

APPENDIX 6

RECOMMENDATIONS OF STAR WORKING GROUPS & STAR CHAIR REPORT TO COUNCIL

RECOMMENDATIONS FROM STAR WORKING GROUPS

1. Recommendations of the Mapping Working Group:

- 1.1 SOPAC Governing Council endorses the proposal for SOPAC to be the secretariat of the PCGIAP Pacific Group.
- 1.2 SOPAC should encourage its member countries to consider participating in PACRIM2.
- 1.3 SOPAC should work with NASA and the Pacific Disaster Center and develop a regional centre where satellite data, in particular LANDSAT 7, can be archived for and subsequently analysed and distributed to SOPAC member countries.

2. Recommendations of the Minerals Working Group:

- 2.1 The STAR recommends Governing Council to promote the positive aspects of environmentally and culturally sustainable mineral development to donor agencies. Donor agencies are to be reminded that mineral development is a large earner of income for small Pacific Island Countries economies and is important for poverty alleviation. Funding should be sought for institutional strengthening projects within the SOPAC region which help underpin mineral development.
- 2.2 The STAR recommends Governing Council to use donor agency funds to assist SOPAC member countries in mineral geoscientific capacity building. This includes skills strengthening and training programs (aimed to improve report writing, interpretational and analytical skills and fieldwork skills) and the development and synthesis of non-digital and digital geological databases. The SOPAC/BGS Minerals/Mining licence administration project proposal submitted to UK DFID should

be supported as a component of the capacity building programme.

- 2.3 The STAR recommends that Governing Council work for the continuation of MMAJ's Marine Research Programme.
- 2.4 The STAR recommends Governing Council to endorse the need to develop mineral policy, which addresses environmental and cultural issues of mineral development. The STAR recommends an on-land mineral and aggregate policy workshop for the region to be held within the year.
- 2.5 The Working Group recommends to Governing Council that a clause be attached to marine exploration licences that accommodate free access for legitimate Marine Scientific Research in that area.

3. Recommendations of the Water Working Group:

- 3.1 Council consider and endorse the conclusion of the 1999 Workshop on ENSO Impacts on Water Resources in the Pacific that without good quality, efficiently managed and adequate water resources there is no chance for sustainable social and economic development or environmental management in the Pacific Island Region and that Council also consider and endorse the recommendations of the Workshop and consider the resource implications for SOPAC's Water Resources Unit.
- 3.2 Council consider the recommendations of the 1999 World Meteorology Organisation Meeting on the hydrological needs of small island states and the resource implications of the PAC-HYCOS initiative for SOPAC, countries in the region and donors.
- 3.3 Given the overwhelming priority given to water resources by the 27th Session of Council in 1998, it is recommended

that Council consider ways of strengthening the Water Resources Unit, to ensure the continuity and effectiveness of the unit and the recruitment of island national personnel.

- 3.4 Council consider the Skills for Development project and encourage member countries to identify and develop an appropriate project.
- 3.5 In view of the high priority given by the World Meteorological Organisation, WMO, to strengthening collaboration with relevant organisations in the Pacific, it is recommended that Council encourage SOPAC to develop an MOU with WMO, particularly in areas of natural disaster reduction through the provision of more effective warnings of tropical cyclones, extreme weather events and storm surges in the region, and in the effective application of meteorological and hydrological information and knowledge to achieve sustainable development and capacity building in the region.
- 3.6 Council consider and endorse water conservation as an appropriate response to drought and direct SOPAC to treat it as a high priority issue.

4. Recommendations of the Energy Working Group:

- 4.1 That the opportunity is taken to inform other relevant member countries with progress of projects, ie the current geothermal work in Vanuatu and that SOPAC take a lead role in the coordination of this information exchange.
- 4.2 Star endorses the priority accorded to energy conservation and efficiency and its inclusion in the year 2000 SOPAC Energy Unit work programme.
- 4.3 Star recommends that the importance of CSD9's energy focus in 2001 be noted.

