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Media Release

Subject : NTSC final accident investigation report of the Sukhoi RRJ-95B aircraft, registration 97004 at Mount Salak, West of Java on 9 May 2012

A Sukhoi RRJ-95B aircraft, registered 97004, with a flight number RA 36801 on 9 May 2012 was conducting a demonstration flight from Halim Perdanakusuma International Airport, Jakarta. The accident flight was the second of the two scheduled demonstration flights.

Occupants of the flight were 45 persons consisted of two pilots, one navigator, one test flight engineer, and 41 passengers. The passengers consisted of 4 Sukhoi Civil Aircraft Company (SCAC) personnel, one engine manufacturer (SNECMA) personnel, and 36 invited passengers (including 34 Indonesian, one American and one French nationality).

The flight was planned under the Instrument Flight Rules (IFR) at an altitude of 10,000 feet and the estimated elapsed time was 30 minutes with total fuel endurance of 4 hours. The area for the demonstration flight was planned over "Bogor" Area however the pilot might assume that the flight was approved to 20 Nm on radial 200 HLM VOR.

The available charts on board the aircraft did not contain information relating to the "Bogor" Area and the nearby terrain.

The Pilot In Command acted as pilot flying while the Second In Command acted as pilot monitoring during this flight. A representative of potential customer sat on the observer seat (jump seat) in the cockpit.

At 0720 UTC (1420 LT), the flight took off from runway 06 then turned right to intercept 200 radial from HLM VOR and climb to 10,000 feet.

At 0724 UTC (1424 LT), the pilot contacted Jakarta Approach controller and informed that the flight was established on 200 radial HLM VOR and reached 10,000 feet.

At 0726 UTC (1426 LT), the pilot contacted Jakarta Approach controller and requested for descent to 6,000 feet and subsequently requested to make a right orbit and was approved by Jakarta Approach controller.

At 0732:26 UTC (1432:26 LT - time based on Flight Data Recorder/FDR) the aircraft impacted a ridge of Mount Salak on 28 Nm HLM VOR on radial 198 at coordinate 06°42'45"S 106°44'05"E, approximately 6,000 feet ASL.

38 seconds prior to impact, the Terrain Awareness Warning System (TAWS) audio warning "TERRAIN AHEAD, PULL UP" activated once and "AVOID TERRAIN" activated 6 times. The PIC inhibited the TAWS system assuming that the warning was a problem on the database.

Seven seconds prior to impact, the flight warning system "LANDING GEAR NOT DOWN" activated.

At 0750 UTC (1450 LT), the Jakarta Approach controller on duty noticed that the flight target disappeared on the radar monitor. There was no alert on the Jakarta Radar system prior to the disappearance of the target.

On 10 May 2012, the location of the aircraft was identified by the Search and Rescue helicopter pilot.

All occupants were fatally injured and aircraft was destroyed.

The Cockpit Voice Recorder (CVR) was found at 15 May 2012. The memory module was in good condition and contained 2 hours of good quality recording.

The Flight Data Recorder (FDR) was found on 31 May 2012. It contained 471 parameters of 150 hours recording time.

Both recorders were downloaded in the NTSC facility by the NTSC experts and were assisted by the Russian experts.

All of the parameters were successfully downloaded and processed. There was no evidence of aircraft malfunction during the flight.

A simulation test suggested that a recovery action might have avoided the collision with terrain up to 24 seconds after the first TAWS warning.

Jakarta Radar Services had not established a minimum altitude for vectoring aircraft for certain areas and the Minimum Safe Altitude Warning (MSAW) did not provide warnings to the Jakarta Approach controller before the aircraft impacted.

The investigation concluded that the factors contributing to this accident were:

- a. The crew were not aware of the mountainous area surrounding the flight path due to various factors resulting in disregarding the TAWS warning.
- b. The Jakarta Radar service had not established the minimum vectoring altitudes and the system was not equipped with functioning MSAW for the particular area surrounding Mount Salak.
- c. Distraction to the flight crew from prolonged conversation not related to the progress of the flight resulted in the pilot flying did not continue to change the aircraft heading while in orbit. Consequently, the aircraft unintentionally exited the orbit.

Following this investigation the Indonesia Directorate General of Civil Aviation, PT. Angkasa Pura II and the Sukhoi Civil Aircraft Company have performed several safety actions.

The NTSC issued Immediate Recommendation and several Safety Recommendations to the Indonesia Directorate General of Civil Aviation (DGCA), Soekarno-Hatta International Airport International Airport, Department of Aviation Industry – the Ministry of Trade and Industry of Russia and Sukhoi Civil Aircraft Company of Russian Federation.

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