

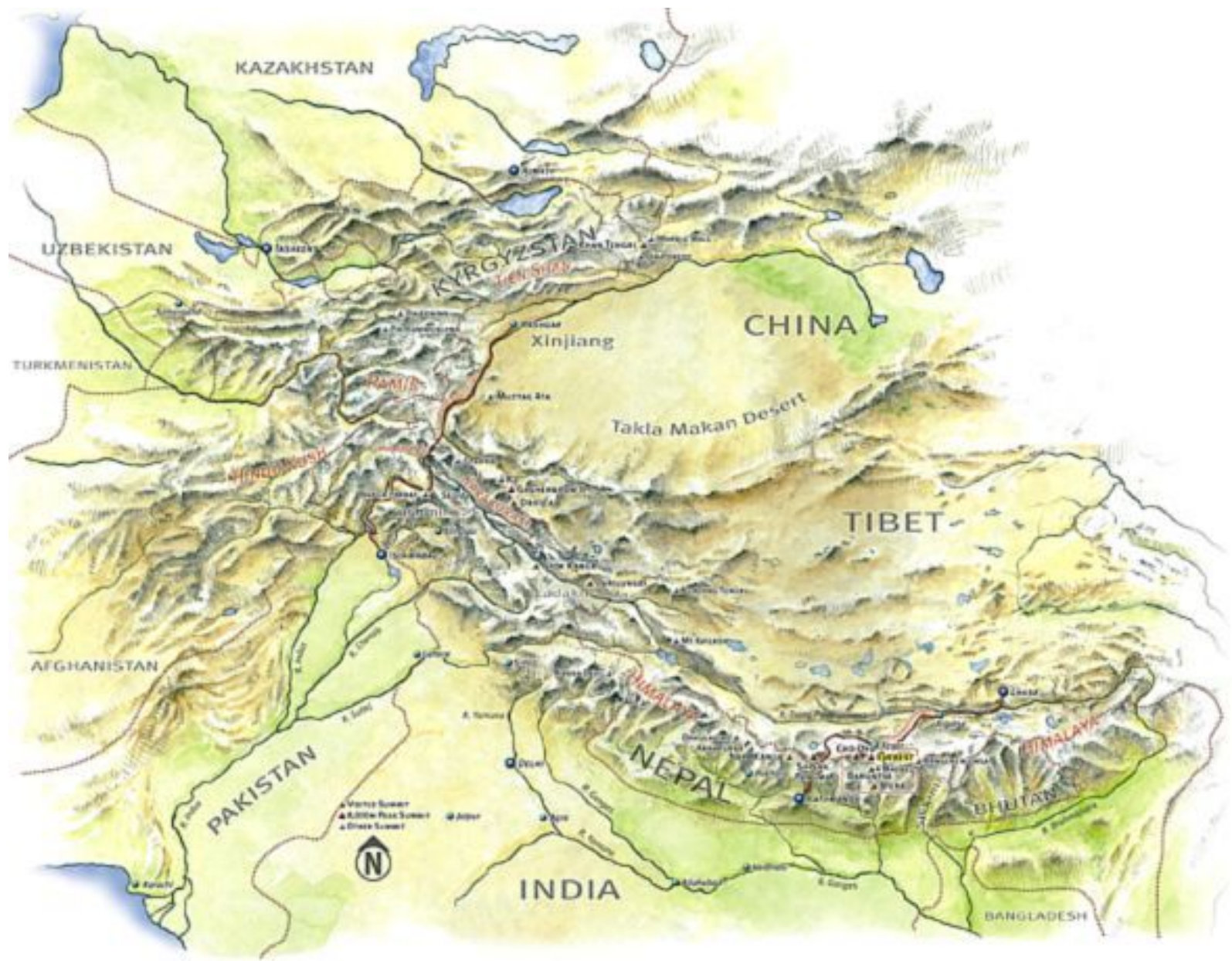
China and the world
discuss the environment



