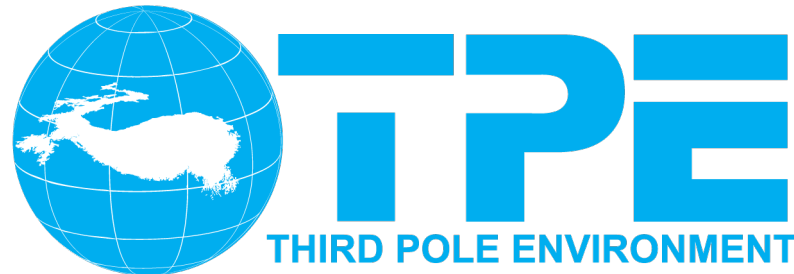


Introduction of TPE Programme and Potential Collaboration with GEWEX



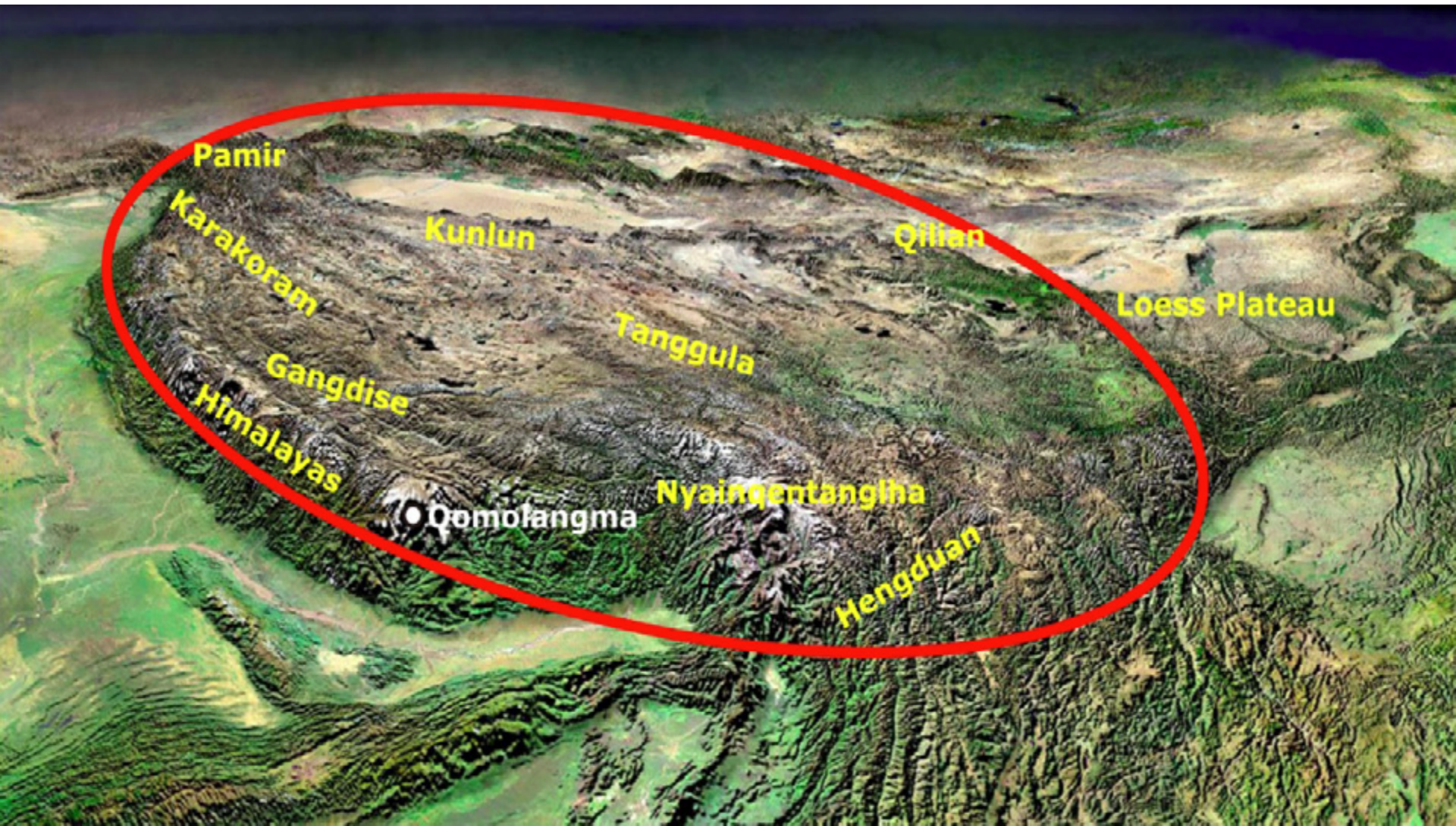
Provided by Prof. Ailikun

Director of TPE IPO

