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**THE PACIFIC SCIENCE ASSOCIATION:
A PLAN FOR THE FUTURE**

A Strategic Plan for the PSA

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Letter from Vice-President R. G. Ward

June 10, 1999

Dear Members of the Pacific Science Association Council,

When the Council of the Pacific Science Association set up the Strategic Planning process at the Beijing Congress in 1995, it recognised the great changes in academic and research communication that had taken place in the previous three decades. These have included not only greatly reduced travel times and costs, but also the extraordinary expansion of the Internet and e-mail as means of cheap and fast communication. Over the same thirty years there has been a multiplication of disciplinary, sub-disciplinary, and international organisations bringing scientists together in special interest and highly focused groups. There remains an important role for a regional and multi-disciplinary scientific organisation such as the Pacific Science Association but its methods of operation must adapt to the new intellectual and research environment. The Association is very fortunate that Drs. Nancy Lewis and Thomas Lee were willing to take the lead in this project. Through a lengthy process of consultation, discussion, and exchange of drafts with many others, they now bring us a well thought out Strategic Plan to take the Pacific Science Association into the coming decades.

The Council of the Pacific Science Association will consider this Plan in Sydney in July 1999. The work of putting it into effect will follow. This will involve many, and I hope most, of the members and friends of the Association. The Plan is not a static document. It will require modification and extension as it is put into effect and its initiatives develop. I commend the Plan to the Council, and to all others involved in the work of the Pacific Science Association. I trust it will be the basis on which the Association gathers new energy and new roles in furthering Pacific Science in its broadest multi-disciplinary connotations for the Pacific Region.

Sincerely,

R. Gerard Ward
Vice-President
Pacific Science Association

INTRODUCTION

For eight decades, the Pacific Science Association (PSA), through its congresses and scientific activities, has foreshadowed the innovative, interdisciplinary approaches that are imperative if the scientific community is to successfully address the challenges facing humankind in the immediate and longer-term future. Regional, interdisciplinary, problem-oriented scientific collaboration and exchange have characterized the PSA since its inception in 1920. Despite this distinguished history, the Executive Council of the PSA realized that if the Association is to meet the needs of Pacific science and Pacific scientists in the next century, the mission and goals of the Association need a thorough and critical review. Furthermore it was deemed imperative that the organization engage in a strategic planning process that would result in a dynamic strategic plan, a blueprint for future PSA endeavors. The purpose of the planning process was to review and renew the Association's mission, articulate a vision, clarify goals and objectives, and suggest strategies and activities, all aimed at revitalizing and strengthening the PSA's leadership in addressing key issues and problems in the Pacific region.¹

The planning process was initiated at the Pacific Science Congress in Beijing in June 1995 under the direction of Dr. Thomas Lee, President of the Center for Quality Management, and Dr. Nancy Lewis of the University of Hawaii.² Strategic planning is a well-developed discipline in its own right, but one with which many academics and scientists have had little experience. Only recently have scientific organizations engaged in strategic planning. The challenges of the planning process are amplified for an international, multidisciplinary organization. Even the language of planning can present obstacles. Strategic planning has a vocabulary of its own, and key terms as they are used in this document are defined in Appendix I. That appendix also includes a timeline for accomplishing the various components of the plan. It is important to stress that the plan is a dynamic blueprint, one in which strategies can be modified to facilitate the achievement of objectives. Because the plan involves organizational changes, some of the objectives and specific activities designed to meet the PSA's goals will have to be developed by the appropriate scientific working groups or committees³. The entire plan must be subject to review by the PSA Council at least every four years. Components of the plan must be subject to ongoing review and evaluation.

Despite challenges and resource limitations, the committee attempted to make the process as inclusive as possible. Many people have participated in this process by responding to queries

¹ The PSA uses the term Pacific region to refer to all countries or definitive geographic areas within or bordering on the Pacific Ocean. Membership in the Association is also open to entities with major scientific interests within the region.

² In addition, the Strategic Planning Committee included R. Gerard Ward (Australia), Sun Shu (China, Beijing), Jong-Ching Su (China, Taipei), Yuiti Ono (Japan), Roland Fuchs (United States, ex officio).

³Over the course of its history, the PSA has had Scientific Committees, Working Groups, Divisions, and so on. In this document the term "scientific working group" is used to refer to all collectively.

sent in March 1996, January 1997, and June 1997,⁴ and/or in discussions at the Pacific Science Intercongress in Suva in July 1997 and at the Intercongress in Taiwan in November 1998. Members of the Strategic Planning Committee met in February 1998 and again in February 1999. Background documents utilized by the planning committee included the Statutes of the PSA, a meeting report of the Standing Committee on Structure and Statutes (Okinawa, June 1993), professional material provided by the Center for Quality of Management, and plans of other scientific organizations. The strategic plan will be presented for adoption by the Council at the Pacific Science Congress in Sydney in July 1999.

The greatest intellectual challenges that the planning committee faced was to articulate a compelling vision for the future in which the PSA plays a key role, and to craft a plan with realistic goals and measurable objectives. In reviewing this document, please remember that what the PSA will be able to accomplish will depend on resources, both fiscal and human. As you review this plan with respect to both the goals and objectives, and the activities associated with them, it will be most useful if you can prioritize the elements that are most important to the constituencies that you represent. This will be critical for the successful implementation of the plan.

OVERVIEW

The Strategic Plan, to be approved at the 1999 Pacific Science Congress in Sydney, Australia, identifies four core scientific goals with subsidiary objectives. Although none of these is entirely new, the strategies and activities designed to achieve these goals and objectives must be developed with a view to the future. The scientific goals are:

- I. I. Advance Science and Technology by Increasing Interdisciplinary Collaboration
In the Pacific Region
 - A. Continue congresses and intercongresses and other interdisciplinary meetings
 - B. Revitalize scientific working groups
 - C. Improve PSA communications.
 - D. Form effective partnerships with other organizations.
 - E. Develop a comprehensive program portfolio.

- II. Build Capacity in Science and Technology in the Pacific Region.
 - A. Increase communication opportunities for isolated scientists and scientific groups.

 - B. Promote the active participation of women and other underrepresented groups in the PSA and regional scientific activities
 - C. Diversify the leadership opportunities within the PSA.
 - D. Strengthen PSA education and mentoring activities for capacity building.

⁴These questionnaires asked for responses to questions concerning obstructions and threats to the PSA, opportunities for the PSA, products of the PSA, an ideal image for the PSA in the year 2000, and PSA stakeholders. Results of the tabulations are available from Nancy Lewis, Nlewis@hawaii.edu.

- E. Increase students' and young scientists' participation in the PSA.
 - F. Foster common scientific protocols and standards.
- III. Encourage Science for Public Policy and the Common Good in the Pacific Region.
 - A. Focus on policy relevance in congresses and intercongresses and other symposia and meetings.
 - B. Review role and function of PSA resolutions.
 - C. Consider the publication of policy-relevant materials.
 - D. Concentrate on science for public policy.
 - IV. Promote the "Science of the Pacific" and Pacific Island Involvement in Regional and International Scientific Activities.
 - A. In partnership with Pacific Island scientists and institutions, develop research capacity within the Pacific Islands; help involve Pacific Island colleagues in PSA activities.
 - B. Consider the feasibility of an organized program of Pacific research initiatives.
 - C. Institute a formal policy concerning the holding of meetings in the Pacific Islands.

The Strategic Plan is intended to serve as the Association's blueprint for continuing to be at the forefront of Pacific science in the decades to come. In addition to the four scientific goals, the planning committee identified two crosscutting organizational or institutional operational goals. These address desired outcomes in terms of the structure and function of the Association, resources, and perhaps most important, the active involvement of the Pacific scientific community.

The organizational goals are:

- V. Revitalize PSA Organizational Structure and Processes; Create an Organization for the Future.
- VI. Increase Individual Participation and Involvement. The PSA will be an organization led by some of the region's top scientists. Its driving force is a cross section of active scientists and scholars at different stages in their careers from across the entire Pacific region.