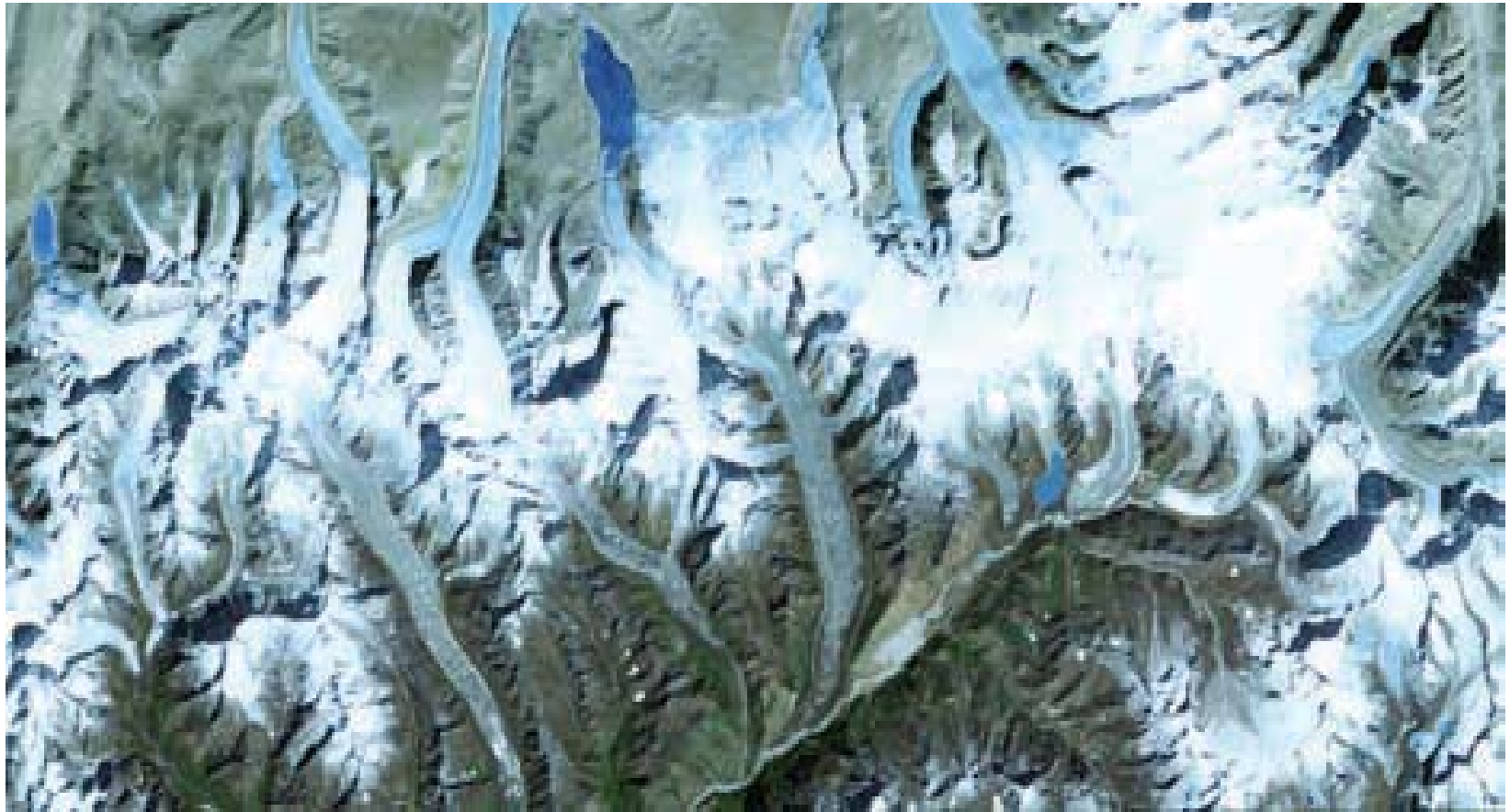
 中外对话
chinadialogue

www.chinadialogue.net
www.chinadialogue.cn





himalayas main ridge





Himalayan glaciers, the largest mass of ice outside of the polar caps, are shrinking at a rate of 10–15 metres a year





