

National Assessment Report

Republic of Nauru



Ten Year Review of the Barbados Programme of Action

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Foreword

The Republic of Nauru's National Assessment Report has been prepared following consultations with stakeholders and two National Workshops on Sustainable Development held in April 2002 and February 2004. Discussions at these two workshops focused on achievements and constraints faced by the country in the context of economic, social and environment issues. Inputs were sourced from government officials, the private sector, non-government organisations and the general public.

The Republic of Nauru's activities in promoting environmental conservation and economic sustainable development since Agenda 21 and more importantly the Barbados Programme of Action included the development of the National Environment Management Strategy (NEMS), which provides guidelines for sustainable development, guidelines for land use, and development through the establishment of the rehabilitation programme.

Activities by the government to strengthen the foundations of sustainable development included continued focus on improvements in education, health and the establishment of the Human Resources Department, the development of policies to promote economic growth and the recognition of the importance of the private sector as a strategic partner in creating employment opportunities, wealth and security of opportunity.

However, after years of high economic growth fuelled by the booming but unsustainable phosphate exports, Nauru faces immediate and potentially long-term development challenges. The most pressing challenge is the restoration of macroeconomic and financial stability to the country. In the short to medium term, the imminent exhaustion of the phosphates resource and the decline in revenue from phosphate mining will have serious consequences for the country and its people. Diversification of the economic base, with specific focus on private sector development to achieve economic growth is a key objective of the Government. Providing an enabling environment for the productive sector to flourish is crucial to the future prosperity of Nauru.

This report is the outcome of extensive consultations with all stakeholders and includes issues identified in past reports such as the FAO food security, the UNCCD report and the EU Strategy reports. The NAR is also based on the template provided for the UN SIDS Unit and identifies the key challenges on sustainable development faced by Nauru. The key responses to these challenges are presented in the period leading up to the BPOA+10 review. The report should serve to provide a comprehensive and integrated approach of developing programs for sustainable development for the Republic of Nauru and assist in developing Nauru's National Sustainable Development Strategy.

The report identifies the needs of the Republic of Nauru, calls for the establishment of the Sustainable Development Planning Unit within the Office of the President for the coordination and development of programs for sustainable development.



1. SOCIO-ECONOMIC CONTEXT

Key Characteristics, Challenges and Responses

KEY CHARACTERISTICS

Geographical Location

Nauru is located 41 km South of the equator at 0° 32' South latitude and 166° 56' East longitude. Its most southerly point (which is the airport runway extension in Yaren District) is mapped at 61.3 km south of the equator. Its most northerly point in Ewa district is mapped at 55.6 km south of the equator.

Nauru is some 2000 km East-Northeast of Papua New Guinea, 4450 km South-Southeast of the Philippines and an equal distance to the Southwest of Hawaii. The nearest island is Banaba (Ocean Island), 300 km due East, which is part of the Republic of Kiribati. The main islands of Kiribati lie a further 400 km to the East.

Topography and Geology

Nauru is an uplifted limestone island. The total land area of Nauru is only 22 km² (2200 ha). Despite its small land mass, Nauru has an Exclusive Economic Zone (EEZ) that extends over 320,000 sq. km. Its maximum height above sea level is approximately 70 meters. The island is surrounded by a fringing coral reef between 120 and 300 meters wide. The reef drops away sharply on the seaward edge, at an angle of about 40°, to a depth of about 4000 meters. The land area consists of a narrow coastal plain or "Bottomside", ranging from 100 to 300 meters wide, which encircles a limestone escarpment rising some 30 meters to a central plateau known locally as "Topside".

The coastal plain is composed of a zone of sandy or rocky beach on the seaward edge, and a beach ridge or fore-dune, behind which is either relatively flat ground or, in some places, low-lying depressions or small lagoons filled by brackish water where the surface level is below the water table (freshwater lens). The most extensive system of these landlocked lagoons is found near the border of Ijuw and Anabar Districts. Scattered limestone outcrops or pinnacles can also be found on both the coastal plain and on the inter-tidal flats of the fringing reef, with particularly good examples in the Anibare Bay area.

The escarpment ranges in gradient from vertical cliffs to gradually sloping areas of colluvial soil (deposits that accumulate on and at the base of slopes as a result of movement by gravity) interspersed with limestone outcrops and pinnacles.

The raised central plateau or Topside consists of a matrix of coral-limestone pinnacles and limestone outcrops, between which lie extensive deposits of soil and high-grade tricalcic phosphate rock. This area covers approximately 1600 ha (over 70% of the island) and has been the focus of phosphate mining for over 80 years. Relative elevations on Topside vary generally between 20 and 45 meters above sea-level, with occasional pinnacle outcrops reaching elevations of 50 to a maximum of 70 meters above sea-level. The topography remaining after completion of

primary phosphate mining is a pinnacle-and-pit relief varying between 2 and 10 meters from the top of the pinnacles to the bottom of the pits. The highest point on the island is Command Ridge in the west at an elevation of 71 meters above sea-level.

Buada Lagoon, a landlocked, slightly brackish, freshwater lake, and its associated fertile depression (about 12 ha in area), is located in the low-lying Southwest-central portion of the island at an elevation of about 5 meters above sea-level.

Temperature and Rainfall

Nauru is located in the dry belt of the equatorial oceanic zone, with diurnal temperatures ranging from 26°C to 35°C, and nocturnal temperatures between 22°C and 28°C. Annual rainfall is extremely variable, averaging 2126 mm per year (data from 77 years from 1916 to 1993) with a range of 280 to 4590 mm. Monthly rainfall data available for the period 1977 to 1993 indicate a range of 0 to 746 mm, with 62 months out of 204 months (for which data were available) having less than 100 mm of rain. Rain tends to be more frequent during the months of December to April. Prolonged droughts are common and place severe stress on the natural species and lead to the death of non-coastal exotics and fruit trees (such as breadfruit).

Weather

Weather in general sees a weakening of the easterly winds along the equator, sometimes accompanied by strong Westerly outbursts with high waves and hence coastal damage, which has been noted in Nauru, Western Kiribati and Northern Tuvalu.

Sea temperatures produce a fundamental oceanic signature of ENSO in a fan-shaped area where sea surface temperatures are significantly higher than normal. This extends Eastwards from the dateline (180th meridian) along the equator and fans out to the coastline of the Americas. High surface temperatures are known to stress corals and affect fisheries, and this is significant for Nauru.

Population and Density^[JC1]

The total population of the island is 10,065 (2002 census) with an evenly distributed estimated population density of 495 per sq km. However, since the bulk of the population lives along the coast, the real estimate for population density is 3,000 per sq km. The population's ethnic composition is: 58% Nauruan, 26% other Pacific Islanders, 8% Chinese, and 8% Europeans and others.

From the period 1992 to 2002, population growth has been more stable around 0.15% per annum. The decline of population growth per annum of 2.4% estimated before the 2002 census could be attributed to out migration of Nauruans since the economic down turn of the economy. Since 2000, the island has seen a number of non-Nauruan workers departing the island in light of the winding down of the phosphate industry and government economic reform policy of retrenchment. In 2001, arrival of asylum seekers and associated migrant processing staff compensated for the number of repatriated contract workers.

Culture

Nauruans are Micronesians inhabiting the island for almost 3,000 years, with evidence of Melanesian and possibly Polynesian influence. The Nauruan language is distinct from other Pacific languages yet it shares many words with other Micronesian islands such as Kiribati and the Marshall Islands. The society is matrilineal and the people are drawn from twelve tribes that are totemic in origin.

Nauruans are Christian and adhere to the Nauruan Congregational Church and the Roman Catholic Church. Approximately 70% of the Christian population is Protestant.

Nauruans traditionally existed on a subsistence economy until the discovery of phosphate deposits shortly after 1888. At the turn of the century and with the commencement of mining in 1906 there was a significant change in lifestyle and economy, which has been apparent by the very high per capita GDP. The advent of phosphate mining has led to a dramatic change in lifestyle for the Nauruan people, and effectively transformed the culture into one that is compatible with a cash economy. Since 1990, Nauru's GDP per capita is declining at an average of 4.9% while inflation is increasing at 4.3% per annum.

The literacy rate in Nauru has improved since the 1980s (90 percent) with around 95 percent of the population able to read and write. Life expectancy has also improved at 58 years. [JC2]

KEY CHALLENGES

The Republic of Nauru believes that sustainable development for the Pacific Island communities is a process of development which ensures that quality of life, and quality of growth are achieved through good governance within the limits of acceptable change to our communities, our island and our ocean, without compromising the opportunities available to our future generations.

After years of high economic growth fuelled by booming but unsustainable phosphate exports, the economy of Nauru has, over the past decade, experienced an unprecedented economic downturn. The downturn has been characterized by mounting domestic and external debt service payments, falling revenues, high and unsustainable government expenditure, and a liquidity crisis in the financial sector, resulting in the economic and financial stability of the country. The country has experienced a steep decline in GDP per capita, employment opportunities, and in income earning opportunities.

Notwithstanding the fundamental issue of Nauru's economic and financial situation, there are several resource and environmental issues affecting sustainable development in Nauru. These include an array of issues from climate and sea-level variability, environmental degradation and pollution, to resource management. More specific challenges to development include coastal erosion, water quality, water availability and sanitation. Sustainable management of resources such as terrestrial minerals and renewable energy are other issues under consideration.

The following key challenges are discussed below:

- a. Economic vulnerability and stability
- b. Private Sector Development
- c. Unemployment
- d. Lack of Capacity Building
- e. Land Tenure
- f. Lack of Freshwater Water^[JC3]
- g. Land degradation
- h. Pest and disease infestations
- i. Pollution and waste management
- j. Population growth and urbanization

Economic Vulnerability and Stability

Nauru, like other Pacific small island developing states, has all the prerequisite characteristics of an economy that is vulnerable to external forces such as natural disasters and the effects of the globalization of the world's economy. These includes small domestic markets; limited ability to exploit economics of scale; lack of natural resources endowments and high import content; limitations of diversification possibilities and market thinness; dependence on a narrow range of export products; and uncertainties of supply due to remoteness and insularity.

