SECRETARIAT OF THE PACIFIC COMMUNITY
SECRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE

Applied Geoscience and Technology Division (SOPAC)

October 2010

STRATEGIC PLAN 2011–2015

Panasonic

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Applied Geoscience and Technology Division (SOPAC)

STRATEGIC PLAN 2011–2015

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Foreword by the Chair

On behalf of the Government of Vanuatu – the current Chair of the SOPAC Governing Council – I am pleased to introduce this five-year Strategic Plan for the core work programme of the Pacific Islands Applied Geoscience Commission (SOPAC) for 2011–2015.

SOPAC is to become integrated into the Secretariat of the Pacific Community with effect from 1st January 2011. Henceforth, SOPAC will be known as the Applied Geoscience and Technology Division of the SPC. As such this plan represents a "bridge" from the past into the future … from SOPAC "The Commission to SOPAC "The Division".

The last work programme five-year strategic plan for SOPAC "The Commission" concluded in 2009. This new plan for SOPAC "The Division", approved by SOPAC Council and endorsed by the CRGA of SPC in October 2010, will be the first strategic plan for the Applied Geoscience and Technology Division of the SPC. I must emphasise at the outset that the plan is to be treated as a "living document".

It is vital that the new Division begins its life with a plan that builds on past achievements. As Members we need to be able to readily see the links with the past and thereby be able to guide our attention to the contents of this plan and the benefits it will provide for us in the future. The three technical work programmes: Ocean and Islands, Water and Sanitation, and Disaster Reduction provide that guidance.

For the future, the required annual internal and ongoing reporting and monitoring requirements supported by the Programme Monitoring and Evaluation Group that SOPAC has established will inform on progress with delivery of the plan and its accompanying annual work plans and budgets. Opportunity exists also to have the plan and its work programme directly accountable at the national level through the in-country SPC Joint Country Strategies process.

In this regard I would highlight that the Division's focus is to deliver outputs while we Members are responsible to use the outputs to deliver outcomes to contribute to economic growth and development at the national and regional level, and ensure that the overall success of this five-year Strategic Plan by the end of 2015 can be measured against baseline information.

I also take this opportunity to introduce the Strategic Plan and its work programmes to the Members of SPC who have not formerly been Members of SOPAC. In particular, in due course I feel sure that the Commonwealth of the Northern Marianas Islands, Pitcairn, and Wallis and Futuna will derive benefits from the work programme, while American Samoa, New Caledonia, French Polynesia and Tokelau can look forward to stronger links.

The Heads of the Applied Geoscience and Technology Meeting will be responsible for the governance structure to ensure service delivery is maintained and, if possible, strengthened. Through this mechanism we all, Members, Development Partners and the scientists in the STAR Network, have a responsibility to work with the Division to ensure that integrated scientific and technical solutions are indeed meaningful.

With these words, I commend to you this Strategic Plan 2011–2015 for the Applied Geoscience and Technology Division of SPC.

Honourable Paul Telukluk

Minister of Lands, Geology, Mines, Energy, and Rural Water Supplies, Vanuatu

October 2010

Foreword by the Director

Preparing this Strategic Plan, as a "living" document, as part of the requirements of the transfer and integration of the core work programme of SOPAC "The Commission" (Pacific Islands Applied Geoscience Commission) to SOPAC "The Division" (Applied Geoscience and Technology Division of SPC) has been both a challenging and rewarding process. I would like to take this opportunity to thank all those representatives of Members, SPC and SPREP as well as SOPAC staff who gave their time to engage in this task.

During the first half of 2010 three strategic planning meetings were convened supported by an independent facilitator, and contributions were received from a wide range of Secretariat staff, Member representatives, and representatives from SPC and SPREP.

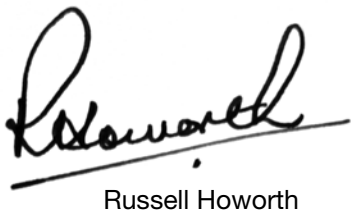
Staff members worked tirelessly between these meetings brainstorming and editing the earlier draft which was circulated to Members for comments in late July. Following responses from Members, a revised draft was prepared in September and circulated back to Members in time for consideration at the SOPAC Council Meeting in late October where it was approved.

The SPC/CRGA in late October endorsed the plan as the first for the new Applied Geoscience and Technology Division of SPC, which will be fully operational 1st January 2011 and will be located on the former SOPAC Secretariat campus on Mead Road, Suva, Fiji.

The new Strategic Plan outlines the core work of the SPC Applied Geoscience and Technology Division including its three technical work programmes, five technical support services and its on-campus corporate service.

The plan, I hope, provides clear links with the work of the former SOPAC while also mapping a way forward to achieve national, and regional outcomes which can be measured and thereby progress quantified. A key initiative in articulating this is the inclusion of four high order 'key result areas' (KRAs) that link the work of the technical programmes and technical support services to deliver integrated outcomes. The inclusion of these KRAs also provides a strong entry point for interlinkage and synergy with the work of the other SPC Divisions, as well as other stakeholders nationally, regionally and internationally.

I hope our Development Partners will recognise the value to Members of this new strategic approach and agree to support it as a means of improving service delivery that can be quantified. Over time I would therefore anticipate a shift to more programme-based funding rather than project-based funding.



Russell Howorth
SOPAC Director

October 2010

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1

INTRODUCTION TO THE APPLIED GEOSCIENCE AND TECHNOLOGY DIVISION (SOPAC Division of SPC) AND ITS STRATEGIC PLAN 2011–2015

Crossing the Bridge

The SPC Applied Geoscience and Technology Division (SOPAC Division of SPC) is new, and begins operation on 1st January 2011.

The mission of the SPC is "to help Pacific island people position themselves to respond effectively to the challenges they face and make informed decisions about their future and the future they wish to leave for the generations that follow".

The goal of the Applied Geoscience and Technology Division is to apply geoscience and technology to realise new opportunities for improving the livelihoods of Pacific communities.

In the SOPAC context, geoscience means any science concerned with the Earth. This includes geological, physical, chemical and biological processes that occur at the earth's surface or in its interior. It includes the tools used in SOPAC to assess whether the use of resources is viable, and to study natural disasters and their impact on island communities.

The SOPAC Division of SPC has been established as an outcome of the regional institutional framework reform process called for by the Pacific Island Forum Leaders over recent years. Part of

that process was to transfer and integrate the core-work programme of the Pacific Islands Applied Geoscience Commission (SOPAC 'The Commission') into the SPC.

The purpose of establishing SOPAC "The Division" is to ensure the preservation of the identity of the SOPAC work programme that has built up an excellent reputation, amongst both Members and donor partners over nearly 40 years.

SOPAC "The Commission" Governing Council has agreed to this, and both the Commission and SPC have agreed that the Division will operate from the existing campus of the SOPAC Secretariat on Mead Road, Nabua, Fiji. Currently the offices on this campus accommodate close to 100 staff.

SOPAC "The Commission" has come a long way since its establishment in 1972, first as a United Nations Development Programme Regional Project, then in 1990 as an independent inter-governmental organisation, and from 2011, to be a new Division in the SPC. Initially the work programme focused on the assessment of deep-sea minerals and hydrocarbon potential. Over the years, the work programme of SOPAC expanded to include the assessment of the potential of ocean and onshore mineral resources, coastal protection and management, and geo-hazard assessment. Over the past decade, its mandate broadened further to include water, wastewater, sanitation, energy, and disaster risk management.

Through 2010, SOPAC "The Commission" Governing Council has reviewed its 2005–2009 Strategic Plan. In doing so, Council has overseen its Secretariat prepare the successor strategic plan for the core work programme, to become the 2011–2015 Strategic Plan for the Applied Geoscience and Technology Division of the SPC. This plan will be a "living document."

The review process has been evidence based. It commenced at the 2009 Annual Session of SOPAC Governing Council where the achievements of the 2005–2009 plan were reported on together with specific examples. Work undertaken in 2010 commenced with an analysis of strengths, weaknesses, opportunities and threats at the programme level.

Across the Bridge

This plan describes the strategic areas of service delivery that build upon the services that SOPAC has delivered to its Pacific island country Members over the past decade. It places emphasis on the provision of measurable outcomes based upon integrated solutions across the programmes. By extension, this approach will be developed and strengthened with other divisions of SPC in particular the marine resources (Fisheries, Aquaculture, and Marine Ecosystems: FAME), land resources (Land Resources Division), and public health divisions.

Furthermore the plan places an emphasis on ensuring robust monitoring and evaluation systems and processes are in place which link together the five-year plan and the annual work plan and budget in order to ensure at any one time the ongoing activities and related outputs of the work programme are measurable and tracking towards the longer term outcomes of the plan.

It is key that the division through implementing this plan builds on the ongoing new management tools within the SPC: (i) the long term sustainable financing exercise; and (ii) the Joint Country Strategies. In the context of the long term sustainable financing exercise, the SPC Subcommittee has already agreed that the functions of SOPAC be high priority with the future SPC work programmes.

To fulfill its purpose under this Strategic Plan, the three technical work programmes of SOPAC 'The Division' will be supported:

- Ocean and Islands
- Water and Sanitation
- Disaster Reduction

These three programmes share common technical support services:

- Natural Resource Economics
- GIS and Remote Sensing
- Technical Equipment and Services
- Data Management
- Publications and Library

2

GEOGRAPHIC, SOCIO-ECONOMIC, AND SOPAC CONTEXT

Geographic Context

With the establishment of the SOPAC "The Division" of the SPC, all 22 developing Pacific Island Countries and Territories (Table 1) will have access to the services provided by the existing technical programmes. The Pacific Island Countries and Territories are dispersed over a large geographical area and differ in size, population, resource base, and development constraints and prospects. Despite these quite dramatic overall differences, they share a common characteristic of vulnerability. Furthermore, this vulnerability has increased over the last decade, whilst building resilience has not kept pace. Vulnerability, in this context, is used in its broadest context, whether it results from internal or external issues, or whether it is economic, social, environmental, or governance related.

