

Integral/CPC/Wetstone Workshop to Establish Fijian Internal Coastal Mapping Capability and Workforce

Problem Statement – The South Pacific region is an expansive area with many Small Island Developing State (SIDS) that need technical and practical capacity building to fully evaluate and manage their ocean and island resources. With increasing pressures for SIDS to explore and exploit their natural resources, indigenous and in-house skills and knowledge about seafloor mapping methods and interpretations are necessary for decision making regarding seafloor mining and ocean fishing regulations. Historically this capacity has been provided by commercial companies and consultancies (e.g., Fugro, NV5, Tetra Tech, etc.) including the current ongoing high resolution airborne mapping program across all of Tonga (<https://www.adaptation-undp.org/tonga-achieve-100-percent-national-lidar-coverage-all-low-lying-islands-2026>). Other programs include international regional multi-jurisdictional organizations such as the Committee for Co-ordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas (CCOP/SOPAC), The South Pacific Geoscience Commission (SOPAC), and The Pacific Community (known as SPC, see <https://www.spc.int/>).

However, many island governments are now seeking in-house technical and applied capacity and increased self-determined technical capabilities. CPC has partnered with Integral Corp and Wetstone Global to provide a scheduled solution to invest locally in Fiji for building capacity to map and monitor their coastal resources including the Suva Urban Sea System (November 12/13, 2026, in Suva, Fiji).

The Fiji Solution –During the 2025 CPC-STAR conference, this pilot project was discussed as well as several discussions around how the project could grow into a larger and more impactful vehicle around the S. Pacific region. This Proposal is built as 2 phases, to widen impact and utilize learnings and feedback from Phase 1 to strengthen and broaden the reach and efficacy of Phase 2.

Phase 1: A multibeam training course and introduction designed to train and enable Fijians to monitor and measure their own coastal waters and associated resources. It will be a short-term pilot project to plan and deliver a multistakeholder training workshop and field demonstration of the coastal and Urban Sea areas of Suva Harbor, application of modern technologies, and implementation of state-of-the-art techniques and methodologies. This capacity building exercise is specifically designed to invest in the national Fiji Mineral Resources Department (MRD)

workforce capabilities for future undertakings. Phase 1 is scheduled for November 2026, preceding the annual CPC-STAR Workshop and STAR Conference.

Phase 2: This phase is a multi-task effort to broaden the subject matter team at Integral and widen the scope for future offers of CPC workshops to the S. Pacific region that will focus on additional topics germane to Integral's wider portfolio of strengths and expertise. These would be packaged and marketed to be offered to other nations in the region by CPC. In short – CPC proposes to showcase the speed and delivery of needed critical skills and increase access to specialist knowledge (via the combination of Integral's Team and CPC leadership and experience) achieved through a commercial consultancy. Combined, we can bring meaningful and positive impacts to the local technical capacity of project partners and nations, all being accomplished by investing locally.

Proposed Summary of Results – Participants will receive training materials useful in self-learning of MBES collection methodologies and software use. They will acquire a database useful in assessing the seafloor conditions of Suva Harbor, a map that will be constructed along with an initial analysis of hazards, resources, and benthic habitats. Results of this workshop will be used to improve future similar workshops, and a report of such results will be used in seeking support and funds for additional workshops within other SIDS.

Anticipated Benefits – This proposed workshop will assist CPC efforts to bring modern marine technologies, methodologies, and expert knowledge to SIDS for the benefit of solving resource appraisal, assessing environmental impacts, and evaluating economic problems or misunderstandings. Since the 1970's, CPC has been dedicated to bringing together industry, governments, and academia to propagate information sharing and to support (in kind and financially) marine projects beneficial to the small island communities of the South and Western Pacific.

Additional background

Previous Activities – CPC and STAR initiated a regional interest in this CPC-Integral training session through the Urban Sea Systems/Deep-Sea Minerals Workshop held last November in Suva, Fiji. This was followed by a one-day STAR Field Trip of Suva Harbor to assess the problems and potential benefits of the UrbSea regarding shipping, trade, and the potential of being a supply/service hub for deep-sea mining activities in the region. From these events a request from Fiji MRD to CPC for assistance in developing the capacity to map and evaluate their coastal and offshore resources was made. Response to this was in the form of providing initial training to Fiji Nationals in bathymetric, geologic, and benthic habitat mapping through an Integral Charitable Foundation grant.



Photos of STAR-CPC Urban Seas Systems/Deep-Sea Mining workshop in Suva, Fiji – Nov. 2025 a.) Fiji Times photo of Drs. Gary Greene, Gary McMurtry, and Daniel Doolittle overseeing potential areas for MBES training surveys, b). Workshop participants at CPC STAR 2025, listening to a presentation on deep-sea minerals.



Photos of various ships that call at Suva Harbor, the hub of South Pacific maritime trade. a.) cruise ship, b.) satellite tracking ship, c.) Nauru cargo vessel, and d.) cable layer.



Photos from tour of Suva Harbor following the STAR-CPC 2025 workshop to investigate potential MBES survey of harbor, which has not recently been surveyed. a.) Islanders and STAR participants on cruise of harbor, b.) abandoned fishing vessels, c.) sunken vessel on reef at harbor entrance, and d.) sunken vessel in harbor. Many such vessels lie on seafloor in harbor, a hazard to navigation and impact to benthic habitats.



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