

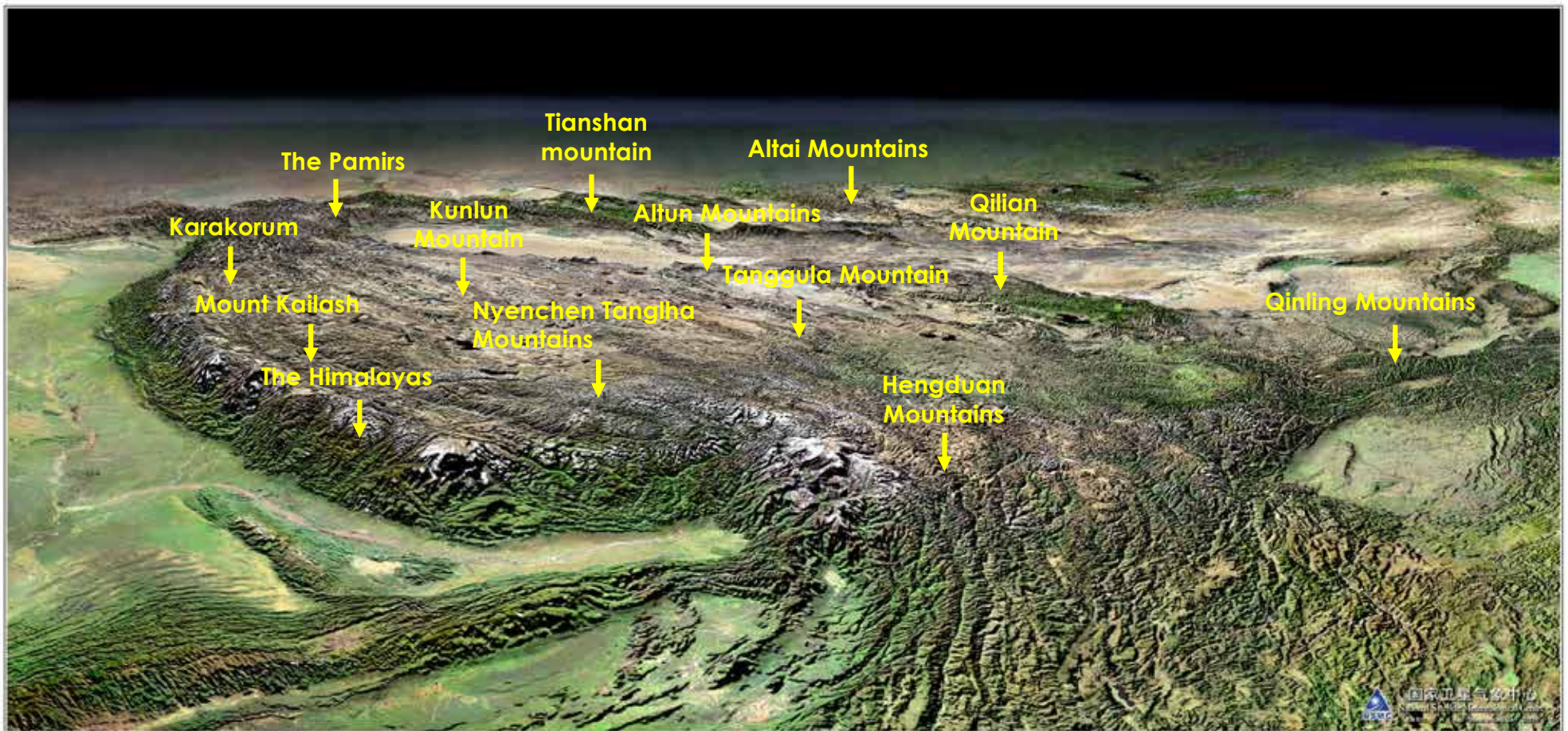
Third Pole Environment

T P E

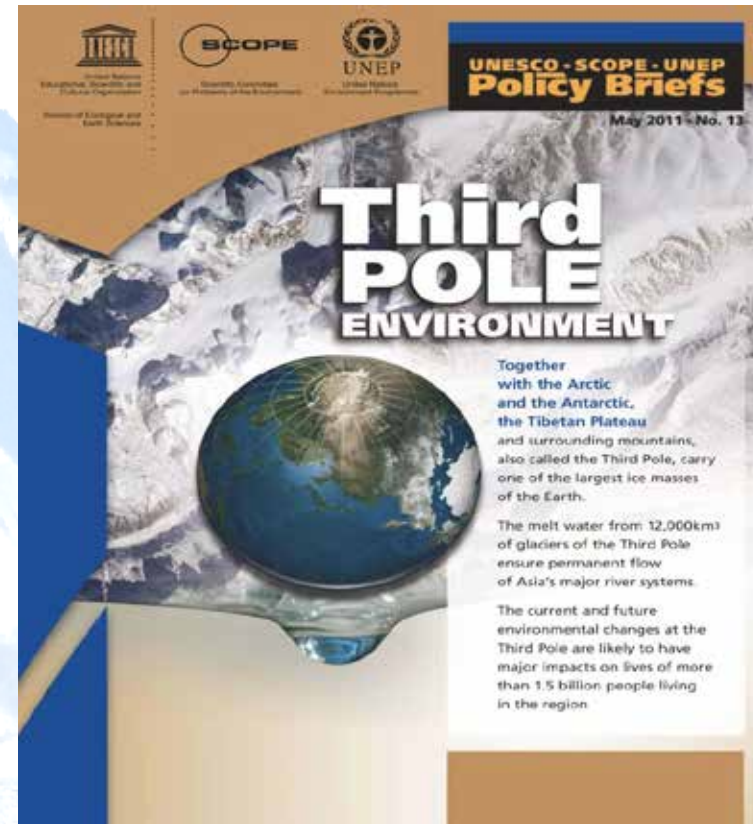
YAO Tandong

17/10/2019

The Third Pole refers to Tibetan Plateau and its surroundings. It covers 5 million km² in area with an elevation higher than 4000m by average, its behavior