On the following pages, each of these goals is explained, and objectives and activities outlined. Because this plan includes institutional reorganization and revitalization, the level of specificity with respect to each of the goals and associated activities varies. In some cases -- for example, Pacific Science Congresses with which the PSA has a long and highly successful history -- objectives and activities for implementation are quite specific. In others--for example, engaging science for public policy (Goal III) -- the objective is more general, and specific activities are identified and plans for implementation are articulated by the appropriate PSA subunits. Organizational Goal VI, increasing active scientific involvement and ensuring dynamic leadership, turned out to be the most illusive to address. The Strategic Planning Committee recommends that the PSA Council make this its highest priority and that it be incorporated as a specific, crosscutting component of all PSA activities.

Where the Strategic Planning Committee has specific recommendations, they are listed in the body of the Strategic Plan. In the course of their deliberations, additional considerations and questions were articulated by the Planning Committee, which may be of use to the PSA Council and committees as they move forward with implementing the Strategic Plan. These are included in Appendix II and noted in the text by [Appendix II, p. -].

PSA VISION

The PSA is a dynamic, regional, interdisciplinary enterprise that creatively engages the natural and human scientific communities and creates innovative partnerships to find solutions to the key challenges facing the Pacific region. The PSA and member scientists provide critical information and analysis to governments, policy makers, nongovernmental organizations (NGOs), the scientific community, and the public.

This vision is, in fact, one that is broader than the PSA, but one in which the PSA can play a leading role. It emphasizes the importance of cooperation between academic, scientific, governmental, and nongovernmental organizations at regional, national, and local levels.

MISSION STATEMENT

The Pacific Science Association, founded in 1920, is a regional, nongovernmental, scholarly organization that seeks to advance science and technology, broadly defined,⁵ in and of the Pacific region by fostering interdisciplinary and international research and collaboration. The Association's focus is on key issues and problems in the region with the goals of engaging science in the service of human needs and improving both the environment and the quality of life of the region's peoples. To achieve this mission the PSA serves as a catalyst for scientific and scholarly collaboration; develops scientific capacity within the region; fosters effective communication between scientists, policy makers, and the public; actively involves the Pacific Island states in regional and international scientific activities; and promotes the "Science of the Pacific."

*The mission and key goals of the PSA in 1999 are very similar to those guiding its establishment in 1920. Some of the objectives remain the same, for example, organizing congresses. Others are responsive to evolving scientific, political, and communication environments. The PSA is unique in being a **regional** scientific organization. The Pacific Ocean is the defining geographic characteristic, and the region includes countries or definitive geographic areas within or bordering the Pacific Ocean. Membership is also open to countries that have major scientific interests within the region.⁶ The PSA is committed equally to participation from and scholarship on all reaches of the region. At the same time, based in part on historical precedent, the PSA recognizes a particular responsibility to ensure that the small island states of the Pacific, often not included in international scientific endeavors, are actively involved*

⁵For the PSA, science is understood to include at least the natural and social sciences and their application through engineering and technology.

⁶Current membership includes adhering organizations in Australia, Chile, China (Beijing), China (Taipei), France, Guam, Hong Kong, Indonesia, Japan, Republic of Korea, Malaysia, Okinawa, Pacific Islands (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu), Russia, Singapore, Thailand, the United Kingdom, and the United States of America.

in regional scientific activities. It is also committed to promoting a “Science of the Pacific,” research on and in the Pacific Island region. At another scale, the environmental and human “interconnectedness” of the globe is increasingly apparent. The PSA is uniquely positioned to facilitate regional scientific and scholarly endeavors. The endeavors have as their focus more than a third of the globe’s surface; they include many of the globe’s terrestrial and marine ecosystems and much of its store of natural resources. The PSA region also includes a large proportion of the globe’s human population, with diverse cultural, historical, and political heritages.

PSA HISTORY AND ACCOMPLISHMENTS

The Pacific Science Association was founded following the First Pan-Pacific Science Congress held in Honolulu in 1920. That meeting was organized in recognition of the need for a broad regional scientific organization. Ninety-three scientists from around the Pacific met to “outline scientific problems of the Pacific region and to suggest methods for their solution, to make a critical inventory of existing knowledge, and to devise plans for future studies”. The Second Pan-Pacific Congress was held in Melbourne and Sydney in August 1923, with 580 scientists participating. A constitution was drafted and accepted at the Third Pan-Pacific Congress held in Tokyo in November 1926. Throughout the following 75 years, 18 Congresses and 9 Inter-congresses have been convened. PSA scientific working groups have organized ongoing activities in the intervening periods. Membership is by national academy of science or similar adhering organization in member countries or geographic regions. Current membership includes, or in a few cases has included, adhering organizations in Australia, Chile, China (Beijing), China (Taipei), France, Guam, Hong Kong, Indonesia, Japan, Republic of Korea, Malaysia, Okinawa, Pacific Islands (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu), Russia, Singapore, Thailand, the United Kingdom, and the United States of America. There is also an individual membership category.

Following nine successful Congresses, the 10th held in Honolulu in 1961 began a new era for the PSA. This, the largest Congress to that date, featured dozens of symposia. Raymond Fosberg's "Man's Place in the Island Ecosystem" was highly instrumental in spearheading environment and conservation activities in the Pacific through what was then the South Pacific Commission (now the Pacific Community). This ultimately led to the formation of the South Pacific Regional Environment Programme, headquartered in Apia, Samoa. More than 13 publications resulted from the combined symposia, many still considered “classics”. At this meeting there was also increased recognition of the role of work in the social sciences and the humanities and disciplines such as archeology and linguistics in the PSA. Thirty years later, in 1991, the 17th Congress was convened in Honolulu, another highly successful meeting. At that meeting, the foundation was laid for a new focus on capacity building within the PSA which resulted in the creation of the Division on Human Resources for the Future: Women and Young Scientists in Asian and Pacific Science. That group organized very successful symposia at the 1995 Congress in Beijing, China and the 1997 Intercongress in Suva, Fiji.

The 11th Congress in Tokyo in 1966 was the largest ever held with more than 6000 scientists participating. Numerous publications also resulted from that gathering. The relationship between PSA and Japan has remained strong. Eight Congresses have been convened

between the Tokyo Congress and the present including important meetings in Seoul, Korea in 1987 and Beijing, China in 1995. Each has had its own characteristics and each has resulted in strengthened relationships among local and international scientists and organizations. The First Inter-Congress was held in 1969 in Kuala Lumpur, initiating a series of smaller, more focused meetings. An Intercongress was held in Chile under the auspices of the Institute of International Studies, University of Chile in 1989 and one, organized by the University of the Ryukyus was held in Okinawa in 1993.

The Congress and Intercongress venues have been used by other regional and international organizations to convene meetings. The United Nations Environment Programme (UNEP) has organized a number of regional symposia at PSA meetings during the past ten years. During the 1991 Honolulu meeting a tropical forestry session was organized by the Pacific Southwest Research Station of the U.S. Department of Agriculture and one was sponsored by the Forest History Society and IUFRO History Group, both of which resulted in proceedings publications. The 2nd Asia-Pacific Conference on Entomology and the International Society for Mangrove Ecosystems held sessions at the Okinawa Inter-Congress in 1993. During the Fiji Inter-Congress in 1997, START (The Global Change SysTEM for Analysis, Research and Training) held a consultation to familiarize itself with Pacific regional organizations involved in global change research. This has helped to launch a regional START Oceania program. At the same Intercongress, the IOC-UNEP-IUCN Global Coral Reef Monitoring Network held an organizational meeting, and the Soil Conservation Research in Asia and the Pacific Network (SCRAP) convened a full-day workshop on "Contaminants in Soils and Water Environments in the Pacific Islands".

The Pacific Science Association and its scientific working groups also collaborate with other organizations and activities. The Association was a co-sponsor for the 3rd International Conference on Marine Biology organized by the University of Hong Kong in 1996 and the 7th International Coral Reef Symposium organized by the University Guam in 1992. The Committee on Meteorology and Atmospheric Sciences held a series of international conferences in Taipei from 1993-1998 in collaboration with the International South China Sea Monsoon Experiment and the U.S.-P.R.C. Cooperative Program on Monsoon Research. The Task Force on Global Environmental Change held an International Symposium on Global Change in Asia and the Pacific Region in Beijing in 1994.

Individual Task Forces and Committees organize activities. Most recently the Coral Reef Committee, through the International Coral Reef Initiative, produced, *Status of Coral Reefs in the Pacific*, a milestone report covering the PSA region. The Division of Ecology, Conservation, and Environmental Protection, in collaboration with DIVERSITAS in the Western Pacific and Asia (DIWPA), has initiated a special Pacific-Asia Biodiversity Transect Network (PABITRA) to study ecosystems throughout the Pacific. Other working groups have conducted a variety of valuable activities. The Task Force on Biodiversity convened two three-day workshops on "Marine and Coastal Biodiversity in the Tropical Pacific Region" in cooperation with the East West Center in 1994. The publications resulting from these have become standards for the region.