Institute of Atmospheric Physics

Chinese Academy of Sciences

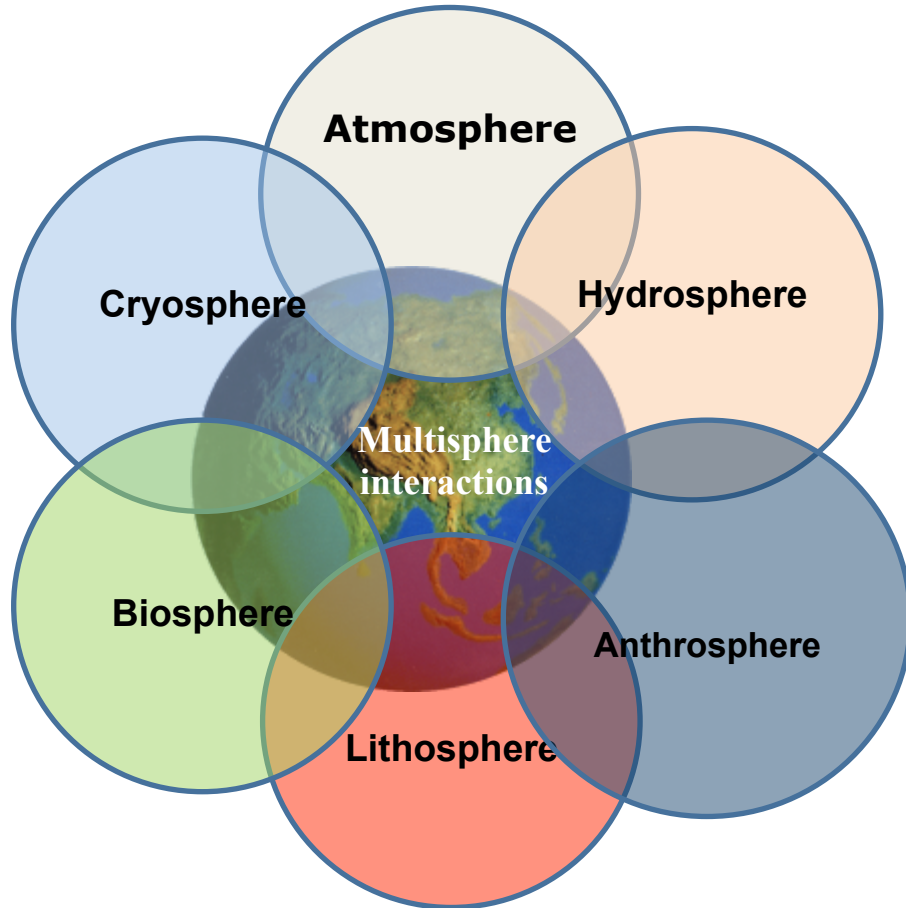
The Third Pole region covers 5 million km² in area with an elevation higher than 4000m by average



