



UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

[illegible]

Vulnerability profile of Samoa

March 2006

[illegible]

Prepared by the Special Programme on the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, UNCTAD, in accordance with resolution 59/209 of the General Assembly, which decided that "after a country has met the criteria for graduation for the first time, the Secretary-General of the United Nations will invite the Secretary-General of the United Nations Conference on Trade and Development to prepare a vulnerability profile on the identified country to be taken into account by the Committee for Development Policy at its subsequent triennial review".

*Prepared in anticipation of the 2006 review of the list of LDCs
by the Committee for Development Policy*

Table of contents

Summary

1. Introduction
2. Institutional context
 - 2.1 *The rationale for graduation*
 - 2.2 *The graduation rule*
 - 2.3 *The time frame for graduation*
 - 2.4 *The "history" of Samoa's non-graduation*
3. The situation of Samoa with regard to graduation thresholds at the time of the 2006 review of the list of LDCs
4. The situation of Samoa with regard to the economic vulnerability criterion
 - 4.1 *Natural shocks affecting the economy*
 - 4.1.1 Cyclones
 - 4.1.2 Floods
 - 4.1.3 Fluctuations in the ocean temperature
 - 4.1.4 Sea level rise
 - 4.1.5 Drought
 - 4.1.6 Earthquakes
 - 4.1.7 Volcanic activity
 - 4.1.8 Plant diseases and pests
 - 4.1.9 Human diseases
 - 4.2 *Shocks of non-natural origin affecting the economy*
 - 4.2.1 Loss or erosion of preferential access to foreign markets
 - 4.2.2 Hardening of foreign competition
 - 4.2.3 Possible withdrawal of foreign-owned exporting firms
 - 4.2.4 Fluctuations in export prices
 - 4.2.5 Decline in remittance inflows
 - 4.2.6 Reduction of inflows of foreign aid
 - 4.2.7 Criminal influences in the financial sector
 - 4.3 *Structure of the economy and exposure to external shocks*
 - 4.3.1 The external dependence of the Samoan economy
 - 4.3.2 Merchandise export concentration
 - 4.3.3 Increasing dependence on tourism
 - 4.4 *Smallness and remoteness, factors of exposure*
 - 4.4.1 Smallness and fragility
 - 4.4.2 Resource limitations
 - 4.4.3 Small market size and diseconomies of scale
 - 4.4.4 Remoteness and transport costs

Summary

Samoa, for the second consecutive time, meets two of the three graduation criteria (low income; human assets) and therefore technically qualifies for graduation. By virtue of General Assembly resolution 59/209, a decision in 2006 to earmark Samoa for graduation would normally imply effective loss of LDC status, for the country, in early 2010¹.

The country's score under the low-income criterion (gross national income per capita) is for the second consecutive time well above the graduation threshold in 2006 (177% of the threshold; 161% in 2003). Under the human capital weakness criterion (*Human Assets Index*), Samoa's score, at 143% of the graduation threshold, also remains relatively high, though not demonstrating progress from the 2003 review (146%). Under the economic vulnerability criterion (*Economic Vulnerability Index*), the country is not faring better in 2006 (57% of the graduation threshold, compared with 83% in 2003). Samoa's score under this criterion now rests at its poorest level since the 1994 review of the list of LDCs.

A graduating country is expected to have demonstrated, through its improved socio-economic performance, irreversible structural progress. In principle, such progress will be deemed sufficient to enable the country to pursue its development efforts in an externally less dependent manner, precisely without the benefit of LDC treatment. This means that the country should have developed a domestic saving capacity that enables it to be content with lesser concessionary financing, and also that exporters should have become more competitive and able to gain or retain export market shares under less preferential terms.

Does Samoa demonstrate such structural progress?