Socio-economic Context

It is absolutely necessary to acknowledge at this time, the ongoing efforts by the Pacific Island Countries and Territories, (many of which have been with their own limited resources), to respond to calls and commitments through global agendas such as the Millennium Development Goals and the Mauritius Strategy. Despite these efforts, there remains a critical issue. That is, many of the hard-earned gains of the past two to three decades may be eliminated, by the adverse impacts of climate change, and/or the immediate impacts of natural disasters, together with the impacts of the recent food, fuel and financial global crises.

Table 1: Pacific Island Countries and Territories.

	LAND AREA (km^2)	EEZ (km^3)	POPULATION (estimate for mid-2010)	GDP/capital (USD)	GDP Growth Rate 2007 (estimated)	Human Development Index
American Samoa	200	390 000	65 896	8 000	-1.9	
Commonwealth of Northern Mariana Islands	471	1 823 000	63 072	16 494	0.5	
Cook Islands	237	1 830 000	15 529	10 007	0.4	0.829
Federated States of Micronesia	701	2 978 000	111 364	2 183	0.1	0.716
Fiji Islands	18 272	1 290 000	847 793	3 182	-3.9	0.718
French Polynesia	3 521	5 030 000	268 767	18 000		
Guam	541	218 000	187 140	22 991	0.3	
Kiribati	811	3 550 000	100 835	656		0.597
Marshall Islands	181	2 131 000	54 439	2 851	2	0.708
Nauru	21	320 000	9 976	2 820	0.2	0.637
New Caledonia	19 103	1 740 000	254 525	15 000		
Niue	259	390 000	1 479	5 854		0.821
Palau	444	616 000	20 512	8 423	5.5	0.810
Papua New Guinea	462 840	3 120 000	6 744 955	1 062	6.2	0.437
Pitcaim	5	800 000	66			
Samoa	2 935	120 000	183 123	2 860	4.7	0.762
Solomon Islands	28 370	1 340 000	549 574	1 100	6.3	0.579
Tokelau	10	290 000	1 165			
Tonga	650	700 000	103 365	1 874	-3.5	0.737
Tuvalu	26	900 000	11 149	1 563	3	0.691
Vanuatu	12 190	680 000	245 036	1 908	4.7	0.640
Wallis and Futuna	255	300 000	13 256	3 800		
Total	**552 043**	**30 546 000**	**9 853 016**			

Source:

SPC and SOPAC databases

UN Statistics Division National Accounts Main Aggregates Database

Draft Pacific Human Development Report 2009

The vulnerability of Pacific island societies is increased because communities continue to be dominated by increasing exposure to the encroaching outside world, alongside their diminishing ability to respond. A major disadvantage is the small population base that tends to lead to a narrow range of on-island resources and skills. Dependence on international trade, combined with limited domestic markets for local products, creates vulnerability to global developments, and restricts employment and livelihood opportunities at the national level. Growing pockets of high population density increase the pressure on limited resources, resulting in, for example, overfishing, freshwater depletion, pollution and poverty.

Despite these challenges and vulnerabilities, the isolation of small islands in Pacific Island Countries and Territories has also produced some resilience within these communities, with coping capacity developing out of traditions, cultures and social structures. This strength is founded on extended family values and communal mechanisms that link to national systems.

The SOPAC Context

For nearly 40 years, the SOPAC work programme has established a reputation for excellence, placing an emphasis on applying technical knowledge to improving the livelihoods of Pacific people. Initially, the focus was on mineral and hydrocarbon resources assessment in offshore areas. With over 90% of the region being ocean, the economic potential of these resources was, and still remains very large. Today, despite the global economic crisis, there is a well-established, renewed interest in the assessment of the seabed mineral resources of many Pacific Island Countries and Territories. It is crucial to provide guidance to Pacific Island Countries and Territories, not only on the scientific and technical aspects of these potential resources, but also on establishing sound national policy and regulatory frameworks. In this context, the surveying and subsequent legal work, to complete the establishment and declaration of sovereign maritime boundaries for all Pacific Island Countries and Territories is most urgent.

The contribution of SOPAC to the scientific and technical, particularly geological understanding of the underlying root causes of environmental vulnerability remains critical. As vulnerability increases, in particular to climate change and other natural hazards, sound, knowledge-based adaptation strategies are needed, in the context of coastal and near-shore environments, water and sanitation, and disaster risk reduction.

In the generally small communities throughout the Pacific Island Countries and Territories awareness-raising, capacity building, especially at the technical level, and capacity supplementation, particularly at the professional level, will remain important across all the SOPAC work programmes.

3

VALUES

The work of the SOPAC Division will be conducted in accordance with the following values which are based on those in the 2007–2012 SPC Corporate Plan: The following reflect the current SPC values (bold text) together with supporting text in the context of the work of the SOPAC Division.

In putting people first, the SOPAC Division will acknowledge and embrace the diversity of cultures and people of the Pacific Island Countries and Territories, and the opportunity provided for learning and growing together, in a period of accelerated and unprecedented change.

In focussing on the priorities of Pacific Island Countries and Territories, the SOPAC Division will strive to promptly provide evidence-based advice that is based upon accurate data and unbiased. In this regard, the STAR (see Section 6) relationship with the Division will be preserved, strengthened, and the concept promoted to the wider SPC community.

In taking an outcome-driven approach, the SOPAC Division will strive to ensure Pacific Island Countries and Territories demonstrate the use of outputs from the work programme as contributing to achieving outcomes in national development and that this can be measured.

In contributing to the alleviation of absolute poverty, the SOPAC Division will work with all stakeholders in order to develop and promote affordable and innovative technologies and solutions.

In committing to the three pillars of sustainable development in Pacific Island Countries and Territories, the SOPAC Division will apply resource-economics-tools to add value to its resource assessment results, in order to influence national policies in directions that minimise the effects of resource exploitation on the environment and society, and thereby contribute towards sustainable economic development.

In fostering strategic alliances, the SOPAC Division will work to preserve and maintain quality win-win partnerships at all levels that can be shown to benefit Pacific islanders in the areas of their greatest need.

In strategic engagement and analysis, providing options for response to current and future opportunities; and addressing regional and international developments, the SOPAC Division will recognise the general lack of reliable and accurate datasets and will continue to work with countries to improve this circumstance in order that strategic engagement at all levels is underpinned by rigorous analysis based upon accurate data.

In emphasising results and accountability, the SOPAC Division will ensure reporting to Members is through a robust monitoring and evaluation system which links together the five-year plan and the annual work plan and budget in order to ensure at any one time the ongoing activities and related outputs of the work programme are tracking towards the longer term outcomes of the plan.

On operational transparency, the SOPAC Division will conduct itself at the highest levels of integrity, transparency and accountability and the work will be based on a sound understanding of the strengths, needs and challenges facing each of the Pacific Island Countries and Territories, and will be undertaken in a collaborative manner with our development partners and other stakeholders, recognising the specific skills and experiences that the Division can contribute to providing holistic and integrative solutions requiring multidisciplinary approaches..

On commitment to gender equity and equality, the SOPAC Division will work towards ensuring a male/female balance in all aspects of its activities.

On the pragmatic approach and keeping it simple, the SOPAC Division will make extensive use of imagery, and information and communications technology, to translate scientific and technical concepts in forms that will assist understanding by non-technical audiences.

On commitment to excellence, the SOPAC Division will strive for the continued trust in its products and services, in its ability to deliver, as well as its flexibility in delivery. In part this commitment to excellence in this plan will be measured annually by outputs and indicators in the annual work plan and budget, and will be monitored by the mid-term and end of term review of the plan.

4

IMPROVING SERVICE DELIVERY, PRIORITY SETTING, FUNDING, REPORTING, MONITORING AND EVALUATION

Improving Service Delivery

Leaders welcomed the signing at their Plenary Session on 4 August 2010 of the Letter of Agreement between SPC and SOPAC relating to the final transfer of the core functions. In doing, so Leaders acknowledged the importance of ensuring adequate resources for SOPAC's functions beyond the Regional Institutional Framework (RIF) review process to ensure that the overall level of service is not diminished.

The goal, purpose and key result areas of the Division link closely to those of the SPC and will serve as the framework for an annual work plan and budget for the five years from 2011 to 2015, through which the opportunities for improving service delivery will be developed and tracked by a robust monitoring and evaluation process that links the long-term outcomes of the plan to the ongoing activities and outputs of the annual work plan and budget.

Staff objectives will be captured in new job descriptions, which will reflect the function of each position and describe the contribution to the KRAs, thus ensuring strong links between the strategic and operational levels.

Mindful of the resource implications, the opportunities for improved service delivery (but no assurances) once SOPAC "The Division" of SPC is fully operational include:

- The strengthening of existing synergies and inter-linkages with current SPC divisions, especially marine resources, land resources and health.
- The development of new synergies and inter-linkages with current SPC programmes, for example, Regional Media Centre, and Human Development (Culture, Youth and Gender Equality).
- Having more direct and effective access in-country through national planning and participation in the SPC Joint Country Strategies (JCS) work.
- Working through the SPC decentralisation practice of subregional and country offices.

Priority Setting

In a five-year strategic plan, it is important that priorities should not be set solely to address current demands. They must also be forward looking, flexible, and capable of taking into consideration new and emerging demands, and adapting to an ever-changing environment. Outcomes by the end of the full cycle of the plan need to be identified and deliverable, through a distinct and measurable set of baseline data and outputs described in the annual work plan and budget process.

Key parameters in priority setting are based on a combination of current and forward-looking national, regional and global interventions. Recognition of the linkages between each level is considered important in this process: specifically, national needs and requests, regional policies and strategies, as well as global agreements and processes.

Setting priorities at a national level takes direct country consultations and requests into consideration. SOPAC "The Division" will benefit from being able to participate in the SPC Joint Country Programme Strategies consultative process.

For over thirty years, SOPAC "The Commission" has played a key role in the definition of regional policies and strategic plans, and as such, has had something of a dual role: delivering an annually approved work plan based on the requests and needs of Members while providing a strategic, long-term overview. It is this long-term strategic priority setting which defines these strategies. Most importantly, the Pacific Plan linked to the Cairns Compact currently provides the regional modality for priority setting.