impacts more than 2 billion people. The Third Pole is also called the **Asian Water Tower**



Third Pole Environment (TPE) program



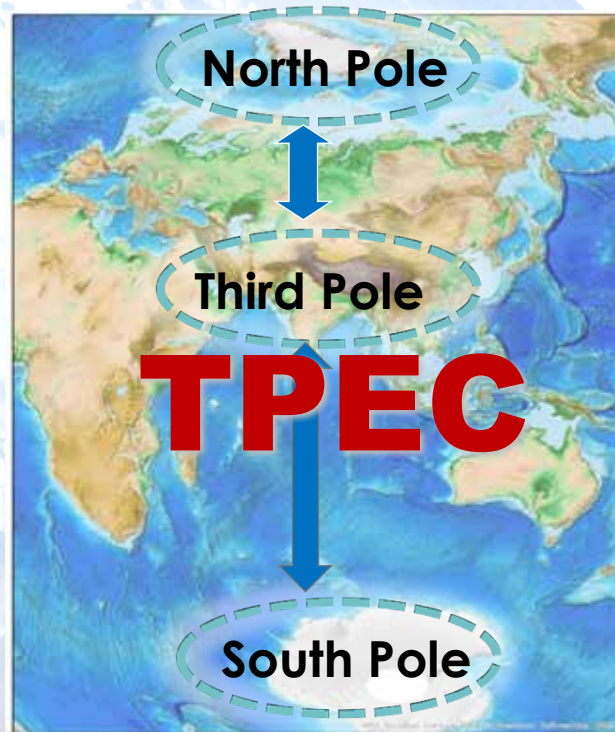
Tandong Yao (China)
Lonnie Thompson (USA)
Volker Mosbrugger (Germany)
Deliang Chen (Sweden)
David Madlen (ICIMOD)