The Third Pole Region

- Water tower of Asia with strong downstream impacts, but one of the most water scarcity areas in the world
- Significantly influenced by global warming
- Crucial glacier retreating, snow and permafrost melting
- Richest area with natural biodiversity but rapid ecosystem degradation in recent decades
- Most disaster-prone (climate and non-climate) area in the world
- Poorest area in the world
- Rapid economic development in recent decades

To Understand the Earth System Interaction in TPE Region



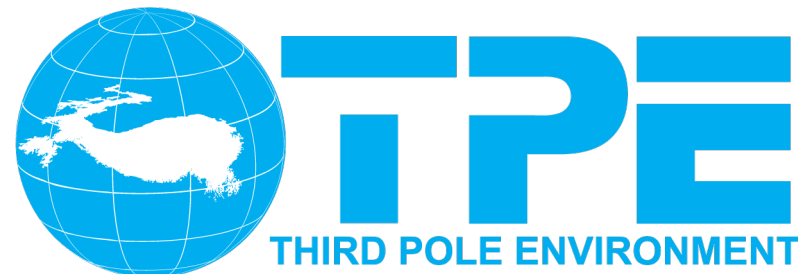
- ✓ Earth is a dynamic complex system and Third Pole is a key region which triggers or influences many regional evolution processes of the earth system
- ✓ TPE programme focuses on the third pole and all its inter-connections with other areas or processes of the earth system.
- ✓ The overarching objective of TPE is to obtain a system understanding of the evolution of third pole and of its impact on the dynamics of the earth system: past - present - future.

Key Scientific Questions for TPE Programme

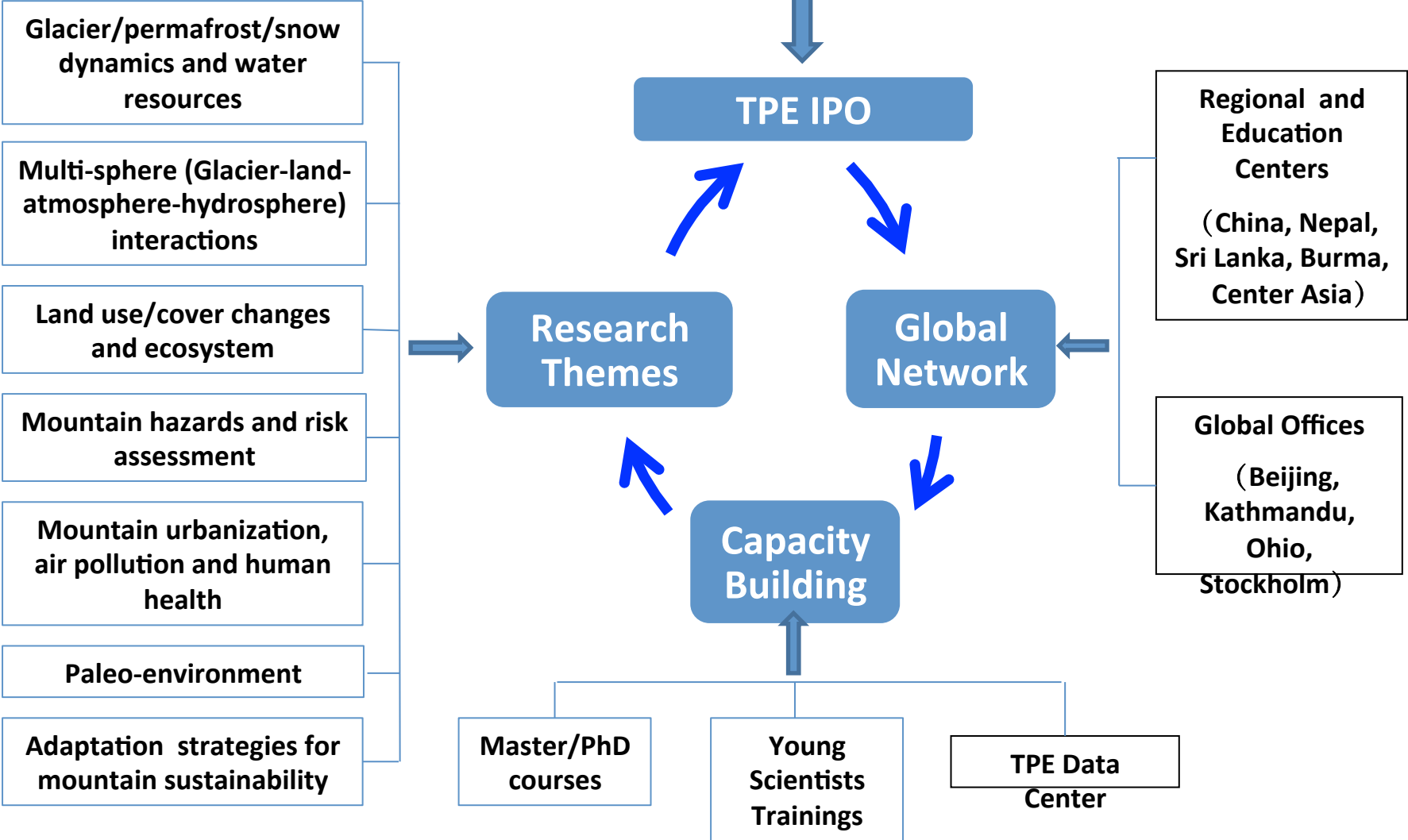
- ✓ What are the key earth system processes and their interactions among multi-spheres in Pan-TP region?
- ✓ What are the impacts of global environment change to Pan-Third Pole environment? And what are the feedbacks?
- ✓ How to protect and safeguard the livelihood local people, and how to support government/people approaching to the UN SDGs?