For Nauru the issue of vulnerability is not a matter of academic debate but a reality. Nauru's economy, in the first 20 years of independence, was driven by the export of a single, finite,

nonrenewable mineral resource called phosphate found by accident in late 1800s by an (Australian/New Zealand) geologist. Mining of the phosphate commenced in earnest in 1906 while Nauru was under the administration of Australia but it did not contribute to the economic development of the island until 1970 when Nauru purchased the phosphate industry from Australia at the cost of A\$21 million.

The mining of the run-of-mine phosphate has been done at the expense of the destruction of over 70% of the land area which were declared phosphate bearing land by the 1976 Lands Act; the destruction of virgin forest and undergrowth that covered the area including land based biodiversity by the process of preparing the land for mining.

The boom in Nauru's economy was evident from the very high per capita income (over US\$19,000) that dominated the 1970s and 80s and the provision of welfare programs such as free education, health care services, child endowments, pension for the elderly and no taxation regime for the people. Health care services included free referral to hospital in Australia if the medical condition of the patient was untreatable at the Nauru Hospitals, which were more or less designed to treat tropical disease. In education, the Government offered 20 scholarships a year for secondary level education in Australia and New Zealand. The program was complemented by tertiary and technical scholarship for Nauruan students who matriculated or passed relevant examination, respectively.

Investment in transport (shipping and airline routes) and satellite communication became a priority in 1970s firstly to overcome Nauru's isolation and secondly to use Nauru's economic advantage with respect to the other emerging nations of the Pacific by opening routes to service both the remote and major trading islands of the Pacific with Australia, New Zealand and Hawaii in the hope they would guarantee demand for the services to the benefit of Nauru.

Cognizance of the finite life of the phosphate industry and its contribution to the economic development of Nauru, the Constitution of Nauru directed the creation of certain Trust Funds and the appropriation of the revenue from the sales of phosphate into the respective funds through the Government Treasury. Of the seven Trust Funds created, three were fund investment and was assigned to the Nauru Phosphate Royalties Trust (NPRT) to manage. Between 1970 and 1990, the funds grew to a book value of over A\$1.3 billion. The latest report from the NPRT shows that the funds have declined substantively. A high proportion of the Government loans were to fund the budget deficit that was inherent in all the Government budgets since the mid-1970s.

The economic downturn that came about in the early 1990s following the significant drop in export of Nauru's phosphate to its traditional buyers left a huge gap between revenue and expenditure in the Government's budget. It also brought to the fore that deficit budgeting by the Government, particularly the continuation of exorbitant welfare programs was and will be financially unsustainable. Unfortunately, actions to reform the financial and social programs of the Government were erratic to say the least as political instability reined. The situation has not altered much over the last five years. For example, the budget deficit in 2000 was around A\$10 million or about 18 percent of GDP. For fiscal year 2002, a deficit of A\$40 million to A\$50 million was budgeted, but it was unclear how this was going to be funded.

Therefore, the single and major challenge facing the Government and people of Nauru is how to arrest the economic regression that is being experienced. The lack of and unpredictable flow of financial resources has affected all sectors of services and programs of the Government. Educational programs and health care services are being curtailed, particularly those involving training or medical referrals overseas. Critical work in all sectors are also being curtailed or suspended as the case maybe including efforts to implement the Barbados Plan of Action. In other words the dependence on the phosphate industry and development driven by this industry has not been sustainable. Nauru's financial and economic situation has now reached the crises situation, and a concerted, comprehensive and integrated approach to national sustainable development planning is needed.¹

All other key challenges being addressed in the report stems from the economic situation. Nauru has always and will continue to be dependent on imports of manufactured goods, agricultural products, medicines, educational material, building material and so forth. The substantial drop in sales of its only export commodity, phosphate, has resulted in the reduction of foreign reserve and has affected the balance of trade.

Other economic problems are increasing income disparity within Nauru, rapid inflation, and increasing unemployment. These problems augur poorly for sustainable development.

Private Sector Development

The private sector in Nauru continues to be very narrow-based as the phosphate industry has been the mainstay of the economy of Nauru since independence in 1968. The failure to diversify the economy could possibly be attributed to the general assumption that earnings from phosphate would sustain the people of Nauru. Export earnings have declined considerably since the 1990s, let alone the fact that the remaining deposits would soon be exhausted. Quality private investments from both foreign and domestic sources are lacking, whilst there is hardly any development even at the micro and small enterprise level. The prevailing economic crisis has made it a lot harder for the private sector to grow and contribute more meaningfully to the economy. Nauru thus faces a serious challenge with respect to improving its business climate so as to strengthen and support the role of the private sector in its overall development process.

Arguably, the best measure of the current economic situation in Nauru is the deteriorating health of its private sector. Foreign exchange earnings from phosphate exports that once sustained the economy have plunged to their lowest levels. It is very unlikely that the Government in the foreseeable future will derive significant phosphate earnings. The alternative then is economic diversification through the expansion of the private sector. However, an overall policy and support environment to help realize the desire for private sector growth in the country hardly exists. Investor confidence is at its lowest in light of the absence of an institutional framework,

¹ A National Economic Forum (NEF) was held in October 2003, with a theme of "Helping Government Plan for the Future". This is a key response instituted by the Government of Nauru. The NEF was attended by all stakeholders and provided an opportunity for all Nauruans to participate and contribute to the process of assisting government in planning for sustainable development. The key stakeholder recommendations have been submitted to the Government for consideration. The recommendations of this Forum should form a basis and assist the Nauruan government to develop its National Sustainable Development Strategy. Further elaboration is under the key responses chapter.

basic support services and public-private sector partnerships to assist private sector development. Notably, key recommendations of the 1999 National Economic and Development Summit which have yet to be implemented include firstly, the creation of an enabling environment to facilitate the formation and growth of a Nauruan-owned private sector and secondly, the revival of the Nauru Chamber of Commerce.

Unemployment

The estimated percentage of labour in formal employment is about 56%. This included the bulk of the indigenous workforce employed by the public sector. For example about 1,600 Nauruans work directly for the government (public service sector) and about 1,400 are employed in the government owned National Phosphate Company. Kiribati and Tuvalu islanders comprise the majority of unskilled workers in the phosphate industry.

Although there are no official figures, unemployment is growing in the last few years due mainly to the decline in the phosphate industry and downsizing of the public sector. A particular problem is the extremely high rate of youth unemployment (estimated at 30 percent for males and 55 percent for females). With the downsizing of the public sector and limited opportunities in all other sectors, it is unlikely that the government will be able to provide sufficient jobs in the short-term to make up for those that are being lost in mining and in the public sector.

This means that many families will lose their current source of employment and income. Subsistence production and small-scale income-generating activities may offer the best short-term solutions to the problem. At present the private sector offers limited opportunity for employment, as this sector is thin and underdeveloped. The private sector is largely comprised of Chinese immigrants and about over 100 to 150 Nauruans that are engaged in form of businesses.

Capacity Building

Another challenge that Nauru faces today is the provision of funds for scholarships among the Nauruans. The economic situation has forced the Government of Nauru to reduce the number of scholarship offered yearly. The scholarships awarded early in the inception of the scheme were 20. As the nation began experiencing economic hardship the numbers of awards was reduced to 4. Throughout the years the scholarship awards offered fluctuated between 20 and 10. In 2002 and 2003 AusAid sponsored 4 of the 10 students who ranked highest in the scheme.² . As of 2004, 10 scholarships were again granted but in the hope of reducing expenditure but still offer excellent education, the students were sent to Fiji, instead of Australia.

AusAid has been the major provider of scholarships in tertiary education. Other scholarships offered by external agencies are in the form of Commonwealth Fellowships, UNESCO Fellowships and Republic of China – Taiwan. As a result, a steady but slow training of qualified workers across the various disciplines. These scholarships have been highly contested as only five are offered yearly, except for 2003 where 3 were offered. Education and Health dominate the awards as the teaching and nursing staff turnover is high.

² This sponsorship covers the students' duration of secondary schooling.

The turnover of teaching personnel is still alarming and the Department of Education is resorting to desperate measures of upgrading teachers with inappropriate qualifications from lower levels to higher levels (primary - secondary) so as to compensate for the lack of external recruitment. The secondary level has only one local degree holder. Another local teacher is a qualified primary teacher with years of experience. The remaining local teachers are unqualified but experienced in their fields. Most of the teachers are recruited from overseas and are qualified primary and secondary teachers. Senior secondary teachers are lacking at the school.

A huge gap still exists and more training needs to be offered for all areas. All other sectors are critically short of qualified personnel as most of employees are 'qualified' more so through years of experience and less so with tertiary qualifications.

Other members of the public that have largely been ignored in the venture of capacity building are the youth. As stakeholders in the development of the country, it is obvious that the workforce is unwilling to relinquish reigns and very few youths are offered opportunities of training that will enable them to be future leaders, managers and workers. The provision of employment opportunities and training should be a main focus. Mention should also be made of the disabled persons, as stakeholders in this society and training opportunities are scarce for them.

Land Tenure

Land tenure is the most critical consideration relating to the practicality of implementing programs for the rehabilitation and development of agricultural based activities. Settlement problems are exacerbated by a land tenure system that is made up of some 630 irregular sized and shaped pieces of land. For example, some land is less than a meter wide and only a few square meters in area, which do not appear to relate to any ordered plan or access rights. This is further aggravated by a joint ownership system where many individuals hold a share in a piece of land which may be as in one case, as little as an 1/1008 interest. In addition, a consensus has to be achieved among owners before development can proceed. With a growing population and fragmentation of land ownership, as a result of inheritance, attempts to use land for building or agriculture can result in disputes between owners of a land portion as to who should have the use of this land.

Water

The major challenge for Nauru is the sustainable provision of adequate supplies of non-polluted freshwater. It follows that the conservation, management and protection of surface water and groundwater and the collection and storage of rainwater are critical to sustaining human settlements in Nauru.

There are no streams on Nauru. There is however, a small brackish lagoon, Lake Buada (approximately 14 hectares) and a smaller brackish lagoon in the Anabar District. Ground water is utilized from hundreds of shallow wells on the coastal margin and is primarily used as non-potable water as it is brackish as a result of pumping impacts and the contraction of the freshwater lenses in dry periods. These wells are also proximate to habitation, building, and

sanitation structures. Contamination has been detected, thus restricting further the use of water from these wells.

