriate mitigation actions – where required– to ensure that the risk has been reduced to an acceptable level. The intended change will then be approved.

1.10 CONTINUOUS IMPROVEMENT OF THE SMS

Every year the QASO will review all reported safety issues conduct a trend analysis and to assess improvements in safety.

The results of this analysis will be reported and discussed at the SC meetings during which safety targets for the following season will be set. These will be communicated to all **SSN** members.

1.11 SAFETY PROMOTION

In order to establish and maintain a positive safety culture within the **SSN** it is important to promote safety on a continuous basis.

This is achieved by the following means:

- Distribution of safety statistics and trend analyses to all members;
- Safety discussions in briefing sessions;
- Distribution of incident/accident reports and analyses to all members;
- Issuing safety notices and directives by e-mail as well as posting on the website;
- Distribution of the minutes of SC meetings to all members;
- Posting interesting safety related publications and case studies on the website.

1.12   EMERGENCY RESPONSE PROGRAMME (ERP)

Each affiliated club shall present the **SSN** with a tailor-made ERP applicable to its own unique operational environment.

The **SSN** must approve all submitted ERP's.

The CFI of each affiliated club and operational base is responsible for activating the ERP when required.

Each ERP shall contain the following information:

- List and contact numbers of responsible persons e.g. CFI, QASO etc.
- Contact number of NCAA;
- Contact number DAAI;
- Contact number of local police services;
- Contact number of local fire-fighting services;

- Contact number of local medical facilities;
- Contact number of Medevac services;
- Contact number of ATC for search and rescue purposes;
- Outline of actions to be taken in the Uncertainty (INCERFA), Alert (ALERFA) and Distress (DISTRESFA) phases;
- Event log sheet.
- ERP action control sheet.

An emergency is a condition that requires urgent need for action or assistance.

The initial focus regarding emergencies is to contain the emergency by taking the necessary corrective actions.

Emergencies must be reported to the CFI and the QASO.

The CFI must activate the ERP and co-ordinate all ERP activities.

After the emergency is contained/solved an internal safety report must be compiled and a safety investigation must be performed to determine the root cause and required preventive actions.

All information in the ERP, particularly the respective contact numbers, must be checked for validity and, where required, updated prior to the commencement of a soaring season.

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