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Ecosystem-based adaptation planning on the garden island of Taveuni, Fiji

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Abstract:

Background Known for its rugged landscape, native forests and biodiversity, Taveuni is considered a national treasure with valuable eco-tourism and agroforestry potential. However, climate and non-climate factors undermine Taveuni's social and biophysical environment with implications for its resilience. The Pacific Ecosystem-Based Adaptation to Climate Change project (PEBACC) works with national and local stakeholders to promote a more ecologically sustainable and resilient development pathway. Objectives The objectives of the project are i) to conduct ecosystem and socio-economic resilience analysis and mapping (ESRAM) to inform adaptation planning, ii) to identify, compare and prioritise EbA options and develop EbA implementation plans, and iii) to support demonstration EbA activities. Methods The ESRAM focuses on analysing and mapping resilience linked to ecosystem and socioeconomic systems at different scales taking into account existing trends and anticipated climate impacts. Key elements include: linking technical skills with local knowledge using participatory approaches; landscape level of analysis; focusing on inter-connectivity between systems, and generating future scenarios based on current and anticipated trends. Findings The ESRAM assessment is underway with results expected in early 2017. Key issues emerging relate to a loss of protected forest from encroachment of small-scale taro and yagona farming systems as farmers move upslope in search of soil fertility and moisture. Prolonged drought and changing precipitation further constrain agricultural production and water supply. An influx of non-land owning immigrant farmers results in landuse decisions being driven by short-term economic gain. Conclusions The unique features that make Taveuni the 'garden island' are increasingly coming under threat by unsustainable development pressures leading to a reduction in the resilience of social and ecological systems. EbA initiatives such as PEBACC empower stakeholders to deal with the tradeoffs needed to place the island on a more sustainable and resilient development pathway.