Low income

The relatively enviable income performance of Samoa is largely due to the combined effect of remittance inflows and tourism receipts (about 70% of total foreign exchange inflows). The stability of remittances as a result of strong ties with Samoans living abroad and government efforts to encourage remittances has indeed contributed to stabilizing the income performance of the country. The Samoan economy, in spite of the difficulties faced by the fisheries and manufacturing sectors, has been continuously fuelled by the multiplier effect of remittance inflows and tourist spending. This in theory could have enhanced the domestic saving capacity of the country. Whether this hypothetical capacity enhancement allows Samoa to safely face the challenge of lesser concessionary financing (greater use of loans as opposed to grants) remains highly questionable.

¹ An ECOSOC decision in 2006 in favour of Samoa's graduation, if endorsed by the General Assembly in the same year, would in principle entitle the country to a three-year grace period (2007-2009) before graduation effectively takes place. Under the terms of General Assembly resolution 59/209, this grace period would give Samoa an opportunity to negotiate with its development partners a "smooth transition" strategy in anticipation of the loss of LDC treatment.

Weak human capital

An independent report to the Ministry of Health, in 2004, described the prevalence of modern lifestyle diseases as being “on an enormous scale”, and the diet of most Samoans as “an unhealthy one, contributing significantly to obesity [53% of the population], heart diseases and diabetes [23%]”. The question of the share of the population undernourished is irrelevant to Samoa, where less than 2% of children have been suffering from some kind of malnutrition. Child (under 5) mortality (42 per 1,000 in 1990; 25 per 1,000 in 2002) has been the only area of significant structural progress among the variables making up the *Human Assets Index*.

Secondary school enrolment has been progressing very little in the long run, with increases in 1997, 1999, 2001, 2002, 2003 and 2005, and decreases in 1998, 2000 and 2004. Episodes of decrease were caused by the incidence of drop-out cases at the end of primary school, especially among boys. An estimated 5% of Samoan children do not go to primary school at all, essentially in the most remote rural areas where the link between education and future standards of living is not viewed by all parents as essential. This long-lasting trend has been one of the factors explaining why Samoa has had the lowest rate of adult literacy among all potential graduation cases, although literacy is almost total (99.5% in 2003) in the 15-24 class of age.

Overall, although Samoa enjoys an HAI score well above the graduation border, there is little sign of durable structural progress in human capital, and in particular, toward healthier and better educated human assets on the basis of which the Samoan economy could durably diversify and converge with the global economy.

Economic vulnerability

Cyclone Heta, in January 2004, caused considerable damage to the production of coconut, banana, taro, breadfruit and cocoa. Over 10,000 households reported that the cyclone resulted in food shortages, and about 8,370 found that the disaster severely reduced their income. Heta underscored Samoa's permanent vulnerability to external shocks. There has not been any structural improvement in the country's exposure to this risk: economic diversification through tourism growth, though precious in terms of foreign exchange earnings, has not lessened the degree of exposure to external shocks. The economic difficulties encountered by the fisheries sector (instability in fish stocks) and the manufacturing sector (substantial reduction in textile activities) are reminders of the fallacy of Samoa's structural progress, and therefore, of graduation as a realistic development for the country.

What consequences can be anticipated from hypothetical graduation?

Development financing

Grant contributions from the four largest donors since 1999 (Australia, EU, Japan, New Zealand) have been fluctuating between US \$48 and \$76 million, with the latter total resulting from special efforts in supporting Samoa in the post-Heta reconstruction context. There has been no evidence of any impact on these donors' decision-making of the eventuality of Samoa's graduation. While it is known that progress in the national income per capita has had an impact on donors' treatment of

Samoa, it is practically impossible to measure the extent of this impact. Likewise, predicting the concrete consequences on aid levels of the loss of LDC status is difficult, although one would hardly expect grant levels to remain unchanged, even in a context of “smooth transition”.

Trade

The six main exported commodities, in 2004, were fresh fish (41%), nonu juice (14%), beer (13%), coconut cream (8%), garments (6%) and taro (6%). There has been no LDC-specific treatment for the access of fish products to the country's main markets (Australia, Canada, Japan, New Zealand, United States), where MFN zero rates have prevailed (except for fish fillets). Most textile and clothing products have been exported to New Zealand and Japan, and have enjoyed a slight preferential margin on those markets. The treatment of these products would in principle be “upgraded” from LDC treatment to regular GSP treatment in case of graduation, and this would entail further loss of competitiveness. Moreover, graduation will not facilitate the process of accession to the World Trade Organization (WTO).

