

Abstract

Can Leveraging Agrobiodiverse Food Systems Help Reverse the Rise of Malnutrition in Pacific Small Island Developing States (PSIDS)?[†]

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Objective: Indigenous food systems of Melanesia contain vast genetic, biological and culture diversity. However, globalization is fuelling a nutrition transition away from traditional foods in favour of ultra-processed foods, leading to rises in non-communicable diseases. This research aimed to examine the sustainability of a rural food system on Rendova Island in Solomon Islands, and understand how the nutrition transition is influencing micronutrient intakes among rural Solomon Islanders.

Methods: Qualitative participatory focus group discussions (n = 86) captured food system transitions, challenges, and future projections. Quantitative household nutrition questionnaires (n = 30) measured usual nutrient intakes, diet diversity, and food sourcing patterns by using repeat multiple-pass 24 h recalls. The survey also assessed nutrition-related knowledge attitudes and practices (KAP), household food insecurity levels (FAO-FIES), and anthropometric data.

Results: Focus group participants identified 253 varieties of homegrown and wild foods (species and varieties) available in Baniata, including roots, tubers, bananas, fruits, vegetables, beans, nuts, seeds, eggs, livestock, and seafood. However, all focus group participants agreed that traditional knowledge and utilization of local agri-biodiversity is rapidly declining. Anthropometric data showed that 60% of participants were overweight or obese, with the average body fat percentage was 31% (n = 30). Diet patterns were increasingly reliant on ultra-processed imported foods such as white rice, biscuits, noodles, and sugary drinks. Usual dietary intakes were low in protein (53.3% below EAR), vitamin A (80%), iron (30%), calcium (96%), and thiamine (86%). Participants who consumed a higher ratio of homegrown and wild foods had significantly improved micronutrient intakes.

Conclusions: Local food knowledge and utilization is rapidly declining. Leveraging the power of nutrient-dense, biodiverse foods can help mitigate rising malnutrition. Improved understanding of neglected and underutilized (NUS) species could enhance nutrition-sensitive agriculture interventions aimed towards combating the rise of malnutrition and food security.



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