**SRice, Influencing Cabin Safety** June 30, 2023

Asia Pacific Cabin Safety Working Group – APCSWG

# Influencing Cabin Safety

**Susan Rice ISASI Member Number MO4032**

**Business Owner S.R. Cabin Safety Consulting**

*Sue was a member of Cabin Crew for 24 years until she became the first Cabin Safety Inspector in 1999 with the Civil Aviation Safety Authority of Australia, CASA. She represented Australia at ICAO on several working groups and was involved in the then, JAA/Airbus Industrie Regulatory Cabin Safety Oversight Group in Toulouse, which was responsible for the certification of the Airbus A380. She retired in late 2012 and continued to attend, present, and contribute to international forums. She has been a member of the Asia Pacific Cabin Safety Working Group, APCSWG, since 1994 and in 2015 accepted nomination as Chair of the Group.*

The Asia Pacific Cabin Safety Working Group, APCSWG, is a Sub Group of the Australian Society of Air Safety Investigators, ASASI. In 1993 a group of like-minded ASASI aviation safety professionals got together and decided there was a need within the industry for a desire to raise the profile of the discipline of Cabin Safety. Those individuals were diverse in their skill set: an air traffic officer, a pilot, 2 members of cabin crew (both of whom were qualified air accident investigators) an air safety accident investigator with the then Bureau of Air Safety Investigation, BASI, now the ATSB, and, an airline cabin crew safety manager.

Prior to the development of the Group, it was predominately the realm of the Cabin Crew unions to flag issues of concern with their airline operators. There was a reliance on utilising the individual networks of delegates to draw on international knowledge and to be attending conferences. There was a growth internationally of awareness and acceptance for greater attention to be paid to Cabin Crew and their role in airline operations. Cabin Crew actions in incidents and accidents were becoming more noteworthy and a realisation that appropriate actions could/would save lives. These notions were also becoming realities in Australia as we had experienced some incidents that were worth this attention in order to learn and share what was concluded.

The Group grew and gained notoriety within the aviation industry as the years progressed. Understanding this was prior to social media and email being a basic means of communication as it is today. On occasion, there were phone calls in the wee hours of the morning to an international colleague to seek clarification on an issue. Fax was a more expeditious way to communicate but nothing can really replace the spoken word.

As the 1990s progressed the diversity of disciplines and occupations outside of aviation seeking to be involved in the Group was growing. Combined with the individual networks of members reaching out we were being provided with exposure and education from the medical profession, the legal profession, and tertiary education, to name a few. There were, and still are, analogies to be drawn between medical practices and aviation operations. Fatigue Management, Human Factors, and Training are the most obvious. With the introduction of Safety Management Systems and the increased acceptance and study of Human Factors, both were becoming aspects of aviation operations, the medical industry, and the mining industry.

Participating in emergency scenarios was becoming more of a regular occurrence for some members. It was understood that much first-hand knowledge and expertise is to be gained by direct involvement in such exercises. In Australia, was a regulatory requirement that aerodromes periodically conduct an emergency scenario. There were occasions when defense personnel participated in various scenarios and this truly injected an air of realism, particularly in the event of a hi-jacking exercise. Participants such as police, ARFF, ambulance service, hospital, Salvation Army, Red Cross, and airport and airline operator staff.

Before the regulatory review and implementation, it was a requirement that aerodromes conduct periodic emergency scenarios. It was at their discretion as to how involved the exercise was to be. These days as a component of the aerodrome operators' Safety Management System, an Emergency Response Plan will be embedded and is expected to be reviewed regularly to ensure efficiencies are maintained. As a component of the audit, the Regulator will need to be satisfied the EPR has the elements that will ensure a successful outcome.

More members of the Group were becoming aware of these exercises and seeking to be involved more frequently, they would then bring back what occurred and what they learned to share with the Group. It was becoming a clear and popular notion that the ARFF performed an integral role in the survivability of occupants after an incident or accident. We were able to capitalise on this awareness and became involved directly with the ARFF, mainly in Sydney and Cairns.

The diversity of the membership/participants ranges from:

- Incident & accident investigators.
- Civil aircrew and defense personal
- Airline safety representative
- Aviation regulators
- Training providers
- Legal specialists
- Aviation Medical personnel
- Royal Flying Doctors Service
- Phycologists & Human Factors Specialists
- Airport Rescue and Fire Fighting Service, ARFF
- Law Enforcement – Police and Customs
- Airport Security & Airline Security
- Higher education lecturers and postgraduate students

With the diversity of involvement, it provides a great spectrum of information for the Group. Analogies can be drawn between Safety Management Systems and the implementation of processes and procedures for managing workers. In many instances, it becomes apparent that 'people are people' and often their behaviours can almost be predictable. Even though from differing occupations.