Through its Scientific Activity Fund, PSA has supported a number of small projects. One of the larger was the New Caledonia Biodiversity Project, which held a workshop in Noumea, followed by a symposium at the Honolulu Congress in 1991. Membership directories for botanists, coral reef researchers, and entomologists have been compiled. The entomologist listing

is currently available on the PSA web page and continues to be updated. The *1993 International Fax Directory for Biologists* also continues to be updated on the PSA web page.

The Association publishes the *PSA Information Bulletin* and its supplement, *Pacific Research Titles*. Additionally, irregularly the PSA prepares separate publications, such as the *Preliminary Directory of Science and Technology Organizations with Interests in the Pacific Islands* in 1998. The PSA Council has authorized the PSA Executive to continue discussions with the publishers of the journal *Pacific Science* with the expectation that *Pacific Science* will become the official journal of the Pacific Science Association.

In 1961 PSA was invited to become a Unesco Category B member by the 60th Session of the Executive Board of Unesco. PSA was approved as the first Regional Associate of the International Council of Scientific Unions (ICSU) in Paris in 1970 because of its stature and longevity. It remains one of four such current members.

The Pacific Science Association has played a major and leading role in scientific activities in the Asia-Pacific region for over eight decades. It will continue to do so in the decades to come, as it pursues its mission and adapts the Strategic Plan in face of ever changing realities. The interdisciplinary nature of the PSA has been and will continue to be a major strength. New information technologies will facilitate communication amongst all members. A specialized meeting on science and information technology in the Asia Pacific region is being hosted by the U.S. National Academy of Sciences in 2000 in California, the ninth Intercongress, hosted by the University of Guam, is planned for 2001 and the twentieth Pacific Science Congress, organized by the National Research Council of Thailand will be held in Bangkok in 2003. The Pacific Science Association is poised to continue its scientific leadership in the next millenium.

SCIENTIFIC GOALS AND OBJECTIVES

GOAL I: Advance Science and Technology by Increasing Interdisciplinary Collaboration and Communication in the Pacific Region.

The PSA acts as a catalyst for interdisciplinary scientific and scholarly collaboration among individuals, institutions, and organizations addressing issues of relevance to the Pacific region. This is accomplished by

**Organizing interdisciplinary congresses and intercongresses and other symposia and meetings;
Promoting scholarly networks employing both conventional means and new information technologies; and
Developing effective linkages with other organizations with complementary goals.**

PSA problem-oriented scientific working groups provide the mechanism for sustained collaboration on relevant issues.

OBJECTIVE I.A: Hold high-level, relevant interdisciplinary congresses every four years, with smaller more topical meetings as needed. These assemble scientists and scholars from a wide range of disciplines to bring the latest scientific and scholarly advances to bear on regional problems. Success is measured not only by conventional means, for example, publications and proceedings, but also by formation of new scientific partnerships and the impact of PSA scientists' activities on public policy in the region.

IMPLEMENTATION:

Activity I.A. Convene Congresses and Intercongresses.⁷ Continue to convene Pacific Science Congresses every four years, and intercongresses and other symposia and meetings as deemed advisable by the PSA Council, Scientific Activities Committee, and scientific working groups.

1. **Meeting Themes.** To ensure that regional scientific needs are being met and that overall themes of congresses mesh with PSA priorities, the PSA Council and the Scientific Activities Committee should have a greater role in determining themes for congresses and intercongresses. At the same time, the Planning Committee acknowledges the importance of the host countries' input into these decisions. The Executive Board will appoint an International Program Committee to ensure that PSA goals are advanced. The committee will include

⁷For several of the key activities of the PSA (congresses, intercongresses, and scientific working groups), the Strategic Planning Committee, under the direction of Dr. Tom Lee, has designed a process chart (see Appendix III) that outlines the operational steps involved in the activities. We anticipate doing this for other key activities at the conclusion of the planning process.

representation from the Council, the Scientific Activities Committee, and the host country and it will oversee the overall design of the congress. The detailed organization of the congress is the responsibility of the host country. An additional and important benefit will be an institutional history of congress organization, which should facilitate future organizational efforts.

2. **Meeting Location.** The PSA has attempted, informally, to ensure that successive congresses and intercongresses and other symposia and meetings are held across the Pacific region. The PSA congresses and intercongresses depend very greatly on the effort, talent, and resources of the host country and its scientists. By 2001,⁸ the PSA Council will articulate a policy concerning the choice of host countries.

3. **Meeting Designation.** According to the PSA statutes, congresses are large, regional meetings held every four years. Intercongresses are more topically focused, subregional meetings typically held at the intervening two-year intervals. By 2001, the PSA Executive Council or an ad hoc committee appointed by the Council will review the congress/intercongress designations, and develop guidelines for other possible forms of focused regional meetings, electronic conferences, and so on.

4. **Procedures Manual.** A procedures manual will be developed that will outline in considerable detail the planning process for congresses and intercongresses. Models are available from other scientific organizations and a preliminary flow chart has been prepared as part of the planning process (Appendix III). The responsibility for overseeing the development of the manual lies with the PSA Secretariat and it will be developed immediately following the Sydney Congress to be held in July 1999. Following a standard format to be developed by the Secretariat, this manual will be updated by the Secretariat after each congress or intercongress, in consultation with the local Planning Committee and Secretary General of that meeting.

OBJECTIVE I.B. To have a limited number of dynamic scientific working groups addressing critical issues that sustain PSA activity between congresses and whose activities contribute substantially to the meetings. By 2001 the Scientific Activities Committee will have carefully reviewed the roles and functions of scientific working groups, and determined mechanisms, processes, and policies for their formation, evaluation, and continuance or dissolution. By 2003 and the XX Pacific Science Congress, it is expected that there will be at least four to six highly active scientific working groups and that they will have been directly involved in the organization of that meeting (See Activity I.A.1 above).

IMPLEMENTATION:

Activity I.B. Review and Revitalize Scientific Working Groups. The Scientific Activities Committee will undertake a thorough review of task forces and scientific committees, collectively referred to as “scientific working groups.” The value of the PSA lies in its regional, interdisciplinary nature. The Scientific Activities Committee will develop clear policy guidelines with respect to scientific working groups. These should include but not be limited to measures that guard against their proliferation and guidelines for their

⁸The dates cited in this plan correspond to the dates when the PSA Council is expected to meet (1999 at the Sydney Congress, 2001 at the Intercongress following the Sydney meeting, and in 2003 at the next Congress, which is planned for Bangkok, Thailand). These dates should be considered the outside limits. Progress toward all goals should be expedited and this can be facilitated with effective electronic communication.

evaluation and subsequent continuance or dissolution. The policy also should lead to the establishment of groups that enhance interdisciplinary collaboration. In support of other objectives in the Strategic Plan, the chairs of scientific working groups will be expected to establish electronic communication with the PSA Secretariat and members of their working group in cases in which this is technologically feasible. It is also expected that scientific working groups will be more formally involved in deciding themes for congresses and intercongresses. As is currently the case, scientific working groups will be expected to organize sessions or symposia at congresses and intercongresses as well as being the vehicles for sustained collaboration on relevant issues between meetings.

[Additional considerations, Appendix II, p.26]

OBJECTIVE I.C: Establish effective communication for PSA membership with a special focus on scientific working groups. Communication and networking are key to the future success of the Association. The PSA will thoroughly review its communication functions. Effective electronic communication, at least among Council members, will have been established by the Secretariat no later than the Sydney meeting. Other communication functions, for publications, for example, will be reviewed by the proposed Communication and Publication Committee no later than 2001.

IMPLEMENTATION:

Activity I.C. Enhance Communication and Publication. The Executive Board will appoint a Communication and Publications Committee that will review all PSA Publication and Communication Functions by 2001. Because of the timeliness of the *Pacific Science* proposition, that will be considered by the Executive Board at the Sydney meeting.

