

## **Dairy Farmers' Coping Strategies Against the Escalating and Evolving Environmental Challenges and COVID-19 Pandemic in Jaffna District, Sri Lanka.**

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Dairy industry in Sri Lanka experiencing a variety of challenges while the local demand for dairy products escalated dramatically. Particularly the Dry zone of Sri Lanka is feeling the effect in the industry rather acutely. Further, COVID-19 makes its entry and aggravated the situation further. This study was conducted in the Jaffna District which is part of the dry zone of Sri Lanka, to understand the dairy farmer's coping strategies toward the prevailing environmental challenges. To achieve this a total of 203 dairy households were sampled using the purposive random sampling method. The primary data were collected through personal interview and focus group discussion and analyzed employing Structural Equation Modelling (SEM). SEM uses 'Pliability' as a latent variable and is a function of six dimensions that are not directly measured from the data set. The analysis revealed that the latent variable 'Pliability' of the dairy households is having a significant positive association with the five dimensions namely, Access to basic services ( $P > |z| = 0.030$ ), Social safety net ( $P > |z| = 0.053$ ), Assets ( $P > |z| = 0.073$ ), Adaptive capacity ( $P > |z| = 0.041$ ), and Stability ( $P > |z| = 0.020$ ). Furthermore, results indicated that pliability will be significantly higher for the households who have been adopted several coping strategies ( $P > |z| = 0.090$ ), significantly enhanced the resilience of the dairy farm households in addressing the emerging environmental challenges and the consequences of external shock like COVID-19 outbreak. The findings further revealed that majority of the Jaffna dairy farmers couldn't establish either pasture or fodder crops during the dry spells. However, they try to cope with the dry spells by adopting set of mitigating strategies which enable them to survive through. The most followed coping strategies were, sort assistance from the Government and NGOs (87%), sending livestock in search of pasture (78%) and reduced non-essential household expenditure (58%). The results of the study could be used to develop a policy framework

that could foster the capacity to withstand adversity and overcoming ability of the dairy farmers in the Jaffna district.

**Key Words:** Coping effort, Dairy entrepreneurs, Environmental restraints, Northern dry zone, SEM.