Objectives of TPE

TPE programme provides an important platform to enhancing the international collaboration. Water in the Third Pole is proposed to be the most important objective, and we focus on clarifying the cryospheric melt dominant processes and consequences, and proposing measures to mitigate or adapt to hazardous consequences. (TPE Science Plan 2011)



TPE SSC
Co-chairs: T. Yao, L. Thompson, V. Mosbrugger



Structure of TPE programme

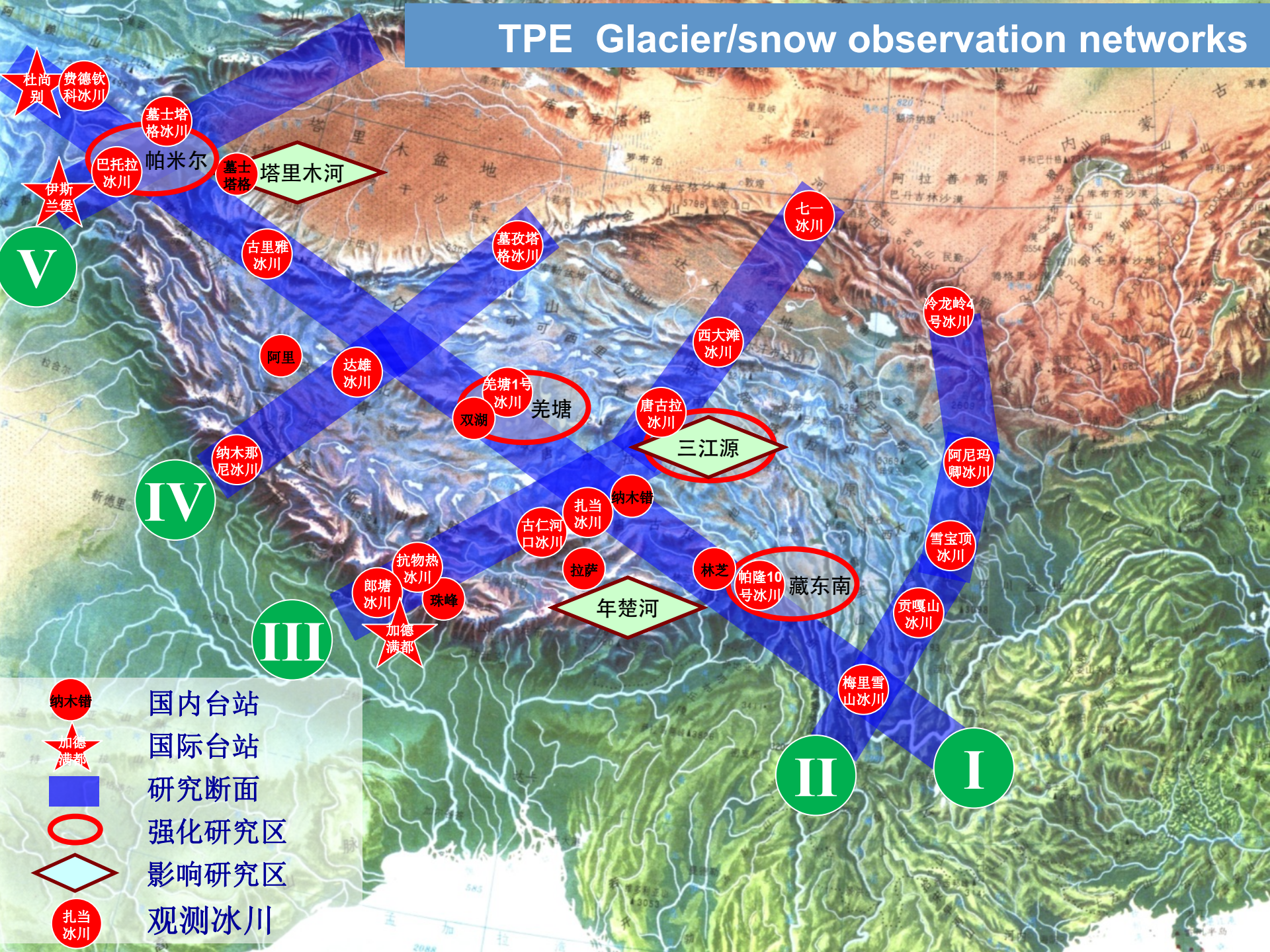
Worldwide TPE Scientific Network

Research and Education Centers

TPE Offices



TPE Glacier/snow observation networks