Priority setting within the global context has been based on awareness and recognition of support for development in general, and the special case of Small Island Developing States. These general development priorities appear in the Millennium Declaration, the Millennium Development Goals (specifically the MDG+10 Review, September 2010) and the UN Secretary General's Road Map for Implementation. Specific priorities for small islands are emphasised in Chapter 7 of the Johannesburg Plan of Implementation of the World Summit on Sustainable Development and the Mauritius Strategy for Small Island Developing States (2005) and the Mauritius Strategy Review (September 2010).

Funding

During 2010 and 2011, SPC is undertaking a Long Term Sustainable Financing Exercise, in which SOPAC is participating. The expectation is that there will be a substantive move to increase security of funding in the long term by a move from project-based to programme-based support.

Nonetheless, there are two anticipated means of funding for SOPAC "The Division", which are similar to those that SOPAC "The Commission" has enjoyed:

- By direct support from funds solely at the discretion of the Division.
- By support, in cash and in kind, from development partners through initiatives of varying scope and size, and either regional or bilateral in nature.

Opportunities are also anticipated from time to time to generate funds from income-earning activities on a cost-recovery basis. These will be considered on a case-by-case basis in conjunction with the country concerned, and in accordance with agreed guidelines.

Of particular importance when considering strategic programme planning, is that emerging priorities may not always have an identified means of delivery. This provides a very effective means to identify gaps in the future financial security of the Division, thus facilitating consultations with development partners.

Reporting, Monitoring and Evaluation

The SOPAC Division will ensure reporting through a robust monitoring and evaluation system which is underpinned by measurable baseline data, links together the five-year plan and the annual work plan and budget in order to ensure accountability.

These three levels of assessment can be interpreted as linking to the hierarchical structure of the strategic plan. At any given time, a number of activities and tasks will be in progress to realise outputs and ultimately outcomes identified to address the priorities and goals of each programme.

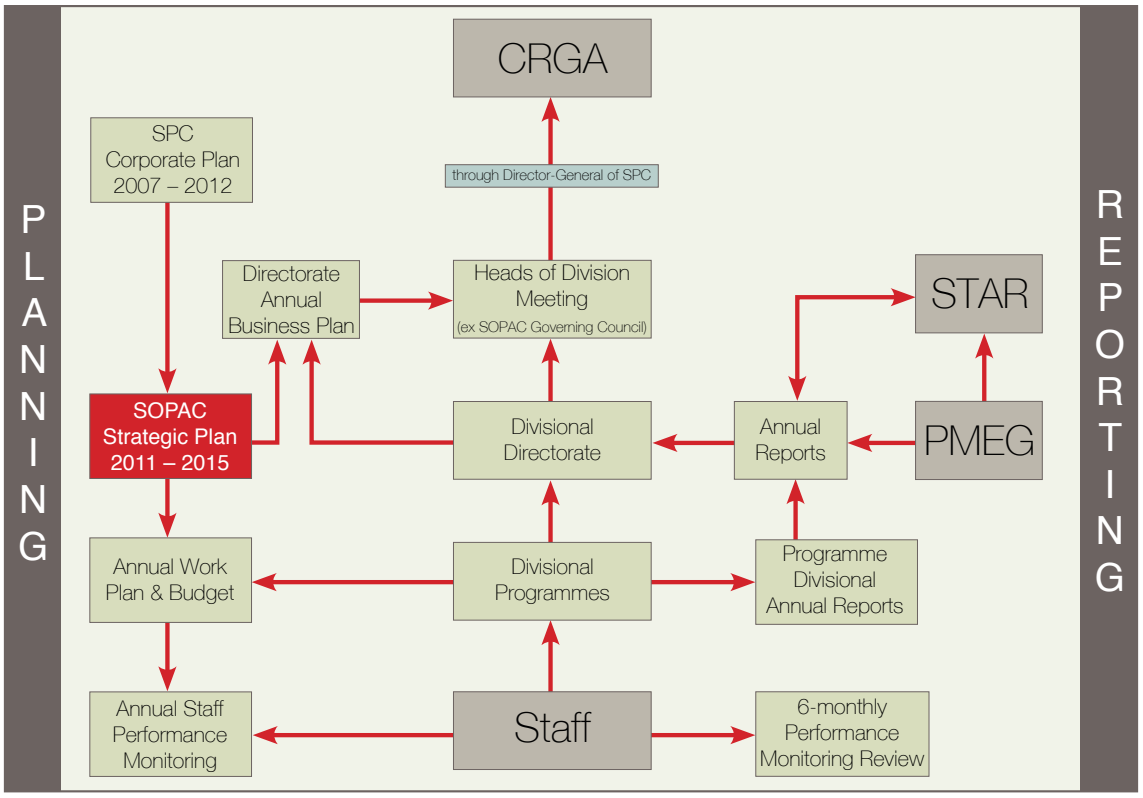
The Division Director will provide the output level of reporting on an annual basis through the annual work plan and budget to the Heads of Applied Geoscience and Technology Meeting, SPC/CRGA and Conference, major development partners.

This annual required internal reporting to Members will be supported by an independent process the Programme Monitoring and Evaluation Group (PMEG) process developed by SOPAC "The Commission". The PMEG will also continue to look at the medium to longer term aspects of work programme delivery within the context of the strategic plan.

It is anticipated the new Heads of Applied Geoscience and Technology Division will, in effect, provide a forum similar to that of the Technical Advisory Group (TAG) of SOPAC 'The Commission' supported by external advisers. It will thereby provide an opportunity for Members to have from external technical advisers a collective, direct, effective mechanism to monitor and evaluate programme implementation, and delivery of outputs against outcomes. This will complement the reviews undertaken at national level as part of the Joint Country Strategy process.

To ensure the plan remains on track to deliver against the outcomes, a transparent, independent and cost-effective mid-term evaluation process will be implemented in the second half of 2013, and be followed by a full evaluation towards the end of the five years.

An annual Staff Performance Monitoring System underpins all of the above.



5

GOAL, PURPOSE, KEY RESULT AREAS AND MEANS OF DELIVERY

This Strategic Plan 2011–2015 is a "living" document. The goal, purpose, key result areas and means of delivery are consistent and complementary to those of the SPC as a whole. Nonetheless they are sufficiently distinct so as to reflect the particular role and comparative advantage that the work programme of the SOPAC Division will deliver for the Members.

GOAL

Apply geoscience and technology to realise new opportunities for improving the livelihoods of Pacific communities.

PURPOSE

To ensure that Pacific Island Countries and Territories are better able to:

- Monitor and assess natural resources, systems and processes.
- Develop, manage and govern their natural resources.
- Manage vulnerability and risks in their countries.

Therefore at the strategic level, the SOPAC Division will engage with Pacific Island Countries and Territories under three key result areas that are primarily based on the purpose, together with a fourth key result area focusing on optimising service delivery and best corporate practices for the Division.

KEY RESULT AREAS, OVERALL OBJECTIVES AND OUTCOMES

The four Key Result Areas (KRAs), their overall objectives and outcomes (Table 2) which the work of the SOPAC Division will address are as follows:

- **KRA 1: Natural Resources, Systems and Processes Monitored and Assessed**
- **KRA 2: Natural Resources Developed and Managed and Governance Strengthened**
- **KRA 3: Vulnerability and Risks Managed**

KRAs 1 – 3 represent external service delivery to provide scientific and technical advice and support to Member countries and territories.

- **KRA 4: Service into Member Countries and the Division Efficiently and Effectively Delivered**

KRA 4 represents internal corporate management mechanisms to ensure optimal delivery of services under KRAs 1 to 3; and that best corporate practices are observed and utilised in delivery of the services.

MEANS OF DELIVERY

The work of the SOPAC Division Strategic Pan will be delivered through an annual work plan and budget that identifies these three KRAs across:

- three technical work programmes: Ocean and Islands Programme; Water and Sanitation Programme and Disaster Reduction Programme; and
- five technical support service areas: Natural Resource Economics, GIS and Remote Sensing, Technical Equipment and Services, Data Management, Publications and Library.

Over the five-year period of the plan the technical work programmes will each contribute to achieving the outcomes of the three technical KRAs. Specific activities and outputs for each of the technical work programmes will be described in the annual work plan and budget for each programme which, together with the technical support services will operate synergistically to deliver optimal integrated scientific and technical solutions that are measurable.

Capacity Building and Training

Invariably work carried out by the three technical programmes will have capacity building components to better address the primary purposes of the Division. Capacity building will be carried out through on-the-job training for Member country personnel when supporting professional staff Members in-country; and also through the establishment wherever/whenever possible of a variety of training modalities including but not restricted to the following:

- **Certificate in Earth Science and Marine Geology Course (Restablished)** to provide for the continued training and development of skills and background knowledge required for technicians in mineral and water resource, coastal development, disaster risk management and environment departments throughout the region.
- **Scholarships** to provide first degree training in geosciences, engineering and hazard assessment.
- **Fellowships** to provide individual training attachments at the Secretariat for Member country personnel; inclusive of onboard ship training and on-the-job training at places other than the Secretariat or the island country national's own home country.
- **Short courses, Workshops and Country Seminars** to provide group training opportunities of less than two weeks duration on a specific SOPAC divisional work programme activity or to address a particular island country's specific training need.
- **Management Training and Development** to provide the opportunity for one young scientist from each Member country to attend the SOPAC Division annual meeting with a senior national representative. The cadet is expected to gain experience in the operations of the Division and the management of their respective country work programmes through interaction with technical experts.