Recent investigations indicate uncertainty about the estimates of water from the freshwater lens due to mixing in the open test bore holes. On current knowledge, it is not possible to assess the long term sustainability of the freshwater lens as a viable water source for Nauru. This has led to focus on more certain, yet expensive alternatives as desalination, osmosis and importation. The development of this resource will have to depend upon studies, testing and simulation using more recently available techniques for extraction.

Nauru has a modern desalination plant - an important source of water delivered to domestic tanks via road transport. This plant is using the waste heat generated from the power station. But recently, the plant has not been operational due to the high cost of energy as well as its dependency on the power output of the Power Station. As the facility is experiencing problems, the heat energy required to operate the desalination plant is not available, causing it to shutdown. A costly replacement source of energy will be needed, unless the power demand is met by the introduction of a different industry or by general industrial and commercial expansion.

As the desalination plant experiences usual shutdowns, the people of Nauru collect storm water for subsequent re-use. Collection of storm water (rainwater) contributes efficiently and effectively to water conservation. Storage tanks for surplus water produced during wet periods when there is sufficient rainfall to fill household and institutional tanks play an important role for water supply needed for livestock, irrigation of crops and gardens. However, potable water is still imported and continues to cause a major challenge.

The remoteness of Nauru which affects capacity to service infrastructure in the event of a major breakdown and its bimodal rainfall pattern with an approximate cycle of 9 years and potential extended droughts means that other sources of harvested water will need to be in place if such events arise.

AusAid conducted a review of the water supply infrastructure on Nauru in 2002. This review was based on the information contained in the Draft 2001 National Water Plan of Nauru. The recommendations in the draft National Water Plan Action Plan include the following:

- continue use of the existing desalinators as the major source of portable water for Nauru;
- introduce water charges to maintain water supply facilities on cost recovery basis;
- replace the desalinators at the end of its service life with two 500t/d desalination units to provide operational flexibility;
- rehabilitate the existing storage tanks to provide a 20 day supply (30,000t);
- establish the airport rainwater collection system as the next source of potable water;
- ensure each house and building has guttering and a large rainwater tank;
- establish a rainwater catchment inspection program to ensure that the water being collected and stored is safe for consumption;
- investigate groundwater as a possible emergency supply in times of drought;

- implement a water conservation program including an education program which would focus on a sustainable water cycle; and
- if the safe yield of groundwater in drought periods is too small to make up the gap between rainwater and 500t/d, then purchase an additional desalinator of 250t/d capacity.

Given the current situation of shortages of water, a review of the Draft Water Plan for Nauru should address issues such as sustainability, institutional arrangements, fees and charges, rehabilitation plans and economic conditions in Nauru. As noted in the AusAid review, the development of a long-term strategy to incorporate the assessment of sustainability of water supply infrastructure should be undertaken.

Land Degradation

One of the major challenges Nauru is facing is land degradation. This includes the almost total degradation of Topside and localized inland and coastal erosion. The most drastic land degradation has been caused by the removal of natural vegetation, topsoil, phosphate rock and the modification of various landscapes.

Due to mining, nearly two-thirds of the country will be converted to an almost totally unproductive pinnacle and pit topography from a gently undulating, productive forestland. Even though there are varying degrees of vegetative re-growth, they remain functionally useless.

Localized soil erosion, coastal erosion and the loss of limited soil resources are important concerns. Throughout the history of mining, the soils of Nauru have been lost from the island. A small proportion remains in the form of stockpiles and underneath roadways. However, these stockpiles are estimated to provide only enough soil to reinstate approximately 32% of the land after rehabilitation. Thus, the existing soil resource of Nauru is particularly precious and any incidence of erosion is of especially great concern. Soils in Nauru are like those of all small islands in the Pacific, a very precious resource whose conservation is of utmost importance.

Coastal and inland erosion are increasing challenges in Nauru. Development of buildings very close to the upper tide limit may also be affecting the coast, and these buildings are likely to be damaged by storm surges that correspond to a higher than usual tide. Erosion of the coastline is of special concern owing to the possibility of global warming-induced sea-level rise.

With no surface water flow, modification by erosion to the island structure has been restricted above sea level. Dissolution erosion undoubtedly has taken place, as has coastal erosion of the narrow coastal plain from waves crossing the narrow coastal reef flat. The island structure has however been subjected to major modification from mega submarine landslides. The upper part of one such mega slide disrupts the coastline in the vicinity of Anabare Bay on the eastern part of the island. The estimated volume of material disturbed extending down to 2 km below sea level is 1.5 cubic kilometers, equivalent to the entire volume of the island currently above sea level.

Pest and Disease Infestations

Lack of quarantine regulations and facilities in Nauru is a big challenge and concern. At present, pest and disease organisms (whether plant, animal or microorganism) can be introduced unchecked to Nauru through air and sea transport terminals. This has not been regarded as important in the past since most consumables were imported and there was little agriculture that was deemed necessary to protect. However, accidental importations of several pest species such as a range of aggressive weeds, fruit flies, and brown tree snakes among others have occurred.

Nauru is suffering from an increase in population of pests and disease vectors such as flies, mosquitoes, cockroaches, rats, feral dogs, cats and pigs. There is also a great concern on the possibility of introducing serious pests or diseases into Nauru's marine environment in the ballast or bilge water brought into Nauru. Experiences from other parts of the world show that organisms introduced via bilge water have had devastating effects on marine organisms and could have disastrous effects on the entire marine environment and food chains of Nauru.

Pollution and Waste Management

Pollution and waste management is one of the major concerns of Nauru. The increase in pollution and the waste stream require strategies for prevention and management at all levels of the Nauruan society, from the individual, household and community levels to the national level. The main areas of concern are solid waste management, water pollution, sewage treatments, air and noise pollution.

On the issue of solid waste disposal, all households and activities in Nauru are producers of solid wastes, such as food scraps, packaging, plastic, glass and metal containers, garden waster and garbage of other kinds. Pollution from the uncontrolled disposal of such solid wastes contaminates groundwater, causes the spread of pests and diseases, and creates air pollution through burning and generation of toxic and greenhouse gases.

A problem also exists with regards to the future of the existing landfill site, and what will happen to it when land rehabilitation commences. The landfill has been uncontrolled with respect to compaction and burying of organic matter, which will continue to decompose and form methane gas for many years. This decomposition will also result in the formation of liquid leachate, which will pollute the groundwater system. This will render the land unsuitable for any other purpose, including participation in the rehabilitation process.

Pollution from toxic chemicals --- such as fuels and lubricants, paints, solvents, heavy metals, pesticides, fungicides and other industrial chemicals --- is of great concern as well. Storage and waste disposal of fuels and lubricants has been recognized as both a current and potentially more serious future pollution issue. No facilities are available for the safe disposal or recycling of these lubricants and fuel.

Bio-wastes from medical facilities have, at times, been burned at the landfill site, owing to operational problems with the Hospital incinerator. Such wastes need to be separated from the general solids, and a suitable incinerator established at the new controlled landfill site, away from residential sectors.

Population Growth and Urbanization

Population growth and urbanization put increasing pressure on natural and cultural resources and constitute a major constraint to sustainable development in Nauru. The island is facing land shortage and increasing population pressure on scarce resources, such as water, noddy birds and marine resources. Nauru's population is increasing at an average rate of 2.4% per annum.

Uncontrolled urbanization is another indication of increasing population density and declining productivity of the land. Most of Nauru's people now live urban lifestyles. This has led to the loss of traditional knowledge about plants, animals and environment and an abandonment of subsistence lifestyles. Increasing cash employment and unemployment (people who neither have urban jobs nor produce things for themselves) and increasing dependence on imported foods, beverages, entertainment have led to social problems and increasing consumption of nutritionally inferior, highly processed foods and alcohol.

From an environmental and cultural perspective, urbanization has not only put pressure on and polluted Nauru environment, but has also produced a current generation of Nauruans who have little traditional environmental knowledge.

KEY RESPONSES

The Republic of Nauru is among today's 33 small developing states that are making up about 17 percent of the total membership of the United Nations. Nauru's remoteness causes its limited access to immediate assistance on human capital and expertise of various UN agencies and bodies that are available in other islands. Although Nauru does not face the problems of surrounding island nations such as Tuvalu and Kiribati, it still have to implement responses and undergo change that will affect the community and place a great demand on limited Government resources. Some of these changes will affect the lifestyle of the people and some of the necessary decisions may be hard on the community in general.

The Nauru Government announced during the Small Islands Developing States (SIDS) Conference on Sustainable Development in 1994, plans to rehabilitate the island. The out-of-court settlement of US\$8 million each from Australia and New Zealand is expected to assist with this exercise. Once the rehabilitation effort gets started, more realistic and meaningful development in the area of agriculture can be planned and executed.

The current Government of Nauru is taking a responsible and decisive approach to the problems by establishing review and planning committees to appraise the issues and address each problem in systematic manner.

National Economic Forum

The Government of Nauru held a national forum entitled the "National Economic Forum: Helping Government Plan for Our Future" last October 7-8, 2003. The forum, funded by the AusAID and ADB, addressed the following issues in various panel discussions:

- (1) Improving Government Transparency and Accountability
- (2) Improving Public Participation with Government
- (3) Deciding the Future of Government Instrumentalities and Corporations
- (4) Financing Government Services
- (5) Setting Priorities for Government Spending
- (6) Priorities for Health and Education
- (7) Managing Trust Funds

The wrap-up provided a synopsis of the panels and discussions of the National Economic Forum, presented in the form of a Summary of Key Findings.

Private Sector Development

Every effort is to be made to enable private sector development in Nauru and that necessitates support for all entrepreneurs, including micro operators in the informal sector. The anticipated enabling factors are listed below.

Institutionalisation of PSD

A proposed Small Enterprise Development Unit (SEDU) will help address the needs and concerns of the small business sector, whose contributions to economic and social development, including poverty alleviation in small island states, are widely recognised. Such businesses have the potential to create and expand employment opportunities, develop entrepreneurial skills, enhance market opportunities and encourage export promotion and import substitution. The establishment of SEDU will therefore provide an avenue for the strengthening and expansion of small businesses in Nauru, especially through public sector/institutional capacity building, partnerships and networking with other agencies, which are necessary for the smooth implementation of PSD strategies. SEDU will also serve the technical and administrative needs of potential Nauruan entrepreneurs.

