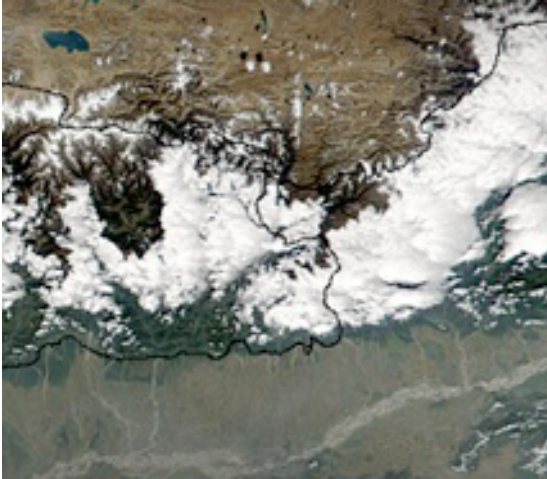




Fate of Mountain Glaciers in the Anthropocene



Working Group 2-4 April 2011 – Mountain glaciers in Europe, North America, South America, Africa, and the largest of them all in the Himalayan-Tibetan region are retreating, some at alarming rates. The hypothesized causal factors include global warming, atmospheric brown clouds, land surface modification, recovery from the mini ice-age, and large scale drying of the air among other factors. Some glaciers are expected to disappear during this century and others are predicted to experience significant loss of spatial cover and mass. The downstream consequences include glacial lake outburst floods, disrupted availability of water for agriculture and human consumption, changes to mountain eco systems, increased frequency of forest fires, loss of habitat, and other potential catastrophes. A holistic study covering the physical science, social science, and the human dimension sides of the problem has not been attempted thus far. It is our hope that this first of its kind workshop organized by the Pontifical Academy of sciences will lay the foundation for studying and monitoring this potential disaster that will impact the entire planet. The workshop will also explore avenues available for mitigating and adapting to this potential tragedy.

P.J. Crutzen, L. Bengtsson and V. Ramanathan

Declaration by the Working Group

We call on all people and nations to recognise the serious and potentially irreversible impacts of global warming caused by the anthropogenic emissions of greenhouse gases and other pollutants, and by changes in forests, wetlands, grasslands, and other land uses. We appeal to all nations to develop and implement, without delay, effective and fair policies to reduce the causes and impacts of climate change on communities and ecosystems, including mountain glaciers and their watersheds, aware that we all live in the same home. By acting now, in the spirit of common but differentiated responsibility, we accept our duty to one another and to the stewardship of a planet blessed with the gift of life.

We are committed to ensuring that all inhabitants of this planet receive their daily bread, fresh air to breathe and clean water to drink as we are aware that, if we want justice and peace, we must protect the habitat that sustains us. The believers among us ask God to grant us this wish.

signed by Ajai, L. Bengtsson, D. Breashears, P.J. Crutzen, S. Fuzzi, W. Haeberli, W.W. Immerzeel, G. Kaser, C. Kennel, A. Kulkarni, J. Mittelstrass, R. Pachauri, T. Painter, J. Rabassa, V. Ramanathan, A. Robock, C. Rubbia, L. Russell, M. Sánchez Sorondo, H.J. Schellnhuber, S. Sorooshian, T. F. Stocker, L.G. Thompson, O.B. Toon, D. Zaelke

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