



International Civil Aviation Organization
**THIRTEENTH MEETING OF THE
 ASIA/PACIFIC AIR NAVIGATION PLANNING AND
 IMPLEMENTATION REGIONAL GROUP (APANPIRG/13)**
Bangkok, Thailand, 9 to 13 September 2002

Agenda item 2.1 Item 2.1 ATS/AIS/SAR Matters

Search and Rescue Services in Nepal

(Persented by Nepal)

SUMMARY

This paper presents the experiences of search and rescue efforts for missing helicopters in Nepal.

Background

Nepal is a mountainous country with hostile terrain. Due to such topographical condition search and rescue operation is an exceedingly challenging task. Two accidents occurred in Nepal are yet to be recovered.

On 12 Nov. 2001, a helicopter French made equiril AS350 crashed in two minutes after take off and the helicopter dropped into deep lake known as Rara Lake. Out of 6 persons (1 crew + 5 pax) onboard, two injured persons were saved and rest declared dead. However, 3 bodies and the helicopter could not be recovered from the lake due to the depth of the lake.

Similarly, on 31 May 2002, another helicopter Russian made MI-17 departed Mt. Makalu Base Camp for Lukla airport (North east of Kathmandu) is still missing. There were 10 persons on board (crew 4 + 6 pax). Air search was immediately activated but because of dense forest air search has not been successful and the ground search undertaken so far is unable to locate the missing aircraft due to Steep Mountain and dense forest inaccessibility of the area.

Action Taken:

- a. In case of accident taken place in Rara Lake, the available date so far are as follows:
 - 1. The depth of lake is 165 meter(approx)
 - 2. The elevation of lake is 9000 ft above sea level.

3. The helicopter took off near by lake and crashed into the lake within two minutes.
 4. Crew 1 and 5 pax
 5. No search required but rescue started immediately with the help of local available resources.
 6. Two injured person floated on the lake were rescued and saved and one dead body found floating. Rest 3 bodies and the helicopter wreckage is still inside the lake and could not be traced due to depth.
 7. Rescue team from abroad and deep divers were used but due to high attitude and deep lake unable to go inside the lake so deep.
 8. The area is inaccessible by road and no airport nearby and thus accessible only by small helicopter.
- b. In case of missing Russian made helicopter MI-17:
1. The sector of flying is Kathmandu-Lukla-Makalu base camp-Lukla-Makalu base camp-Lukla.
 2. It was lost while flying back second time from Makalu base camp.
 3. Last conversation heard by next MI-17 helicopter flying near by that area after 9 minutes from the take-off in second trip.
 4. Makalu base Camp Elevation;
 5. Lukla airport elevation; 9100 ft AMSL.
 6. Total distance -39 km approx. between the two sectors.
 7. Missing route distance - 24 km approx. from the departure point.
 8. Search conducted;
 - a. Around missing area
 - b. Right and left of the track.
 - c. Different probable location as per updated information.
 9. Area is dense forest and steep valley inaccessible from ground.
 10. Unable to search on Some icy & heavy snowy area
 11. No Emergency Locator Beacon (ELT) signal received
 12. As per other helicopter pilot heading is 244 on direct route but there are other two/three different routes to fly on VFR

Conclusion:

This information paper is presented in this Meeting for sharing experiences and seeking expert suggestion and advises. The meeting is invited to note the subject for further action as deemed necessary.
