CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
Aircraft Accident Investigation and Inquiry Board
Aircraft Serious Incident Report

BASIC INFORMATION

Aircraft Registration No.	:	RP-C3197
Aircraft Type/Model	:	Airbus A319-111
Owner/Operator	:	Cebu Pacific Air, Inc.
Address of Owner	:	c/o Airline Operation Center, Domestic Road, Pasay City
Date/Time of S. Incident	:	13 June 2013/ o/a 0613H
Type of Operation	:	Scheduled Commercial Transport
Type of Occurrence	:	Loss of Lateral Control
Place of S. Incident	:	Runway 24, Ninoy Aquino International Airport, Pasay City, Philippines

EXECUTIVE SUMMARY

RP-C3197, an A319-111 aircraft Flight 5J448, departed from Ilo-Ilo Airport (RPVI) on 13 June 2013 for its scheduled flight to Ninoy Aquino International Airport (RPLL) with 101 persons on board (95 passengers and 6 crew members). The aircraft was vectored for ILS approach to land on RWY 24. At final approach 1000ft RA, stabilized and configured for landing with winds at 140 degrees/9 knots and moderate rain over the field, the aircraft was cleared to land RWY 24 with caution on wet runway and visibility deteriorating. Before reaching 90 feet RA the wind was calm.

From 80 feet RA to 35 feet RA, the wind was already at left cross to tail-cross (left rear quadrant) and at variable direction from 160 degrees – 060 degrees momentary at 013 degrees with wind speed variably increasing from 1 knot to 6 knots. At 70 feet RA, the auto pilot was disengaged and the aircraft was manually flown by the PIC as the PF until touchdown. The aircraft's true heading was 240 and ground speed of 121 knots. Rudder position was at average – 2 degrees even with rudder pedal position of up to -5 degrees at ground speed 121 knots.

From 35 feet RA until before weight on wheels (WOW) the wind shifted direction within the left tail-cross (left rear quadrant) and this time coming from 060 degrees to 112 degrees at increasing speed from 05 knots to 12 knots, true heading at 240 degrees, drift angle increasing to 5 degrees. Moments (2seconds) just before WOW, the aircraft's true heading, which was initially at 240 degrees, changed to 230 degrees with groundspeed decreasing to 119 knots, drift angle increasing from +1 degree until +9 degress just before WOW. The rudder position was variable from +1 degree to +6 degrees and abruptly increased to +10 degrees just before WOW with a drift angle also increasing from +6 degrees to positive 9 just before WOW and left cross-tail wind from 122 degrees to 112 degrees increasing wind speed from 16knots to 22 knots.

The aircraft touched down while heading 230 degress and further left to heading 220 degrees at drift angle +12 degrees, GS118knots, wind 117-128 degrees /25-36kts) at the right portion of runway centerline, and for 4 seconds skidded further right. On the

process, the RH MLG hit 5 lights of right runway edge lights between E1 to E2 with RH MLG momentarily treading portion of soft ground near the right runway edge.

At the moment when the Nose Wheel settled on ground and the wind speed has dissipated to a low of 7 knots increasing 14 knots for 6 seconds and Airspeed below 92 knots/GS111, the spoilers and reversers were successfully deployed and the aircraft was steered back to the runway at heading 240 degrees (at time about 11 seconds from touchdown) and aircraft lateral control was regained by pilot.

Thereafter, at Airspeed below 90knots, even with variable wind from right-cross to right tail-cross (270 degrees–053 degreees–270 degrees) at intermittent speed 14knots & 192 knots, the aircraft heading on the runway was maintained within 230 degrees – 240 degrees until it exited to the right via E4 to taxiway Charlie.

The ATC reminded the pilot to confirm if landing gears are okay before it gave instructions to switch to Ramp Control at freq 121.35. Without any ECAM fault indication, the pilot continued taxiing towards Terminal 3 for passenger disembarkation.

Regular passenger disembarkation was made at Terminal 3 bay 116. Maintenance personnel conducted inspection on the landing gears and discovered several cuts on both RH tires.

PROBABLE CAUSE

The Aircraft Accident Investigation and Inquiry Board determined that the probable causes of this accident are the following:

- **Primary Factor:**

a. Inadequate Pilot skill/technique applied on unusual aircraft attitude during landing IFR with unpredicted abnormal wind shift effect. **(Human Factor. Psychological. Learning. Motor conditioning)**

The Pilot was overconfident and dependent on the auto system of the aircraft for adjustment on shifts of wind direction and drift effect and failed to make adequate and effective corrective actions (motor skills/techniques) on the instant changes of wind direction and speed at time just before touchdown.

- **Contributory Factors**

a. Abrupt shifts of wind direction and speed at the critical moments just before touchdown. (Environmental. Natural Environment. Wind condition)

The sudden change in wind direction from the left forward quadrant to the left rear quadrant induced aircraft positive drift with late pilot response that resulted in critical skidding of the aircraft to the right with gears momentarily departing the runway pavement. The pilot was overtaken by events in making timely recognition and

corrective actions to prevent entering into such dangerous situation.

b. Lack of aerodrome advisory on surges of wind. (Environmental. Man-made Environment. Real time wind information)

The non-availability of aerodrome information on the developing and shifting wind direction and speed that exceeded aircraft/flight limits resulted in delayed recognition and action by the pilot.

- **Underlying Factors**

a. Inadequate Training of pilot in the probable critical scenarios at the different ladders of approach and landing. (Human Factor. Psychological. Learning. Motor conditioning)

The pilot was overtaken by event during the instantly developed changes and shifts in wind condition during landing and failed to make necessary judgment or application of appropriate motor skill/technique for recovery from such unusual environmental condition.

b. Inadequate aerodrome capability to provide real-time wind advisory to aircraft on landing approach. (Environmental. Man-made environment. Aerodrome Weather Radar)

The aerodrome capability (radar) needs enhancement to be able to determine surges in aerodrome wind that affect landing flight path especially in the area below MDA and until touchdown and pre-warn/advise pilots on the landing approach. Adequacy of equipment such as LLWR to detect wind shear or microburst and infrastructure support can be looked into.

SAFETY RECOMMENDATIONS

As a result of this investigation, the Aircraft Accident Investigation and Inquiry Board made the following safety recommendations:

- CAAP- FSIS shall review/update the existing pilot simulator training in A319/320 to include scenarios to ensure proficiency in maintaining stabilized approach and landing whether IFR or non-precision VOR/DME with shifting effect of wind and sound judgment for a go-around/missed approach as necessity may dictate.

- CAAP-ANS shall cooperate with NAIA and other chartered Airport Authorities in-country to review/update the equipage for weather monitoring/advisory capability and provide appropriate technical advice to ensure enhanced capability to prevent recurrence of a similar incident. Likewise, CAAP-ANS shall review similar situations on CAAP operated Airports in-country and submit technical remedial recommendations to prevent recurrence of a similar incident.