杜尚别 费德钦科冰川

伊斯兰堡 巴托拉冰川

V

IV

III

II

I

- 国内台站
- ★ 国际台站
- 研究断面
- 强化研究区
- 影响研究区
- 观测冰川

帕米尔

塔里木河

三江源

年楚河

藏东南

羌塘

帕隆10号冰川

古里雅冰川

慕孜塔格冰川

七一冰川

冷龙岭4号冰川

西大滩冰川

阿尼玛卿冰川

纳木那尼冰川

达雄冰川

羌塘1号冰川

唐古拉冰川

雪宝顶冰川

扎当冰川

纳木错

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抗物热冰川

珠峰

拉萨

林芝

梅里雪山冰川

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国内台站

国际台站

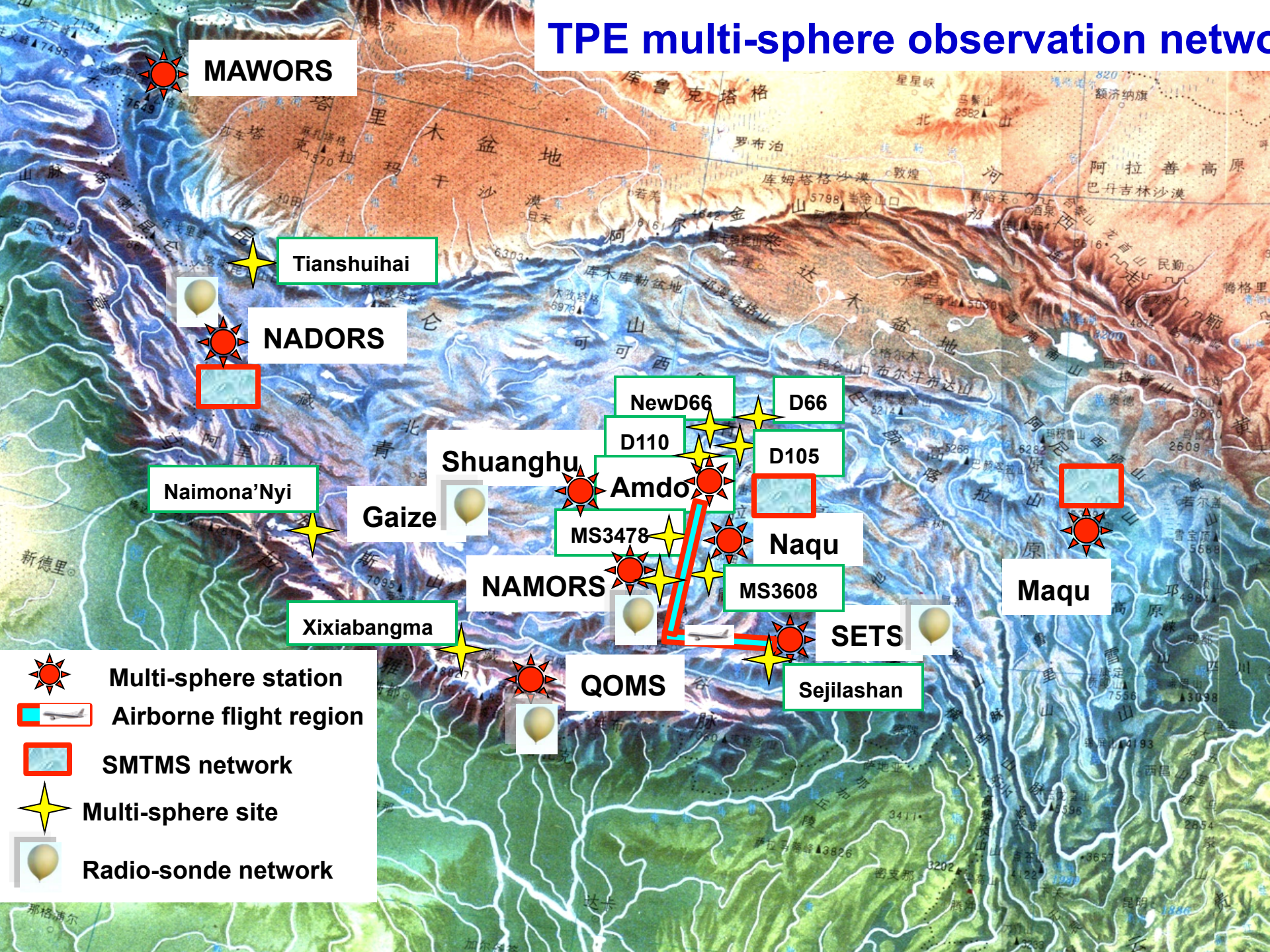
研究断面

强化研究区

影响研究区


观测冰川

TPE multi-sphere observation network



Some Thinking on Future collaboration with GEWEX/WCRP

Collaborating issues:

- 1. Glacier/permafrost/snow dynamics and water resources**
 - 2. Multi-sphere (Glacier-land-atmosphere-hydrosphere) interactions**
 - 3. Land use/cover changes and ecosystem**
- 

Collaborating objectives

- To understand the mechanism of water resource and water cycle changes in TPE region**
- To support the local and regional sustainability by understanding the water-food-energy nexus in TPE region**

Potential Joint activity

(To be discussed with SSC)

1. Exchange information (web link, newsletter, meeting announcement)
2. Exchange visitors
3. Joint workshops/conferences
4. Joint projects
5. Trainings
6. Joint publications
7. TBD