Private Sector Capacity Building

The formation of a Nauru Small Business Association (NSBA) is being formalised. Since the Chamber of Commerce no longer exists, the establishment of NSBA will be a significant step towards establishing a national Public-Private Sector Partnership or consultative mechanism for Nauru. This will also raise the capacity of the country's private sector to become a more organised body that is capable of consulting with Government on key policy making issues as well as addressing the requirements of small businesses. Through the NSBA, it can be expected that networking and information sharing with similar institutions in the Pacific Islands will be mutually beneficial.

The development of needs-based skills training programmes by means of a proposed Nauru Skills Training Centre will augur well for the capacity building needs of both existing and potential small businesses. The intended training is to cover technical issues pertinent to businesses as well as basic entrepreneurial skills, especially for business-minded citizens without knowledge on entrepreneurship.

Micro-finance Scheme

As the lack of funds is a major impediment to business development on Nauru, the establishment of a Micro-finance Scheme to provide basic financial services to small businesses is deemed appropriate for the country. Beginning with small loan services to facilitate business start-ups, the Scheme could be broadened at a later stage to enable deposits and other payment services, which would be critical in light of the current state of the Bank of Nauru.

National Environment and Management Strategies and Action Plan

In 1997 the Government of Nauru adopted the National Environmental Management Strategy (NEMS) and National Environmental Action Plan (NEAP) to respond to the challenges faced by the island on the environment.

The NEMS report identified development programmes that are sustainable. The report served as a blueprint for the development of sustainable Nauruan island way of life as well as a guideline towards sustaining the island culture and island environment that will remain healthy and productive. A detailed discussion of the NEMS is presented in the next chapter.

2. NATIONAL FRAMEWORK FOR SUSTAINABLE DEVELOPMENT

Phosphate mining has brought great economic benefits both to Nauru as a nation and to Nauruan landowners. On the other hand, it also brought a great environmental cost. The need to protect the environment and Nauru's renewable natural resources is made more urgent by the fact that the mining of phosphate, as a non-renewable natural resource and a source of income, will cease soon. With the cessation of new phosphate income, development efforts must refocus on:

- Living off the interest of the invested capital gained from phosphate mining;
- The rehabilitation of the mined lands under the Nauru Australia Cooperation Rehabilitation and Development Agreement;
- The protection, enhancement and sustainable use of renewable terrestrial and marine resources; and
- The promotion of environmentally friendly industries such as small-scale agriculture and tourism that can provide new sources of income in post-mining Nauru.

Sustainable development will require that economic development, social development, and environmental protection to be integrated and go hand in hand. On one hand, Nauruans desire those services and technologies from the urban-industrial world that can make life in Nauru safer, healthier, more productive and more enjoyable. On the other hand, they will need to protect their environment, their renewable resources and their cultural traditions as the development capital needed for future generations. Essential ecological processes and life-support systems will need to be maintained, and plant and animal diversity preserved. Cultural traditions of sharing and caring, family solidarity and health, caring for ancestral lands and passing on traditional knowledge of their terrestrial and marine resources must be preserved and reinforced.

The Republic of Nauru adopted its National Environmental Management Strategy (NEMS) and National Environmental Action Plan in September 1997. The NEMS was initiated under the United Nations Capacity 21 Programme and funded by the United Nations Development Programme (UNDP) and the South Pacific Regional Environmental Programme (SPREP).

The NEMS focused on:

- Living a life without harming the environment or culture;
- Not exploiting the land or marine environment for food or resources beyond what is needed for individuals and families;
- Encouraging cooperative decision making on what is best for the environment and participate actively in the decision making process;
- Encouraging the Principles of Sustainable Development;
- Developing as necessary a new model of Nauruan life, which is a blend of traditional culture and modern technology; and
- Protecting and nurturing the island environment, flora, fauna and all its inhabitants as a basis for sustainable living for the future.

The NEMS includes a National Environmental Action Plan (NEAP) and a range of objectives and programmes that can serve as a basis for the promotion of environmentally sustainable development. The recommendations and views expressed are recommended to be taken as possibilities — as suggestions that need to be ratified and continually discussed by Nauru's people and their government. The programme of implementation will rely on a focused and comprehensive environmental policy as ratified by the government and the Nauruan people.

The NEMS maps a return to the idea of stewardship, of looking after Nauru's surrounding environment for future generations. Although the report did not claim to cover all aspects of the environment and development, it was regarded as a tool for policy makers, offering a clear view of Nauru's contemporary situation and identifying the challenges that lie ahead for Nauru in the future.

The four guiding principles for the preparation and implementation of the NEMS were:

- that there must be an exhaustive, and continuing, process of consultation and consensus building;
- that the NEMS must be based on what is currently known about the environment, and equally important, what is not known;
- that priorities, the formulation of policy, and the resultant National Environmental Action Plan (NEAP), as the most important component of the NEMS, should depend on the results of the first two stages; and,
- that the implementation of programs and activities suggested in the NEMS and the NEAP be constantly monitored, modified or changed over time based on both changing priorities of the Nauruan people and on the acquisition of new information or feedback on existing programs or activities and the state of Nauru's environment.

The National Environmental Action Plan (NEAP) consists of a range of objectives and associated programmes that could be implemented to address the main environmental issues and constraints to environmentally sustainable development.

Highlighted in the programme of action were:

- rehabilitation of the mined-out areas of the island;
- strengthening of environmental awareness and education;
- strengthening of environmental infrastructure planning and environmental legislation;
- protection of endangered terrestrial and marine resources;
- waste management and pollution control;
- population planning; and
- identification of sustainable economic alternatives to phosphate mining.

While the local community or individual landowners and citizens can implement some of the programmes and activities recommended in the report by government, many other programmes and activities required outside funding and expertise.

The NEMS report identified a set of key challenges that are similar to ones that have been discussed above. In responses to these challenges and issues, the NEAP identified the following actions:

- Land rehabilitation and protection, including the rehabilitation of the mined-out phosphate lands, a rehabilitation trial, soil manufacture, and erosion assessment and control;
- Strengthening environment education, including the development of a Master Environmental Education Plan, the establishment of an Environmental Education Subcommittee and an Environmental Resource Centre, a traditional environmental awareness campaign, a "Keep Nauru a Pleasant Island" competition, an "Enviro-Media" campaign, a pilot "Operation Clean-Up Nauru" campaign, the upgrading of science education, and tertiary training in environmental science and environmental management;
- strengthening environmental institutions and legislation, including the establishment of a Nauru Environmental Coordinating Committee, adoption of the environmental impact assessment (EIA) process, development of a land use planning system, land tenure reform, conduct of relevant environmental baseline studies, establishment of a Nauru Environmental Information System, review and enforcement of existing legislation, and enactment of new environmental legislation;
- Conservation of biodiversity, including the survey and selection of priority conservation sites, establishment of pilot Conservation Areas under the SPBCP, protection and rehabilitation of endangered plants and animals, a noddy bird population biology study and conservation initiative, the development of a Forestry and Agroforestry Development Plan, establishment of a nursery system for endangered and culturally-important plants, establishment of a Rehabilitation Nursery, and the establishment of a Nauru National Botanical Garden and Arboretum;
- Promotion of sustainable use of marine resources, including the establishment of marine reserves, improvement of the fisheries resources data base, control of overexploitation of marine resources, improved exploitation of pelagic and deepwater marine resources, reinstatement of appropriate traditional marine resources management strategies, and rehabilitation of aquaculture in Buada Lagoon;
- Pest and disease control, including the establishment of an Integrated Pest and Disease Control Program and a Quarantine Service;
- Pollution and waste management, including the development of an Integrated Waste Management Plan and the establishment of a Waste Management Authority, a waste reduction campaign, an education program for the safe handling and proper disposal of pesticides and chemicals, strengthening of recycling capabilities, green waste recycling, establishment of a sewage treatment plant, a composting toilet trial, air pollution monitoring and control, and noise pollution control;
- Control of population and urban growth, including the implementation of an effective family planning program, development of new residential and agricultural areas as part of the rehabilitation of Nauru, and controlling immigration into Nauru;
- Health and nutrition improvement, including a Health and Nutrition Awareness and Improvement Campaign and a Physical Fitness Campaign;

- Promotion of sustainable economic development, including the strengthening of local production systems, the development of a Tourism Master Plan, and the promotion of ecotourism;
- Appropriate infrastructure development, including the coordination of infrastructure and services planning, obtaining consensus agreement of landowners on the easement or right-of-way over private property for the installation and maintenance of essential services, design of an Energy Management Plan, development of a storm water collection and disposal system that minimizes erosion and maximizes the recycling of water for irrigation, and the establishment of an integrated water conservation program;
- Addressing and preparing for global climate change and sea level rise, including a continuing strong commitment to international initiatives addressing global climate change and sea-level rise, development of an Integrated Coastal Zone Management and Coastal Protection Plan, coastal forest protection and reforestation, and protection from ultraviolet radiation;
- Maintenance of a strong anti-nuclear stance, including a continued commitment to all international anti-nuclear initiatives and the initiation of a local nuclear awareness campaign;
- Maintenance of a strong stance against trade in toxic and hazardous wastes. including support of regional initiatives to ban the importation of hazardous and radioactive wastes;
- Transparency and accountability to the budget process and financial management; and
- Establishment of a viable banking system.

The following activities are currently ongoing:

- The Department of Island Development & Industry with the assistance of SPREP Legal Lawyers have begun the process of reviewing and adopting Environmental Legislation for Nauru.
- The rehabilitation of the mined lands under the Nauru-Australia Cooperation Rehabilitation and Development agreement process has begun.
- The rehabilitation program has a Plant Nursery project component whereby land has been designated and secured from landowners. The project is to commence within the year.