Technical and financial assistance

The prospect of eventual graduation is unlikely to have any adverse impact on Samoa's eligibility for the Integrated Framework for Trade-related Technical Assistance to LDCs, which the Government formally asked to benefit from in a letter of 7 March 2006 to the WTO. Overall, one of the most painful consequences of graduation for the country will be the budgetary impact of the loss, for Samoan Authorities, of travel coverage by organizations and programmes of the UN system and WTO, a privilege that has enabled Samoa to be present at many important global events and avoid marginalization from the multilateral scene.

Vulnerability profile of Samoa

1. Introduction

At the time of the 2003 review of the list of LDCs, the Committee for Development Policy (CDP) noted that Samoa met two graduation criteria (it had met only one in 2000) and recommended that the country "be considered eligible for graduation". In doing so, the CDP anticipated that Samoa "might qualify for graduation should it fulfil the graduation criteria again in the 2006 review"². The General Assembly, in its resolution 59/209 in December 2004, decided that, "after a country has met the criteria for graduation for the first time, the Secretary-General of the United Nations will invite the Secretary-General of the United Nations Conference on Trade and Development to prepare a vulnerability profile on the identified country to be taken into account by the Committee for Development Policy at its subsequent triennial review"³.

UNCTAD prepared this vulnerability profile in accordance with resolution 59/209, in anticipation of the 2006 review of the list, after a field mission in October 2005 with the full cooperation of the Government of Samoa. The views expressed in this document are based on factual observations, essentially to assist the CDP in its understanding of the situation underlying the context of Samoa's technical eligibility for graduation. To that end, the profile raises following question: does the socio-economic performance of the country reflect genuine structural progress that makes the perspective of graduation realistic?

Samoa, a small archipelago situated immediately to the East of the international dateline at the centre of the South Pacific, had a population estimated at 179,000 in 2004. About 70% of this population lives on the island of Upolu (where the capital, Apia, is located), while 28% is on the island of Savai'i. The total land area is about 1,130 km². On both islands, a large majority of the population (80%) lives on a narrow coastal strip where the population density is 75 per km². The islands are volcanic in nature. Samoa lies in the "cyclone belt" near the earthquake-generating Tonga Trench. Its exclusive economic zone is "sea-locked" and smaller than those of its Pacific neighbours.

Traditionally, the economy has been dominated by the production of coconut products, fish, banana, beef, pork, kava, passion fruit and poultry. Until the early 1990s, industrial production was limited to food and beverages. In 1991, a Japanese manufacturer of automotive wire harnesses (Yazaki Samoa Ltd.) started production in Samoa for the Australian market. In 1999, a Chinese garment manufacturer invested in Samoa to export to the United States and the European Union. Tourism also gained importance in recent years, and gross foreign exchange earnings in this sector now account for more than half of the country's total export receipts (55% in 2003). Overall, the rapidly rising exports of tuna, sales of automotive products, and tourism receipts have transformed the Samoan economy. As Table 1 shows, Samoa has become a

² United Nations, *Local development and global issues*, Report of the Committee for Development Policy on the fifth session (7-11 April 2003), para. 22.

³ General Assembly resolution A/RES/59/209, "Smooth transition strategy for countries graduating from the list of least developed countries", para. 3(b).

service-dominated economy, with export services accounting for nearly 62% of total foreign exchange earnings.

Table 1
Evolution in the export specialization of the Samoan economy

Leading export sectors in 1985	Export values 1985 (\$ m)	in %	Leading export sectors in 2003	Export values ⁴ 2003 (\$ m)	in %
Coconut products	8.5	32.7	Tourism	41.7	55.0
Tourism	6.5	25.2	Fish	9.7	12.8
Taro	2.3	8.8	Business services	4.3	5.7
Transport	2.3	8.8	Food & beverages	1.9	2.5
Beverages	0.9	3.5	Garments	1.7	2.2
			Transport	0.9	1.2
Total goods & serv. exports		100	Total goods & serv. exports	75.8	100

Source: UNCTAD

Section 2 describes the institutional context in which the country-specific information which the profile offers is deemed necessary, while sections 3 examines the situation of the country with regard to the economic vulnerability criterion.

