

Paper ID	036
Author(s)	Gyatso Marnyi
Title	The Riverine Polity: A New Model for Tibetan Governments in the Upper Yellow and Yangtze River Basins, 15th-19th Centuries
Abstract	
<p>The Upper Yellow and Yangtze River basins, stretching from southern Qinghai to western Sichuan, are known by Tibetans as Amdo and Kham. Countless rivers cut through towering mountains, shaping the eastern Tibetan Plateau into a region of valleys. Tibetan nomads and farmers constituted the majority of inhabitants in these valleys. Secular and religious authorities established small kingdoms and monastic polities and managed this region for centuries. Tibetologists have adopted the “mandala scheme” or “galactic model” from scholarship on the constructs of Southeast Asian kingdoms to describe the pattern of Tibetan political and religious systems. Few scholars have examined the role of the natural environment in shaping social organization, the system of temporal and ecclesiastic rule, as well as local power dynamics in Amdo and Kham. Hence, this paper employs the approach of digital humanities to explore the connection between the spatial distribution of Tibetan society, the structure of local governments, and the drainage system. It investigates how the interaction between local communities, authorities, states, and rivers shaped the spatial design of Tibetan polities from the 15th to the 19th century. This paper argues that the drainage system influenced power dynamics between neighboring rulers, shaped dendritic and parallel structures of local governments, and fostered a decentralized spatial design in Tibetan polities.</p>	
Keywords	River, Tibetan Polity, Amdo, Kham

Paper ID	183
Author(s)	Wuyutong Yao
Title	Controversial Mountains: Medicinal Production, Local Communities, and the River Valleys in Western Sichuan, 1930-1940
Abstract	
<p>The valleys of the Min river in western Sichuan were the largest sourcing areas for China’s medicinal products, including medicinal herbs, roots, minerals and animal parts. Local medicinal production benefited from the transitional geographical feature of the corridor situated between the eastern edge of the Himalayan plateau and the Sichuan basin. Its liminal place “in between” shaped the suitable habitat for Chinese materia medica. Nevertheless, the Min River also brought floods and droughts, and the changing climate even rendered villages extinct. Drawing on county-level archives, local gazetteers and oral histories, this paper explores the local dynamics of medicinal production in relation to the environment and local religious beliefs. From a local standpoint, this paper examines the intertwined interplay of environment, local politics, and religion via the instance of conflicts on digging rights between two nearby villages in Mao county, Sichuan province, from the 1930s to 1940s. This type of dispute over natural resources was common in the Min River region but no one lasted as long as between these two villages. Their disputes were later collected, edited, and published as folk stories. These recurring disputes demonstrate how local people related access to natural resources with community membership, and how the commerce in natural medicinal products was intertwined with ecology, local politics, and religious belief. This paper would contribute to our understanding of the interactions between local communities, natural products and the environment.</p>	
Keywords	Plants, Water, Land, Humans

Paper ID	289
Author(s)	Ru-Yu Lin
Title	Water Crisis in Eastern Himalayan Borderland – A Ground-level Collective Memory Point of View about the Transboundary Resource in Tension
Abstract	
<p>For mountain dwellers living in remote places, most of them used to own a cycle of food and waste before being connected to capitalist market-driven food imports. After the dependence on food imports was established, either through markets or government rations, the packages, containers, and mostly plastics became the major source of water and soil contamination. Addressing waste issues in rural areas, especially mountainous regions, is a hard task for governance and local society. Himalayan mountains, which have been popular tourist destinations, are facing environmental stress due to the rapidly increasing waste issues. The problems within food-environment-waste nexus in the East Himalayan borderland face exacerbation due to the proximity of waste and farms, also the strategic settlement increase caused by China-India border tension.</p> <p>In the small village cluster near Jang in Arunachal Pradesh, India, the animation of, function from, and sociality with water has transitioned from a deity-control micro-climate system, the expected source for substance agriculture, the flowing common that brings together the villagers daily, to the drive for micro-scale electricity source, leisure scenery location and fear of widening contamination pointing to global climate change. The local Indigenous group believes that water has a source of its being, which supports the local mountain dwellers' pro-environment behaviours regardless of the knowledge paradigm shift. This short paper aims to tell the story of the water sociality of the people in Jang to build a dialogue with the conceptualisation of modern crisis – who is altering nature?</p>	
Keywords	Himalayas, Borderland, Indigenous, River, Energy

Paper ID	293
Author(s)	Minoru TOKUMASU, Yoshinori YAMADA, Ki-Cheol SHIN and Keiji TAKASE
Title	Water use to prevent salinization under climate change in the Saijo Plain, Japan
Abstract	
<p>Water sources for irrigation and life of the Saijo Plain in Ehime Prefecture are the Kamo River water, shallow groundwater discharged from the middle reaches of the plain, and deep confined groundwater. Climate change has caused drought to become more frequent in recent years, and dependency on groundwater increases during drought periods. As a result, salinization of groundwater is increasing in coastal areas. Drought was particularly severe in July 1994. The groundwater level dropped significantly, leading to increased salinization in coastal areas, causing damage to agriculture. In this study, we propose efficient and sustainable water use to mitigate the fall in groundwater levels during droughts.</p> <p>The hydrological analysis of the plains during the drought year was carried out as follows. In August of 2021, when shallow groundwater had ceased discharging because of drought, surface water and groundwater were collected and water flow rates were measured at 43 points in the Saijo Plain. We focused on the difference in Stibnite (Sb) content in each water source and used them as tracers for hydrological analysis. The ratio of the water source at each point was determined from simultaneous equations using the Sb concentrations. A lumped parametric model was used to simulate the groundwater level.</p> <p>As a result, even during droughts every few decades, the risk of salinization was found to be significantly reduced</p>	

by the efficient allocation of irrigation water from the Kamo River and proper management of groundwater pumping. A detailed analysis will be provided in our presentation.

Keywords

water source, drought, salinization, climate change, Stibnite