The Government of Nauru has been active in Regional Environmental Initiatives with programs that Nauru is currently engaged in are as follows:

- AusAID sea level and climate monitoring project
- United States Atmospheric Radiation Measurement Programme
- National Biodiversity Strategic Action Plan (NBSAP);
- Persistence Organic Pollutants (POPs);
- National Capacity Self-Assessment (NCSA);
- Pacific Islands Renewable Energy Projects (PIREP);
- Capacity Building for Adaptation to Climate Change in the Pacific Region (PACC);
- National Biosafety Framework; and
- International Waters Programme.
- Under the Umbrella of the Department of Island Development & Industry, the National Environmental Coordinating Committee.

3. SECTORAL PROGRESS MADE AND PROBLEMS ENCOUNTERED

Climate Change and Sea-Level Rise

In the context of climate change Nauru's geography and environment form the major determinants in establishing its current position and approach to addressing the climate change issues. Climate change, and in particular global warming and the destruction of the earth's ozone layer, is a major concern not only for Nauru but also for the entire international community.

Global warming and associated sea-level rise are posing a huge challenge to the densely populated coastal plain of Nauru. Accelerated coastal erosion and increasing salt-spray damage to vegetation and property are already being experienced.

Nauru continues to face the biggest challenge of coping up with the sea level rise superimposed on higher average levels associated with global warming. Evidence from El Niño phenomena shows that the sea level near Nauru has risen from time to time as much as 40 cm higher than its current average level. The continuation of this scenario poses a serious threat to Small Island States and Coastal Areas. Some of the potential effects of rising sea levels on low-lying islands and coastal areas include:

- a. Increased frequency of storms
- b. Increased flooding and inundation of wetlands, coastal agricultural areas and other low-lying areas
- c. Increased saltwater incursion and storm over wash into coastal aquifers, freshwater lenses, and agricultural areas
- d. Increased destructiveness of unpredictable natural hazards such as tropical cyclones, storm surge, and tsunamis, especially if they coincide with exceptionally high tides, such as the "king tides" that occurred in June 1994
- e. Increasingly destructive wave activity and decreased protection from submerged offshore reefs
- f. Increased coastal erosion
- g. Loss of coastal and mangrove forests
- h. Loss of coastal agricultural areas
- i. Declining fisheries productivity
- j. Increased coral mortality
- k. Changes in oceanic currents and upwelling
- l. Breakdown in natural community (ecological) interrelationships
- m. Loss of property and structures.

Most of these potential effects have serious implications for Nauru. Of serious concern to Nauru is that recent studies show increased sea temperature may be a major cause of "coral bleaching" and the death of coral. This has serious implications in terms of the loss of protection that coral reefs provide to the island from the destructive power of the sea and the loss of marine habitats and destruction of food chains for important marine organisms.

Breakdown in the earth's ozone layer concerns all Nauruans. The island is close to the equator where sunlight is very intense throughout most of the year. The ozone layer is vital for protecting life on earth from the harmful effects of ultraviolet radiation. The immune systems of living things can be weakened by exposure to ultraviolet radiation. This weakening of the immune system poses a grave danger of amplifying the effects of communicable and other diseases which are present now, or could be present in the future in Nauru such as AIDS.

Environment

The two most important factors determining the future environmental, social and economic scenarios for Nauru will be the cessation of phosphate mining, and subsequent implementation of the National Environmental Action Plan (NEAP) and the Rehabilitation Master Land-use Plan (RMLP) along with other sustainable development objectives. Failure to implement the NEAP and RMLP successfully would lead to continued breakdown of the physical environment of Nauru, as well as the social and economic well being of the people through continued exploitation of remaining resources.

Two possible scenarios of future socio-economic development and environmental changes are presented:

- Failure to implement the NEAP and RMLP successfully would be associated with ongoing exploitation of land and marine resources and continued social and economic breakdown. Such an outcome will limit the potential for an environmentally and economically sustainable future for Nauruans; and
- Successful implementation of the NEAP and RMLP would result in rehabilitation of mined land, increased protection and enhanced productivity of renewable natural resources and enhanced social and economic well being. Such an outcome will provide Nauruans with an environmentally, socially and economically sustainable future.

Management of Waste

All households and activities in Nauru are producers of solid wastes, such as food scraps, packaging, plastic, glass and metal containers, garden waste, and garbage of other kinds. At present, collection of garbage is undertaken partly by each of the NIC, NPC and NWD, but collection is irregular and not all households are serviced because the service is voluntary.

The storage and waste disposal of fuels and lubricants has been recognized as both a current and potentially more serious future pollution issue. The NPC currently imports and distributes all fuels and lubricants, but no facilities are available for recycling or safe disposal.

Having an efficient integrated waste management programme has been recognized by the Government of Nauru as of utmost importance. **Thus, Programme 7.1 of the NEAP emphasized the development of an Integrated Waste Management Plan and the establishment of a Waste Management Authority.**

One of the key objectives of the RMLP was to develop sustainable waste minimization and recycling programs that will reduce the environmental impact of the waste management process in Nauru. In order to increase topsoil stocks for rehabilitation and agricultural purposes, soil creation was through waste management by collecting and composting all organic waste. However, several key issues were recommended for consideration for evaluating various waste management options and these included:

- Long term viability (sustainability) of the island's natural resources;
- Protection of freshwater resources (potential ground water pollution, water use management);
- The provision of materials, primarily organic matter, for use in the rehabilitation of mined out areas;
- Implication for sustainable energy production and use;
- Impact on the coral reef;
- The integration of waste management activities with future industries such as pig and poultry production, horticulture, food processing;
- Social acceptability and barriers to implementation of options;
- Costs of municipal solid waste options; and
- The quality of projected estimates of waste generation types and quantities.

The key challenges for the above issues include the following:

- Generating public awareness and putting in place such programs;
- Generating community participation and developing initiatives;
- Find the land for waste allocation; and
- The implementation of a full waste management program

Solid Waste Disposal

Controlled land filling is currently not practiced on Nauru. Instead, open dumping is the most common way of disposing of solid wastes. This has been carried out mainly in designated areas above the main town centre and in an area previously mined of phosphate. The current waste-collection system is ineffective and not integrated, which leads also to indiscriminate dumping. This lack of solid-waste management including hospital waste, quarantine waste, metal waste and the municipal waste, leads to future potential environmental and health risks, some of which already exist.

To determine the emissions from these open landfill areas it has been assumed that the organic waste decomposes aerobically (in the presence of oxygen) and is then attacked by anaerobic non-methanogenic bacteria.

Wastewater Treatment

On Nauru the domestic and commercial wastewater and sewage are collected by large tanker trucks from septic and wastewater storage tanks and along with Nap's wastewater is disposed of through a seawater pipe outfall close to the edge of the reef. There is no alternate domestic,

commercial or industrial wastewater treatment available on Nauru. This lack of primary treatment for liquid wastes provides potential environmental and health risks. The estimated amount of methane produced from the wastewater collection and disposal process is 0.0113 Gg.

Coastal and Marine Resources

Marine resources are of critical long-term subsistence and commercial importance to the people of Nauru. Degradation and overexploitation of the inter-tidal zone, sub-tidal coral reefs, reef slope, and pelagic fisheries resources are seen as major constraints to sustainable development.

Increasing population, commercialization, the use of motorized fishing boats and more efficient modern fishing techniques and the use of some destructive fishing techniques have placed great pressure on Nauru's limited inshore and reef slope fisheries resources.

In Nauru, a very wide and diverse range of marine resources is available for sustainable harvest. Many of these have helped sustain the people of Nauru since their first arrival over three thousand years ago. The resilience of the resource is evidenced by the fact that, despite many years of daily reef gleaning, it is still possible for some families to glean their daily protein needs from the inter-tidal zone and fringing reef areas.

However, the increasing scarcity of many formerly more common marine organisms such as turtles, large reef cod, squirrelfish, drummers and turban shells are well known. Smaller catches and decreasing average size of individuals are sure indicators that over fishing have occurred for these species. Of particular concern is the fact that an increasing percentage of the overall catch is being sold commercially, thus applying more pressure on these resources. This situation underlines the need for protective legislation and sustainable harvesting strategies.

Fortunately, the conservation ethic remains strong among some Nauruans, and there are some traditional and modern conservation practices that could be used to protect the sustainability of the resource. Some of the main mechanisms include: secrecy about fishing grounds and techniques, temporary or seasonal taboos or bans on species or fishing grounds, restrictions on the consumption of certain species (for example, some species such as turtles or giant clams were reserved for chiefs or priests), fines or penalties for resource abuses, and clan tenure or limited access to reef and lagoon areas.

In terms of fisheries development, Nauru is earning revenue in through:

- the issuance of licenses to distant fishing nations under bilateral or multilateral agreements, and
- the export of tuna to markets in Australia and Japan by the Nauru Fisheries and Marine Resource Authority.

In the 1990s, the Government of Nauru established the Nauru Fisheries and Marine Resource Authority (NFMRA) as both the policy advisory body and the operational arm for the implementation and enforcement of Nauruan laws relating to the management and use of marine

resources within Nauru's Economic Exclusive Zone (EEZ). Before the establishment of the body, the Department of Foreign Affairs and the Department of Island Development were jointly responsible for negotiations with distant fishing nation for fishing rights in the EEZ.

The fishing industry on Nauru is still in its infancy with the NFMRA operating two very small long lone fishing vessels primarily for domestic market. Catches of tuna that meets the quality standard of the tuna markets in Australia and Japan are export to these countries. The volume of sales and revenue earned over the last few years has been low. For example, in 2001 fresh tuna export to Japan had been around 600kg per week but there is potential for further development of this market and industry.

The opening of the Nauru Fish market in 2000 has also provided a source of employment for Nauruans. Revenue from international fishing licenses sold to Japan, the USA, Taiwan and the Philippines brings in around A\$2.8 million annually. In 2000, Nauru earned A\$8.5 millions from fishing license fees. This represented a 60 percent increase over 1999, but is largely attributed to a weakening of the Australian dollar. Aquaculture, particularly the development of milkfish ponds to serve the domestic market has potential to provide incomes at the 'grassroots' or subsistence level.

Freshwater Resources

In Nauru, the only significant permanent freshwater resource is groundwater in the form of a "lens" of often slightly brackish freshwater, hydrostatically "floating" on higher-density saltwater beneath it. The height of the freshwater leans above sea-level and the level of salinity vary in relation to the elevation, geology, texture and shape of the island, and with the amount of water use and rainfall.