1. Electronic Communication. The Communication and Publication Committee will explore how the Association can more effectively use the tools of the “New Information Age” to meet its goals and objectives. Given geographic distribution of its membership and the critical need for interaction, the PSA will make this one of its highest priorities. The first step will be a heightened World Wide Web presence, initiated immediately, and with a dynamic Web page linked to the XIX Congress’s Web page.

[Additional considerations, Appendix II, p. 26].

2. Publication. The existing publications of the PSA are the *Pacific Science Association Information Bulletin* and *Research Titles*. Proceedings are published by the organizers of congresses and intercongresses. At the Sydney meeting, a proposal will be presented by the Secretariat for the adoption of the existing journal, *Pacific Science*, published by the University of Hawaii Press, as the official journal of the PSA. If the proposal is accepted, the *Information Bulletin* and *Research Titles* will be discontinued, with PSA information being published in *Pacific Science* and on the Web. Important reasons for considering the adoption of *Pacific Science* as the PSA’s official journal include enhancing the Association’s ability to attract individual membership and increasing its visibility by publishing a refereed journal (see Goal VI).

[Additional considerations, Appendix II, p.26]

OBJECTIVE I.D. Form effective partnerships with other organizations with similar goals. The PSA is a unique, regional, interdisciplinary scientific organization with an 80-year history.

The challenges facing the region demand interdisciplinary collaboration. This, in turn, will require new partnerships between scientific organizations, academic and research institutions, governmental, intergovernmental, and nongovernmental bodies. The PSA must capitalize on its long history, scientific credibility, and many regional links to form new productive partnerships. Because of their senior status, members of the PSA Council must take an active role in establishing these linkages in their own countries and within their own disciplines. A Collaboration and Cooperation Committee will be appointed by the Executive Board to coordinate this effort, but it also should be one of the highest priorities of individual Council members. The PSA is already affiliated with a number of regional organizations, for example, International Council of Scientific Unions (ICSU), but others must be explored, for example, Asia Pacific Economic Cooperation (APEC), and ways to capitalize on these links must be explored actively.

IMPLEMENTATION:

Activity I.D. Build Effective Links to Other Organizations. The PSA Executive Board, with advice from the PSA Council, will appoint an ad hoc Committee on Cooperation and Collaboration at the Sydney meeting to identify the key organizations with which it might be beneficial for the PSA to be associated and to advise on the formation of these partnerships. The form of partnership would vary according to the organization. In the period between the 1999 Sydney meeting and 2001, a concerted effort also should be made by appropriate members of the PSA Council to provide this committee with information about relevant organizations within their countries and from their disciplines as well as governmental or intergovernmental bodies that might be clients for PSA research activities. It will be imperative for those involved to have “something to sell,” a convincing argument as to why collaboration with PSA will be worthwhile. Members of the PSA Executive Board have discussed partnering with the American Association for the Advancement of Science, the Circum-Pacific Council, ICSU, Pacific Circle, and so on.

[Additional considerations, Appendix II, p. 26]

OBJECTIVE I.E: Create a comprehensive program portfolio for the PSA which would include the PSA vision, mission, key goals, scientific activities, past accomplishments, and future plans.

IMPLEMENTATION:

Activity I.E. Develop a Program Portfolio. An effective program portfolio will be developed for the Association. This will include a collection of available material on the PSA that could be used by constituents for presentation to other organizations, public relations, grant applications, and so on. It should be compelling, easy to update, and available in electronic format. Much of the information also could be posted on the PSA Web site. This will be the responsibility of the Secretariat and should be completed as soon as is reasonably feasible.

[Additional consideration, Appendix. II, p.27]

GOAL II: Build Capacity in Science and Technology in the Pacific Region.

The PSA is strongly committed to developing scientific capacity in the Pacific region. As defined by the PSA, this includes:

**Increasing communication and communication links for isolated scientists and scientific groups;
Promoting the participation of underrepresented groups, including women;
Strengthening mentoring activities for capacity building;
Developing leadership opportunities within the PSA structure; and
Involving students and young scientists in regional scientific activities.**

The PSA also recognizes the need to develop and share common standards and protocols that can be applied in the conduct of science in the region. The scientific working groups will take the lead with respect to common standards and protocols.

OBJECTIVE II: As a long-term goal, contribute substantially to scientific and technological capacity in the Pacific region, utilizing the Association's strengths and regional character. Cognizant of resource limitations at this time, the initial focus will be on the activities of the PSA itself. The PSA will employ all means at its disposal (including sponsoring participation in congresses and intercongresses and other symposia and meetings and electronic communication) to include isolated scientists in its activities (also see Goal IV). The association will review its past activities and programs with respect to capacity building and mentoring and develop strategies for the future, including diversifying leadership opportunities within the PSA. It also will develop specific guidelines for student involvement. Last, but certainly not least important, the PSA will explore ways in which its scientific working groups can contribute to the development of common standards and protocols applicable for Pacific science and technology.

IMPLEMENTATION:

Activity II.A. Increase Communication and Communication Links to Isolated Scientists in the Pacific Region. Starting with its own activities, the PSA will develop strategies to enhance scientific communication with and participation of scientists in countries and regions with less regular access to the scientific "mainstream." Such strategies could include subsidized registration fees, special travel grants, in-country programs, special efforts by scientific working groups to include these colleagues in their activities and their communications. (Also see Goal IV.)

Activity II.B. Promote the Active Participation of Women and Other Underrepresented Groups in PSA Activities. To date, capacity-building activities have been carried out through designated scientific working groups, for example, the Science Education Committee and the Task Force on Human Resources for the Future. As a first step, the Scientific Activities Committee, with input from the current and former members of the above-mentioned scientific working groups, will consider whether this is the most

effective and efficient manner with which the PSA should pursue these goals. They should consider whether a standing committee should be appointed. A standing committee could have as its charge the fostering of capacity-building activities across all PSA activities. Once this decision is made, the Council will take the appropriate action and the Statutes will be so modified. Some activities can begin immediately, for example, encouraging scientific working group chairs to include women, younger colleagues, and so on. The PSA Council will review these activities and decide upon a further course of action no later than 2001. Although the PSA encourages science education for young people, the Association's thrust is on university (tertiary) and professional education and mentoring.

[Additional considerations, Appendix II, p. 27]

Activity II.C. Strengthen PSA Education and Mentoring Activities for Capacity Building.

This is a long-term goal of the PSA. Given the present resource limitations, the initial effort will be made within the context of PSA activities themselves, as in Activity II.B. Mentoring can occur in informal ways as young and mid-career individuals as well as students (Activity II.E) become involved. As we move forward, the Standing Committee on Capacity Building or the appropriate scientific working group should make this a priority.

[Additional considerations, Appendix II, p. 27]

Activity II.D. Develop Leadership Opportunities for Pacific Scientists Within the PSA.

The PSA will provide leadership development by the inclusion of young and mid-career individuals in key leadership positions, PSA scientific working groups, and PSA activities. This has not been an overt goal of the PSA, but it is one that is increasingly important if the Association is going to achieve its other goals and if it is going to be a dynamic, future-oriented organization. The PSA Council and scientific working groups will take this into immediate consideration as the Strategic Plan is implemented and Working Group activities developed. This also should be considered by the Structure and Statutes Committee. A more formalized set of strategies will be developed no later than 2001.

[Additional considerations, Appendix II, p. 27].

Activity II.E. Increase Student Involvement in the PSA. The Planning Committee recommends that students from the host country and beyond be involved in congresses, intercongresses, and scientific working group activities. Students will be encouraged to give scientific papers, participate in scientific working group activities, and become professionally involved in PSA activities.

[Additional considerations; Appendix II, p. 28]

Activity II.F. Foster Common Standards and Protocols. The scientific working groups will, under the direction of the Scientific Activities Committee, consider the feasibility of fostering common scientific standards and protocols in the region. Given the interdisciplinary nature of the organization and the diversity of scientific disciplines represented, this may be more appropriate in some arenas than others, for example,

interdisciplinary scientific activities. In other cases, this may be more appropriate for international disciplinary organizations.

GOAL III: Actively Encourage Research That Is the Basis for Sound Public Policy and the Common Good in the Pacific Region.

In the Asia-Pacific region, as elsewhere, the communication of science to both policy makers and the public is of critical concern. As a regional organization, the PSA has a critical communication role to play, one that acknowledges local and national concerns but also transcends national boundaries. As it moves into the next millennium, the PSA will become increasingly effective in facilitating communication between scientists and technologists and the public, with particular attention paid to policy makers.