5. Recommendations of Coastal and Nearshore Processes Working Group:

In nearshore aggregates research the Coastal and Nearshore Processes Working Group

- 5.1 recommends the early and ongoing

strategic national assessment of nearshore aggregate resources and consumption in member countries, and that post-extraction monitoring programs continue. Prior to new "large" construction projects being approved, aggregate needs be assessed and sources of aggregate identified, and approval be assessed within the framework of other needs

- 5.2 recommends that alternative extraction techniques be investigated, with the view to adopting environmentally friendly techniques, such as suction dredging with bottom return flow, and recommends that "standards for best practice" in dredging be more widely publicized, and that dredge operators be educated in avoidance of environmental damage

In coastal research the Coastal and Nearshore Processes Working Group

- 5.3 recommends that beach profile data continue to be obtained, and especially to increase the number of atolls surveyed (although the WG realises the logistical difficulties of access) and that the position of coastal geomorphologist be filled as a matter of urgency, in order to accomplish the SOPAC coastal work program objectives

- 5.4 endorses the need to train additional SOPAC staff in the use of the MIKE 21 module

- 5.5 endorses the proposal to proceed with airborne LADS surveys

In nearshore research the Coastal and Nearshore Processes Working Group

- 5.6 recommends that SOPAC actively encourages co-operative multidisciplinary research internally and with outside agencies and that a collaborative demonstration project be initiated between SOPAC, regional organisations and other research partners to apply new mapping tools for multidisciplinary objectives, including habitat mapping, environmental assessment, pollution and threats to ecosystems and aggregate resource mapping.

- 5.7 recommends that additional hardware and software be obtained for obtaining and processing multibeam and side-scan data

5.8 recommends that SOPAC encourages “seed money” for post-graduate support of long term research in the region.

6. Recommendations of AdHoc Tsunami Working Group

6.1 SOPAC maintain a catalog of local tsunami data deemed important by TAG members. These data should include the results of post event surveys and extensive interviews of tsunami survivors. The post event surveys should describe tsunami damage to natural and man-made structures, social and economic impact, source mechanisms, and physical evidence of tsunami inundation. Existing tide gauge repositories may yield historical data on anomalous wave activity in the region. SOPAC should make compilations of key data available on the World Wide Web and other data distribution systems in use by member countries. In so doing, SOPAC compliments similar activities carried out in the United States by NOAA.

6.2 SOPAC develop in due course a tsunami vulnerability index derived from and fully integrated with the most current databases available at SOPAC. The index would be developed in collaboration with TAG members and serve to focus local tsunami hazard mitigation efforts on threatened communities and vital economic interests. Cost-effective and valuable tsunami hazard mitigation would be financed by concerned parties and administered by SOPAC.

6.3 SOPAC facilitate a nearshore shallow-water survey off Aitape, PNG, in order to improve study of this destructive local tsunami. The 1998 Aitape, PNG tsunami has become the single most important tsunami case study in the Pacific Basin and TAG members consider nearshore bathymetry as the most important gap in current studies of this disaster. Studies of the 1998 Aitape, PNG tsunami are the current impetus for local tsunami hazard mitigation.

7. Recommendation of Geohazards Working Group:

7.1 A formal means of independent peer review for projects which have implications for legal liability, including some aspects of projects conducted by the Hazard Assessment unit, should be established.

7.2 An integrated process, that involves all levels of the PIC communities and all

appropriate agencies, should be used throughout the Disaster Management Cycle (that incorporates hazard and risk assessment) and that this process should address the needs of the individual communities.

7.3 The work programs for the Hazard Assessment and the Disaster management Units be endorsed by the Governing Council of SOPAC.

7.4 The establishment of a Regional Centre for Applied seismology within SOPAC be strongly endorsed.

7.5 That Council strongly encourage the SOPAC Secretariat to develop a capacity for the collection and archiving of all data acquired during projects conducted within the SOPAC member countries.