2. Institutional context

Since 1971, the United Nations has denominated “Least Developed Countries” a category of States that are deemed structurally handicapped in their development process, faced with the risk of failing to escape from the poverty trap or from a state of great vulnerability to external shocks beyond domestic control, and accordingly, in need of the most favourable treatment by the international community. The UN grants such treatment to LDCs in its allocation of resources under relevant cooperation programmes. Equally important is its role in periodically giving the development partners of these countries a strong signal by determining the list of LDCs and highlighting their structural problems. This generally underscores the need for special concessions in their favour, especially in the area of development financing and in the multilateral trading system.

The question of graduation from LDC status was first raised in 1991, when the first major revision of the criteria for identifying LDCs took place. The graduation mechanism was applied in 1991 and 1994 to Botswana (with effective graduation in 1994), so far the only country that ever graduated from LDC status. The question became controversial in 1997, after the Committee for Development Planning had found that Vanuatu qualified for graduation. The controversy continued in 2000, when the (successor) Committee for Development Policy recommended immediate graduation of Maldives. Having noted the resistance of Vanuatu (1997) and Maldives (2000, 2003) to

⁴ Balance of payments data on merchandise exports as published by the Central Bank of Samoa and the IMF do not include the exports of automotive wire harnesses to Australia, which are classified as a credit item (“export processing”) in the Services and Income Account.

the prospect of graduation, ECOSOC has underlined with insistence the notion of “smooth transition” for graduating countries⁵.

Table 2
Evolution in the UN's criteria for reviewing the list of LDCs
at three dates of particular importance to Samoa

Criteria used in 1997 (first historical observation of Samoa's eligibility for graduation)	Criteria used in 2003 (new observation of Samoa's eligibility for graduation ⁶)	Criteria used in 2006
<u>Low-income criterion:</u> Per capita gross domestic product (GDP): 3-year (1993-1995) average (under \$800 for addition cases; above \$900 for graduation cases)	<u>Low-income criterion:</u> Per capita gross national income (GNI): 3-year (1999-2001) average (under \$750 for addition cases; above \$900 for graduation cases)	<u>Low-income criterion:</u> Per capita gross national income (GNI): 3-year (2002-2004) average (under \$750 for addition cases; above \$900 for graduation cases)
<u>"Quality of life" criterion:</u> Augmented Physical Quality of Life Index (APQLI): Composite index based on the following four indicators: * average per capita daily calorie consumption * life expectancy at birth * combined primary and secondary school enrolment rate * adult literacy rate	<u>"Human assets" criterion:</u> Human Assets Index (HAI): Composite index based on the following four indicators: * average per capita daily calorie consumption as a % of relevant minimum requirements * under-five child mortality rate * gross secondary school enrolment rate * adult literacy rate	<u>"Human assets" criterion:</u> Human Assets Index (HAI): Composite index based on the following four indicators: * percentage of population undernourished * under-five child mortality rate * gross secondary school enrolment rate * adult literacy rate
<u>Economic diversification criterion:</u> Economic Diversification Index (EDI): Composite index based on the following four indicators: * share of manufacturing in GDP * share of labour in industry * per capita electricity consumption * export concentration index	<u>Economic vulnerability criterion:</u> Economic Vulnerability Index (EVI): Composite index based on the following five indicators: * index of instability of agricultural production * index of instability of exports of goods and services * share of manufacturing and modern services in GDP * merchandise export concentration index * population (in log.) A variant formulation of the EVI, with the proportion of population displaced by natural disasters as an additional component, was also considered.	<u>Economic vulnerability criterion:</u> Economic Vulnerability Index (EVI): Composite index based on the following seven indicators ⁷ : * index of instability of agricultural production * proportion of population displaced by natural disasters * index of instability of exports of goods and services * share of agriculture, forestry and fisheries in GDP * merchandise export concentration index * population (in log.) * index of remoteness