© Alfred Molon www.molon.de

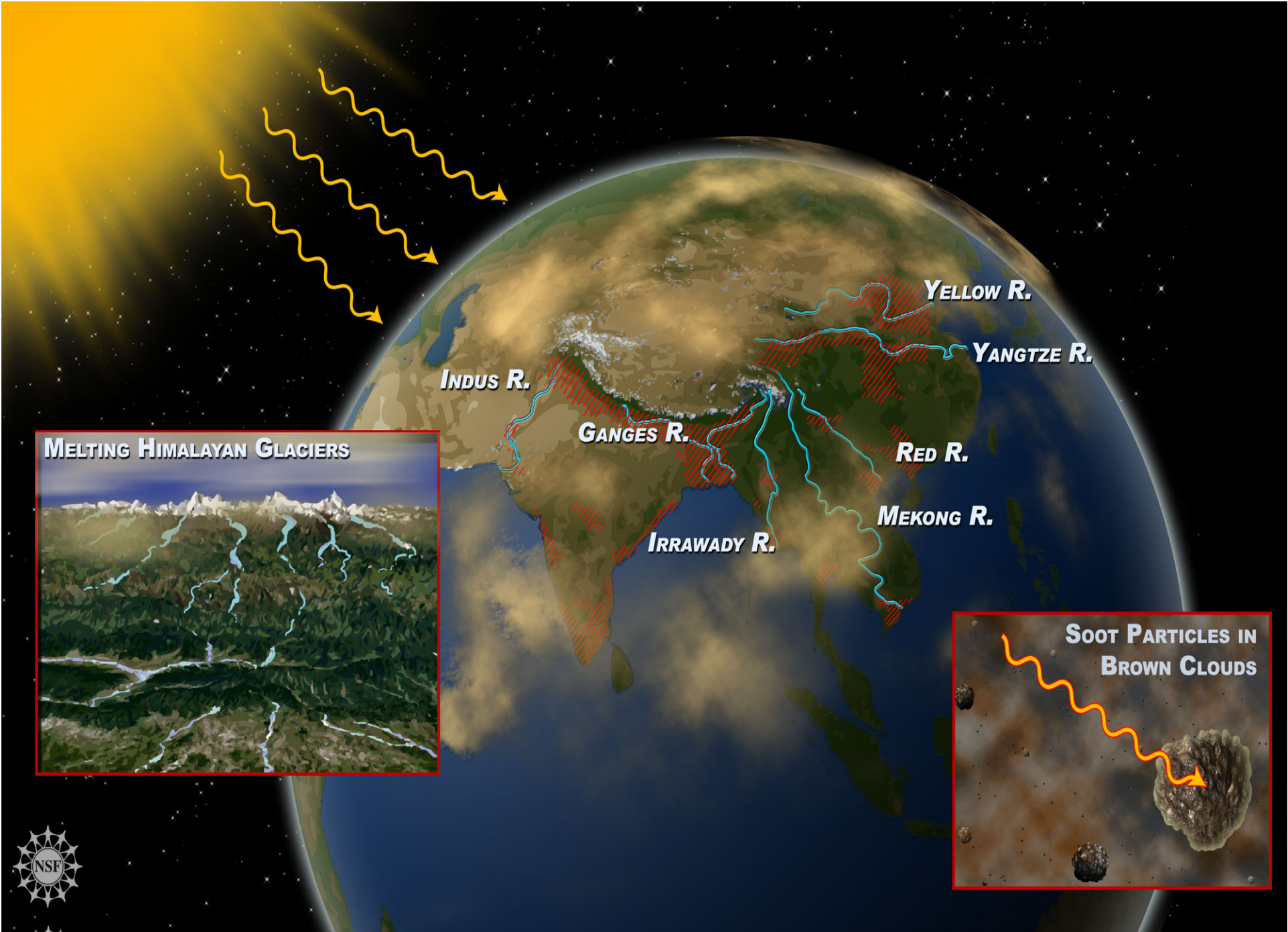
Halong Glacier shrinkage



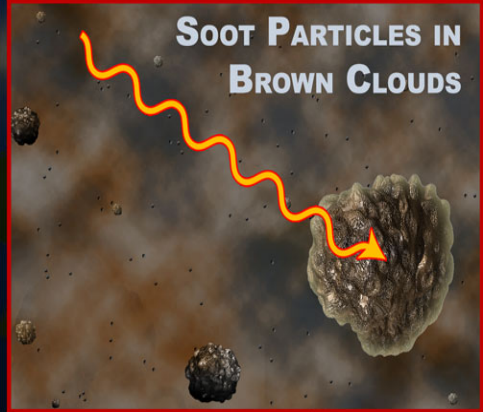
GREENPEACE

Taboche Peak and Khumbu Valley 1950s and 2007





MELTING HIMALAYAN GLACIERS



Pattern of Retreat

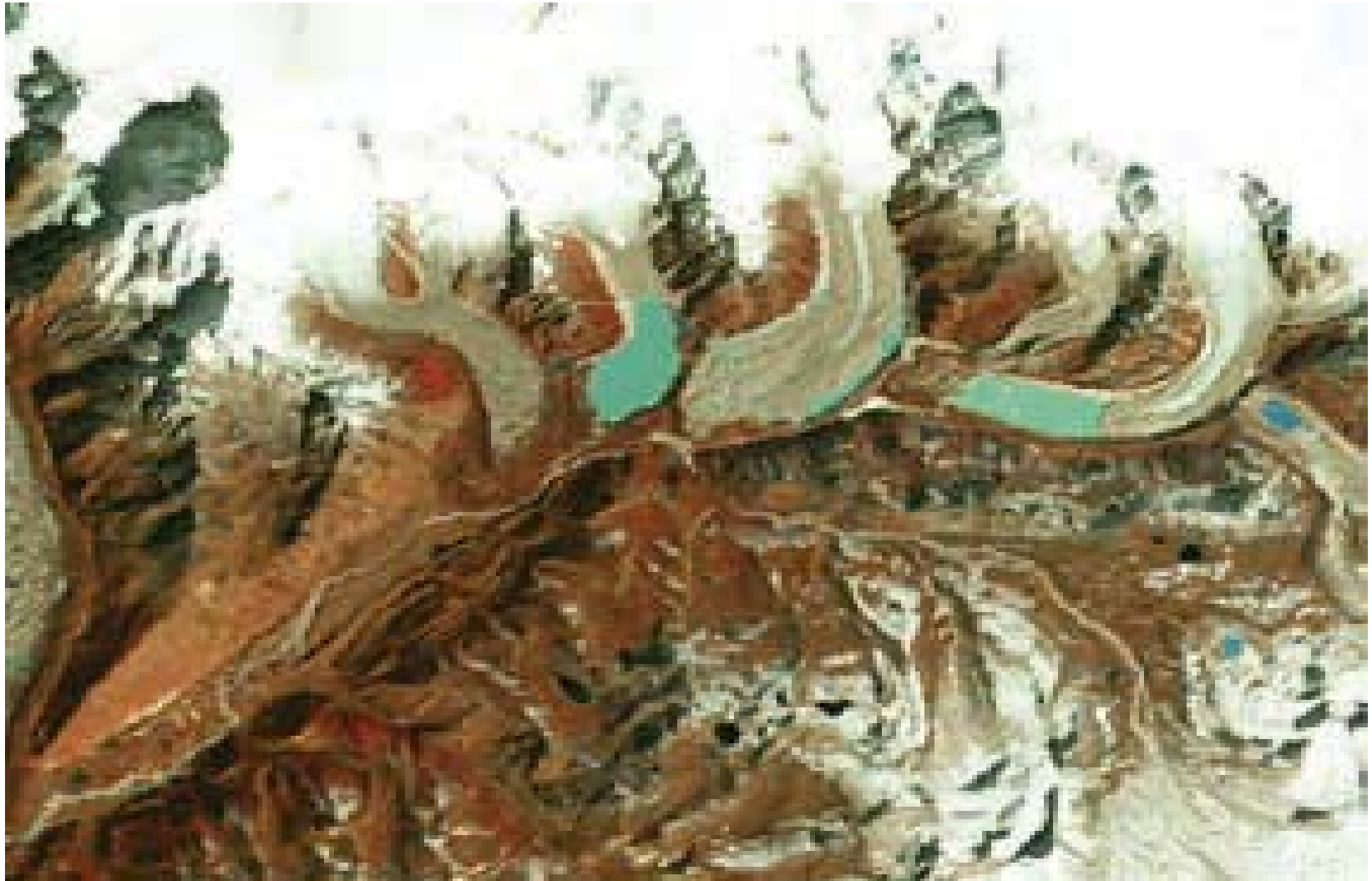
One recent study by the Indian Space Research Organisation, using satellite images and covering 466 glaciers, found a 20 percent reduction in size. Glaciers on the Qinghai–Tibet plateau, a barometer of world climate conditions and the source of the Yellow and Yangtze rivers, have been melting by 7 percent a year