**Topics of Interest**

Organisations prepared to share findings from an incident or from their auditing (however referred) program is always very well received. This is part of the sharing philosophy which we are proud to continue to drive forward. It is a way for participants to learn along the way that there is always another way to address an issue, not just one way.

Hearing an ATSB representative speak to an incident or accident report is always very well received. Now that there is once again a Cabin Safety Specialist within the ranks of the ATSB we have been fortunate to hear from her on several occasions. Most recently she was the IIC on an accident and was able to inject small details to that added even more to our interest.

When presenters from outside of aviation speak about their systems, processes, and procedures it always resonates with the Group. As previously mentioned, human factors and the behaviour of people when confronted with an abnormal situation can be understood by almost everyone. A simple example, it is usually a human factor to find a 'workaround' to a procedure that the worker believes to be inefficient or slowing down the process. Of course, some 'workarounds' have more dangerous outcomes than others, and that can be dependent upon the industry.

Whether we hear from the medical industry – nurses, doctors, paramedics, or the Royal Flying Doctor Service. The RFDS personnel have their own challenges in not only being paramedics and responsible for the care of their patients but they are also required to ensure the cabin is as safe as possible for flight. They are an operational crew member!!

Law enforcement personnel are always interesting and the Group appreciates hearing from Customs and those police officers responsible for maintaining good order in the terminals. Or having escorted someone from an aircraft. A particularly enjoyable afternoon was spent in Auckland, NZ, when the Canine Branch for Customs came to talk about the selection process for the dogs, the training, and how they are trained for different tasks. There was a dog in attendance for the duration of the session, she provided a demonstration of her skills and was duly rewarded with a squeaky toy.

We have had Defence share with us elements of their survival training and demonstrate equipment that will assist in their survival.

We have had one of the operators who regularly operate to Antarctica, in the summer, share their emergency procedures training and equipment carried to assist survival should there be an incident or accident,

We were fortunate to have in attendance a member of Cabin Crew who was an Onboard Manager when an attempted hi-jack took place. The aircraft took off from Melbourne Victoria, bound for Launceston in Tasmania, only a 55 mins flight. A passenger proceeded to inflict injuries with a wooden stake upon 2 of the Cabin Crew. The OBM was the worst injured and physically prevented the offending person from entering the cockpit. He openly relayed his experience and his emotions over a couple of hours. The Group was mesmerised by his words and he willingly responded to each and every one of their questions.

Another topic of great interest, particularly for Long Haul, crew – death on board. How different operators manage that situation and what their document procedures require them to

do.  There are some international operators who carry as part of their equipment, a body bag. Positioning of the deceased can be very tricky, it seems that often they will be left in their seat beside their loved one.   Or moved to Crew Rest.  There are a variety of options.

Disruptive Passengers is always a hot topic.  It generates enormous discussion and all cabin crew in the room have had an experience they wish to share.  Usually, alcohol or drugs, or both, are behind the behavior.  Keeping good order in the room is a task in itself when this subject is discussed.  Together with in-cabin baggage!  These discussions need to be carefully managed in order everyone feels they have been heard.  These are excellent topics for 'workshopping' to seek a best practice.

A topic that generated enormous discussion recently was presented by a postgraduate physiologist from the University of New South Wales, UNSW.   In a nutshell, is there a generation gap among Cabin Crew?  Short answer - "yes"!

Operators permitting employees to attend and speak openly, on occasion, to matters that would be classified as Commercial in Confidence, indicates to us that there was and still is trust in the way the Group conducts itself and is able to ensure that Chatham House Rules are indeed maintained.   Confidentiality is key on many occasions and the Group understands and accepts this philosophy.

**The Emergency Services Scenario in Cairns, Queensland**

On **18&19 February** 1999, we were fortunate to be involved in two days of emergency services exercises.  On the 18th of February, we were guests of the Cairns ARFF.  There was a briefing prior to going out onto the field.  The airport was still operational and as such were an incident or accident to occur we would be required to move to a designated safe place so the firefighters could become operational.  We were shown and then asked to demonstrate some of the survival training the Fire Fighters undergo.  As an example, there was what resembled a concrete bunker that had tunnels within and this was where we crawled through on our stomachs to safety.  Some of us donned fire-fighting uniforms, drove in trucks, and had hands-on experience using a fire hose.

The following day we participated in a Cairns City Emergency Services scenario that was to be a ditching in Cairns Harbour.  Again, a thorough briefing, and again conducted by the ARFF, prior to our heading to the location.  The services involved were Police, Ambulance, Cairns Base Hospital, the ARFF, Naval helicopter wing.   And volunteers from the towns folk.

