

Outline of Glaciological Studies in the Nepal Himalaya, 1989

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Abstract

Research by the Glaciological Expedition of Nepal, 1989 was carried out as part of the project 'Glaciological Studies in Asian Highland Regions'. The hydrological and meteorological station in Langtang Himal has been continuously maintained since 1985. In addition, glacier fluctuations for over ten years were observed in the Khumbu, Shorong and Langtang regions.

1. Aim and observations

The aim of the Glaciological Expedition of Nepal in 1989 ("GEN-89") is to continue the studies of glaciological and hydrological processes relating to the hydrospheric environment of Langtang Khola watershed, Langtang Himal, initiated in 1985. For this study, a hydrological and meteorological station was established and continuously maintained since 1985. GEN-89 carried out the following maintenance of the station:

- 1) The hydrological station of Langtang Khola was reconstructed, because the water pipes leading from the river to the measuring well were fully clogged with fine sand. Around the well, a stone wall hut was constructed.
- 2) For measuring the water level of Langtang Khola, a newly designed potentiometer type water level gauge was set by hanging a float in the well. The water level data can be automatically obtained every 30 minutes for 22 months by using a data logger system.
- 3) A new precipitation gauge was installed with a data logger system of the same type as a water level gauge.
- 4) New installation of a humidity and radiation sensor with the same type of data logger system as mentioned above.

The working sensors are now water level, air temperature, precipitation, humidity and solar radiation at the Kyangchen hydrological and meteorologi-

cal station.

In addition, glacier fluctuations in the Nepal Himalaya for over ten years were investigated by re-survey of terminus positions of glaciers in the Langtang and Shorong/Khumbu regions. Locations of these glaciers are shown in Figs. 1 and 2. The first surveys of glaciers were carried out in 1982 in the Langtang region and in 1974 to 1978 in the Shorong/Khumbu region. Fixed points (bench marks) were newly established and photos of each glacier terminus were taken at the time of the survey for future investigations of glacier fluctuations.

2. Study areas

- 1) Kyangchen area in Langtang Valley, Langtang Himal
 - 2) Shorong/Khumbu region
- The glaciers observed are marked by solid squares in Figs. 1 and 2.

3. Members

(Japanese side)

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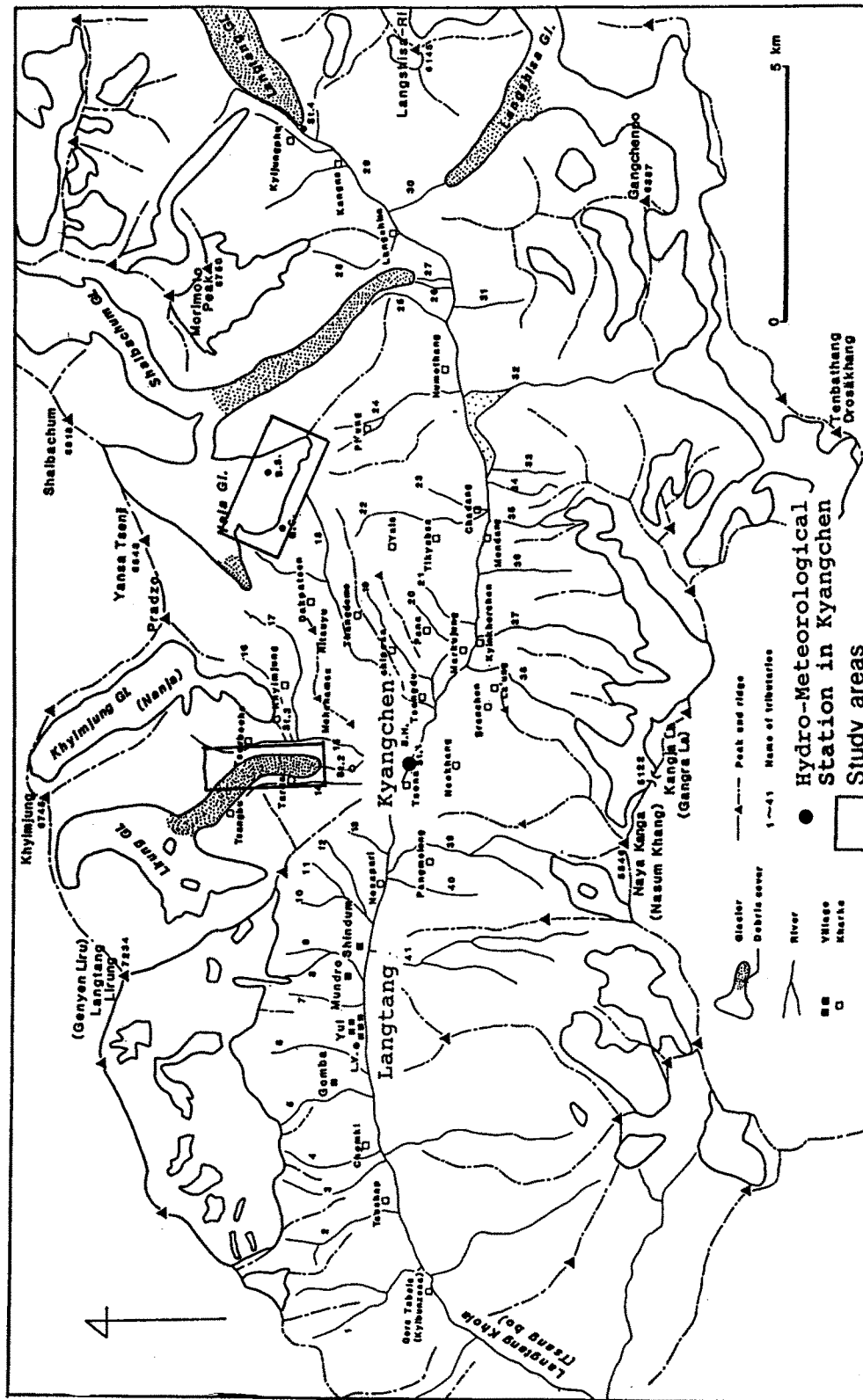


