

# RECENT CHANGES OF GLACIAL PHENOMENA IN THE KHUMBU REGION, NEPAL

**FUSHIMI HIROJI**

School of Environmental Science, University of Shiga Prefecture,  
2500 Hassakacho, Hikone, 522 Japan

**YABUKI HIRONORI AND SEKO KATSUMOTO**

Institute of Hydrospheric-Atmospheric Sciences, Nagoya University,  
Furocho, Nagoya 460-01, Japan

**YAMADA YUZURU**

Nagaoka Institute of Snow and Ice Studies, NIED, STA, Suyoshicho,  
Nagaoka 940, Japan

The fluctuation of 15 glacier termini were measured in the Khumbu region, East Nepal, in the 1970s and the glaciers are classified into 4 groups, retreating (8 glaciers), stationary (3 glaciers), advancing (3 glaciers), and irregular (1 glacier), according to their fluctuation rates.

Since the 1970s, almost all glaciers have shrunk greatly, although a possible advance was recorded for some glaciers during the first half of the 1980s. The rate of retreating of some glaciers has accelerated during the 1980s as compared to the 1970s.

According to the geometric image analysis using the Spot data of 1987 and 1993, the retreating trend of glaciers has been continuing in the Khumbu region where we are going to survey the changes of the glacial phenomena in the fall of 1995 in order to report the recent fluctuations of the glacier termini and glacier lakes and the related influence on the ecohydrology of the high mountain areas in the Nepal Himalaya.