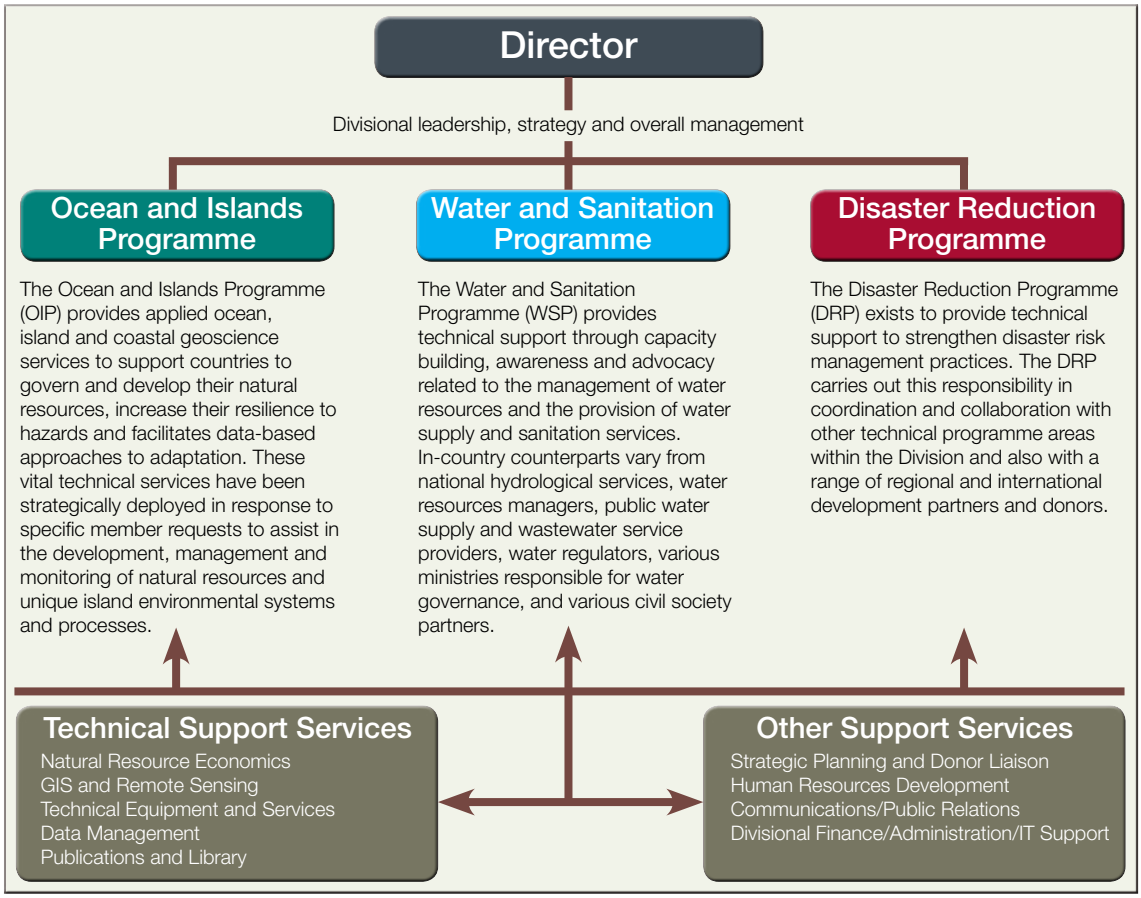


Table 2 – KRAs for the SOPAC Division.

KEY RESULT AREA (KRA)	OBJECTIVE OF KRA	OVERALL OUTCOMES by 2015
KRA 1: Natural Resources, Systems and Processes Monitored and Assessed	This KRA aims to improve the collection of information on, and monitoring of, natural resources, systems and processes and strengthen national and regional capacity to analyse and assess this information for data based solutions and informed decision making and responses	• More accurate and timely data and information collected • Strengthened capacity to assess, analyse, and monitor natural resources, systems and processes • Improved evidence-based solutions • Improved availability of information • Strengthened networks and institutions
KRA 2: Natural Resources Developed and Managed and Governance Strengthened	This KRA aims to improve the development, management and governance of freshwater, minerals, island and oceanic resources to support sustainable development and livelihoods	• Improved development and management of freshwater, hydrocarbon, minerals, island and oceanic resources • Increased in-country capacity to manage the development of natural resources • Improved institutional arrangements for natural resources management
KRA 3: Vulnerability and Risks Managed	This KRA aims to provide effective technical and scientific solutions to inform disaster risk management and climate change adaptation as a means of supporting sustainable development	• Robust disaster risk management and climate change adaptation solutions provided • Disaster risk and climate risk management mainstreamed into development planning and budgeting processes • Increased capacity in-country for informed decision making in the management of vulnerability and risks
KRA 4: Service into Member Countries and the Division Efficiently and Effectively Delivered	This KRA aims to improve the delivery of the SOPAC Division services through the sound application of generally accepted principles of corporate best practice	• Improved performance planning and accountability • Increased opportunities for exchange and learning within and across all programmes; Members, and all other stakeholders • Services and products delivered within budgeted levels and supported by a sustainable financing strategy endorsed by donors • Increased awareness and understanding of SOPAC services • Strengthened enabling environment for enhancing the delivery of services • Staff welfare and safety improved and maintained • Increased commitment to, and incidences of, co-programming and joint priority setting within the Division, with other SPC divisions and external partners

6

STAR: A KEY PARTNERSHIP FOR THE DIVISION

Over the past 25 years, SOPAC "The Commission" has developed the Science, Technology and Resources (the SOPAC/STAR) Network (STAR); an independent network to support the delivery by the international scientific community of new and appropriate science and technology to the region. In this, the international community of scientists and technologists provide a substantial cost-free service to the region worth tens of millions of dollars annually through inter-alia the costs of field surveys, including those for the deployment of large research vessels, institutional laboratory and library costs and salaries.

The establishment of SOPAC "The Division" of SPC enables the STAR to associate itself with the SPC. SPC voiced 'unequivocal' commitment to providing the opportunity to STAR to continue and expand its role and encourages STAR to hold its regular meetings together with the Heads of Applied Geoscience and Technology Meeting (the Technical Advisory Group for the new SOPAC "The Division").

STAR, being an independent, informal and entirely voluntary group of scientists will be encouraged through its Chair to consider the SOPAC merger with SPC as an opportunity for becoming a premier scientific conference of the Pacific Basin. The expansion of the role of STAR under the auspices of SPC will be pursued to extend its benefits to an expanded Membership and to include other major areas within SPC's mandate, for example forestry, agriculture and fisheries.

7

OCEAN AND ISLANDS PROGRAMME

7.1 Rationale

The Ocean and Islands Programme (OIP) provides applied ocean, island and coastal geoscience services to support countries to govern and develop their natural resources, increase their resilience to hazards and facilitates data-based approaches to adaptation. These vital technical services will be strategically deployed in response to specific Member requests to assist in the development, management and monitoring of natural resources and unique island environmental systems and processes.

The unique range of technical services that OIP will deliver in the region include the following:

- Ocean, coastal resource and onland characterisation, resource especially mineral resource use solutions, monitoring and development.
- Provision of science-based ocean and coastal policy and governance support and advice.
- Provision of strategic communications and advocacy for ocean, coastal and onland mineral resource policy.
- Strategic alliances with regional and international partners in technical, research and development assistance relevant to Members.

- Capacity building via specific initiatives or through “hands-on” joint implementation of works.
- Science-based vulnerability assessments particularly in shoreline and coastal zones; Science-based adaptation responses.
- Continued secure investment in instrumentation, tools and support services as the only regional technological facility in geoscience.

OIP maintains and delivers a range of specialist skills, tools and services through flexible, integrated approaches specifically designed to meet the needs of Members communities and environments. OIP is committed to bringing such services to Members in an effective and timely manner which is appropriate to contemporary needs and aspirations and continually strives to provide opportunities for sustained “hands-on” capacity building in all sectors of ocean and island applied geosciences. OIP will continue to create, maintain and disseminate geoscience knowledge to provide technical advice to PICT Governments and to support policy development and decision making.

The strong applied geoscience capacity of OIP also provides support and advocacy of scientific and research interaction with other regional and international technical entities. The OIP also maintains a number of unique research and development partnerships acting as a conduit for improved understanding of Members needs to development partners and the international arena and conversely assists in the delivery of development assistance and international research to Members at an appropriate applied level.

7.2 Critical Issues

Coastal Development, Urbanisation and Vulnerability

The small size and traditional settlement patterns of Members commonly results in an almost total concentration of infrastructure, development, dwellings, recreational facilities and food production within coastal, indeed shoreline margins of islands. These principally coastal communities are then reliant upon healthy coastal zone environments for coastal protection and food security. Resilient coastal zones and shorelines are, in turn, dependent upon living reef systems for continued mediation of wave energy and many are also dependent on reefs for ongoing supply of sediment for beach and land building processes.

Continued human trends of increased population, poverty, peri-urban and urban development, combined with changing aspirations, lifestyles and economic growth are creating significant environmental and development challenges. For example, poorly planned coastal zone development, inappropriate settlement patterns and/or lack of adequate infrastructure and increasing poverty are raising coastal management and coastal vulnerability issues to among the most urgent in the region today. These factors when combined with common issues such as urbanisation, poor liquid and solid waste management, and poorly managed or overexploitation of coastal resources, place enormous untenable strain on coastal marine environments and systems.

Pacific Islands are exposed to a wide range of natural hydro-meteorological, oceanographic and tectonic hazards which, in many cases, manifest as extreme sea levels and wave phenomena, leading to inundation and wave impacts. Given the proximity of the majority of Pacific island cities, towns and settlements in the coastal zone and the frequently degraded state of natural defensive systems such as reefs and beaches, many of the region’s communities and infrastructure exist in a state of considerable vulnerability. Members frequently lack the human and technical capability to assess coastal systems and resources, determine environmental and social constraints to development and elucidate underlying causes of vulnerability. It is a regional priority to assist island communities to raise awareness of, monitor and develop novel, technically sound and appropriate solutions to these issues.

OIP will continue to deliver integrated geoscience and technical services to provide sound coastal environmental and resource use analysis and management and development solutions. OIP will strive to improve understanding of natural systems, identifying existing sources of stresses and vulnerability, and developing options for improvement and mitigation.

Maritime Boundaries

As signatories to the United Nations Convention on Law of the Sea, Members have obligations under the Convention to deposit and declare maritime boundary information consistent with the Convention's provisions. At the time of writing 6 Member states have declared their respective territorial sea baselines, 3 have declared their exclusive economic zones (EEZ) and only 20 of a potential 48 shared boundaries (adjoining state boundaries) are subject to treaty. Thus the greater number of baselines; territorial, contiguous and exclusive economic zones are in fact notional and poorly defined either legally or geodetically.

Given the Members regional economic dependence on migratory fish stocks and the ongoing issues of development and enforcement of sustainable fisheries management, the lack of declared baselines and maritime zones presents significant lost opportunities and challenges. Other regional resources such as hydrocarbons and deep sea mineral deposits are also likely to straddle these international boundaries and their subsequent management will be similarly handicapped in the absence of clear boundary delineation. Similarly issues of security, international transfer of hazardous waste, oceanographic research, shipping activity, regional conservation initiatives and other ocean governance issues are all presently hampered by poorly defined maritime boundaries.

