

Research on Strategic Solutions for Developing a Modern Integrated Plateau Water Network in Yunnan

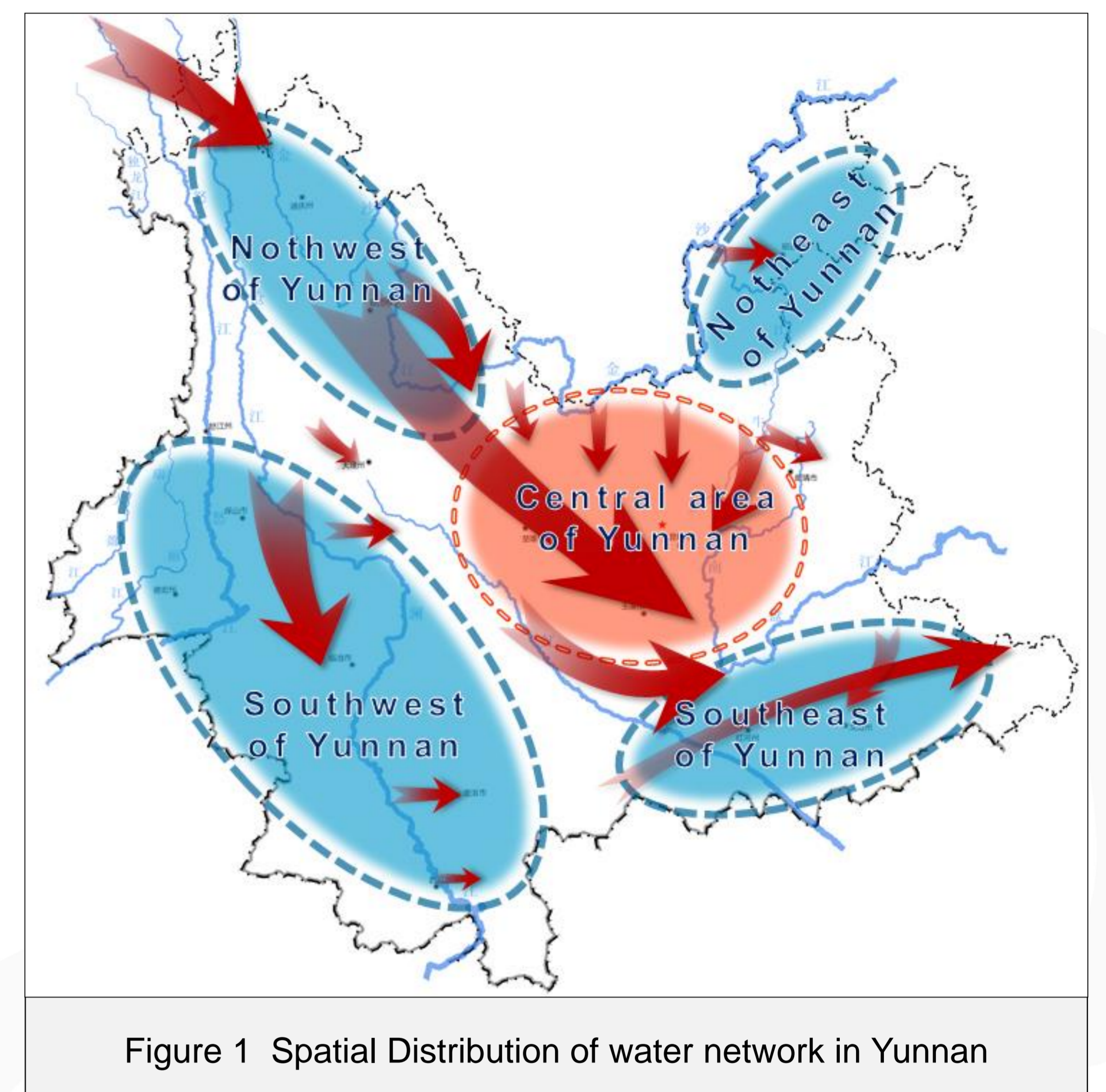
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Objectives

The spatial and temporal distribution of water resources in Yunnan does not match the development pattern of its land, population, and economic development. Therefore, in order to realize water resources spatial equilibrium on a larger scale, it is an effective way and an inevitable choice to ensure Yunnan's water supply security by accelerating the development of a modern integrated plateau water network in Yunnan.

Meaning of the modern integrated plateau water network in Yunnan

the modern integrated plateau water network in Yunnan is a three-dimensional integrated system that is based on six major river, with the Dianzhong Water Diversion Project and other important water diversion projects as channels, storage projects as nodes, and intelligent regulation as means. It integrates functions such as optimizing water resource allocation, protecting and managing water ecology, and flood control and disaster reduction in the basin.



