Thesis Title	Environmental Governance and Socioecological Vulnerability: A Case Study of Hungry Water Effect on Mekong River Communities Adaptation in Chiang Khong District, Chiang Rai Province, Thailand
Author	Kornkanok Sanabud
Degree	Master of Arts (International Development)
Advisor	Assistant Professor Wanwalee Inpin, Ph. D.
Co-Advisor	Muhammad Anggri Setiawan, Ph. D.

ABSTRACT

The Mekong River supports immense biodiversity and sustains the livelihoods of millions who depend on its aquatic resources. However, the river is increasingly threatened by the Hungry Water Effect, a slow-onset disaster characterized by severe sediment trapping upstream. This leads to sediment and nutrient depletion downstream, triggering soil degradation, and riverbank erosion. Alarmingly, the Mekong River Commission (MRC) predicts that sediment levels will drop at only 3% by 2040, a grave sign for the river's ecological health.

This issue is particularly acute in Wiang Chiang Khong, a community in Chiang Rai Province, Thailand. The area's soil-based riverbanks are especially prone to erosion and ecological degradation. As a result, essential ecosystem services such as natural season of riverweed (Kai), nutrient cycling, and aquatic habitat stability are increasingly impaired, diminishing their capacity to support local livelihoods. This study draws on three key conceptual frameworks including Socioecological Vulnerability, Environmental Governance and Community Adaptation. Despite the growing concern, limited research has explored the localized socioecological impacts of the Hungry Water Effect or the governance responses at the community level. This research addresses that gap through a qualitative method case study in Wiang Chiang Khong.

The qualitative component involves in-depth interviews with 60 participants across six occupational categories that rely on the Mekong River including sector of fishery, hydro-based farmer, agricultural farmers, business owners, local NGOs, and local

government officials. The findings reveal that community adaptation in Chiang Khong is largely One-Sided Adaptation driven by necessity rather than coordinated support. With minimal assistance from state agencies or formal institutions, local responses remain fragmented, reactive, and unsustainable. Effective adaptation must go beyond survival. It requires systemic change that integrates top-down policy with bottom-up, inclusive participation. The future of the Mekong depends on recognizing that environmental challenges are inseparable from politics, and that equitable, participatory governance is essential for sustainable river management.

Keywords: Hungry Water Effect, Environmental Governance, Community Adaptation, Mekong River