Eight Members submitted extended continental shelf (eCS) claims before their respective deadlines in 2009 to the United Nations Commission on Limits of the Continental Shelf (UNCLCS) and others are working towards later deadlines in 2013. Recent UNCLCS rulings allowed countries to submit partial claims with the opportunity to update and complete these before technical review by UNCLCS over the coming years. In many cases these submissions are also dependent on the clear definition of baselines and maritime zones and the absence of these in many Members will present challenges to the finalisation and successful defence of eCS submissions.

Significant technical, policy and diplomatic work remains and it is critical that Members embrace obligations under UNCLOS and deposit and declare their existing maritime boundary information. The OIP has already made significant advances in regional access to accurate technical data in support of regional boundary solutions. In the next few years it will continue to support Members in the technical development of eCS submissions as well as baselines, maritime zones and shared boundaries.

Climate Change and Adaptation

Members are innately vulnerable and their communities exposed to a range of natural hazards. Climate change potentially brings a range of additional stressors which when applied to these already strained environmental systems, resources and vulnerable communities may rapidly exhaust capacity for resilience and recovery. OIP assists Members to meet these challenges through improved understanding and the development of sound "no regrets" solutions and actions to bolster and protect the natural function of environmental systems, conserve and manage crucial natural resources and reduce the vulnerability of PICT communities.

This is achieved by:

- Delivering enhanced regional capacity and understanding of climate change stress or impacts based on monitoring initiatives like sea level change such as the South Pacific Sea level and Climate Monitoring Project (SPSLCMP) and the Pacific Regional Island Shoreline Monitoring System (PRISMS).
- Applying its technical capacity and tools to develop data-based adaptation responses to existing and expected hazards and extremes. The "no regrets" approaches to adaptation, strive to address existing vulnerabilities, environmental stresses and resource use issues with a view to tackling unsustainable or inappropriate practices and bolstering future resilience.
- Advocating Members' interests and needs at regional and international scientific fora and striving to ensure awareness by international partners of crucial data and information gaps needed to better inform Members of climate change stress and appropriate responses.

OIP will continue to develop pragmatic solutions which address climate change vulnerability through the provision of solutions to existing resource use or management stress issues which provide tangible benefit to communities now and increases their resilience to future climate change stress.

Natural Resource Development

The livelihoods and wellbeing of Members are inextricably linked to the optimal and responsible exploitation of ocean, coastal and onland resources, especially mineral resources. However, management of some "non-traditional" resources such as deep sea minerals and hydrocarbons are in many cases beyond the present capacity of Members and there is poor awareness of the necessary policy, legislation and environmental, fiscal, taxation management regimes needed to ensure PICT interests and environments are protected. Members have significant untapped oceanic resources and vast tracts of their EEZs are already under licence for exploration and research into deep sea minerals potential and active mining is expected to start within the next five years. Likewise, the region's potential hydrocarbon resources are attracting considerable interest as oil prices soar.

Many Members lack the necessary technical expertise to set in place and monitor the rigour of governance processes to ensure resource exploitation contributes to sustainable economic development whilst minimising environmental impacts. OIP will continue to build technical capacity, awareness of potential mineral resources and environmental issues and provide expert assistance as required by Members. For example, environmental impact assessment (EIA) is routinely used by many Members in the natural resources and infrastructure development sectors and OIP contributes expert review to complex documents on aggregates, minerals, aquaculture, effluent outfall, infrastructure, deep sea minerals, etc. OIP will also provide assistance to develop regulatory frameworks which ensure important decision making and guidance tools and processes such as natural resource policy development are effective.

Developing sustainable aggregate resources has been an important focal area for OIP over the years in recognition of the devastating impact of uncontrolled beach mining especially evident in urban atoll settings. In these settings beach mining has increased as demand for building material has also increased. This example highlights the need for the development of not only technically sound alternatives, but alternatives which are economically viable and socially appropriate in the context of the communities which utilise these resources. OIP will continue to deliver integrated technical solutions which include social and economic considerations.

Information Management and Analysis

Geospatial data sets (computer based mapping) underpin Members ability to analyse and understand natural resources, environmental processes, impacts, hazards and stress such as climate change. Disparate efforts in the region over many years, has amassed large amounts of geoscience research and data, some of which lies in Members while others lie in other locations around the world. In many cases such data is priceless yet where it is held in the region it is often not adequately stored or catalogued, is not duplicated, and is seldom digitised or incorporated into GIS systems allowing its ease of use, analysis and security.

OIP will continue its commitment to data rescue, collation, storage, cataloguing and digitisation, and undertakes to make such data available to Members to support improved decision making. OIP will also use such "historical" data in conjunction with state of the art remotely sensed data to provide technologically advanced analysis of change, processing of specialist solutions to maritime boundaries, habitat and vegetation mapping, bathymetry, modelling, etc.

7.3 Partnership Networks

The broad mandate of OIP in applied marine, coastal, ocean and island geosciences means that the Programme has numerous partnerships to ensure optimum delivery of its services.

Within the Division, coordination and collaboration will continue with our complementary technical programmes (DRP and WSP) to provide integrated technical solutions. For example, OIP will contribute to the understanding of ocean/coastal extremes such as tsunami by developing tsunami modelling. This information can be used by the Disaster Reduction Programme to enhance PICT understanding of risks and responses to such disasters.

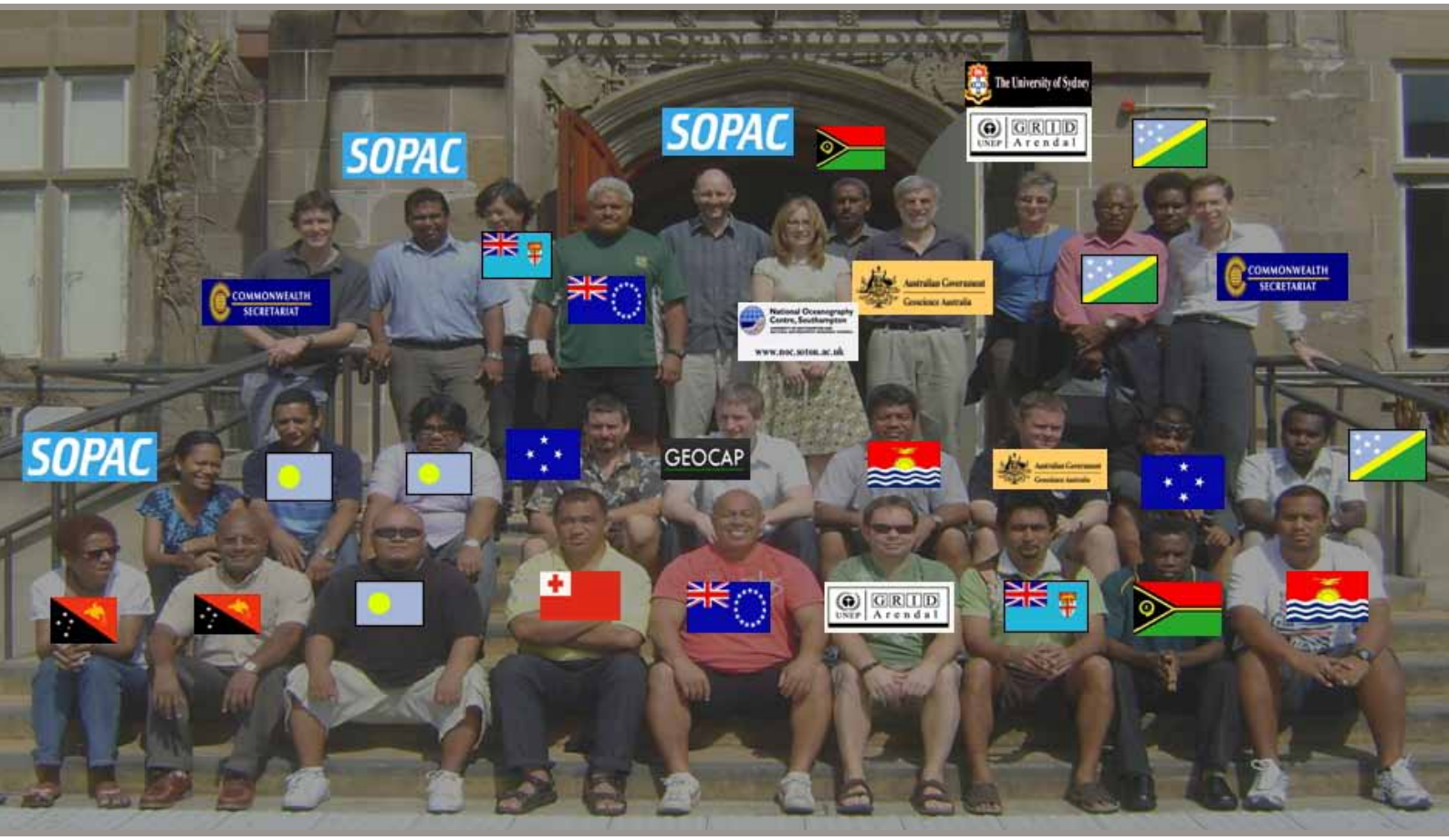
OIP services will also be enhanced and supported by a range of technical partnerships with other SPC Divisions. For example, the Lands Resources Division (collaborative approaches to saline intrusion), Fisheries, Aquaculture and Marine Ecosystems (collaborative approaches to fisheries management issues, and approaches to maritime boundaries issues).

OIP will partner with a variety of Council of Regional Organitations of the Pacific organisations to improve the use and flow of information to develop and govern coastal and oceanic resources. For example, OIPs coastal assessment capacity and monitoring systems link to and support the Secretariat of the Pacific Regional Environment Programme's (SPREP) regional mandate in climate change and environmental management. Similarly, OIPs ongoing efforts in maritime boundaries development are directly linked to the needs of resource management agencies such as the Forum Fisheries Agency and the Western and Central Pacific Tuna Commission for declaration of regional maritime zones and boundaries.