⁵ The importance of "smooth transition" has been consistently reiterated since the review year 2000, when ECOSOC, in resolution 2000/34, requested the Secretary-General "to make recommendations on additional measures that can be taken to ensure a smooth transition from least developed country status for graduating countries" (para. 3). In 2004, ECOSOC resolution 2004/66, which was echoed by General Assembly resolution 59/209, re-emphasized the need for a smooth transition for graduating countries, and delineated the main areas of action in which smooth transition modalities are deemed particularly important.

⁶ Samoa ceased to be found eligible for graduation in 2000, as the country then exceeded only one of the three graduation thresholds.

<p><u>For graduation cases:</u> A country would be recommended for immediate graduation if it had met at least two of the three criteria (subject to a margin between the thresholds for addition to, and graduation from, the list of LDCs) in at least two consecutive triennial reviews of the list.</p>	<p><u>For graduation cases:</u> A country could be recommended for immediate graduation if it had met at least two of the three criteria (subject to a margin between the thresholds for addition to, and graduation from, the list of LDCs) in at least two consecutive triennial reviews of the list. However, a graduation case would not be considered by the CDP unless a vulnerability profile of the country was made available to the Committee.</p>	<p><u>For graduation cases:</u> A recommendation to graduate the country could be made by the CDP on the basis of the same graduation rule, but actual graduation cannot take place before a three-year grace period beginning after the General Assembly has decided to endorse the recommendation (after ECOSOC itself endorsed it) has elapsed, in accordance with General Assembly resolution 59/209 of 20th December 2004.</p>
---	--	--

Source: methodology summary by UNCTAD

2.1 *The rationale for graduation*

In 1990, the Second United Nations Conference on the Least Developed Countries noted the importance of envisaging graduation from LDC status for countries that would be deemed to have demonstrated sufficient socio-economic progress to be able to pursue such progress in an externally less dependent manner. In 2001, the Third United Nations Conference on the Least Developed Countries contemplated graduation as a criterion on the basis of which the success of the Programme of Action for the Least Developed Countries for the Decade 2001-2010 "will be judged"⁸.

With the current or potential graduation cases of Cape Verde, Maldives and Samoa, the question of graduation underscores the "island paradox", which has been a common concern among small island developing States (SIDS). These countries often appear relatively prosperous in terms of *per capita* income, as a result of rapid growth in economic sectors with significant value added (mainly international tourism). However, SIDS are generally among the economically most vulnerable and structurally most handicapped countries. For this reason, they are often among countries least prepared to face the loss of concessionary treatment, whether this treatment has been enjoyed by virtue of LDC status (least developed SIDS), or as a result of other regimes (other SIDS)⁹. Ignoring the "island paradox" in dealing with least developed SIDS in the context of the periodic review of the list of LDCs would contradict the long-lasting recognition, by the UN, of the serious disadvantages SIDS are faced with, and of the need to bring commensurate responses to these disadvantages.

⁷ The Committee for Development Policy, at its seventh session, decided that the following weight structure should be given to the revised components of the EVI:

Indicators of external shocks (weight of indicator within the EVI): Index of instability of agricultural production (12.5%); Ratio of homelessness caused by natural disasters (12.5%); Index of instability of exports of goods and services (25%).

Indicators of exposure to relevant shocks: Population in logarithm (25%); Index of remoteness (12.5%); Share of agriculture, forestry and fisheries (6.25%); Index of merchandise export concentration (6.25%).

⁸ UN General Assembly, Third United Nations Conference on the Least Developed Countries, Brussels, Belgium, 14-20 May 2001, Programme of Action for the Least Developed Countries for the Decade 2001-2010, para. 21(e)

⁹ For a discussion on this issue, see: UNCTAD, *Is a special treatment of small island developing States possible?*, UNCTAD/LDC/2004/1, 2004, 102 p.

