[Which existing local or regional policies and governance structures can support or damage the development about the climate-resilient food system at Saibai community?]

Design Area and Project Opportunity: 5.4 Climate-adaptive food systems

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# 5.4 Climate-adaptation food system

# Through this report will introduce the mainly support and hinder of the climate-resilient food system’s development that provided by policies and governance structures. This research topic relevant with the design area5 climate change adaptation at EWB challenge, especial around 5.4 climate-adaptation food system idea. As the EWB challenge report said, from 2024 EWB challenge background will cooperation with TSIRC, focus on an island named Saibai(EWB challenge 2025). So, this principal topic has a strong correlation with the project field of the challenge competition, which examines policies and governance structures at Saibai Island, beginning with an analysis of how macro frameworks impact the Saibai community, and has the comprehensive analysis of the impact of local climate change on the food system was conducted from the perspective of policy influence.

# Indigenous land rights policy

# In order to deeply go through with research question, this report will mainly analyse the positive and negative impacts about local structures that affect the food system. The understanding about these basic policies and government rules implement on Saibai Island is an extremely important task for research this question. According to the EWB challenge, Saibai Island is a small, low-lying alluvial island. Although the number of total populations at island is not large(EWB challenge 2025), but the scares land resources increased the big stressful for local residents. To address the issue of scarce per capital planting area, the local government has implemented many policies. At Native Title ILUA policy decide, indigenous ownership exists on all islands, directly establish the legal governance structure at Saibai Island, which is the any kind of projects must be negotiated with Saibai Mura Budway RNTBC(Torres Strait Island Regional Council, 2025a). This policy provides more respect for indigenous people in governing the local land structure, strengthen the dominance of the Saibai community. Is the significant key to carry out any activities relevant about the land us permits, introduction of species and project approval. However, the hinger about this policy is to increase the difficulty of the project’s approval. The implementation approval chain of the plan is long and requires the consent of multiple parties, for example at the long-term lease of DOGIT land implementation need to make resolution with the trustee and followed the procedures for indigenous ownership(Queensland Government. Nd), this may result the delay the development of agricultural facilities about food system.

# Water resources management policy

# Around the climate-resilient food system, another essential condition absolutely is water resources. Water play an important role at whole food system. Water as the source of live, the growth of crops cannot do without water. Especially on the small island like Saibai Island, which is surrounded by the sea, a stable supply of water is even more precious for food system. Reduce the tropical climate, Saibai Island’s monthly precipitation varies greatly. At rainy season, precipitation accounts for approximately 95% of the annual rainfall(EWB challenge, 2025b). So, the useful policies can help coordinate and address the issue of extremely uneven monthly distribution of water resources. From the TSIRC Water management file take the drinking water safety, drainage and flood control as the core planning issues, from different level to promote the upgrading of water supply, drainage and sewage facilities(Torres Strait Island Regional Council, 2025b). Directly reduce the impact of salt and flood pollution on Saibai community vegetable gardens, support the hygienic and safe processing of salt-tolerant and flood-tolerant crops. Not only the positive impacted brought by the progress of infrastructure technology, but also the behavioural norms of local residents brought about by this policy support a lot.

# Cross-border mobility security, trade and biosecurity policy

# The geographical location of Sabai Island is less than four kilometres away from the waters of Papua New Guinea, a northern neighbour of Australia, so sometimes the fishermen and villagers from Signboard and Mabaduan in Papua New Guinea will cross the sea by boat for wo minutes to reach Saibai(EWB challenge, 2025). They been allowed engage in the trade of handicrafts, handicrafts and food with local residents. Among these transactions, the ones that may affect the food system are high-risk agricultural products and plant transactions. To avoid the serious negative consequences brought about by this problem, local government follow the NAQS to supervise the flow of goods from the Torres Strait. The biosecurity framework is one of the useful solutions from this policy that it helps prevent foreign pests and diseases from entering the island's farms and local ecology, avoid the spread of plant diseases and pests at local food system(AgriFishForesry.gov). But such strict biological control policy may increase the circulation costs of cross-border or cross-regional food ingredients and seedlings and restrict the availability and timeliness of diverse crops and imported food supplies(AgriFishForesry.gov). Also from the illegal fishing incident, the Saibai local community lacks the regulatory authority to manage the interception of illegal activities, and the backward facility of the border defines forces have also led to the low governance capacity(ABS, 2025). This unsafety cross-border mobility could even threaten the foundation of community livelihoods and the traditional food system.

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