Currently, Nauru's population is reliant on water supplied either from a desalination plant run by the Nauru Phosphate Corporation - which produces on average of 1,150 tons per day - or from local wells. There is little use made of roof rainwater catchments on the island. Existing long-term potential threats to the quality of the groundwater resource include contamination by cadmium, rubbish dump leachate, sewage and household wastewater, e.g., bathroom, kitchen and laundry.

Land Resources

Land in Nauru is limited both in its availability and also in its use. Of the total area of 22 square kilometres, 70% has been utilized for the mining of phosphate. The balance provides space for the domestic, government, commercial and industrial sectors. The international airport takes up a significant proportion of this area. There are very limited recreational areas, and agricultural activities are currently minimal due to fruit fly problems for which a concentrated eradication programme has been successfully commenced.

Land resources from Nauru's area are insufficient to make a full contribution to agriculture and food requirements. Out of 2,100 hectares of Nauru's area, only about 100 hectares are available for household garden food production. The remainder consists of mined areas. This available

land area when fully utilized can only make a contribution to Nauru's food requirements in the form of vegetables, fruits, spices, coconuts, and some tree fruits. However, this area is insufficient to contribute substantially to food and energy requirements. Food energy will have to be imported as previously in the form of rice flour, oil, sugar or similar energy staples. Even in the best scenario, there will still be a continuing need for Nauru to import most of its food energy requirements

The soil in the coastal areas is only about 25 cm deep, is coarse textured and contains more coral gravel than sand, and the fertility is highly dependent on organic matter. The plateau soils vary from shallow soils, on the tops of limestone pinnacles, composed primarily of organic material and sand or dolomite, with very little phosphate, to deep phosphatic soils and sandy phosphatic rock, up to more than 2 m deep between the pinnacles. The topsoil ranges from 10 to 30 cm in depth, overlying deeper subsoil, which is frequently reddish yellow, and between 25 and 75 cm deep.

The undisturbed plateau soils have a high level of organic material and are generally fertile. In more recent years these soil deposits have been stripped from the phosphate mining areas and stockpiled for use in future rehabilitation activities. Preliminary excavation and investigation was carried out in 1988 to determine the depth and extent of the secondary phosphate deposits, but these still remain to be quantified (Drayton 1995). The lack of land for urban development and a secure groundwater supply are the two main issues currently being addressed by Nauru through a detailed rehabilitation programme.

In terms of land rehabilitation, 1,295 ha of Topside has been mined and 150 ha of reserves remain unmined, leaving an unusable landscape of limestone pinnacles requiring rehabilitation. The rehabilitation plan was developed on the basis of trial projects. The rehabilitation plan follows a path that will deliver the priority land uses in a similar time sequence to that developed in the Rehabilitation and Development Feasibility Study (RDFS) of 1994.

The Rehabilitation Study has located 12 land uses for Topside after rehabilitation. These are for roads; housing; agro-forestry; sports/recreation/parkland; education complex; public service complex; cementary; hospital complex; industrial complex; airport; water storage; and conservation. Within the land use plan sites, housing will meet demands for the next 80-100 years.

The key challenges are:

- Development of skills and knowledge through training and education to degree level qualifications as reflected earlier under capacity building;
- Implementation of the rehabilitation program;
- The approval by land owners on land uses after rehabilitation; and
- Seeking funds for further assist the land rehabilitation plan.

Energy Sources

The Nauru Phosphate Corporation (NPC) is wholly government owned and is the sole power provider on Nauru. The NPC was traditionally established for the primary purpose of mining. In addition to the provision of electricity for the entire island NPC is also responsible for the water supply (pumped / imported and through desalination) for distribution through water tankers to the meet the domestic, hotel and commercial requirements.

The whole population on Nauru has access to electricity, and there are a number of standalone generators that are used for standby purposes. Limited use is made of solar photovoltaic or solar hot-water systems, although with Nauru situated almost on the equator the climate and long hours of solar radiation lend themselves to this alternate form of renewable energy. Diesel generators have been the traditional source of electrical energy for Nauru since the establishment of the mining activities.

The NPC has an installed capacity of 15 MW (derated to 11.1 MW) with approximately 43% of the energy generated by NPC being used by the mining operation. There is limited use of LPG on Nauru, in particular in the domestic sector. However, hotels and restaurants use LPG for cooking purposes. This situation has arisen due to the long-term reliance on electricity as an energy source, which in the earlier days of the mining operation (pre 1990s) was free.

Opportunities abound for the introduction of demand side management and energy efficiency in Nauru, in particular in the government and domestic sectors where there is a high use of air conditioners, electric water heaters, electric water pumps and electrical appliances.

The installation of a desalination plant (design capacity 1200 tonnes per day with an actual output 1150 tonnes per day) in 1994 utilises the waste heat from the engine exhaust system of the NPC diesel generators. This source currently provides most of the island's clean water supply requirements. Most residents have their own water wells and small electric pumps. Limited use is made of the extensively available roof rainwater catchments.

Indigenous energy resources in Nauru are limited solely to solar radiation and a small amount of biomass. However, as the electricity is supplied from diesel generation and has been abundantly available over the past 80 years, **these other renewable energy sources have not been extensively exploited.** Due to Nauru's limited biomass resources it is unlikely that this could be considered to be a sustainable energy resource for the future. Solar energy offers the best alternative, but considering the high usage of electrical appliances, i.e. air conditioners, stoves, etc., the practicalities of adopting a solar-replacement policy would need to be carefully evaluated from an economic point of view. In addition, the environmental aspects of battery import and disposal may also create additional problems.

Tourism Resources

The number of visitors to Nauru as a destination is very small. Nonetheless, many travelers to Nauru are transit passengers and do not stay overnight. Most of the visitors to Nauru are usually

on government business or visiting friends and relatives. Nauru is serviced by one airline, Air Nauru that links Nauru to Melbourne, Brisbane, Pohnpei, Guam, Manila, Fiji and Kiribati.

Nauru has two hotels: the government owned Menen Hotel, and the privately owned Od'n Hotel. The Department of Culture and Tourism handle matters relating to tourism and visitor information.

Tourism development is slow in its progress due to the many constraints faced by the National Tourism Office (NTO), which is the office handling matters relating to visitor information. The key constraints faced by NTO include the:

- lack of trained personnel in areas pertaining to tourism;
- lack of statistical information including unreliability; and
- lack of commitment, cooperation and coordination of efforts between stakeholders, including between government agencies, NGOs and the private sector businesses; and

Game Fishing

Nauru is situated in the heart of some excellent fishing grounds, with water depths plunging to 2,000 ft just off the edge of the islands shores and reefs, making the region very attractive for the major game fish species, and anglers wanting to catch them.

The beauty of Nauru and its fishing grounds, is that game fish such as Marlin, Sailfish, Wahoo, Yellow fin Tuna, Dolphin fish and many more can be caught just minutes from your accommodation which is also only a few minutes from the marina. Nauru can be fished from April through to December, with most species being readily available during that time.

Biodiversity Resources

Flora and Vegetation

Nauru's indigenous flora and the vegetation as a whole are among the most limited on earth. Because of Nauru's small size, limited habitat diversity, and its physical isolation from continents and other, larger islands, only 60 indigenous species of vascular plants have been recorded. There are no endemic plants (plants unique to Nauru). The long settlement, widespread destruction during World War II, monocultural expansion of coconut palms, and over 80 years of open-cast phosphate mining have led to serious vegetation degradation, disturbance, and displacement. Although greatly outnumbered by exotics, the indigenous species (16.5% by area) still constitute the most culturally useful and ecologically important species, and their protection and enhancement are crucial as a basis for sustainable development on Nauru. Regenerated vegetation after mining covers 63% of Nauru's land area.

Terrestrial Fauna

Nauru's main indigenous land animals are birds, insects and some land crabs which accord varying degrees of importance to sustainable development, in terms of both their ecological and

cultural utility and their possible importance to the development of National Reserves and a limited tourist industry. There are no indigenous land mammals on Nauru. Birds, most of which are either sea birds or migratory species, constitute the most visible and among the most culturally important indigenous animals of Nauru. Migratory species use the island to stop and feed, and sometimes to breed and nest. The single species regarded as endemic is the Nauruan Reed Warbler or Nauru Canary. The brown and black (whitecapped) noddies, common fairy terns and the great frigate bird are all culturally important.

Transport and Roads

Like most Pacific Small Island Developing States, the remoteness and distance of Nauru from other countries has been a challenge in the development of sustainable shipping and aviation services.

The Government of Nauru for a number of years operated “Air Nauru” as a government airline, however under this mode of operation the airline was servicing non-viable destinations and was accumulating significant operating losses (\$20 million per annum). In July 1996 “Air Nauru” was corporatised. The airline still remains 100% government owned but now is operated as a commercial operation with the new objective of providing a financially viable air service. Current indications are that this object is being achieved (reduced operating loss down to \$2.6 million [financial year 97/98] break even or a small profit [financial year 98/99]).

The road infrastructure around Nauru totals 40 km. This comprises of 29 km of sealed roads, of which 17 km is the distance around the perimeter of the island. There is another 12 kms (approximate) of unsealed roads that are mainly on the “Topside” and used for the phosphate mining operations; this varies with the location of the mining operation.

A narrow-gauge rail system for transporting the mined phosphate links a tip head located near the middle of the Topside area to the Phosphate Refinery situated in Aiwo and is 4 km in length.

There is no public transport system and most families own one or more cars or motorcycles. Sea transport is limited to a range of small to medium-sized outboard motor boats, which are used predominantly for subsistence fishing. Fishing for domestic consumption is often carried out from traditional wooden dugout canoes.

The regular ocean-going shipping that services the island and the phosphate ships all add to the potential detrimental impacts to the environment from oil spills and general ship’s pollution. The plumes of phosphate dust drifting freely over both the land and ocean during the loading of phosphate for export, the plumes remain a concern. Unfortunately there does not appear to be an easy solution to this.

Human Resource Development

During the Australian administration of the island, scholarships for two or three final year secondary students were awarded every year for further studies in Australian schools. Following independence, the number of scholarships was increased to 20 per year until late 1999. The

objective of the scholarship program was to basically to produce trained Nauruans in professional and technical fields where such training was not available on the island mainly due to “economy of scale” factors.