OBJECTIVE III: Encourage science for public policy and the common good. The PSA has a critical role to play with respect to science and technology for public policy and the common good. The Association will encourage and when possible facilitate policy-relevant research. The Association also must concern itself with how this research is shared and applied. Deliberations on policy relevant research must be carried out within a context that acknowledges the political, economic, historical, and cultural differences within the region. The PSA Council will address these complex issues between now and 2003. Based on the outcome of these deliberations, concrete activities will be developed by the XX Pacific Science Congress to be held in 2003. Note that the PSA has in its statutes a statement on nondiscrimination and the firm rights of scientists with respect to scientific activity. An additional statement recognizes and respects the independence of the international scientific planning of its members and the scientific communities that they represent. In addition to Council-level deliberation on science for public policy, the Planning Committee recommends that the role and value of PSA resolutions be reviewed, that policy-relevant publications be considered, and that "science for the public" be viewed as a long-term rather than an immediate goal.

IMPLEMENTATION:

Activity III.A. Develop a Focus on Policy Relevance in Congresses and intercongresses and other symposia and meetings. Although local, national, and international leaders have addressed congresses and intercongresses and many policy relevant topics have been discussed during these meetings, the PSA has not had specific guidelines concerning the involvement of policy makers, nor has it had guidelines with respect to activities that might directly shape policy. By 2003 the PSA Council will address the role of the PSA with respect to science for public policy and develop guidelines for PSA activities. For example, a policy might be developed that each congress or intercongress incorporate a policy component. This could be a responsibility of the proposed International Program Committee. In the interim, PSA Council members should communicate to the PSA Executive Board the specific examples of needs for policy-relevant research that they identify in their respective countries.

[Additional considerations, Appendix II, p. 28]

Activity III.B. Review PSA Resolutions. The PSA statutes outline the procedures for the PSA to pass resolutions. By and large, PSA resolutions have not had major policy impacts. In conjunction with general consideration of science for public policy, the PSA Council will consider the role, function, and impact of PSA resolutions and present recommendations with respect to resolutions no later than 2003.

[Additional considerations, Appendix II, p. 28]

Activity III.C. Consider the Publication of High Quality Policy-Relevant Materials. The PSA Council will consider the value, either under its own auspices or in partnership, of regular publication of policy-relevant materials.

[Additional considerations, Appendix II, p. 29]

Activity III D. Concentrate on Science for Public Policy. The Planning Committee discussed the balance between PSA's focus on policy makers and a focus on public perceptions of and awareness of science. Considering resource limitations as well as the need for the Association to focus its activities, the Committee recommends that the focus at this time be on science for public policy. It should also develop links with international bodies involved in policy formulation. This does **not** preclude the inclusion of a public component in activities of the Association, for example, congresses. The PSA, in fact, encourages it.

GOAL IV: Promote "Science of the Pacific Islands."

The PSA membership includes national academies or like bodies in countries or definitive geographic areas within or bordering the Pacific Ocean or with major scientific interests in the region. The PSA is especially cognizant of the fact that the Pacific realm includes the Pacific Islands, defined in contemporary geopolitical terms as the 22 states and territories spanning the Pacific Ocean that are represented by the Pacific Community (SPC).⁹ These islands, with very unique environmental characteristics and human histories, often are not included in international scientific dialogue. The VIII Pacific Science Intercongress, held in Suva, Fiji, in July 1997 was a great success. The PSA actively seeks to:

- Include the island states and island scientists in regional scientific activities;**
- Contribute to capacity building and the involvement of Pacific Island scientists in regional and PSA activities;**
- Encourage collaborative scientific research endeavors in the Pacific Islands, perhaps sponsoring Pacific research initiatives that would foster the Science of the Pacific; and**
- Hold meetings in the Pacific Island region.**

⁹ The Pacific Community is the new name of the South Pacific Commission. The acronym SPC has been retained.

OBJECTIVE IV: In active partnership with Pacific Island–based scientists, institutions, and organizations, help develop Pacific research capacity and initiatives. Pacific representation in defining and planning activities must be included from the inception of any program or project. The PSA is committed to participation from and scholarship on all reaches of the Pacific region. At the same time, the PSA recognizes a particular responsibility to ensure that the small island states of the Pacific, often not included in international scientific endeavors, are actively involved in PSA and regional activities. Furthermore, it is committed to promoting scholarship on and in the Pacific Islands. This includes Pacific research initiatives, or Science of the Pacific, capacity building, and PSA activities held within the Pacific Island region.

IMPLEMENTATION:

Activity IV.A. Include Island States and Island Scientists in PSA and Regional Scientific Activities. It is central to ensure that island states and scientists are involved in the activities of the PSA, including program planning and direction. Activities IV.B through IV.D are interrelated. The Structure and Statutes Committee should take this into consideration as changes are made to the PSA Statutes, and the Scientific Activities Committee and the scientific working groups should be especially cognizant of including Pacific Island colleagues.

Activity IV.B. Build Pacific Island Research Capacity. The PSA is actively committed to helping develop research capacity in the Pacific Islands and involving peoples of the Pacific Islands in regional research as well as in the affairs of the PSA. (See Activities II.C and II.D.) Member scientists are already engaged in relevant activities. Relevant examples will be provided by the Secretariat. By 2001, the Scientific Activities Committee, in consultation with Pacific Island colleagues and institutional representatives, and the PSA Executive Board will develop a plan for action to meet this goal.

[Additional considerations, Appendix II, p.29]

Activity IV.C. Explore Pacific Research Initiatives. The PSA has been involved, largely through scientific committees and task forces, in Pacific research, but it has not had an organized program of Pacific Island Research Initiatives. The Scientific Activities Committee will consider avenues for fostering Pacific research and whether the PSA itself should explore an organized program of Pacific research. Recommendations will be made no later than 2001.

[Additional considerations, Appendix II, p. 29]

Activity IV.D. Hold Intercongresses in the Pacific Islands. An important way to ensure that Goal IV is achieved is to hold PSA congresses and other meetings regularly in Pacific Island locations. The success of the 1997 Suva, Fiji, Intercongress hosted by the University of the South Pacific should be noted. Pacific Island locations do not have accommodation facilities or resources to host a meeting the size of a Pacific Science Congress, but they do provide attractive locales for intercongresses. The PSA Council will consider the advisability of developing a policy concerning offering to Pacific Island

states the opportunity to host intercongresses and smaller meetings on a regular basis. These deliberations will take place acknowledging that there are additional considerations with respect to the equitable selection of PSA venues.

[Additional considerations, Appendix II, p. 30]

ORGANIZATIONAL OPERATING GOALS

Human and Organizational Resources

The Strategic Planning Committee identified two crosscutting organizational or institutional operational goals that intersect with the core scientific goals. Although strategies aimed at achieving both the scientific goals and the organizational goals must be pursued simultaneously, successfully achieving the organizational goals will be a key component in ensuring that the PSA will be a dynamic force in Pacific science in the decades to come. Goal V addresses the revitalization of the PSA structures and processes. Goal VI essentially addresses individual membership. It calls for the active involvement of a broad, interdisciplinary representation of the region's scientists and a leadership team that includes (but is not limited to) some of the region's most accomplished scientists. This proved to be a somewhat illusive goal for the Strategic Planning Committee when it came to articulating concrete activities. The Committee stressed that a dynamic organization is critical to attracting the needed participation. It also strongly recommended that addressing this goal be incorporated into all PSA activities. The Committee suggested some related activities concerning this vital goal but also felt that its membership was not representative enough to tackle this critical issue in the most creative and effective manner. Recommendations for further action are made.

GOAL V: Revitalize the PSA Organizational Structure and Processes; Create an Organization for the Future.

Develop an organizational structure that capitalizes on the PSA's long history and significant accomplishments and positions the Association to play a leading role in the decades to come.

OBJECTIVE V: Reorganize the PSA. The geopolitical, scientific, and communication environments of the twenty-first century are very different from those extant when the PSA was founded in 1920. The Strategic Planning Committee identified a number of structural and organizational issues that must be systematically addressed by the Structure and Statutes Committee of the Association. The specific organizational issues that must be addressed include national membership; the role of national committees; the role and function of the PSA Council, PSA Executive Board, and PSA standing committees; the Secretariat; infrastructure issues; funding; and evaluation and planning.