At regional level, OIP will continue to maintain links with key donor agencies and to coordinate with key technical agencies that join the programme to deliver complementary services in the region. OIPs relationship with Geoscience Australia and the Bureau of Meteorology Australia is an excellent example where interagency partnerships in areas such as marine survey, tsunami modelling, maritime boundary development, sea level and climate monitoring are delivered with far greater efficiencies and benefits to Members via such partnerships.

OIP will also continue to maintain its strong international links with agencies such as the Commonwealth Secretariat; European Union, UNEP Grid Shelf Programme, United Nations Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs; International Seabed Authority; South West Hydrographic Commission and many other research organisations and institutions, particularly those involved in marine scientific research initiatives.

From time to time, OIP also fosters commercial relationships and undertakes contracts at full cost recovery where such work is consistent with national and regional interests.



7.4 Strategic Outcomes Focus for OIP

Key Result Area	Strategic Outcomes	Success Indicators
KRA 1: Natural Resources, Systems and Processes Monitored and Assessed	• More accurate and timely data and information on natural resources (especially minerals) systems and processes collected • Strengthened capacity to analyse and assess natural resources (especially minerals), systems and processes • Improved capacity and understanding of change and processes in ocean and island resources and environmental systems	• More accurate and timely data and information collected • Strengthened capacity to assess, analyse, and monitor natural resources, systems and processes • Improved evidence-based solutions • Improved availability of information • Strengthened networks and institutions
KRA 2: Natural Resources Developed and Managed and Governance Strengthened	• Improved development and management of hydrocarbon, minerals, island and oceanic resources • Maritime boundaries declared and negotiated based on the ongoing provision of technical advice, solutions and support • Improved national capacity and regional awareness of maritime boundaries and ocean and island resource policy issues • Island and ocean resource information and data managed and secured to underpin and promote resource development and environmental management	• Improved minerals governance systems within and across Members • Sustainable economic development of mineral resources by Members • Maritime jurisdictions between and across Members publically declared • Members jurisdictions codified in national legislation • Improved dissemination of information on boundary status within and between Members • Increased national and regional capacity to determine and progress maritime boundaries • Enhanced quality and availability of resource information databases for national, regional and international stakeholders • Improved regional coordination of marine scientific research
KRA 3: Vulnerability and Risks Managed	• Improved understanding of natural and human-induced hazards based on modelling, analyses and mapping • Improved knowledge for decision making for the management of vulnerability and risks • Robust disaster risk management and climate change adaptation solutions developed and implemented for Members	• Improved understanding and monitoring of hazards • Enhancements in the design and or availability of information to support early warning systems • Improved capacity to respond to and mitigate/adapt to hazards • Policies and approaches to improve resilience and reduce vulnerability to disasters underpinned by sound science • Evidence-based decision making achieved through improved links between science and policy

8

WATER AND SANITATION PROGRAMME

8.1 Rationale

The Water and Sanitation Programme (WSP) provides technical support to Members through capacity building, awareness and advocacy related to the management of water resources and the provision of water supply and sanitation services.

In-country counterparts vary from national hydrological services, water resources managers, public water supply and wastewater service providers, water regulators, various ministries responsible for water governance, and various civil society partners.

The period 2005–2009 has seen increased support for, and interventions in the region's water and sanitation sector. This unprecedented growth has been guided largely by a number of regional strategic policy instruments developed over the last years through a broad series of coordinated and comprehensive consultations with relevant Pacific stakeholders.

There are three main strategic documents that underpin the WSP for 2011–2015:

- The Pacific Wastewater Policy and associated Pacific Wastewater Framework for Action, both completed in 2001 in Majuro, Republic of the Marshall Islands and developed as part of UNEP's Global Programme of Action for the Protection of the Marine Environment from Land-based Sources of Pollution (GPA).

- The more holistic Pacific Regional Action Plan on Sustainable Water Management (Pacific RAP) completed in 2002 in Sigatoka, Fiji in preparation for the Water in Small Island Countries session at the 3rd World Water Forum in 2003, Kyoto. Pacific Heads of State endorsed this strategic framework in 2004 and recommended in 2006 that water, sanitation and hygiene challenges facing the region be directly addressed under the Pacific Plan through the Pacific RAP.
- The Drinking Water Quality and Health Framework for Action which was developed as a complementary framework building on the Pacific RAP. The Framework was developed by health and water officials at the WHO facilitated workshop on Water Quality Standards and Monitoring in Pacific Island Countries. It was recommended for implementation by the region's Ministers for Health at their 2005 Apia meeting.

It should be noted however that these regional strategic frameworks, although still very relevant in providing direction and guidance for regional support programmes in the sector, are in need of review in conjunction with the WSP Strategic Planning process

The Pacific region has collectively been off-track in meeting the UN's Millennium Development Goal (MDG) targets for water and sanitation. Furthermore, recognising the July 2010 declaration of safe and clean drinking water and sanitation as a human right by the United Nations General Assembly, it is especially important and most opportune to revisit these Frameworks for Action against current and future policy drivers through a new series of coordinated and comprehensive consultations with member countries and partner organisations in the period 2011–2012.

In this context it is noted with concern that the region's access to improved drinking water and sanitation lags behind the rest of the world as reported in the WHO/SOPAC report on "Sanitation, Hygiene and Drinking Water in Pacific Island Countries". Only 50% of the populations of the Oceania region, including Pacific island countries have access to improved drinking water compared to the global average of 87%. Similarly only 53% of the populations of the Oceania region, including Pacific island countries have access to improved sanitation compared to 61% globally, according to the figures of the UNICEF/WHO Joint Monitoring Programme (2010

8.2 Critical Issues

Members have uniquely fragile water resources due to their small size, lack of natural storage, competing land use and vulnerability to natural hazards. Pollution of freshwater resources, unsafe drinking water supplies and inadequate sanitation can have a significant impact on public health, quality of life, the environment and economic development. Urbanisation, rural development, growing populations, climate change and increased demand from industry and agriculture is putting further pressure on the region's freshwater resources, threatening the long term viability of communities and islands.

Natural disasters exacerbate water issues. Excessive rainfall, often linked to cyclones and typhoons, causes flooding and disruption of drinking water supplies. Small islands that rely on groundwater and/or rainwater harvesting are highly vulnerable to droughts, often linked to El Niño or La Niña triggered climatic disruptions. Both situations – too much or too little water – compromise the safety of drinking water supplies and increase the risk to public health.

The annual incidence of diarrhoeal diseases in the region, nearly matches the number of its inhabitants with 6.7 million cases of acute diarrhoea each year, responsible for the annual death of nearly three thousand people. WHO/SOPAC country statistics published in 2008 on access to improved sanitation and improved drinking water reveal that on average, only half of the total population of the region are served with any form of improved sanitation or drinking water.

Furthermore, a 2010 WHO/UNICEF Joint Monitoring Programme report indicates that the region as a whole is unlikely to meet the water and sanitation Millennium Development Goal Targets of halving its population without access to improved water supply and sanitation by 2015.

Three main challenges and constraints that hamper sustainable water resources management and drinking water and sanitation development in the region are summarised below:

- The uniquely fragile water resources due to Members small size, lack of natural storage, competing land use, and vulnerability to natural hazards (including climate change) and human activities necessitates detailed water resources monitoring, assessment and management and improving collaboration with meteorological forecasting services.

- Water service providers face challenging constraints to sustaining water and wastewater provision due to the lack of both human and financial resource bases, which restrict the availability of experienced staff and investment, and effectiveness of cost-recovery. Future action is required in human resources development and retention, water demand management, water safety planning and improving cost-recovery.
- A highly complex water governance system due to the specific socio-political and cultural structures relating to traditional community, tribal and inter-island practices, rights and interests which are all interwoven with past colonial and 'modern' practices and instruments. These require programmes to develop awareness, advocacy, and political will at all levels to create a framework for sustainable integrated water resources and wastewater management.

In responding to these challenges the WSP is structured to deliver its services in the following areas:

Water Resources

Water resources include rainwater, surface water and groundwater resources monitoring, assessment, development, management and protection, with a particular emphasis on water resources management in climatic extremes (both those of water scarcity – droughts; and over-abundance – cyclone-associated flooding). This component therefore includes climate adaptation with regard to water resources issues and has a strong focus on integrated water resources and wastewater management.

Water Services

Sanitation and drinking water supply services, inclusive of aspects on capacity for drinking water quality monitoring, drinking water safety planning, improving water demand management and promotion of rainwater harvesting. Under the general Water Supply, Sanitation and Hygiene (WASH) sub-component it promotes the use of appropriate technologies and approaches for domestic water supply and sanitation issues through awareness raising, demonstrating best practices and advocacy. This includes the mainstreaming of gender and community participation in water supply and sanitation and the coordination of activities through the Pacific WASH Coalition, including coordinated responses in times of natural disasters through the Pacific Humanitarian Team.

Water Governance

Covers water governance, awareness and advocacy and pulls together a number of different areas which together attribute to better institutional arrangements in the water sector. These include national level policies, plans and strategies; institutional instruments such as legislation and institutional strengthening; multi-stakeholder national water partnerships; Integrated Water Resources Management (IWRM) and catchment level management; community level water governance; awareness raising and education initiatives; and advocacy for community participation and gender. The Governance component also includes regional and global high-level advocacy and awareness with the WSP playing a coordinating role as facilitators of the Pacific Partnership Initiative on Sustainable Water Management which involves national stakeholders and external support agencies in the region.

8.3 Partnership Network

The Pacific Partnership Initiative on Sustainable Water Management has been established to ensure a more coordinated and strategic approach to support for water and sanitation in the region. The Partnership enables countries and development agencies to: identify successful previous activities and therefore improve the sustainability of subsequent interventions; reduce and prevent duplication of activities; link country requirements to development programmes (and vice versa); and augment existing and proposed activities nationally and regionally[1].

The Partnership has a Facilitator (based in the WSP) who is responsible for implementing the core functions of the partnership: liaising between the regional stakeholder groups and their sub-networks; researching and receiving stakeholder information on on-going and planned water activities; tracking

[1] See http://www.pacificwater.org

donor and development agency programmes; identifying areas requiring implementation; and coordinating proposal submissions and project implementation. The Facilitator is also responsible for high-level advocacy of the strategic approach. WSP is assisted in this task by a deputy facilitator based at the University of the South Pacific.