The economic situation has forced the Government to reduce the number of scholarship offered yearly down to four. Australia, as part of the agreement with Nauru to accept to host the “boat” people on the ir behalf is providing funds for the scholarships.

Despite the substantive investment in education over the 36 years, there is still a huge gap in quantity of trained workers across the various disciplines and this supported by the continued presence of foreign skilled workers on the island. The critical shortages are in science and technology disciplines, e.g. engineering, health care professionals, communication technology, environmental sciences, and in the finance and banking sectors, legal practitioners and social development sciences.

4. CROSS SECTORAL PROGRESS MADE AND PROBLEMS ENCOUNTERED

As noted earlier, Nauru is a country in post-phosphate transition. After years of high economic growth fuelled by booming but unsustainable phosphate exports (and looming resource exhaustion), the economy of Nauru has, over the past decade, experienced an unprecedented economic downturn. The downturn has been characterized by mounting domestic and external debt service payments, falling revenues, high and unsustainable government expenditure, and a liquidity crisis in the financial sector that is now threatening the economic and financial stability of the country.

Financing and Investment for Sustainable Development

The country is currently experiencing a steep decline in GDP per capita, falling employment opportunities, a concomitant decline in income earning opportunities, and emerging hardship and social problems. In this context, financing and investment for sustainable development will be crucial for the well being of its people.

The major challenge for the Nauru Government is to put in place a National Strategy for Sustainable Development that should consist of a National Development Plan. Nauru's National Policy Objectives and development strategies for the medium term were set out in the Nauru Development Plan (2002-2006). Unfortunately this plan was shelved due to financial constraints to undertake much of the proposed expenditure under the plan. The challenge is secure donor funding in the execution of this Plan.

Trade and Investment

The mainstay of the Nauru economy has been the export of phosphate, mainly to Australia, New Zealand, India, Philippines and Republic of Korea. In the short to medium term, the imminent exhaustion of the phosphates resource and the decline in revenue from phosphate mining will have serious consequences for the country and its people. Diversification of the economic base, with specific focus on private sector development to achieve economic growth will need to be a key objective for the Nauru the Government. Providing an enabling environment for this productive sector to flourish is crucial to the future prosperity of Nauru.

Consistent with these objectives, the Government of Nauru is targeting both the Energy and Fisheries sectors as focal sectors under the EU Cotonou Agreement. The Nauru Government also recognizes and supports the work of Non-Governmental Sectors (NGOs) in the areas of identifying and pursuing employment and income generating opportunities at the 'grassroots' or subsistence level, and their role in ensuring that all members of the community have an equal opportunity to participate in society

Nauru has never received any Foreign Debt Investment (FDI) or Overseas Development Assistance (ODA) since it became independent in 1968. The high per capita income disqualified Nauru from accessing aide or concessionary funding from international financial institutions. This remains the case up to now.

The Phosphate industry was purchased from the British Phosphate Commission in 1970 for A\$21 million and the public infrastructures and buildings on Nauru were built with Nauruan money.

The economic regression that the country is facing brought by the combination of the drop in export sales of and depletion in the stock of phosphate, decline in the value of the investment portfolios and limited options available to Nauru to develop other export industries will force Nauru to look towards FDI and ODA as sources of funds to replace the dilapidated and aging public infrastructures and buildings and maintain social development programs such as education and health care services.

Investment is critical to kick start the economy of Nauru and which would assist in economic and financial recovery. The lack of capital available to the domestic investors, combined with poor basic infrastructure such as utilities and indigenous land disputes are constraints to investment in Nauru. However where they exist, opportunities for private sector initiatives have been identified in offshore fishing, financial services and tourism.

Capacity Building

The Government of Nauru has always given priority to capacity building since being self-sufficient means independence from external resources and forces in the socio-economic development of the nation.

In the formative years of the Republic, it was clear that the Government's priority spending were on:

- Human resource development to meet the demand of the local labour market for skilled and semi-skilled workers;
- Provision of transport services to link Nauru to the metropolitan countries of Australia and New Zealand where all of Nauru's import are sourced as well for Educational and health care services; and the provision of public infrastructures and buildings and services to discharge its obligations to the people and enhance quality lifestyle on the island.

Human Resource Development is highlighted in Chapter 3, under the Sectoral Areas on Program Made and Problems Encountered, and Chapter 5 under MDGs of this NAR. However, with the fall in GDP per capita, Nauru's Human Development Index ranking has fallen to 0.7. One of the principle problems facing Nauru is the extremely high rate of youth unemployment, which has been estimated at 30 percent for males and 55 percent for females.

Infrastructure and Services

In the early 1970s Nauru invested a substantive amount of money in the development of public infrastructure and buildings such as the Civic Center complex with an international conference facilities, a 60-room hotel, rebuilding of the main road around the island and carriage way to public buildings located off the main road, installation of a satellite communication system and

associated infrastructure, the laying of telephone lines to provide connection for the entire island and upgrading of the airport terminal and runway and the installation of navigational aides when the Nauru owned airline started operations in 1972.

Nauru established its own airline Air Nauru in 1972 to provide a critical link with Australia, and over time expanded this to most of the islands of the south, central and north Pacific providing cheap connections between the islands and countries such as New Zealand, Hawaii, Guam and Philippines. However, restrictions on the uplift of passengers enroute on all of the airline's route made the operation unprofitable and the Nauru Government in 1993 reduced the number of its airplane to one and recently cutback on its routes to just Australia, Fiji, and Kiribati.

At the same time that the Government established the airline, the Nauru Local Government Council (NLCC) established a shipping line called Nauru Pacific Line (NPL) to provide shipping services between Nauru and Australia where bulk of Nauru's imports were sourced from.

Over time, the NLGC expanded the services to cover again, the south, central and north Pacific islands providing critical links between the island and the major trading partners, Australia and New Zealand. Poor management of a lucrative service and competition from emerging services made the venture highly unprofitable and in 1992, Nauru sold all its ship and entered into a leasing service with an Australian company. This has also been replaced by a service contract when a foreign company now provides service to Nauru on commercial terms.

It has been estimated that Nauru spent over A\$600 million on both the airline and shipping line in an effort to monopolize the inter-island routes. However, poor management resulted in its inability to secure the lucrative markets.

5. MILLENNIUM DEVELOPMENT GOALS AND SUSTAINABLE DEVELOPMENT

Poverty Eradication

Absolute poverty is not a major issue in Nauru. This is reflected in the relatively low Human Poverty Index of 12.1. However, the dislocation costs of the downsizing of the public sector and the decline in phosphate mining operations will have a considerable impact on the population of Nauru. These activities account for approximately 95 percent of all employment in the country.

The government recognizes and supports policies designed to mitigate any adverse impacts of the transition process on the poorest and most disadvantaged sections of the population. To this end, the Government, in collaboration with the development partners and the wider community has been considering a proposal for a Poverty Partnership Agreement (PPA). If adopted, the PPA will provide the basis for government socio-economic development policy. Its aim will be to enhance employment opportunities – specifically by encouraging private sector development initiatives - and to support human and social development.

Education and Reduction of Child Mortality

In 1993 Nauru ratified the Convention on the Rights of the Child (CRC). This in essence is a commitment to the child's right to education. In 1994 a public forum "Education for Nauru, Now and Beyond 2000" initiated a 10-year plan for education in Nauru. This was followed by a review by public forum in 1997 "Nauru Education for the 21st Century" and subsequently by the National Economic Development Summit held in February 1999. Goals and strategies have been put in place for 5 years. Government and education departments, NGOs, the public and private sector, media, parents and students all have input into the reporting process.

In line with community aspirations and national objectives and needs, the National Education policy is, *"To provide opportunities for all Nauruans to gain knowledge and skills to contribute constructively to the community and economic development of Nauru, to contribute to the preservation of Nauruan society, identity and pride based on a foundation of obedience to God, respect for each other; loyalty to the State, its President and traditional leaders"*.

The Government is the major provider of education and training. It is committed to a vision for the education sector, which is *"literacy for all Nauruans in Nauruan and English and computer literate in an age of technology. Schools are properly equipped and maintained. Parents and teachers collaborate effectively towards education for all. Vocational education and USP equips young Nauruans for worthwhile employment and enterprise. Locally acquired qualifications are recognized locally and abroad. Computer literacy is widespread"*.

As part of Nauru's commitment to the call to action of the World Education Forum, held in Dakar in 1990 for the achievement of Education for All (EFA) by 2015, Nauru established a National EFA Forum in April 2001 to act as a consultative and coordinating body to ensure the EFA priorities and action plans with respect to Nauru's needs are implemented.

At present the reality of the education system is somewhat different from the ideal. The education system in Nauru is failing to produce Nauruans competent to deal with the future. There is a lack of continuity, relevance and off a culturally appropriate curriculum – which, combined contribute to academic failure, loss of identity and sense of purpose. Schools and training facilities are dilapidated and poorly equipped, and there is over-crowding in classrooms.

As a matter fact, significant numbers of Nauruans are illiterate in English and have a poor command of Nauruan. Collaboration between teachers and parents is intermittent. Some relief to the overcrowding situation has been provided in the form of a new primary school (Nauru College) opened in 2000. This project was financed through the Nauru Rehabilitation Fund (managed by the Nauru Rehabilitation Corporation).

Statistics below shows that enrolments have been declining in numbers in the upper secondary especially after year 7. The following factors as expressed by heads of schools, managers of the department, parents of students and students themselves are involved in the decline.

- The Scholarship scheme is only offered in Year 7. 10 scholarships are offered. General feeling of failure is felt in the remaining student population. Lack of incentive to complete the rest of secondary level.
- Very few qualified teachers at the secondary level with lack of teaching skills
- Lack of qualified senior secondary school teachers
- New regional programme offered at Year 12 that needs preparation from previous year. Lacking in curriculum development

Health and Nutritional Deterioration and Diseases such as HIV/AIDS

The Government is the only health provider in Nauru and health care is at no cost to Nauruans. The changing economic status of Nauru and the very limited revenue available to Government means that the present health services fail to achieve the best basic and essential health outcomes for the people of Nauru. And the arrival of Asylum Seekers in 2001 has further added burden to the already fragile and weak health system.