IMPLEMENTATION: By 2001, the Executive Board in consultation with the Structure and Statutes Committee will undertake a thorough review of the PSA structure,

processes, and financing and develop a set of recommendations to position the PSA to achieve its scientific goals. Areas to be addressed include:

Activity V.A. Review Adhering Organization Membership. Review the nature of PSA national and regional membership to determine whether there are alternatives or additions to national academies of science, or their equivalent, that would be effective members.
[Additional considerations, Appendix II, p. 30]

Activity V.B. Encourage the Formation of National or Regional Committees. Develop strategies and policies for the establishment of National or Regional Committees that will be actively involved with the PSA Executive.
[Additional considerations, Appendix II, p. 30]

Activity V.C. Engage the PSA Council. Develop mechanisms to actively engage the PSA Council in the affairs of the Association, including the identification of collaborative research endeavors, funding opportunities, and active scientific involvement from the countries that they represent. Effective electronic communication (Goal I.C) will be a first step in facilitating this.
[Additional considerations, Appendix II, p. 30]

Activity V.D. Evaluate the Composition of PSA Executive. Review the composition of the PSA Executive Board.
[Additional considerations, Appendix II, p. 31]

Activity V.E. Evaluate the Structure of PSA Standing Committees. Review the existing Standing Committee structure (and by-laws) as defined in the PSA Statutes.
[Additional considerations, Appendix II, p. 31]

Activity V.F. Assess and Change the Secretariat. Review and expand the Secretariat. The structure, staffing, and function of the Secretariat must be able to support the expanded activities of the PSA. Being able to actually accomplish this, of course, will depend on financial resources and personnel. Because it is critical that Secretariat support be augmented soon, by three months after the Sydney Pacific Science Congress, the Council will have developed a phased plan that identifies key needs and the costs associated with them for the next two years. The Executive Board will consider longer-term issues including making the Secretariat effective in conveying the role of PSA and science and science policy to policy makers and the public.
[Additional considerations, Appendix II, p. 31]

Activity V.G. Address Additional Infrastructure Issues. Planning in the context of change. As the PSA Executive Board reviews the function of the PSA Council, Secretariat, scientific activities committees, and so on, it must bear in mind a number of issues that are related to changing academic and scientific relationships. PSA plans must be responsive to this changed environment. In times past, universities and other institutions supported general scientific endeavors of their personnel, for example, some of the communication

costs associated with being a scientific committee chair. With more and more attention being paid to the “bottom line” even in public institutions, ancillary activities are more difficult to support.

[Additional considerations, Appendix II, p. 31]

Activity V.H. Develop Funding and Financing Strategies. Develop a fundraising plan. The PSA must become more effective in securing funds to support its activities. The Strategic Planning Committee recommends that the Finance Committee be charged with exploring governmental and nongovernmental funding opportunities at the national and regional levels as well as the possibility of corporate sponsorship. The committee must work closely with the PSA Council. A large part of the region is experiencing a financial crisis that has implications at least in the short term with respect to support of the PSA. Adhering Organization and individual dues and membership criteria need to be evaluated. In addition, both governments and private foundations are restricting the funding of core/staff functions of organizations and instead are funding more project activities and research. This has implications for the PSA because it has not been basically a research or training organization.

[Additional considerations, Appendix II, p.31]

Activity V.I. Develop Guidelines for Assessment and Evaluation of PSA Activities and Programs. As programs and activities evolve from the Strategic Plan, mechanisms must be developed and policies put in place for ongoing evaluation and monitoring of PSA activities. The PSA has a long and distinguished history. To ensure continued relevance, to help the Association meet the challenges of the next century, and to aid in fundraising and program development, the Strategic Planning Committee recommends that all PSA activities include an evaluation component. In the future, the PSA Council should consider the creation of a standing Evaluation Committee and/or developing Secretariat capacity and staffing for evaluation. Until such time as this is feasible, oversight will be the responsibility of the Executive Committee and the Secretariat. An annual report, prepared by the Secretariat, will include a summary of evaluations. Planning based on realistic fiscal projections as well as an evaluation of key regional scientific needs must be an ongoing activity of the PSA Council.

[Additional considerations, Appendix II, p. 32]

Activity V.J. Revise the PSA Statutes and By-Laws. The PSA statutes and by-laws will be revised by the Structure and Statutes Committee to reflect the adopted Strategic Plan.

GOAL VI: Increase Individual Participation and Involvement. The PSA is to become an organization led by some of the region’s top scientists. Its driving force should be a cross section of active scientists in different stages of their careers from across the Pacific region.

OBJECTIVE VI. By 2003, ensure that the PSA is led by some of the region’s top scientists. Also actively involved in the Association and its scientific working groups are midcareer and

younger women and men from across the region. These individuals are the future scientific leaders of the region and the future leaders of the PSA.

IMPLEMENTATION:

Activity VI: Enhance Participation in and Leadership of the Association. Issue a challenge to the PSA Council, Executive Board, scientific working groups, Adhering Organizations, and all members to work actively to enhance participation in and leadership of the Association. This is a crosscutting goal that should be considered in planning all PSA activities.

Goal VI, ensuring dynamic leadership and active membership in the PSA, is the Association's greatest challenge. It is, in large part, a classic "chicken and egg" dilemma. To ensure this level of involvement, the PSA must continue to grow as a dynamic and relevant organization. To do so, it must have dynamic leadership and active involvement from across the Pacific region.

The Committee considered recommending that a special ad hoc committee on membership (Pacific Member Scientists) be constituted by the PSA Council in consultation with PSA National Committees in member countries. Membership in this special ad hoc committee could even reach beyond the PSA. In the final analysis, however, the Strategic Planning Committee decided that, because this goal must be incorporated in all PSA activities, the responsibility lay with the PSA Council, under the direction of the PSA Executive Board. Because this goal is tied closely to the other activities of the PSA, the chair of this committee should be in active communication with the PSA Executive Board, the chairs of PSA standing committees, and scientific working groups. Achieving Goal VI must proceed simultaneously with progress toward the PSA scientific goals (I–IV) and it should be greatly facilitated by Goal V, review and revitalization of PSA organization and processes. The specific activities to accomplish Goal VI will be developed by the relevant PSA units, but the PSA Council should assume oversight for their implementation. Given the interconnectedness of Goal VI with the other Strategic Plan goals, many of the activities aimed at accomplishing the scientific goals will provide the building blocks for achieving Goal VI, a dynamic, member-driven PSA.

Relevant Activities:

1. Continue to hold interdisciplinary congresses and smaller, topically focused meetings that have a measurable impact on science in the Pacific region.
2. Establish effective electronic communication.
3. Develop a scientific working group structure that addresses key regional issues and is responsive to new problems and challenges.
4. Establish a reputation such that the PSA and its scientists are key points of contact for information on policy-relevant scientific issues; PSA could develop the capacity to coordinate research efforts that have governmental and nongovernmental clients.
5. Explore how the benefits of individual membership can be enhanced.
6. Establish effective national committees and raise the national profiles of PSA.
7. Develop active liaisons with other regional/national/international organizations.
8. Publish a refereed journal (*Pacific Science?*).
9. Establish an effective finance committee with the objective of resource development.

Next Steps

The PSA has charted an ambitious and exciting course. Achieving the six goals of the Strategic Plan will depend on human and financial resources, but they can be achieved. At the Sydney Pacific Science Congress (July 1999), the PSA Council reviewed and adopted the Strategic Plan. Acknowledging that implementing all activities could not take place immediately, the Council also identified priorities. These discussions will guide the Executive Board, the body charged with implementing the Strategic Plan, as it develops annual operating plans for the Association. In consultation with the Executive Board, the Secretariat will be responsible for developing an annual operating plan that has specific, achievable objectives. The operating plan will be available no later than two months before the beginning of the fiscal year. In the Strategic Plan, the dates 2001 and 2003 were used for the completion of various activities, as they represent the dates of the next anticipated Intercongress and Congress, when the PSA Council normally meets. The Executive Board will adjust these dates in accordance with the priorities identified by the PSA Council and with the goal of developing effective annual operating plans.

In the Strategic Plan, the importance of evaluating PSA activities was stressed. Mechanisms for evaluating PSA activities, including but not limited to, Congresses, Intercongresses and other PSA symposia and meetings, activities of the Scientific Working Groups, and other accomplishments of the Pacific Science Association will be developed. A summary of the evaluations will be included in an annual report to be prepared by the Secretariat and distributed to the PSA Council, Adhering Organizations and other interested parties.