It was the wet season so was very hot and humid.  As passengers, we boarded a vessel that was volunteered by a company that conducted tours out to the reef.  As previously mentioned, this was a whole-of-town exercise.  Make-up artists went to work on participants to ensure individuals had the appearance of casualties.

The slide/raft had been provided by a major carrier, and the operator was obliged to carry out a workplace health and safety briefing.   Without that device, we would have bobbed around in the water, although still able to go ahead it was a fundamental element for the overall experience to have the slide/raft.  For those of us in the raft it demonstrated just how uncomfortable it can become after a few hours and how important to maintain good order onboard.  All that training was coming in handy.

When proceedings commenced it was clear there were going to be lessons learned by all individuals and disciplines involved, it would mean different things to different people. The next day, the debriefing with all services involved was a candid and open affair. It was expressed how beneficial it was believed this exercise would prove to be. Little did they know just how soon it would be for those lessons learned to come to fruition.

**Helicopter Accident**

ATSB Investigation Number:199901009

Occurrence Date: 12 March 1999

Location: 5 klms SE Cairns (VOR)

Highest Injury Level: Fatal

The following comments are extracts:

"At 1130hrs on 12 March 1999, the Bell 206L-3 helicopter departed Green Island on a routine passenger charter flight to Cairns Airport. The helicopter took off in light drizzle and the pilot elected to track back to The Pier via the shipping channel.

At 1139 hrs the helicopter was cleared by Cairns Air Traffic Control to track to The Pier, not above 500 feet. The Controller advised the pilot that within seven to nine klms from The Pier the cloud base was between 800 – 1,000 feet with some showers and visibility less than 10 klms.

As the helicopter continued along the shipping channel, the pilot noticed that the weather ahead was deteriorating. A short time later he descended the helicopter to about 150 feet to keep the water surface in sight, and reduced speed.

The weather conditions continued to deteriorate, eventually, the pilot flew the helicopter at 50 feet or less above the water in light to moderate rain. By this time he could no longer see the channel beacons.

The pilot turned on the windscreen demister as condensation had begun to form on the inside and he also armed the inflatable floats, which were fitted to the skid-type landing gear.

At about 1146 hrs the pilot asked the controller for directions to The Pier. He was advised that The Pier was on a bearing of 205 degrees M, at a range of three klms (about 1.5 nautical miles) At about that time, visibility had deteriorated to the extent the pilot could not determine where the helicopter was.

Then, noticing that the helicopter had climbed to 100 feet the pilot placed it in a gentle descent to try and sight the water again. A short time later the helicopter contacted the water and rolled inverted.

The pilot and five passengers escaped from the fuselage but one passenger was trapped inside the cabin and did not survive.

The pilot reported that the visibility during the flight from Green Island to Cairns was the worst that he had ever experienced. The sea surface has become completely flat and featureless and had blended entirely with the rain. By that time it was too late to turn around.

Investigation Analysis:

- The pilot's operating culture was conditioned from having 'got through' adverse weather on previous occasions.

NOTE:

- At our recent ANZSASI Conference in early June, after my discussion of this accident, inclusive of the video, during question time, a gentleman raised his hand and advised he had been in the tower on that day when the accident occurred. The room went silent and he seemed to have been triggered by what he had just seen. He talked about the weather that day like it was yesterday, and how quickly visibility had changed, which is not unusual in the wet and humid conditions of the Wet Season in the tropics.

  He also advised he had not ever viewed the video of the rescue and management of the passengers by the ambulance service.

  He had not been aware of the Emergency Services air/sea rescue scenario that had been conducted on 19 February'99.

  He also volunteered that he had noticed a significant improvement in the ARFF response times and, the launching of the Zodiac. There were 4 accidents in a 12-month period and on 2 occasions the Zodiac was deployed.

When I asked if the accident had been close to our scenario location, he categorically said it was the same spot.

- The speaker who followed me on that day advised that he knew the pilot of the helicopter. He had worked with him some years after the accident and found him to be a diligent and capable pilot.

**<u>Excursions</u>**

Attending an airline operator's emergency procedures training department is an opportunity afforded the Group on occasion. Smaller operators with smaller aircraft types use their operational aircraft to train and test their aircrew proficiency in exit operation and evacuation procedures. It is still beneficial to embrace all training philosophies as 'hands-on' in the aircraft you operate on can only be considered beneficial. Larger operators have mock-up cabin facilities which are of great interest to many. This is part of the sharing philosophy that the Group has become renowned for.