8. Recommendations of Tectonics Working Group:

8.1 A staged implementation of a South Pacific continuous GPS network based around existing tide gauges and where other monitoring is critical such as around volcanoes and tectonic boundaries.

8.2 The installation of new land and ocean bottom seismic stations as well as the implementation of a regional seismic network to better define active seismic zones, and

8.3 The extension of sea-level monitoring efforts, via the installation of additional tide gauges, to include areas that are both affected and clearly unaffected by active tectonism to ensure meaningful sea-level rise/fall interpretations.

9. Recommendations of Habitats Working Group:

9.1 Now that SOPAC is in possession of, and will be obtaining, an excellent suite of geophysical and navigational instruments that can be used to characterize shallow to intermediate depth benthic habitats, the working group Recommends that a pilot project be undertaken to show the capabilities of SOPAC in applying geophysical methodologies supplemented, if possible,

with deep sea video and other optical systems to solving fisheries habitat problems including reefs. The working group further Recommends that the pilot project take place in Samoa because of the many fisheries reserves located there, the presence of SPREP, and the immediate country concern for a declining snapper fisheries and the economical importance of the tuna fisheries as an exportable product.

- 9.2 The working committee Recommends that an integrated multi-disciplinary approach be taken in regard to characterizing marine benthic habitats and that teams of geologists and biologists including ecologists and benthic geochemists be formed to address regional habitat problems. The working group recognizes that multidisciplinary data collected for habitat mapping has direct application to EIA's offshore mineral assessment, engineering developments, geohazards identification and other ocean related studies. In addition, the high technological data gathering capacities in SOPAC clearly indicate a need for SOPAC staff to be trained in appropriate disciplines to interpret data from these various sources. Key disciplines should include geologists/geophysicists, coastal geomorphologists, benthic ecologists and benthic geochemists
- 9.3 The working group also Recommends that concerted efforts be made to assure the participation of geological and biological students (from the USP and other universities) in SOPAC's efforts to map and characterize marine benthic habitats. Scholarship funds could be used to support such an effort.
- 9.4 The need to involve organizations dealing with regional fisheries problems in SOPAC meetings was encouraged, and noting the past efforts of SOPAC to involve these organizations, the working group further Recommends that SOPAC continues to jointly develop marine benthic habitat studies with SPREP, PC and other relevant organizations to participate in the marine benthic habitat activities of SOPAC.

Note: Some scientists participating in this working group expressed a willingness to seek potential funding from their country's pertinent funding institutions and will work with the SOPAC Secretariat to develop proposals.

STAR CHAIR REPORT TO COUNCIL

Mr Chairman, Distinguished National Representatives and Delegation members, representatives of Institutions and Organizations, Ladies and Gentlemen

STAR (SOPAC's Science, Technology and Resources Network), has the responsibility of interfacing the SOPAC Secretariat and PIC members of SOPAC with the international scientific research and technology development community. It pursues this objective in three ways. Every few years, STAR convenes an international scientific workshop on a broad theme relevant to the SOPAC region. The last such workshop, on benthic habitats and fisheries, was held in Noumea in 1997.

Between Annual Sessions, the STAR Chair and STAR's thematic Working Groups have, in the past, maintained a watching brief on developments likely to be of interest to SOPAC. That role is now changing. During SOPAC's Annual Sessions, STAR has convened a two-day meeting at which technical papers are presented and discussed, and STAR Working Group meet. Changes are occurring in this aspect of STAR's activities too. I want to bring these changes, and their implications, to the attention of Governing Council.

In response to the changes to the format of Annual Session that were introduced last year, a STAR Ad Hoc Committee was convened during the last Annual Session. It recommended several changes to the way STAR operates between Annual Sessions; and these changes are now being implemented.

As an example, for the past several weeks the report on this year's SOPAC Secretariat Work Program, and the full text of next year's proposed SOPAC Work Program, have been posted on SOPAC's web-site. This enabled at least one STAR thematic Working Group to commence discussion of these documents, using e-mail, before the STAR meeting at this Annual Session. I expect that other STAR Working Groups will follow suit before next year's Annual Session.