The Strategic Plan is a flexible document. It can and will be modified to ensure that the overall goals of the Pacific Science Association are met and that the Association continues to pursue its mission in the most efficient and effective manner possible. Accomplishing this will depend on the scientific talent, energy, enthusiasm and wisdom of its individual and institutional members. Based on these human resources and enhanced communication and collaboration, the Pacific Science Association will continue to advance science in, and of, the Pacific and interdisciplinary approaches to addressing scientific problems in the Asia Pacific region in the 21st century, as it has done so effectively during the last eight decades of the 20th century.

APPENDIX I: THE LANGUAGE OF PLANNING

The definitions used here have been adapted from various sources including: Michael Allison and Jude Kaye, *Strategic Planning for Nonprofit Organizations: A Practical Workbook and Guide*, John Wiley and Sons, 1997.

Vision: An image in words, a mental model of a future state built on plausible assumptions. The vision can be larger than the mission; others can ascribe to the same vision. It is a mental image of a desirable situation that is dependent on successfully fulfilling the mission.

Mission: Communicates the essence of the organization -- purpose, methods to achieve purpose, and values. It defines how an organization will fulfill its vision.

Goal: Something one plans to achieve. These are outcome statements that define what an organization is trying to accomplish programmatically and organizationally.

Objective: What one is actively trying to achieve. These are precise, time-phased results that support the achievement of the goal.

Strategy: A planned set of activities and outcomes intended to fulfill the mission. (In planning, the term “core strategies” meaning broad, overall priorities or directions adopted by an organization, is sometimes used but it is not employed in this plan to avoid confusion.)

Activity: The specific actions required to produce services and products in support of achieving objectives.

Tactics: A set of activities to achieve objectives (also not used in this plan).

Product: The outcome of a successful activity.

Components of a Plan

What	By Whom (primary responsibility)	Time Frame
Vision	PSA Council; Planning Committee	Indefinite
Mission	PSA Council	Indefinite
Goal	PSA Council; Planning Committee	5–10 years
Objective	PSA Council, Scientific Working Groups	2–5 years
Activities	Scientific Committees; member scientists	1–3 years

APPENDIX II: ADDITIONAL STRATEGIC CONSIDERATIONS/QUESTIONS WITH RESPECT TO THE PSA STRATEGIC PLAN

GOAL I: Advance Science and Technology by Increasing Interdisciplinary Collaboration and Communication in the Pacific Region

Activity I.B. Review and Revitalize Scientific Working Groups.

Questions for the Scientific Activities Committee include the following:

- How are scientific working group themes identified? What is the role of the PSA Council/PSA Scientific Activities Committee in determining themes?
- Are the existing scientific committees/task forces/divisions appropriate as we face a new millennium?
- Should working groups be expected to perform research? Obtain funding?
- What should the relationship be between the chair of a working group, his/her institution, and the PSA?
- What mechanisms exist or might be developed to help finance working-group activities in light of the fact that less institutional support from chair and committee members' home institutions may be available in the years to come?

Note: For this process, it is important that the Scientific Activities Committee be composed of individuals that represent the broad interests of the PSA. By statute, it includes chairs from the Scientific Working Groups, but the Structure and Statutes Committee should consider the appropriate composition for this review, including some that are not stakeholders in the process.

Activity I.C. Enhance Communication and Publication.

Additional questions that the Communication and Publication Committee should consider include the following:

- Communication:** How could electronic media better serve the PSA, for example, linking members of working groups, electronic conferences, list-serves? What would this cost and where could resources be found?
- Publication:** If the *Pacific Science* option is not adopted, should the Communication and Publication Committee consider the future of the *PSA Information Bulletin* and *Research Titles*, as well as publishing in an electronic format (on the Worldwide Web). A second tier of questions surrounds the relationship between congress/intercongress Proceedings and the PSA. These questions will be addressed after decisions are made concerning current Association publications and *Pacific Science*.

Activity I.D. Build Effective Links to Other Organizations and an Ad hoc Committee on Collaboration.

Questions for the PSA Council/Cooperation and Collaboration Committee include the following:

What sorts of organizations would be most beneficial as partners: scientific? engineering? technology? educational? governmental? quasi-governmental? APEC?, AAAS and similar organizations in other countries?

With input from the PSA Council and the Executive Board, the PSA Secretariat will produce a prioritized list of organizations.

Activity I.E. Develop a Program Portfolio.

If resources are available, it might be a worthwhile investment to hire a professional to develop the portfolio.

GOAL II: Build Capacity in Science and Technology in the Pacific Region

Activity II.B. Promote the Active Participation of Women and Other Underrepresented Groups in PSA Activities.

and

Activity II.C. Strengthen PSA Education and Mentoring Activities for Capacity Building.

To date the activities of the relevant scientific working groups have been primarily but not exclusively, the organizing of symposia at congresses and intercongresses and publishing proceedings.

Given resource limitations, can capacity-building activities be expanded? Should these efforts be (only/primarily) the work of one or more scientific working groups or should the goal be to diffuse capacity-building activities throughout the activities of the PSA?

In the future, are there ways in which the PSA's attempts at capacity building can be integrated more effectively into efforts at the national level?

The specific focus of the Division on Human Resources has been on women and underrepresented groups; acknowledging that this focus remains important, there are other concerns with respect to scientific capacity in the Pacific region. Which are the most important of these and what could/should PSA do about them? Are there ways in which the PSA can facilitate the involvement of scientists from countries with less well established Western scientific traditions in scientific activities within the region?

In addition to the sessions at congresses and intercongresses sponsored by the Committee on Science Education, what else might the PSA do?

Link junior and senior scientists cross-nationally?

Cooperate with other organizations?

Develop specific mechanisms to foster international exposure for younger colleagues?

Specific programs to involve younger scientists in international research networks and activities?

Activity II D. Develop Leadership Opportunities for Pacific Scientists within the PSA.

There are a number of questions concerning the inclusion of young and midcareer professionals in key positions in PSA leadership, PSA scientific working groups, and PSA activities. Important among them are the following:

How does PSA identify and tap this talent, especially women and minorities?
What will make it worthwhile for younger scientists to become involved, for example, career enhancement? opportunities for publication? exposure to cross-national research opportunities?

What is the appropriate balance between senior scientists with important links to, for example, national academies of science, and the involvement of younger, less established scientists in positions of leadership?

Activity II.E. Increase Student Involvement in the PSA.

It is obviously advantageous to have “student help” at the time of congress activities, but to the extent possible, students also should be given responsibilities and opportunities (including the opportunity to present scientific papers, which would give them valuable experience and contribute to their professional career development).

GOAL III: Encourage Science for Public Policy and the Common Good in the Pacific Region

Activity III.A. Develop a Focus on Policy Relevance in Congresses and intercongresses and other symposia and meetings.

The Strategic Planning Committee is aware that, as an international nongovernmental scientific organization, there many considerations with respect to how the PSA might proceed vis a vis science and public policy. The Committee recommends that the PSA Council make addressing these issues and the Association’s role in shaping policy a top priority. The committee would like for you to consider the following questions:

How are policy needs identified?

Should congress and intercongress themes have strong regional relevance? If so, should intercongresses address subregional themes?

Should having policy makers involved in direct and substantive ways be a goal of PSA?

What tensions might exist between national and regional perspectives? How could/should these be balanced?

Should the PSA only concern itself with science policy?

Activity III.B. Review PSA Resolutions.

The PSA Council also should review the procedures for passing resolutions. If the PSA is going to continue to make resolutions, what could make them more effective in influencing policy?

Activity III.C. Consider the Publication of High-Quality Policy-Relevant Materials.

Should the regular publication of policy-relevant material be a goal for PSA? What are the pros and cons? If so, what format should be used -- briefing papers? press releases? reports?

Because PSA is a nongovernmental organization with national membership, what mechanisms should be put in place for approval of policy positions and policy documents?

How would these documents be produced, funded, and distributed?

GOAL IV: Revitalize the PSA Organizational Structure and Processes

Activity IV.A. Include Island States and Island Scientists in PSA and Regional Scientific Activities.

The Strategic Planning Committee stressed that the Association has a particular role to play with respect to the involvement of Pacific Islanders in its activities. In recommending that particular attention be paid to identifying funding sources to facilitate such involvement, the Committee raises the following questions:

How should this “targeted funding” be related to other fundraising activities?