The partnership network and its on-going business enables many synergies and linkages between the WSP, other Programmes in the Division and development partners within and outside of the region. These linkages and synergies are a strategic response to various opportunities which present themselves for mutual aid and assistance in delivering our services to our Membership.

8.4 Strategic Outcomes Focus for WSP

Key Result Area	Strategic Outcomes	Success Indicators
KRA 1: Natural Resources, Systems and Processes Monitored and Assessed	• Sustained capacity to collect and manage essential water resources information • Sustained capacity to analyse information and assess water resources • Quality water resources information readily available to assist decision-making	• National hydrological databases populated and available • Assessments undertaken by National hydrological services • Water resources departments actively contribute to water and other relevant sector developments based on water resources information
KRA 2: Natural Resources Developed and Managed and Governance Strengthened	• Improved progress towards water and sanitation MDG targets • Improved and sustained capacity for implementing water demand management • High priority provided to improve water resources management, water supply and sanitation at all levels, from community to cabinet with consideration to gender equality and equity. • Improved and sustained capacity for water quality monitoring • Improved water and wastewater management • National coordination processes for water and sanitation initiatives supported • Regional water and sanitation coordination strengthened	• Sound sanitation and drinking water monitoring, evaluation and reporting systems for Members. • Reduced non-revenue water / water losses for water supply systems • Behaviour change in communities regarding WASH • Participatory gender sensitive approaches incorporated in WASH initiatives • Effective institutional arrangements and instruments in place for sustainable management of water resources • Country specific national drinking water quality monitoring programmes developed and implemented • National drinking water quality databases populated and available • Integrated approaches for water and wastewater management demonstrated and replicated • Functioning APEX bodies, National water partnerships and inclusion of community consultation processes • A functioning Pacific Water Partnership
KRA 3: Vulnerability and Risks Managed	• Improved access to secure and safe drinking water supplies • Sustained capacity to mitigate the effects of, prepare for and respond to hydro-meteorological hazards • Improved protection of water resources from pollution and saline water intrusion	• Drinking water safety plans developed, implemented • Flood and drought management plans developed and implemented and linked to disaster preparedness and climate adaptation frameworks • Integrated water resources management plans developed and implemented including ongoing monitoring of IWRM indicators

9

DISASTER REDUCTION PROGRAMME

9.1 Rationale

The Disaster Reduction Programme (DRP) exists to provide Members with technical and policy advice and support to strengthen disaster risk management practices. The DRP carries out this responsibility in coordination and collaboration with other technical Programme areas within the Division and also with a range of regional and international development partners and donors.

The overarching policy guidance for the DRP is the Pacific Disaster Risk Reduction and Disaster Management Framework for Action 2005–2015 which supports and advocates for the building of safer and more resilient communities to disasters. The Regional Disaster Risk Management Framework was approved by Pacific leaders in 2005. It is linked to the global Hyogo Framework for Action 2005–2015 which was endorsed by World leaders following the Second World Conference on Disaster Reduction in January 2005.

There are other regional policy instruments that help to guide the efforts of the DRP such as the Pacific Plan and the Pacific Islands Framework for Action on Climate Change 2006 – 2015.

9.2 Critical Issues

The critical issues or challenges that Members continue to face in terms of disaster risk management are numerous.

Disaster Risk Reduction and Climate Change Adaptation

A key challenge in the Pacific is to resource disaster risk management nationally and regionally. This means convincing national administrations as well as donors of the value of investing in disaster risk management – particularly in risk reduction interventions to avoid the likelihood of a disaster event in the first place. Accordingly, there is a need for continued high-level political advocacy and leadership in disaster risk management in the Pacific, to seek genuine commitment for disaster risk management and climate change adaptation as key sustainable development imperatives at international, regional and national levels. There is a particular need to elevate efforts in relation to mainstreaming at national and also at the sectoral level within each country. In addition, there is a need to de-mystify concepts in relation to disaster risk management and climate change adaptation and to provide clear linkages between these and sustainable national development as decision-makers typically associate issues of disaster risk management and climate change more with emergency or disaster response than with development planning.

In this connection there is also a need to strengthen the collaborative integration of disaster risk management and climate change adaptation at the regional and national levels and coordinated development and implementation of the national disaster risk management National Action Plan and Climate Change National Adaptation Plan of Action. Currently the global approach to these has resulted in polarised efforts at regional and national level. However, given the inter-linkages between climate change adaptation and disaster risk reduction and cognisant of the issues of limited absorptive capacity of Members there is a need to consolidate approaches to reflect demand-side realities and not supply-side capacities. A further and important step within the region would be to better consolidate efforts with the Membership of the Climate Change Round Table coordinated by SPREP.

At a global level consideration is required by the United Nations International Strategy for Disaster Reduction (UNISDR) and other global partners such as the United Nations Framework Convention on Climate Change (UNFCCC) to harmonise their efforts in relation to disaster risk reduction and climate change adaptation. It is acknowledged that there are overlaps between the two initiatives; the DRP's view is climate change adaptation is a 'subset' of disaster risk reduction in that it helps to address issues of vulnerability and risk in relation to the extremes of climate/hydro-meteorological hazards. Disaster risk reduction in its fuller sense of course covers both climate/hydro-met and as well geohazards.

Community Level Disaster Risk Management

To minimise the scale of impact and improve on-the-ground disaster recovery, there is a need to increase community awareness and preparedness programmes, and promote engagement and ownership of ground-level initiatives in disaster risk management and climate change adaptation. Involving the community in disaster risk management and climate change adaptation is crucial to enhancing resilience particularly in small island countries in the region. Whilst there is an increasing interest for engagement at this level there is a need to maintain this momentum and further to ensure that such initiatives dovetail into the macro-level arrangements that Members have established for disaster risk management and climate change adaptation to ensure consistency of outcomes with the overall national governance frameworks.

Institutional Strengthening, Training and Capacity Building within Key National Agencies

There is a need to continue to support the institutional strengthening of disaster risk management and climate change adaptation agencies and encourage robust and evidence-based governance to facilitate the implementation of disaster risk management and climate change adaptation programmes for increased resilience and sustainable development of Members.

In addition the training and capacity development in disaster risk management remains an important concern for national disaster agencies and for other key actors at national level in the region. There is a need to explore opportunities to maintain the current suite of training and to identify additional training opportunities that contribute to the strengthening of key agencies such as lands, meteorological and hydrological services, agriculture, health, and other stakeholders including NGOs and community groups.

Baseline Data and Information

There is still something of a paucity of accurate baseline data and information particularly in the form of maps to support informed decision-making on matters of disaster risk reduction and by extension on sustainable national development. While some attempts are being made by the DRP supported by the Asian Development Bank, World Bank, Institute of Geological and Nuclear Science, New Zealand AIR Worldwide and the Pacific Disaster Center, to establish national and regional risk spatial databases there must be more support from partners and relevant national agencies.

Scientific and Technical Assessments

In relation to the provision of baseline data and information there is a need to expand the knowledge base regarding disaster risk management and climate change in the Pacific through risk assessments, modelling and mapping, post-disaster physical, socio-economic, and environmental damage and loss assessments across all sectors such as agriculture and tourism and lifeline services such as water, to inform decision making and build resilience. In this connection there is also need to incorporate best practices and lessons learned from traditional disaster risk management practices with applied scientific and technical methodologies and approaches.

Early Warning Systems

The Members continue to be challenged by the physical remoteness of many communities in terms of developing and supporting end-to-end multi-hazard early warning systems appropriate and sustainable within the region. In this regard there is a need for increased investments in community preparedness, and to continue support for relevant technical agencies such as national meteorological and hydrological services, and also to identify new and innovative approaches through dialogue and exchanges with partners.

Regional arrangements for supporting tropical cyclone warnings at the national level are indispensable in the region, where resources and technical capacities of the National Meteorological Services of Members are very limited. The Forum Smaller Island States, in particular are entirely dependent on external support in this respect. Such arrangements are at risk of failure as reflected in the recent SPREP- led Review of Meteorological Services in the region. Supporting the strengthening of the arrangements is a high priority for the region

Preparedness and Response

In terms of improved disaster response capacity the efforts of international partners like United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), the International Federation of Red Cross (IFRC) and national Red Cross societies and The Asia Foundation working with the DRP and others to support governments to develop or strengthen national arrangements, laws and policies for enhanced preparedness for national and international disaster response must continue.

9.3 Partnership Networks

The range of support provided by the DRP in delivering disaster risk management products and services to Members is enhanced through coordination and collaboration with members of the Pacific Disaster Risk Management Partnership Network.

The Partnership Network was established in 2006 primarily as a collaborative and cooperative mechanism of support for Pacific countries in relation to disaster risk management capacity building but more so to assist them with the adaptation and implementation of the Pacific Disaster Risk Reduction and Disaster Management Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters. The Partnership Network comprises an open-ended and voluntary membership of international, regional and national government and non-government organisations, with comparative advantages and interests in supporting Pacific countries toward mainstreaming disaster risk management through addressing their risk reduction and disaster management priorities.

At present the Partnership Network membership is approximately 40 donor and development partner organisations.

A key member of this Network is SPC which provides an opportunity for the DRP to expand the imprint of natural hazard disaster risk management more meaningfully beyond national level within Members to sectoral level. The SPC currently carries the mandate for capacity building and institutional strengthening in key sectors such as agriculture, forestry, fisheries, health and education, energy, transport, infrastructure and ICT. By 'capitalising' on this potential the DRP will be able to engage sectoral support for disaster risk management and to help strengthen national linkages and systems for disaster risk management beyond the traditional focal points (National Disaster Management Offices) to the major sectors within Members.

The DRP enjoys synergies and inter-linkages with other technical programmes within the Division and with global and regional partner organisations.

There is a need to broaden the Pacific Disaster Risk Management Partnership Network to include other stakeholders, such as the private sector, utilities and services; as well as civil society which contributes significantly to addressing issues in relation to the most vulnerable groups in society such as women, children and the elderly. There is also a need improve coordination and collaboration in the interests of cost effectiveness and most importantly the ability of the Members to absorb and capitalise on the multitude of disaster risk management and climate change adaptation opportunities that now exist at global, regional and at national level. A significant step is the recent establishment of formal links with Caribbean countries and organisations including the Caribbean Disaster Emergency Response Agency, University of the West Indies, and the Caribbean Community Climate Change Center. Further progress is being made through partnerships being strengthened with the World Bank's Global Facility for Disaster Reduction and Recovery, the UNISDR, European Union and ACP Secretariat.