Beside the complexity of some of these issues, a consensus generally exists on the rationale for graduation: a graduating country will --at least partly-- lose concessionary treatment because it has, through its improved performance, demonstrated sufficient structural progress to persuade its development partners that it is now able to pursue development efforts in an externally less dependent manner. Logically, indeed, a graduating country ought to have developed a domestic saving capacity that enables it to be content with lesser grant inflows. Structural progress also means that exporters have become more competitive, and therefore able to penetrate export markets under less preferential terms. Finally, if the notion of graduation is well founded, a graduating country, with enhanced institutional capacities, is expected to remain undisturbed as international organizations may deny it privileged access to technical assistance programmes. Whether the primacy of genuine structural progress as a *sine qua non* condition for well-founded graduation is corroborated by the graduation rule remains a critical issue in the international debate on fair differentiation in the special treatment of developing countries, particularly in the context of the special attention the UN has been giving to the problems of small island developing States. Many, in various UN circles, have questioned whether the graduation rule matches the rationale for graduation.

2.2 The graduation rule

The graduation rule applies to the three criteria specific thresholds for the three aggregate or composite indicators: per capita gross national income, *Human Assets Index*, and *Economic Vulnerability Index*. For each of these indicators, there is a margin between the threshold for adding a country to the list and the threshold for graduation from LDC status¹⁰. The margin is considered a reasonable estimate of the additional socio-economic progress that ought to be observed if one assumes that the graduating country is effectively engaged on a path of improvement: not only is the graduating country expected to have risen to the threshold under which non-LDCs would be admitted into the category, but it is additionally expected to exceed this threshold by at least the relevant margin. This rule warrants the credibility of the assumption that a graduating country has been undergoing structural progress. It dispels the risk that graduation be dictated by temporary or insignificant economic circumstances.

Two other fundamental elements of the graduation rule also imply durable structural progress in the graduating country:

- at least two of the three graduation thresholds must be met for the relevant country to be deemed qualifying for graduation, whereas a symmetrical application of the addition rule and graduation rule would have implied that only one criterion ceased to be met, since all three criteria should be met for a country to be added to the list;
- while eligibility for graduation can be observed on the occasion of any review of the list (subject to the threshold margin and asymmetrical rule referred to above), a recommendation to graduate the country will not be made until the relevant graduation thresholds have been met in at least two consecutive reviews of the list of LDCs.

¹⁰ Until the 2000 review of the list, a margin of 15% was used under each one of the criteria. For the 2003 review, an expert group meeting in January 2003 recommended that different margins be used among the criteria: 20% for GNI per capita, 10% for HAI and EVI.

2.3 *The time frame for graduation*

Until 2003, a recommendation to graduate a country from LDC status could in principle be enforced with immediate effect, subject to a decision by ECOSOC and the General Assembly. This principle, however, was only implicit, as the CDP never explicitly recommended any graduation "with immediate effect", neither in 1994 for Botswana, nor in 1997 for Vanuatu, 2000 for Maldives, or 2004 for Cape Verde and Maldives.

In adopting resolution 59/209 on 20 December 2004, the General Assembly decided that, upon any decision by ECOSOC to endorse a recommendation by the CDP to graduate a country, the loss of LDC status will begin to take effect after a three-year grace period following the formal endorsement by the General Assembly itself of the relevant decision by ECOSOC. Regarding the cases of Cape Verde and Maldives, this endorsement materialized, also on 20 December 2004, through General Assembly resolution 59/210.

Overall, the timeframe from the initial observation of a country's eligibility for graduation (2003 for Samoa) to the date of the country's actual loss of LDC status will stretch from year y to year $y + 6$. Its duration is strictly speaking likely to exceed six and a half years, considering that a first eligibility observation by the CDP will take place in March of year y , and the three-year grace period immediately following the General Assembly's endorsement of the recommendation to graduate the country will probably end in November or December of year $y + 6$. The three-year grace period was instituted by ECOSOC and the General Assembly with a view to enabling the graduating country to negotiate, with its development partners, modalities of "smooth transition" in anticipation of the loss of LDC status, in keeping with the paramount principle of preventing any harm to the graduating country.