**TPE entered UNESCO-UNEP-
SCOPE flagship program in
2011**

TPE workshops



STEP-TPE-Pan-TPE and TPEC

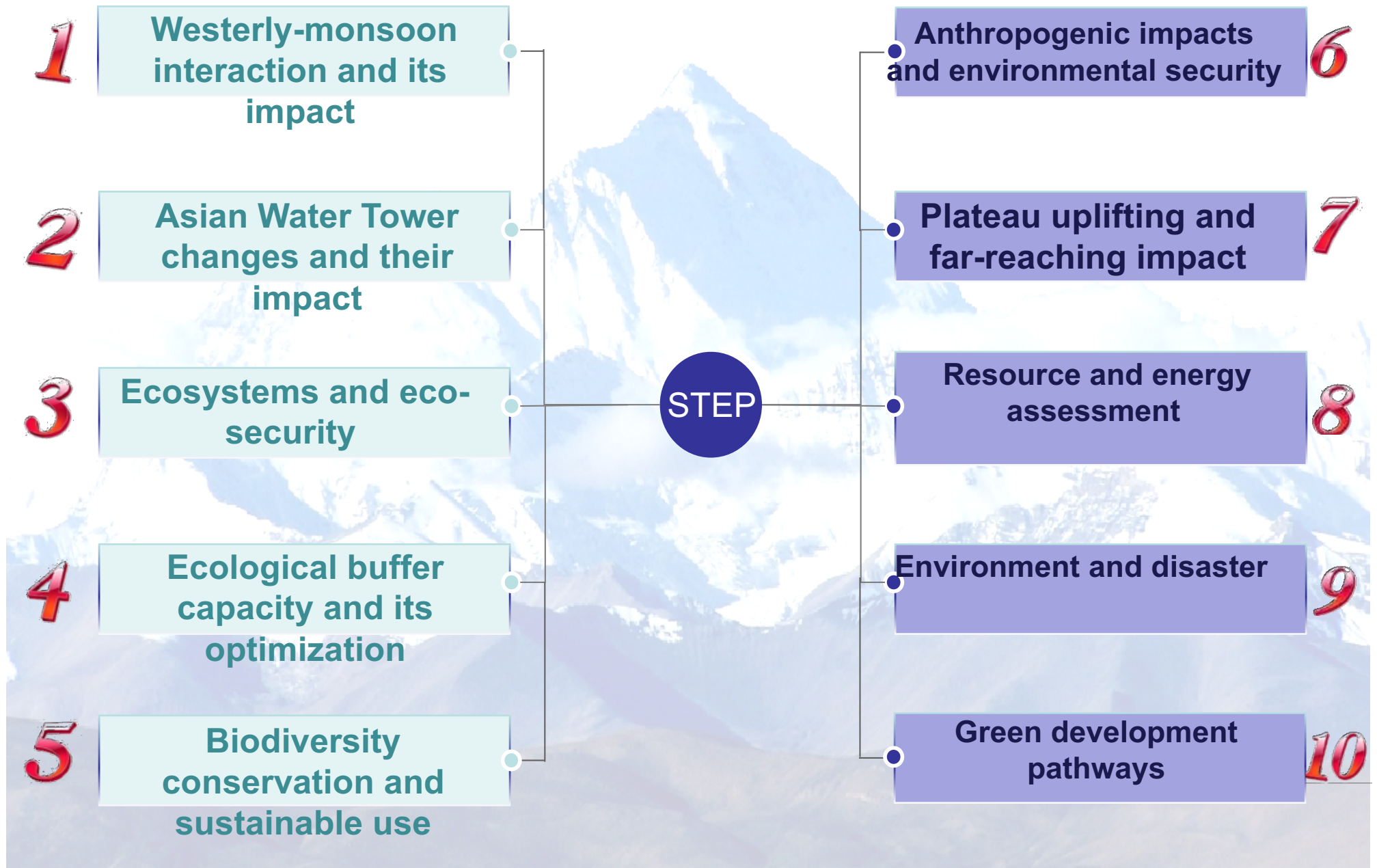


Pan-TPE
PAN THIRD POLE ENVIRONMENT

STEP

Second Tibetan Plateau Scientific Expedition and Research

Major topics



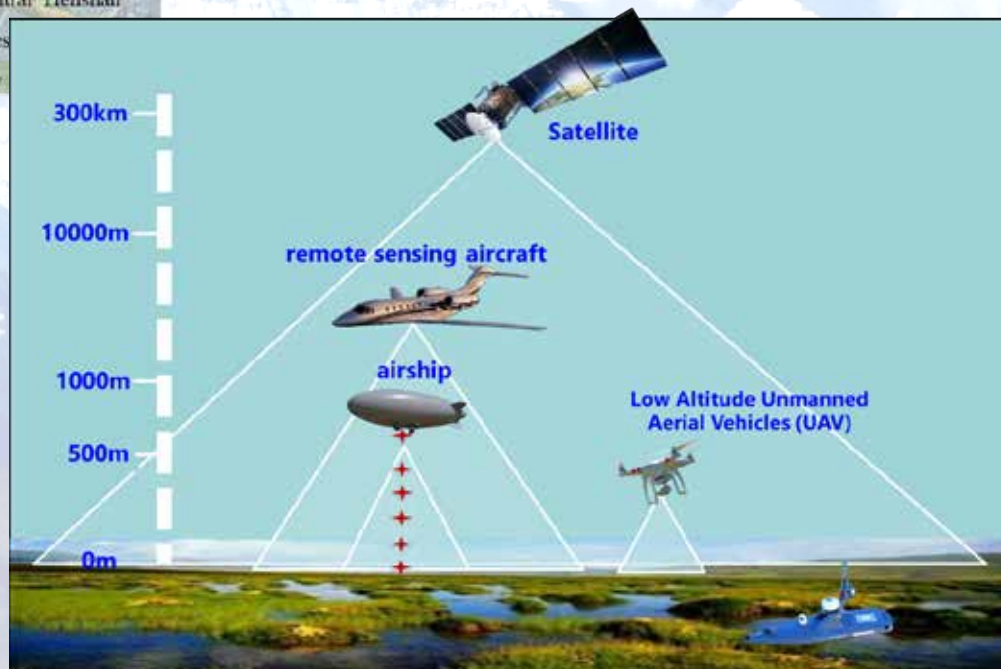
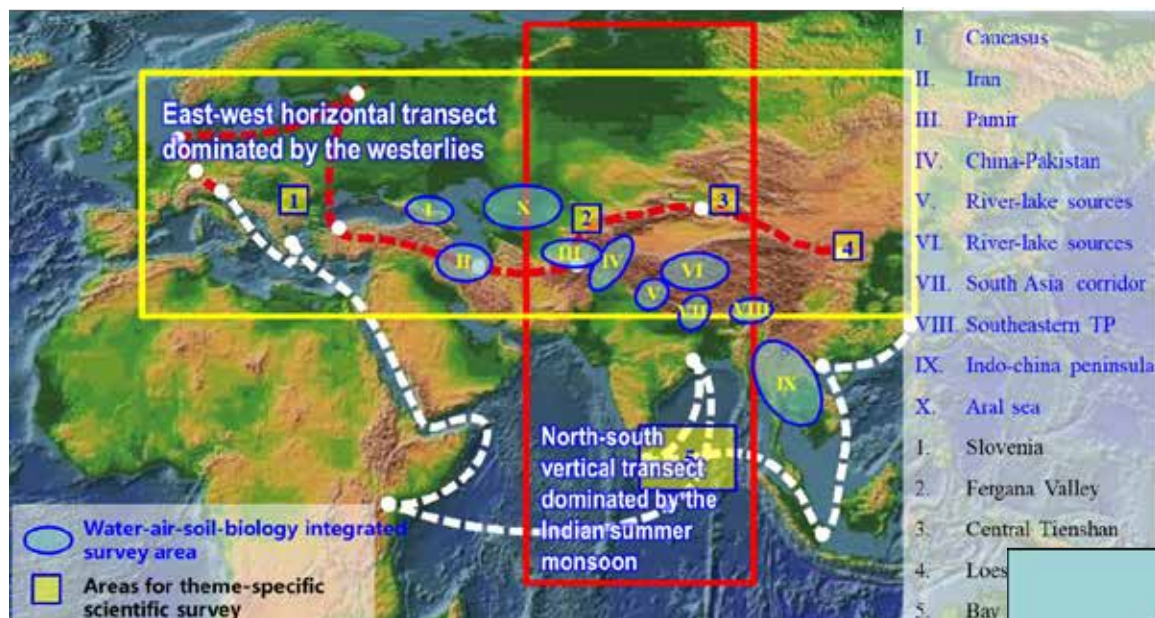
Major focus

Focusing on water, ecosystem and human activity, particularly on changing Asian Water Towers and their impacts and on adaptation strategy with the cooperation between scientists and policy makers

Urgent critical questions for Asian Water Tower

- **How much water stored in and flew out from Asian Water Towers?**
- **How do the conversions between vapor-solid-liquid water phases impact environment in China and Asia or even the world?**
- **How to improve the function of the water and ecology buffer to promote the sustainability of China and Asia or beyond?**