There is a need for strong and consistent political support for the health sector in Nauru. This is required to ensure continuous Government funding to provide health services; to ensure ongoing planning and policies; and to introduce legislative changes to support the sector.

In 2003, AusAID through Aus Health International prepared a Strategic Plan for the Strengthening of Health Services in close consultation with Nauru health authorities and the people of Nauru. This plan was prepared as an achievable strategic plan with a supporting action plan. This was the first time the Government of Nauru has participated in the preparation of an overview of the health status of the people of Nauru and the health system.

Ideas already identified in the health planning process but require further investigation include:

- Affordable user pays options including pharmaceuticals,
- Overseas treatment,

- Private charging for medical services;
- Semi privatization of health services; and
- Introduction of a health insurance scheme.

There are serious nutritional problems and health disorders in Nauru that are mostly related to changes in resource use systems, increasing population densities, and urbanization. Recent studies in Nauru have recorded among the highest incidence of diabetes in the world (almost 66% of adults are affected by diabetes by the age of 55), as well as very high incidences of obesity, hypertension (high blood pressure), *hyperuricaemia* (often manifested as acute or chronic arthritis and gout), diseases of the digestive system, cirrhosis of the liver, and certain forms of cancer.

Dental and periodontal disease is also increasingly common in Nauru. Strong correlations between increasing incidences of these diseases and the increasing consumption of imported foods and beverages (those that are high in sugar, salt, alcohol and animal fat, low in vitamins, minerals and fiber), smoking and sedentary urban lifestyle have found in various studies.

Among the young people of Nauru, stress and social conflict are results of rapid change in lifestyle with the imposition of foreign cultures.

Influenza, historically responsible for devastating epidemics throughout the Pacific, is still a common infectious disease. High rates of infantile and adult diarrhea and other gastro-intestinal problems constitute a health problem. With increasing population densities, the situation could worsen in the future.

Skin diseases, such as tinea and ringworm, are common and are present both among Nauruans and contract workers. These maybe caused by poor personal hygiene and inadequate water supply. Hepatitis B is also present and constitutes an area of concern.

One of the most serious health problems is Sexually Transmitted Infections (STIs) in some Pacific countries that have regular air links to Nauru. Now alarming is the widespread of Acquired Immune Deficiency Syndrome (AIDS), as increasing number of cases has been reported from Saipan, American Samoa, French Polynesia, Fiji, and Papua New Guinea. The situation does not seem to be as bad in Nauru although there are increasing incidences of STIs. There have, as yet, been no cases of AIDS reported, although the potential for an outbreak of AIDS in Nauru is great and would constitute a serious threat to the health of the nation and a constraint to sustainable development.

High incidences of these diseases are related to poor management of scarce water resources, poor nutrition, overcrowding and poor environmental hygiene, and the lack of ability to provide adequate primary and secondary health services.

Gender Equality and Empowerment of Women

Nauru has given strong emphasis to gender equality and empowerment of women through its national efforts and initiatives. This included the establishment of the Women's Office in the 1997, the approval of maternity leave of 3 months to all women in the public service, the

elevation of the Women's Office to Ministry level status in 2000, the approval of the establishment of a Well Women's Clinic in 2003, and the observance of International Women's Day as a public holiday in 2003.

Nauru is a signatory to the Convention for the Elimination of all Forms of Discrimination against Women (CEDAW). The government therefore acknowledges the strategic objectives contained within CEDAW relating to the elimination of gender discrimination against girls and women. These include, ensuring equal access to education, eradicating illiteracy among women, improving women's access to vocational training, science and technology and continuing education, developing non-discriminatory education and training.

In recent years, increasing numbers of girls are enrolling in school and the retention rates of girls now exceed that of boys. Law establishes equal rights and opportunities for women. Notwithstanding this, women are underrepresented at the higher levels of Government service and in the Nauru Phosphate Corporation – the two largest employers on the island. This trend is likely to continue while the social system remains dominated by traditional leaders led by a Council of Chiefs. In this context Nauru is working towards fulfilling the goals set out in the MDGs.

Global and Regional Partnership and Development

The Nauruan Government has given the highest priority to improving integration of Nauru into the world economy via economic regional cooperation agreements and arrangements. In terms of global partnership and development, Nauru is assisted directly through foreign aids, in the form of development assistance. Nauru has bilateral assistance from its traditional partners such as Australia, New Zealand and the European Union. Multilateral assistance comes from for example, the Asian Development Bank and the World Bank. Development assistance is directed towards broad areas of policy development in the National Strategic Development Plan, 2003-2006. The NASDP addresses the components of sustainable development are enshrined in the BPOA.

Grant in Aid basically come in two forms for sustainable development, either as a cash grant or aid-in-kind. Grants from donors have increased during the last three years. For example, in 2001, cash grants of \$0.5 million dollars were received, \$0.3 million were received for 2002, and \$3.19 million dollars was forecasted for 2003. More grants are expected for 2004.

Nauru was granted full membership of the Commonwealth in May 1999 and was admitted as the 187th member of the United Nations on 14th September 1999. The country became a member of the Pacific ACP group in June 2000 and is a signatory to the ACP-EU Partnership Agreement (which could form the basis for a Pacific Regional Economic Partnership Agreement). Nauru is also a member of several regional bodies including the Pacific Island Forum, Forum Fisheries Agency, SPREP, SOPAC, SPC and USP, the Asian Development Bank, UNESCAP, and other specialized agencies.

Nauru is party to the following international conventions and bilateral cooperation agreements:

- Convention on Hazardous & Toxic Wastes (Waigani Convention)
- South Pacific Regional Environment Programme (SPREP Convention)
- Convention for the Protection of the Natural Resources & Environment of the South Pacific Region & Related Protocol
- United Nations Convention on Law of the Sea(UNCLOS)
- United Nations Convention on Rights of the Child
- Agreement Establishing the South Pacific Forum Secretariat
- Treaty on Cooperation in Fisheries Surveillance & Law Enforcement in the South Pacific Region (Niue Treaty)
- United Nations Convention on Biological Diversity
- Basic Agreement between Nauru and World Health Organization (WHO)
- Asian-Pacific Postal Convention & General Regulations of the Asian-Pacific
- Agreement for the Implementation of the Provisions of the UN Law of the Sea of 10 December 1982 Relating to the Conservation & Management of Straddling Fish Stocks & Highly Migratory Fish Stocks adopted on 4 August 1995 by the UN Conference on Straddling Fish Stocks & Migratory Fish Stocks
- Nauru Agreement on Fisheries
- Pacific Island Countries Trade Agreement (PICTA)
- Pacific Agreement on Closer Economic Arrangement (PACER)
- Convention on the Prohibition for the Stockpiling, Transportation & Use of Chemical Weapons
- Treaty on Non-Proliferation of Nuclear Weapons (NPT)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- Vienna Conventions on Diplomatic Relations 1961 & Consular Relations 1963
- South Pacific Nuclear Free Zone Treaty (SPNFZ)
- Convention of the Prohibition of Fishing with Long Driftnets in the South Pacific (Wellington Convention)
- Multilateral Treaty on Fisheries between Government of certain Pacific Island Countries and the Government of the United States of America
- Convention on the Prevention of Marine Pollution, Dumping of Wastes and other Matters (London Convention 1972)
- United Nations Convention to Combat Desertification and Drought (CCDD)
- United Nations Framework Convention on Climate Change (UNFCCC) (1992)

6. EMERGING CONCERNS, SPECIAL NEEDS AND WAY FORWARD

Foremost for Nauru is to resolve the economic and financial crises that it faces. The economy of Nauru and the policies on economic growth and development have not been sustainable. The Nauru Government now confronts considerable developmental challenges in the transition to the post-phosphate era. The most pressing being the restoration of macroeconomic and financial stability to the economy. In the short to medium term, the imminent exhaustion of the phosphates resource and the decline in revenue from phosphate mining is causing serious consequences for the country and its people. Diversification of the economic base, with specific focus on private sector development to achieve economic growth is a key objective of the Government.

There are no other significant mineral resources on Nauru, and years of phosphate extraction have devastated the environment to the extent that the vast majority of the land is degraded and all of Nauru's fresh water must be imported from Australia. Due to constraints on arable land there is no significant local agricultural production. In the longer term, the prospect of further activity to rehabilitate the mined phosphate area is likely to provide improved access to land for agricultural development. Feasibility studies for mining of secondary and residual phosphate deposits could extend mining activities for an additional 10-15 years. However, at the present time, there is very little in the way of immediate opportunities to diversify the Nauruan economy.

One final "long-shot" is that a report prepared by overseas consultants and presented to the Government of Nauru has suggested that the coral pinnacles left over after the removal of phosphates may themselves have an 'enormous' economic value – described as 'being in excess of the value of phosphates itself'. The value appears to lie with the use of crushed coral in tiling and/or in concrete production. Further advice requires to be taken to determine whether this is a genuine opportunity.

With the downsizing of the public sector and limited opportunities in all other sectors then it is unlikely that the government will be able to provide sufficient jobs in the short-term to make up for those that are being lost in mining and in the public sector. This means that many families will lose their current source of employment and income. Subsistence production and small-scale income-generating activities may offer the best short-term solutions to the problem.

The way forward for Nauru is to re-establish an enabling environment for sustainable development. This should include the establishment and operationalization of national sustainable development strategies, underpinned by knowledge management systems, integrated planning systems and supportive legislative frameworks.

Nauru is committed to following a path of sustainable development that achieves for all Nauruans a better way of life while protecting the environment, specifically a path that works for all, today and tomorrow. The challenge includes the development of concrete commitments and actions with targets and timetables to spur action that will make a real difference for all Nauruans.

The Nauruan political leaders and government needs to understand that sustainable development rests on concrete partnership initiatives between the government, NGOs and the private sector and the additional resources and expertise these will bring to attain significant results for the people of Nauru.

To assist coordination and planning and in bringing about sustainable development through the establishment of an enabling environment, is the need for a Sustainable Development Planning Unit to be established and charged with the responsibility of developing a National Strategic Development Plan for Nauru.