During the STAR segment of this Annual Session, **nine** STAR Working Groups have met, which is a record. The Working Groups covered Water, Mapping, Coastal and Nearshore Resources and Processes, Tectonics, Benthic Habitats & Fisheries, Geohazards, Mineral Resources, and Energy (a new Working Group). Their reports will be published separately by the Secretariat as a companion to the STAR

abstracts volume in their miscellaneous report series.

Also included in this special volume (SOPAC Miscellaneous Report 358) will be the report of a special AdHoc Tsunami Hazard Working Group, convened by scientific participants in the JAMSTEC-SOPAC cruises that are investigating the cause of the 1998 Aitape, PNG tsunami. This Working Group has recommended a shallow water bathymetric survey be conducted off Aitape-Sissano, PNG, and that SOPAC develop a tsunami vulnerability index to assist local tsunami hazard mitigation efforts in the SOPAC region.

The STAR Business Meeting re-elected Saimone Helu as Vice-Chair of STAR, to serve for a further year. It also endorsed the technical recommendations of STAR working groups which will be presented during this Joint Governing Council-TAG Session.

Another change in STAR's activities that I want to mention is the size of the STAR meeting. The number of participants in STAR has risen significantly. This year 75 technical papers were presented, covering a very wide range of topics. This is twice the number of papers presented last year. There have been 47 oral presentations with 20 minutes only being available for each, including discussion. Many who wished to present orally have had to prepare posters to get their messages across.

The upsurge in interest in STAR is unlikely to be a one-off event! It reflects the relevance and growth of SOPAC's program and its contribution to the region. It also provides new opportunities for establishing contacts within and beyond the SOPAC Region, both for PIC scientists and for the SOPAC Secretariat. Accordingly, I have commenced discussions with the Secretariat on ways of responding to this enhanced interest in SOPAC and its program, so as to ensure that these new opportunities are not wasted. Next year's STAR may be a 3 day meeting.

One of my responsibilities as STAR Chair is to report to Governing Council on STAR presentations that may indicate new scientific and technical directions for the SOPAC Work Program. In this context I'd like to highlight the potential for the region of NASA's range of

imaging capabilities, and their derivative products, which may assist SOPAC's response to requests from member countries.

Another of my responsibilities is to flag technical matters that may be overlooked. SOPAC's emphasis on new technology for data acquisition, data processing and communications is a major force for regional development that has my strongest support. What must not be overlooked however, is the body of old data, available only as paper copies, that is held in the SOPAC library. Part of that material is now quite difficult to locate elsewhere. Some items are unique. SOPAC's library is an archive of regional importance that warrants commensurate resourcing.

Mr Chairman, this is my 8th and final Annual Session as Chair of STAR. I took over from Chuck Helsley in 1992, after he had served for 7 Annual Sessions. Governing Council has appointed John Collen as my successor, and I pledge him my continued support. I would like to acknowledge the support I have received from the Hawaii Undersea Research Laboratory since I became Chair of STAR. I also want to thank my scientific and technical colleagues from within and beyond the SOPAC region for their support during my Chairmanship of STAR. Throughout my term of office I have received continual encouragement and support from SOPAC Director Alf Simpson and his predecessor, Philipp Muller, from Russell Howorth, and from SOPAC scientific, technical and administrative staff. Without them my task would have been impossible and I thank them accordingly.

Finally, Mr Chairman, I want to close on a personal note. I would like to thank Governing Council for having given me the opportunity to continue a family tradition of service in the SOPAC region. That family tradition was begun 160 years ago by my great-great grandfather, Rev. John Waterhouse, who came to the South Pacific in 1839, and to Fiji in 1840, as the first Superintendent of Wesleyan Missions in the region. The service to which I have been called has been different from his, but my dedication to service has, I hope, been comparable. I look forward to continuing to serve SOPAC and the region in new ways in the future.

Thank you very much. Aloha nui loa!