Imagery of the modern integrated plateau water network in Yunnan

Taking into account Yunnan's three-dimensional topography with high mountains, basins, hills, and river valleys, the principle of utilizing high water and moderate water lifting is employed to establish the "reservoirs are built on mountains, water diversion into basins, water conveyance up the mountains, and long canals connecting valleys" Yunnan three-dimensional water network. This network aims to meet the water security needs of different regions at different altitudes.

The tasks of the modern integrated plateau water network construction in Yunnan

This article also proposes to implement a water resource allocation project to ensure high-quality development, a plateau characteristic agricultural irrigation project to ensure food security, a flood control project to control floods and disasters, a river and lake protection and governance project to pioneer in ecological civilization, a digital project to enable intelligent control for water network engineering, as well as mechanisms to improve water governance, with the hope of securing water supply for the high-quality economic and social development of Yunnan.

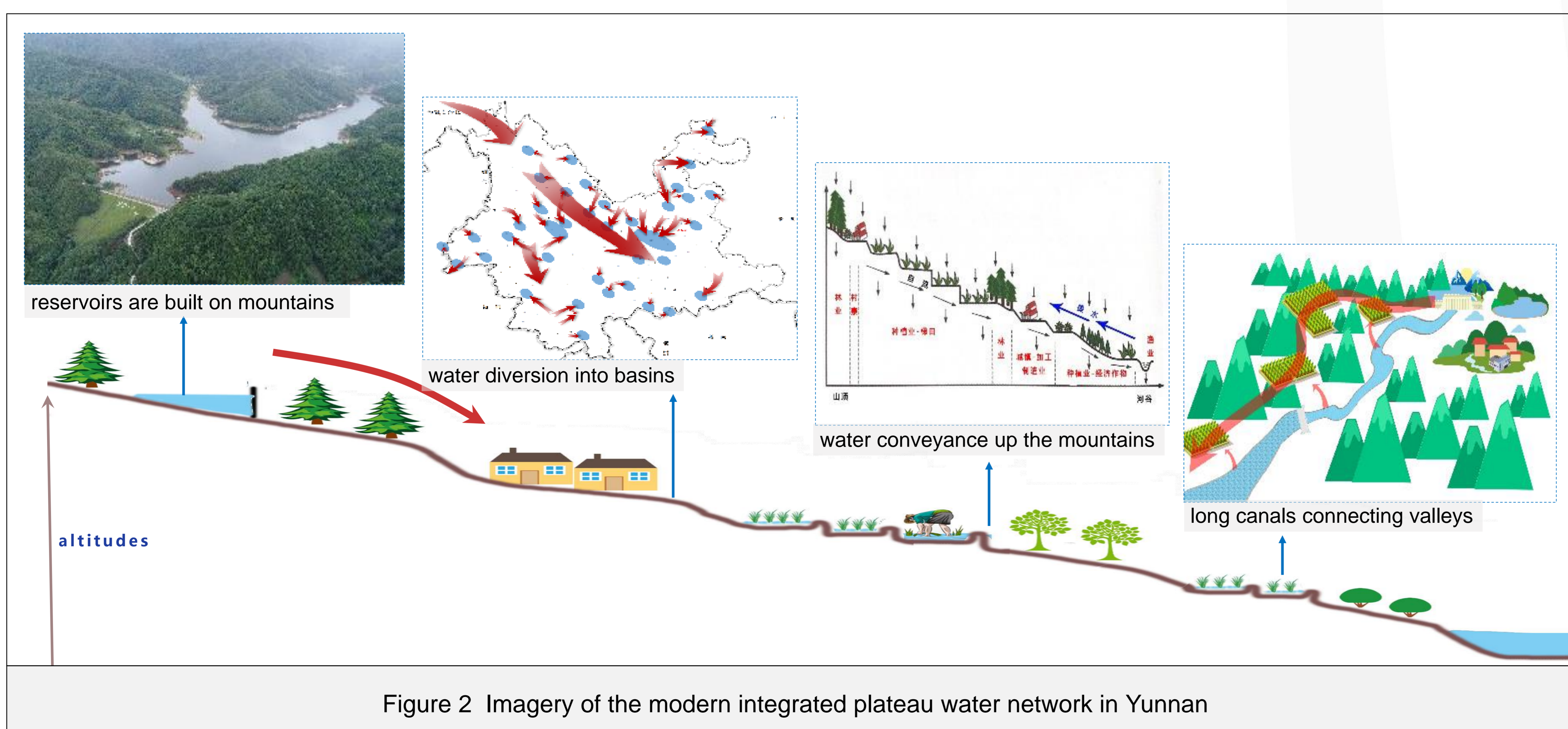


Table 1 Water supply-demand balance unit 100 million m³

zone	Average annual water demand	Average annual available water supply	water shortage
Yunnan	226.8	226.3	0.5
Central area of Yunnan	96.3	96.2	0.1
Northeast of Yunnan	23	22.9	0.1
Southeast of Yunnan	24.6	24.5	0.1
Southwest of Yunnan	70.1	69.9	0.2
Northwest of Yunnan	12.8	12.8	0