9.4 Strategic Outcomes Focus for DRP

Key Result Area	Strategic Outcomes	Success Indicators
KRA 1: Natural Resources, Systems and Processes Monitored and Assessed	• Increased availability of accurate scientific and technical information for disaster risk management • Strengthened networks and institutions to monitor and assess natural hazards	• Pacific Disaster Net sustained and support provided for national disaster observatories • National hazard monitoring systems for flood, drought, volcano, sea-level and seismic monitoring supported and access to regional, international monitoring data and systems improved • Increased access and availability of baseline data for hazard and risk modelling • Capacity building and institutional strengthening programmes developed and maintained to support disaster reduction information management systems and networks • Capacity building and institutional strengthening programmes for hydrology, seismology, volcanology are supported
KRA 2: Natural Resources Developed and Managed and Governance Strengthened		
KRA 3: Vulnerability and Risks Managed	• Improved understanding, modelling, analyses and mapping of risks to inform decision making for the management of vulnerability and risks • Informed decision making for disaster risk management • Strengthened institutions and capacity built for effective disaster risk reduction and disaster management • Increased levels of investment in disaster risk management • Improved regional and national disaster risk management coordination and planning • Effective end-to-end early warning systems established and supported • Development planning and budgeting incorporating appropriate risk reduction solutions supported • Robust disaster risk management solutions, developed and implemented for Members	• Regional and national risk and exposure data are collected, compiled and collated and risk exposure databases are developed and maintained • Reviews of national disaster risk management governance arrangements and legislation undertaken and support provided to national authorities for the implementation of new arrangements. • On going support provided to Pacific island countries and territories for the development and implementation of Disaster Risk Management National Action Plans and/or disaster risk management mainstreaming initiatives at national, sectoral and local levels • Establishment and strengthening of effective end-to-end early warning systems which includes the dissemination of warnings to and preparedness of communities and government response agencies • Development of risk profiles based on hazard and risk models and quantitative risk assessments. • Profiles of the economic impact of disasters and budgetary analysis of national disaster risk management investments undertaken • Knowledge products developed to support disaster risk management activities at regional and national level in the Pacific • Strengthened linkages between regional/national scientific and technical agencies with national, sectoral and local level agencies to ensure the integration of risk information into development planning and decision-making processes and systems. • On-going support provided to strengthen the Pacific Disaster Risk Management Partnership Network • Support provided to strengthen operational capacities in disaster preparedness and response • Technical advice and support provided for post disaster assessments • Disaster risk management training programmes developed and implemented • Support provided for community-based disaster risk management initiatives

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TECHNICAL SUPPORT SERVICES

Five technical support services cross cut the work of the three technical work programmes of the SOPAC Division. These are: natural resource economics; GIS and remote sensing; technical equipment and services; data management; and publications and library.

Natural Resource Economics

Natural resource economics is a relatively new work area in the Division, arising in response to Members' demand for information to improve policy planning and convince donors of the value of supporting new initiatives. Accordingly, economic analysis is becoming increasingly critical to underpin project design and delivery, develop grant proposals, and achieve advocacy. The work of the natural resource economics staff, will include input to natural resource policy development and the economic analysis of actions through cost benefit analyses, and resource use especially mineral resource assessments. The outputs are used to underpin advocacy, awareness and effective policy development.

GIS and Remote Sensing

Geographic Information Systems (GIS) and remote sensing will continue to be used to provide state-of-the-art assessment and monitoring of resource status and use. Expectations have increased, with improved technologies and data access opening new doors to analyse and respond to resource use challenges. GIS/remote sensing services are delivered using modern technologies such as satellite imagery and global positioning systems, underpinning mapping and modelling of natural resource systems. The work will include not only technical support, but also technical training and capacity building to Pacific island stakeholders to enable Pacific Island Countries and Territories to develop and maintain their national applications and data service. Methods and procedures will also be developed to adapt applications that run well in Europe, to meet Pacific needs and conditions.

Technical Equipment and Services

Technical equipment and services will continue to deliver an essential support function, both in the field and in the laboratory, to marine geoscientific and oceanographic surveys as well as land-based geological, geophysical and hydrological surveying.

Geophysical, oceanographic and geological survey equipment include instrumentation packages; echo-sounders; magnetometer; multi-beam echo-sounders; side-scan processing and data recording equipment; sub-bottom profiler systems; current meters, acoustic Doppler profilers, tide and wave gauges, temperature loggers, conductivity temperature depth profilers, winches and cable counters, seabed sampling tools, drilling equipment, real-time high-end GPS positioning and geodetic survey systems, electrical resistivity and electromagnetic prospecting systems.

The technical equipment and services built up by SOPAC "the Commission" is, and will continue to be, a long-standing facility, highly recognised in the region for its specialised expertise, supported by a team of trained and experienced engineers; geological technicians who assist with installation, set up, calibration and data acquisition, providing support for the three technical programmes in their service delivery. It is the intention of SPC, through SOPAC "the Division", to further develop and strengthen this facility.

Data Management

Technical support will involve diverse and integrated services across the work programme to ensure that essential data management systems are operational, and that the necessary support is available to underpin the delivery of the technical work programmes. The demand for data management technical services is continually increasing with the need for increasingly large databases to monitor and respond to natural resource use challenges. Demand for data management services will also continue to respond to the need to ensure effective information and knowledge transfer across the region. Accordingly, data management work will include development of systems and software to underpin information sharing and links across Pacific Island Countries and Territories and other key stakeholders, as well as technical advice to programmes, such as on the procurement of data management equipment.

Publications and Library

Publications and Library services will be maintained by the Division to publish and provide access to corporate, work programme and promotional reports and publications. The service also maintains a special geoscientific library for the Pacific Island Countries and Territories and staff, containing a vast and unique collection of reports, charts, maps, seismic sections, research cruise tracks, cores and other data records from geoscientific surveys. As such, it is the most frequently used entry point for enquiries regarding access to products and services, and is greatly facilitated through a user friendly web portal.

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KRA4 – SERVICE INTO MEMBER COUNTRIES AND THE DIVISION EFFICIENTLY AND EFFECTIVELY DELIVERED

Key Result Area 4 (KRA4) will provide the support and identity for the Director of the Division to ensure efficiency and effectiveness of the SOPAC Division. To ensure this is achieved the functions described in Section 4 are key: improving service delivery, priority setting, funding, reporting, monitoring and evaluation, and capacity building. In addition there must be a series of activities related to the following:

Strategic Planning and Donor Liaison

Strategic planning and donor liaison refers to the coordination of SOPAC 'The Division" activities with external stakeholders as well as internally. Currently all technical programmes of SOPAC "The Commission" liaise with donors and partners, whether this be individually or through specialised partnership networks such as the Pacific Disaster Risk Management Partnership Network or the Pacific Water Partnership. Technical work programmes also prepare grant proposals. At an internal level, technical work programmes also coordinate internally to maximise synergies in common activities. Nevertheless, there is a need for enhanced levels of internal and external liaison to ensure

appropriate sharing of information and achievements as well as to work with partner agencies for funds. These functions will be included in the responsibilities of the Director of the Division and thereby enable technical personnel to devote more time to work programme implementation.

Human Resources Development

Staff are as critical to the Division's success, as are adequate financial resources. Given the highly technical nature of the bulk of the work programme, the dearth of the specialised scientific skills in the region, and continually changing technologies for delivery, it is critical to establish a professional development framework to ensure that technical staff retain state-of-the-art skills. The primary focus for such assistance is on developing and retaining the most competent workforce in order to strengthen the ability to deliver its products and services. This assistance to staff could include short training courses, long-term career development, mentoring/coaching of junior staff and Member-country trainees, succession planning and tuition reimbursement, as examples.

Communications/Public Relations

The technical work programme remains primarily dependent on donor partners for its survival, and thereby needs strong media and public relations to ensure that donor needs are met and that information on achievements is shared. This function needs to be bolstered in the Division, to improve dissemination of achievements, to minimise duplication of public relations activities across programmes especially through the media, as well as to release technical personnel to concentrate on work programme implementation.

The continued improvement in the SOPAC web portal and the increasing access to the Internet throughout the region will greatly assist in promoting the work of the Division.

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CORPORATE SERVICES SUPPORT

Corporate Services was a strong part of SOPAC "The Commission" and provided the substantive administrative and financial services support demanded by the established regulatory framework of the Commission's Governing Council.

These functions will transfer and integrate, to a large extent, into the Corporate Services of the SPC. It is anticipated that this process will be progressive throughout 2011, and will enable a review of skills needs and capacity to be undertaken. Thus, for 2011, the Strategic Plan acknowledges that the SOPAC Division campus on Mead Road will continue to house and provide the current level of corporate service support.

Corporate Services, including through Programme Assistants, will support the three technical work programmes of the Division by ensuring effective policies and practices are in place for the orderly and efficient delivery of work. Corporate Services support to the Division will consist of the facilities below and will become progressively fully integrated within the SPC from 1 January 2011.

Finance

Finance manages all the financial transactions of the Division, including the preparation of the annual work plan and budget and the presentation of the annual Financial Statement of Accounts.

Administration

Administration manages the offices of the physical premises of the Division and its staffing, and maintains daily divisional office routines according to the rules and regulations.

IT Support

IT Support is responsible for the ongoing operation, maintenance and development of a networked information system that supports the delivery of the work programmes, and facilitates access to new and historical data.

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GLOSSARY OF TERMS

GOAL – Statement of strategic intent.

PURPOSE(S) – Statement(s) of SOPAC Division contributions to the development aspirations of island Member countries.

KEY RESULTS AREAS – Cluster of areas of SOPAC Division work programme focus based on the primary purposes of the Division.

STRATEGIC OUTCOMES – Statements of SOPAC Divisional programmes contributions under each KRA.

SPECIFIC OBJECTIVES – of each KRA is an indicative statement of achievements from programme contributions to be confirmed on an annual basis.

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