We were invited whilst in Auckland, New Zealand, for a Meeting, to spend a day at the Air New Zealand emergency procedures training department which was a good experience. Observing how other operators go about their business is always of interest to crew from other operators.

The following day was spent with the ARFF. We had the chance to experience some of their training equipment and scenarios. Such as donning protective and putting out a galley fire.

Then crawling through a smoke and obstacle-filled environment. Next, we went out onto the mud flats that are at one end of the runway at the airport, to experience an Airforce Orion dropping supplies and participants being rescued from a slide/raft. Due to the terrain surrounding the airport, the ARFF have a hovercraft which is their only means of traversing the terrain in the event there is a rescue necessary. The airport continued operations during our exercise and the ARFF was very generous with their time and equipment.

**Accomplishments of the APCSWG**

An increase in industry awareness of another way to effect positive change rather than through the unions was gradually becoming a way forward in the 1990s. There was the provision of education for a variety of standard operational procedures, emergency safety training, and investigative matters that would otherwise not have occurred. There was a huge increase in sharing of issues which enabled a more consistent manner of operation for Regional Airline Operators. These were the smaller aircraft type such as SAAB 340, DHC 8 100/200, Embraer, and Bombardier. These operators were learning they were not alone and their issues were not unique to them. There were some projects instigated through the Group that resulted in a more consistent and efficient way of operating for these airlines. There was the development of a working group to specifically look at and make recommendations for the "Solo" operators. This proved beneficial for all those who fell into this category.

With the introduction of the CASA Regulatory Review Program in 1994 the Group actively participated in the process to generate a modern and contemporary rule set. Those early days were exciting, but gradually the process was bogged down in bureaucracy and higher priorities within the Regulator. From1999 The Cabin Safety Inspectorate continued to strive for excellence and by December 2022 the new rule set was published for industry compliance.

Input to Airbus Industrie regards the development of the cabin interior for the A380. As an example, around 1996 engineers from Airbus Industrie were conducting a world tour to prospective customers providing an insight into the development of the Airbus A380. As overhead slides were presented to the Group membership there was an air of incredulity at the proposal. Even though it was still believed that Boeing was thought to be considering extending the upper deck through to the aft of the aircraft. There was significant input provided on a number of the cabin interior aspects that were of a practical nature from a Cabin Crew perspective. In particular, the development of the slide/rafts. Initial diagrams shown were such that the upper deck slide/raft was a separate piece of equipment necessitating the removal from a stowage position and then to be brought to an exit door. It was then quite a tedious process to activate the device. Our feedback was clear and concise. This was a bad idea!

We were advised our feedback, in total, was timely and appreciated. Airbus did consult extensively worldwide, although our Group's input was seemingly among the limited cabin safety input sought.

Greatest achievement – during the 1990s, petitioned the Federal Govt to employ Cabin Safety Inspectors. The first two inspectors commenced with the Civil Aviation Safety Authority of Australia, CASA, in Canberra, in May 1999.

**Support**

Without support, the Group would likely find it extremely difficult to continue. That support comes from a variety of sources. First and foremost is ASASI. When there is a conference being held we have aligned ourselves with an annual event and are always assured of a conference room being provided for us. So very much appreciated.

Support can come from airline operators who will provide a conference room along with a tour of their facilities. We have on occasion been invited to Training Organisations in both Australia and New Zealand, both graciously provided us with tours of their facilities which invariably provide some much-appreciated insight into how cabin crew emergency and safety training can be undertaken.

Without the Aviation Safety Authority of Australia, CASA, the Australian Transport Safety Bureau, ATSB, the Civil Aviation Authority of New Zealand, CAA and the University of New South Wales, UNSW, it is understood the Group would surely flounder.

These organisations provide us with our undoubted hard-won credibility, always factual valid, and contemporary information, and on occasion venues for the conduct of our meetings.

Since inception, we have maintained a reasonably stable executive for the Group, in total there have been only 5 Chairpersons. Of note, during his tenure at UNSW in the late 1990s the 2nd Chair was DR Graham Braithwaite.

My Chairmanship has been since 2015 and I now share the role. We have 2 Co-Chairs, which clearly is a more ideal situation for the Group in general. We each have our own skills and are a good balance!

We have been proud to present today and although this has not been an exhaustive summary of the Asia Pacific Cabin Safety Working Group, APCSWG, we hope it has provided an insight into how and why we do the things we do. We anticipate our ability to have a positive influence on aviation safety continues well into the future and assists many more individuals and operators.

APCSWG Website – www.apcswg.org

Facebook Page – apcswg.wix.com/cabin **OR** search: asia pacific cabin safety working group

Susan Rice – sue.rice@apcswg.org

# THANK YOU