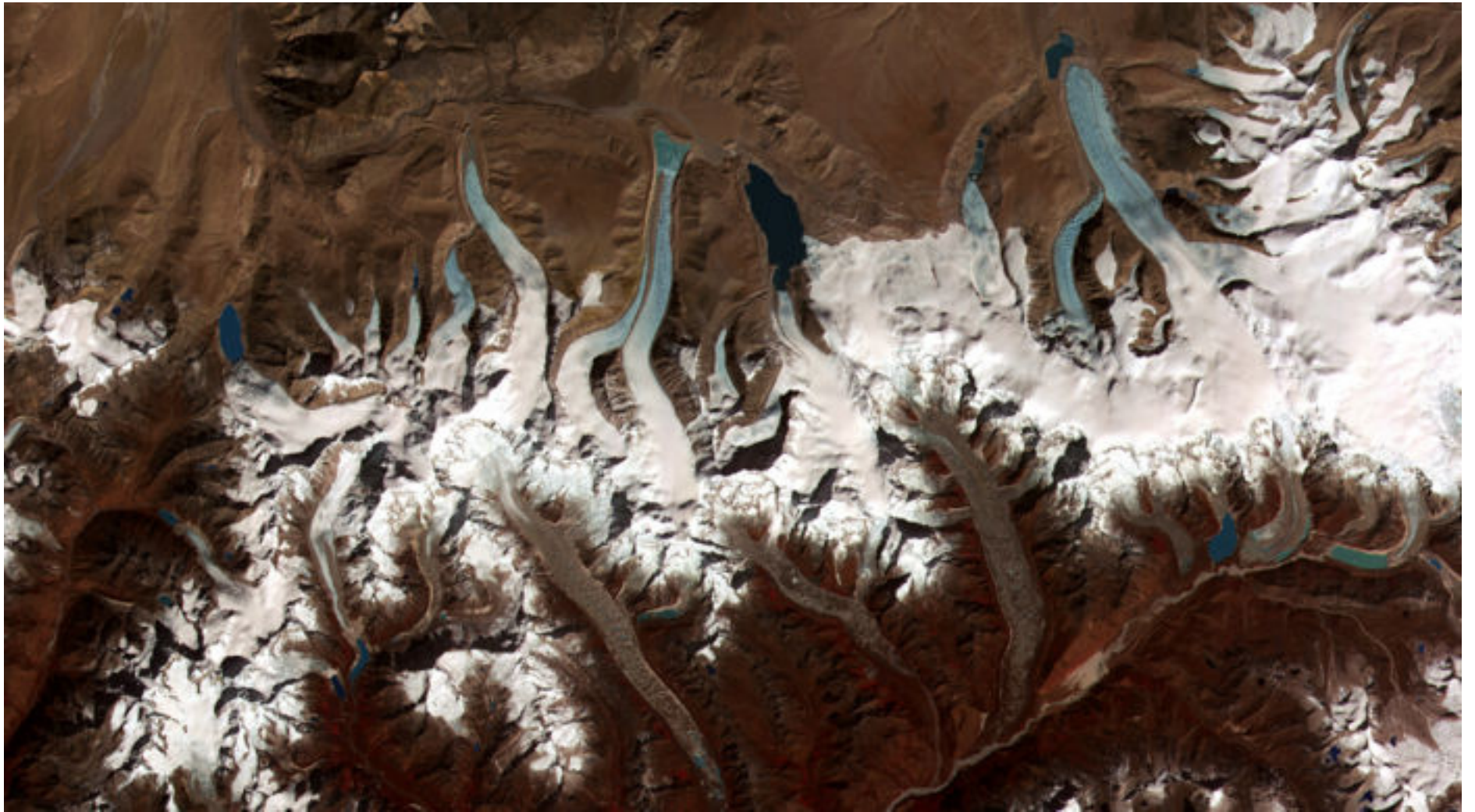
Tianshan

- The longest record of glacier study in China is the Tianshan No 1 glacier
- At current rates two-thirds of China's glaciers, including Tien Shan—will disappear by 2060, with total melting by 2100.

- With any climate change scenario in excess of the 2°C dangerous climate change threshold, the rate of glacial retreat will accelerate.
- Accelerated glacial melt creates some immediate human development risks. Avalanches and floods pose special risks to densely populated mountain regions.

Lake Formation





- One of the countries facing severe risks today is Nepal, where glaciers are retreating at a rate of several metres each year. Lakes formed by melting glacier waters are expanding at an alarming rate
- the Tsho Rolpa Lake has increased more than sevenfold in the last 50 years.
- A comprehensive assessment completed in 2001 identified 20 glacial lakes that could potentially burst their banks, with catastrophic consequences for people, agriculture and hydropower infrastructure, unless urgent action is taken.

Lake Imja Tsho in 1997



Imja, a fast growing hazard

- Imja, a fast-swelling glacial lake, is putting the entire Khumbu region in peril. The Everest region is one of the hotspots of glacial melting in the Nepal Himalayas. Out of 20 potentially dangerous glacial lakes in Nepal, 12 lie in this region. Imja is the fastest-retreating glacier in the entire Himalayas and the lake is growing by 74 metres a year

The downstream effects

- As glacial water banks are run down, water flows will diminish. Seven of Asia's great river systems—the Brahmaputra, the Ganges, the Huang He, the Indus, the Mekong, the Salween and the Yangtze—will be affected. These river systems provide water and sustain food supplies for over 2 billion people.

Tensions and development impacts

- In India, competition between industry and agriculture is creating tensions over the allocation of water between states. Reduced glacial flows will intensify those tensions.
- In parts of the Huai, Hai and Huang (Yellow) basins current water extraction is 140 percent of renewable supply—a fact that explains the rapid shrinkage of major river systems and falling ground water tables. Over the medium term, changed glacial melting patterns will add to that stress.
- The area is home to around half of China's 128 million rural poor, contains about 40 percent of the country's agricultural land area and accounts for one-third of GDP, this has serious implications for human development

