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FRUIT AND VEGETABLE ACQUISITION IN SOLOMON ISLANDS: IDENTIFYING OPPORTUNITIES FOR IMPROVED HEALTH OUTCOMES



INTRODUCTION	AIM
<p>Solomon Islands is in the midst of a nutrition transition, and non-communicable disease and obesity rates are rapidly increasing (1-5). Consuming sufficient (five serves or 400g per person per day) fruit and non-starchy vegetables (FNSV) is important for preventing diet related diseases (6), which are placing significant burden on the Solomon Island health system. Yet FNSV consumption is inadequate (7) and there is a data gap in terms of understanding how FNSV are acquired and distributed in Solomon Islands (8). In this poster we describe key aspects of the food system with respect to FNSV in Solomon Islands, including household acquisition from the food environment, production, and trade.</p>	<p>Our study aimed to identify possible pathways for increasing FNSV consumption to improve human health outcomes in Solomon Islands. We used a contemporary food system framework (9) to analyse data on a) consumption through the food environment, to understand how dietary behaviour is influenced by food environment sub-components including location and income status, b) FNSV supply including local markets, production and trade. We overlaid our analysis of these food system surveys and datasets with an analysis of policies relevant to FNSV production and supply, to identify priority policy focus points.</p>

RESULTS		
Food system component	Data source	Key findings
Individual consumption	Household Income and Expenditure Survey (HIES)	<ul style="list-style-type: none"> - More than half of households do not consume sufficient FNSV. - The following have significantly lower odds of acquiring the daily recommended amount FNSV (400g): People with household head aged 40 and above, people with seven or more household members, people who live in households that participate in fishing, households in urban areas, lower income households - Diversity is low. Banana, papaya, watermelon and pineapple account for 75 percent of fruit consumed, while island cabbage and other cabbages make up 60 percent of non-starchy vegetables
Food environments	Household Income and Expenditure Survey (HIES)	<ul style="list-style-type: none"> - In rural areas, the majority of FNSV are acquired directly from cultivated (76%) and wild (12%) food environments. - In urban areas, majority of FNSV purchased from formal retail (40%), and central markets made up 37%) and informal retail (34%), and local markets supplied 31%. - Cash value (price) of 400g/person/day FNSV urban areas: SBD 2.48, rural areas: SBD 1.62.
Food supply chains	Market survey	Supply chains are generally short. The vast majority of produce sold by market vendors in Auki and Gizo originates from the province of sale. Produce sold at Honiara Central Market mostly originates from the same province (Guadalcanal)
Food supply chains	FAOSTAT	Solomon Islands is currently not producing enough FNSV for each person to consume the recommended 5 serves (400g) FNSV per day. Production of FNSV is increasing, but on a per capita basis it is declining.
	Pacific Food Trade Database	Imported FNSV provide a negligible proportion of the 400g/person/day recommended for good health.



METHOD	CONCLUSIONS	REFERENCES
<p>We drew on multiple sources of data and a contemporary food system framework (9) to show a whole-country picture of FNSV acquisition, food environment factors, and supply in Solomon Islands.</p> <p>We analysed:</p> <ul style="list-style-type: none"> Household consumption and food environment factors from the most recent Household Income and Expenditure Survey A survey conducted by the author team on FNSV market supply in 2020 and 2021 across 3 provinces Production data from the FAOSTAT database Net import data from the Pacific Food Trade Database Solomon Islands Government policy documents 	<ul style="list-style-type: none"> FNSV affordability is an important access lever in particular for urban populations, large households, and those on low incomes. Approaches to address price and affordability need to extend across the whole food system – targeting all aspects from production, harvest (or import) through to acquisition from the food environment. FNSV supply (production + imports) does not meet consumption demand. Our policy analysis showed explicit priorities for investment in local production and efforts to increase livelihood equity through targeting youth and women. In order to address consumption deficits however, there will be a need for Solomon Islands to consider the resources required to operationalise local-level action and implementation. 	<ol style="list-style-type: none"> Jones, H. A., Charlton, K. E., A cross-sectional analysis of the cost and affordability of achieving recommended intakes of non-starchy fruits and vegetables in the capital of Vanuatu. <i>BMC Public Health</i> 2015, 15, (1), 1-10. Dibello, J. R., McGarvey, S. T., Kraft, P., Goldberg, R., Campos, H., Quested, C., Launoni, T. S., Bajbouj, A., Dietary patterns are associated with metabolic syndrome in adult Samoans. <i>The Journal of Nutrition</i> 2009, 139, (10), 1933-1943. Seiden, A., Hawley, N. L., Schulz, D., Ralman, S., McGarvey, S. T., Long-term trends in food availability, food prices, and obesity in Samoa. <i>American Journal of Human Biology</i> 2012, 24, (3), 286-295. Stronaton, W., Lawrence, M., Schultz, J., Vuyls, P., Swinburn, B., Evidence-informed priorities to identify policies that will promote a healthy food environment in the Pacific Islands. <i>Public Health Nutrition</i> 2010, 13, (6), 886-892. Reeve, J., Lemaitre, F., McKenzie, B., Wago, G., Webster, J., Snowden, W., Bell, C., The role of dietary risks for noncommunicable diseases in Pacific Islands: an analysis of population NCD surveys. <i>BMC Public Health</i> 2022, 22, (1), 1-12. Bertola, M. L., Makarem, M. J., Cahill, L. E., Hsu, T., Ludwig, D. S., Mozaffarian, D., Willett, W. C., Hu, F. B., Rimm, E. B., Changes in intake of fruits and vegetables and weight change in United States men and women followed for up to 24 years: analysis from three prospective cohort studies. <i>PLoS medicine</i> 2015, 12, (9), e1001878. Troubat, N., Sharp, M.K. and Andrew, N.L., Food consumption in Solomon Islands – Based on the analysis of the 2012/13 Household Income and Expenditure Survey. <i>FAO and SPC</i>, Honiara, 2021. Andrew, N., Allison, E. H., Brewer, T., Cornell, J., Filisano, H., Eureka, J. G., Farmery, A., Goehart, J. A., Golden, C. D., Herrero, M., Continuity and change in the contemporary Pacific food system. <i>Globe Food Security</i> 2022, 32, 100908. Farmery, A., Haddad, L., Schneider, K. R., Béné, C., Coyle, N. M., Guarini, A., Harforth, A. W., Herrero, M., Srinivasan, R., Abanto, N. J., Rigorous monitoring is necessary to guide food system transformation in the countdown to the 2030 global goals. <i>Food Policy</i> 2021, 104, 102163.

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