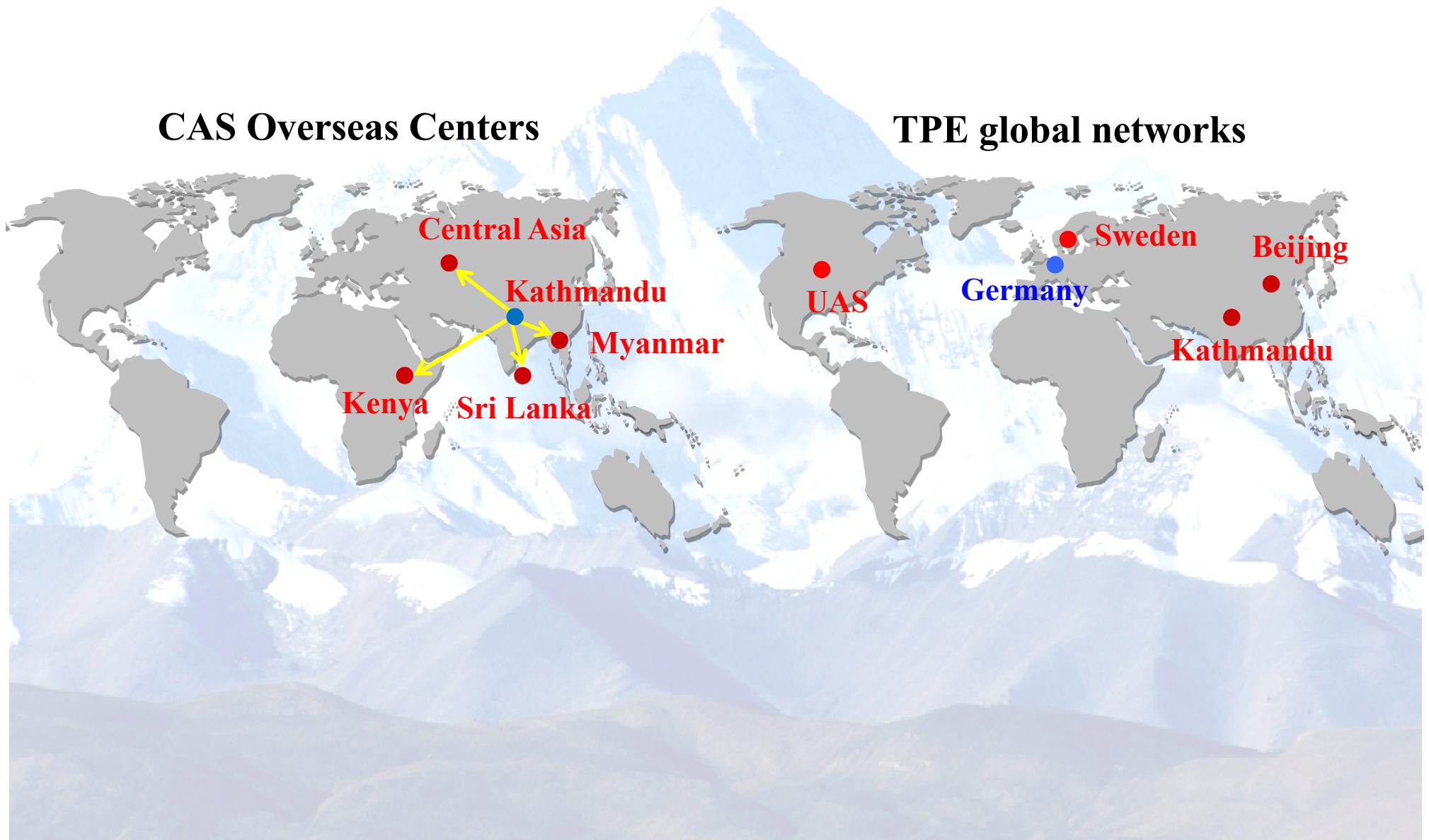
Earth system science approach of ground/space observing networks and modeling integration



TPE has an international alliances with scientists throughout the world

CAS Overseas Centers

TPE global networks



TPE and PAN-TPE have linkage with International Programs and Organizations




International Programs
on scientific themes

International programs on
regional environment

TPE is a partnership of WMO in High Mountain Weather and Climate

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU



WMO OMM

World Meteorological Organization
Organisation météorologique mondiale
Organización Meteorológica Mundial
Всемирная метеорологическая организация
المنظمة العالمية للأرصاد الجوية
世界气象组织

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17 December 2018

Subject: World Meteorological Organization (WMO) High Mountain Summit:
invitation to the Third Pole Environment Program as a co-organizer of the
Summit and on Steering Committee Membership

Dear Professor Yao,

As you are aware, the World Meteorological Organization (WMO) is hosting a High Mountain Summit, as a high-level forum for engaging the scientific, policy, and operational communities, with the goal of advancing the understanding of the accelerated changes in the high-mountain areas, and fostering the development of end-to-end high-mountain hydro-meteorological and climate services, to address water and hazard risk management priorities, at global level. The Summit will take place in Geneva, Switzerland, from 29 to 31 October 2019.

TPE is jointly addressing global climate change issues through UNEP networks



UN SPBF

**TPE is coordinating CORDEX Flagship Pilot Studies (FPS) on
high resolution modelling over the Third Pole**



Upcoming TPE events

October 29-30, WMO High Mountain Summit, Geneva

November 29-30, TPE Workshop, Frankfurt

**Tandong Yao, Lonnie Thompson, Volker Mosbrugger, Deliang Chen
are organizing and coordinating**



An aerial photograph of a majestic, snow-covered mountain peak, likely Mount Everest, rising above a thick layer of white clouds. The sky is a clear, deep blue. The mountain's ridges and valleys are covered in snow, with some rocky outcrops visible. The perspective is from a high altitude, looking down at the mountain and across the cloud sea.

Thank you!