Fig. 1. Locations of glaciers in the Langtang region where observations of glacier fluctuations were made. (original figure by GEN 1982)

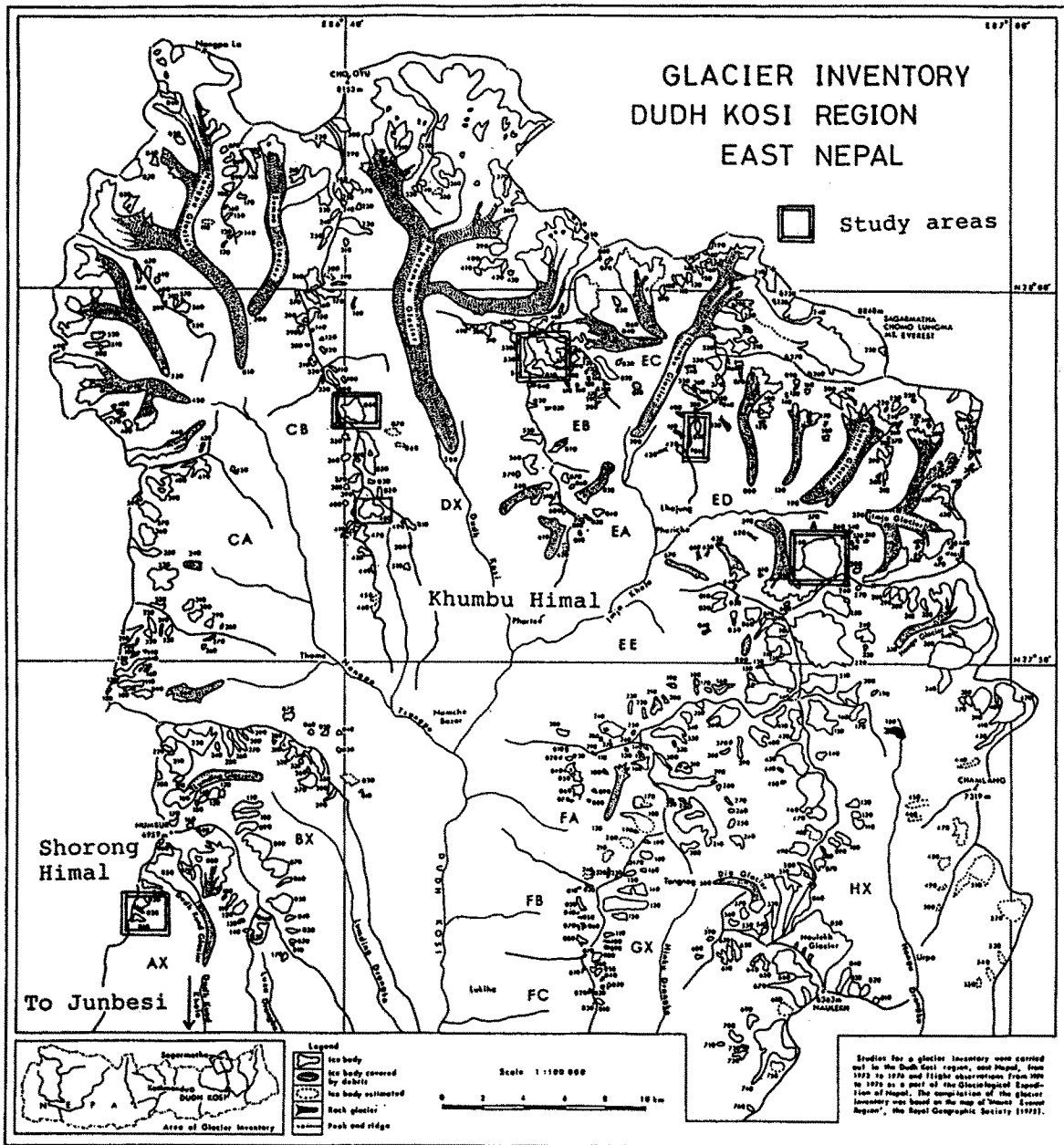


Fig. 2. Locations of glaciers in the Khumbu-Shorong region where observations of glacier fluctuations were made. (original figure by GEN 1974-76)

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4. Observation period

October-December, 1989

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