In addition to funding, what other mechanisms could be employed to involve Pacific Island colleagues?

Should a similar “special area” focus be created for other less developed parts of the region?

Activity IV.B. Build Pacific Island Research Capacity.

This obviously is linked closely with Activities IV.A, IV.C, and IV.D as well as II.A–II.E.

Activity IV.C. Explore Pacific Research Initiatives.

There was considerable discussion in the Strategic Planning Committee concerning PSA’s role in conducting research and whether it actually does research. The Scientific Activities Committee should consider the following:

Should the PSA have an organized program of Pacific Island research, promoting Science of the Pacific? If so:

How should themes be identified?
How should participants be recruited?
How would such activities contribute to human resource development in the Pacific Island region?
If the PSA did develop an organized program on Pacific Island research, what guidelines/policies would need to be developed? For example, should such research have a problem-oriented focus?
Does the PSA have, or could it develop, a strategic advantage with respect to attracting funding for PSA-sponsored Pacific Island research activities?
How can the PSA ensure broad-based Pacific Island input into defining research questions and developing research methodologies?

Activity IV.D. Hold Intercongresses in the Pacific Islands.

Should PSA have a policy on how frequently intercongresses are held in or offered to Pacific Island locations?

GOAL V: Increase Individual Participation and Involvement

Activity V.A. Develop an Adhering Organization Membership.

Are national academies of science or their equivalent the appropriate national members (as is currently the case)?
If not, what would be the alternative?
What guidelines should be given to adhering organizations concerning the involvement and responsibilities of members representing the adhering organization?
What kinds of relationships should be cultivated with national/international scientific organizations? Other entities?
What are the pros and cons of various membership categories with respect to both national stature and funding opportunities?
How can individual membership and active involvement be expanded (see Goal VI)?

Activity V.B. Establish National Committees.

Effective National Committees can contribute to and also be the result of Goal VI.

What can the PSA encourage do to encourage this?
Should National Committees be expected to submit a report of PSA-related activities annually?

Activity V.C. Engage the PSA Council.

Should Council members be responsible annually for preparing a brief annual report of PSA activities in their countries, in collaboration with the chair of their respective National Committees?

Activity V.D. Evaluate the Composition of PSA the Executive Board.

The function of all PSA office holders should be reviewed. For example:

Should the Secretary-Treasurer function be two separate offices?

Activity V.E. Evaluate the Structure of PSA Standing Committees.

At a minimum, what committees are necessary to accomplish what is laid out in the Strategic Plan?

What committees might be useful if additional resources become available?

How are these committees formed?

What is the relationship between the committees and the PSA Council? The committees and the scientific working groups?

In addition to the PSA Council and Executive Board, current Standing Committees include the Scientific Activities Committee, the Finance Committee, and the Structure and Statutes Committee. The following additional standing committees are recommended: International Program Committee, Cooperation and Collaboration Committee, and a Publications and Communication Committee. A Planning and Evaluation Committee may be created in the future. Membership and method of appointment will have to be considered by the PSA Executive Board and the by-laws modified to reflect these changes.

Activity V.F. Assess and Change the Secretariat.

Questions to be considered include:

Locus of secretariat?

Staffing of secretariat?

Internships?

Succession, performance evaluation, professional opportunities for personnel?

Role and responsibility of PSA officers?

Enhanced “virtual” (Web) presence and function?

Activity V.G. Address Additional Infrastructure Issues.

Questions include but are not limited to:

How does the PSA adjust to this?

This has implications, too, for the support of our key activity, congresses and intercongresses.

Activity V.H. Develop Funding and Financing Strategies.

Questions include:

Should the PSA be in the business of developing products (e.g., databases, research) for “sale”?

The Planning Committee further notes that the PSA Council has fiduciary responsibility for the financial affairs of the Association. The Finance committee should review an auditor’s report of Association finances on an annual basis and present its evaluation to the Executive Board. Active Council involvement in financial affairs may help to identify additional national sources of support for PSA activities.

Activity V I. Develop Guidelines for Assessment and Evaluation of PSA Activities and Programs.

Evaluation and assessment are critical, but demanding, aspects of effective programs and organizations. The Strategic Planning Committee recommends that the PSA Executive Committee seriously consider this as yet unaddressed challenge faced by the PSA. As resources allow, a standing committee for evaluation might be established or staffing capacity for evaluation incorporated into the Secretariat. The Structure and Statutes Committee should consider this as it addresses Goal V.

GOAL VI:

No additional comments.

APPENDIX III: Process Charts

1. Pacific Science Congresses and Intercongresses
2. Scientific Working Groups

Process Chart 1: Pacific Science Congress and Intercongress

	Task	Customer	Who	What	Where	Wh
STEP 1	Process Chart 1: Pacific Science Congress and Intercongress Soliciting host country	PSA	Any member of Executive Board after consultation with Board	Interest of host countries, organization, facilities etc.		At l befc Con Inter
STEP 2	Review proposal	PSA Council	Executive Board, International Planning Committee Finance committee	<ul style="list-style-type: none"> Compare criteria (Executive Board and Council will establish criteria) Establish priorities, recommendations 		At l befc mee dec
STEP 3	PSA Council makes decision or choice	PSA	PSA Council	Vote on recommendation of Committees' evaluation	Congress or Intercongress or special meetings	At l befc 3 ye Inter
STEP 4	Contact host country	Host country	President of PSA	Acceptance		At l befc 2 ye Inter
STEP 5	Planning for Congress or Intercongress	PSA Executive Board	Adhering organization of host country Honorary advisors, previous Congress organizers PSA International Planning Comm. PSA Finance Comm. PSA Activities Scientific Comm.	Appoint Secretary General and other committee members organize meetings		At l befc 2 ye Inter
STEP 6	Producing Congress or Intercongress plan	PSA Executive Board	Host country Secretary General & Local Organizing Committee International Planning Committee	Scientific programs Budgets Invited speakers Awards Timetables <ul style="list-style-type: none"> Announcement/Circular Paper solicitation Logistics Participants Fund raising plan 		Vari
STEP 7	Review and approval of plans	PSA & Hosting country	International Planning Committee (review) Executive Board and PSA Council	Suggested modifications or approval		At l befc 1 ye Inter
STEP 8	Organize Congress	PSA	Secretary General, Local Organizing Committee	Detail organization & program plans including budgets, registration deadlines, instruction to authors, logistics, the plans for announcements		Vari

STEP 14	Review of reports and proceedings; Evaluation of meeting including policy impacts	PSA Science community	PSA Executive Board Scientific Activities Committee Finance Committee International Planning Committee prepares report	Evaluation document		Con mor Con
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Process Chart 2 : ‘Scientific Working Groups’/Scientific Committees, Task Forces/Divisions

	Task	Customer	Who	What	Where	Whe
STEP 1	Choice/Mapping of relevant theme	PSA	Scientific Activities Committee	Establish criteria, identify themes, evaluate themes	During Congress or intercongress	Once
STEP 2	Council approval of working group theme	PSA	Scientific Activities Committee	Presentation to Council	During Congress or intercongress	Once
STEP 3	Soliciting participants	PSA Council	Scientists, Council members, Scientific Activities Committee	Describe activities, purposes, products	Meetings, Bulletin, Website	After decis
STEP 4	Formation of a Working group; Choice of chair	PSA Council, Scientific Activities Committee	Potential working group members in collaboration with Planning committee and chair	A plan for action	Home institution of the chairperson	
STEP 5	Scientific Activities Committee approval of plan	PSA Council	Working group chair	Working group chair presents plan to Scientific Activities Committee for approval	Scientific Activities Comm. Meeting	
STEP 6	Council approval	PSA	Council	Working group chair and Scientific Activities Comm. Chair present plan	Council meeting	
STEP 7	Establishing criteria-evaluation & elevation (to Task Force or Scientific Comm.	Council	Scientific Activities Committee	Determine criteria	Scientific Activities Committee Meeting	
STEP 8	Review of Progress	Council	Scientific Activities Committee	Working group chair reports	Scientific Activities Committee meeting	
STEP 9	Request for action	Council	Scientific Activities Committee chair	Report on Committee decision on evaluation/elevations	Council meeting	
STEP 10	Decision on Action	PSA	Council	Group discussion	Council meeting	