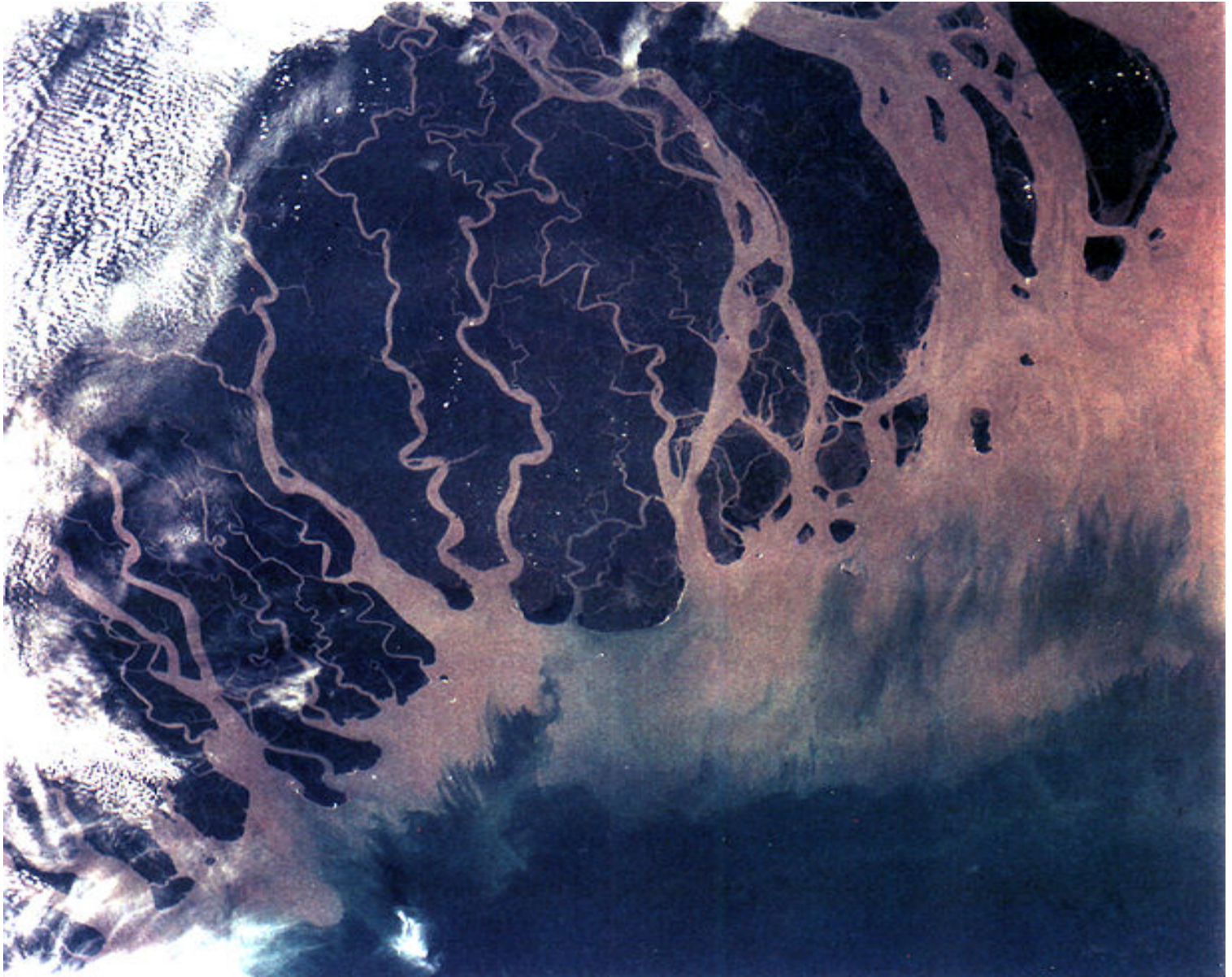


Gangotri glacier

The Gangotri glacier, one of the main water reservoirs for the 500 million people living in the Ganges basin, is shrinking by 23 metres a year.

Gangotri Glacier retreat





www.chinadialogue.net



- The Third Pole Project
- isabel.hilton@chinadialogue.net
- Thank you!