

THE ROLE OF SOCIAL CAPITAL IN ENHANCING HOUSEHOLD RESILIENCE TO CLIMATE CHANGE: A CASE STUDY IN THE *THUDUWAKKAIKULAM* CASCADED TANK VILLAGE SYSTEM, SRI LANKA

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Climate change significantly impacts agriculture in Sri Lanka's dry zone, adversely affecting agrarian communities. The Cascaded Tank Village Systems (CTVS) serve as adaptive measures to these climate challenges; however, they are increasingly vulnerable under escalating adverse climate conditions. Enhancing the climate resilience of farming communities within CTVS is essential, with livelihood capital supporting. This study investigates the prominent role of social capital in the *Thuduwakkaikulam* CTVS, which is known for its high ethnic, social, and administrative diversity. It examines the perceived impacts of climate change and how social capital influences livelihood resilience, emphasizing three dimensions of perceived climate resilience capacities: robustness, adaptability, and transformability. Data were collected through a questionnaire administered to 200 farming households, selected using a proportionate random sampling method. The questionnaire included standard scales to measure perceived climate change resilience capacities. Descriptive and inferential statistics were employed to analyse the data. The survey respondents included 52% Tamil, 32% Sinhala, and 16% Muslim. Results revealed that respondents perceived an apparent increase in temperature variation over the years, primarily leading to reduced agro-productivity. Among the three resilience dimensions, robustness—the ability to withstand and recover from shocks—was the most prominent, followed by adaptability. Based on the overall resilience score for each household, farming households were categorized into three groups: "Low," "Medium," and "High," with the majority (63%) exhibiting low climate resilience. The social capital assessment revealed that among the three forms of social capital: bonding, bridging, and linking, bridging and bonding were particularly strong in this community. Higher levels of social capital were associated with increased perceived resilience capacity. Therefore, the study recommends strengthening social capital, particularly linking social capital, which involves connections with authorities for resource access and improving transformability, defined as the capacity to alter the farm's core structure under stress through targeted community and policy interventions to enhance resilience to future climate challenges.

Keywords: Agrarian communities, climate resilience, ethnic diversity, livelihood capital, temperature variation