2.4 *The "history" of Samoa's non-graduation*

Samoa was admitted in the group of LDCs in 1971, when the category was instituted.

In January 1994, the Committee for Development Planning observed that Samoa exceeded by \$51 the threshold used for the gross domestic product per capita (1990-1992 annual average), and was well above the threshold relevant to the quality of life criterion. At the same time, the country had a score under the graduation threshold regarding the economic diversification criterion, which prevailed at that time as the main structural criterion.

At its May 1997 session, the Committee observed that Samoa, with a GDP per capita (1993-1995 annual average) of \$1,025 and an APQLI score of 72.7, was exceeding by \$160 the graduation threshold used for the low-income criterion. The country was also 21 index points above the graduation threshold used for the quality of life criterion. In accordance with the graduation rule, the Committee recommended Samoa's graduation in 2000 if at that time, the observation of the graduation rule being satisfied was confirmed "on the basis of a more detailed assessment" of the situation of the country.

The General Assembly, in its resolution 52/210 of 18 December 1997 and in accordance with an earlier proposal by the CDP, called for an assessment of the usefulness of a vulnerability index as a criterion for determining the list of LDCs. This call was made in response to the issues that had been raised by Vanuatu after that country, in the 1997 review of the list, had been found eligible for graduation. In turn, ECOSOC, at its substantive session of 1998, requested the Committee for Development Planning to assess the usefulness of such an index. The (successor) Committee for Development Policy (CDP), at its first session in April 1999, adopted an economic vulnerability criterion involving an Economic Vulnerability Index (EVI) to replace the existing Economic Diversification Index (EDI). At the same time, it considered that "an index of economic vulnerability could give only a partial and approximate measure of the relative level of vulnerability of a country"¹¹, and recommended that a country-specific "vulnerability profile" be prepared for each potential graduation case on the occasion of every review of the list.

The 2000 review of the list revealed an unprecedented development in the history of the category: a country that had been found eligible for graduation three years earlier now ceased to meet graduation criteria¹². Samoa's declining score under the low-income criterion was the cause of this downturn: the country was found remaining under the graduation threshold relevant to its GDP per capita performance, though coming very close (at 98.6%) to this threshold. At the same time, Samoa was found well below the graduation threshold relevant to the new Economic Vulnerability Index (at only 59% of the threshold), while the country surpassed the Augmented Physical Quality of Life Index threshold by only a narrow margin (103%). Overall, Samoa met only one graduation criterion in 2000, as opposed to two criteria in 1997. This development brought an end to the case for graduation. The earlier eligibility of Samoa for graduation from LDC status had no bearing on the subsequent reviews of the list, and was hardly referred to at all at the time of the 2003 review.

The 2003 review of the list highlighted the new context of eligibility for graduation as resulting from substantial progress across the range of criteria. The country's score under the low-income criterion had again crossed the graduation threshold, this time to culminate at an impressive 161% of the threshold. Meanwhile, Samoa's score under the (restyled) Human Assets Index regained the high level (well above the graduation cut-off line) it had demonstrated earlier, before the 2000 downturn¹³. As for the country's EVI score, it was better in 2003 than in 2000 (at 83% instead of 59% of the graduation line), but yet remained under the graduation threshold.

With a "graduating" performance under the low-income and human assets criteria and a persistent vulnerability gap under the EVI graduation threshold, Samoa illustrates the "island paradox": small island developing States may appear relatively

¹¹ United Nations, *Vulnerability and Poverty in a Global Economy*, Report of the Committee for Development Policy on the first session (26-30 April 1999), para. 122.

¹² Vanuatu also ceased to meet graduation criteria in 2000, but this was following two observations of eligibility for graduation (1994 and 1997, with a recommendation for graduation in 1997), whereas only one observation of eligibility was made (in 1997) for Samoa.

¹³ In the absence of any major natural disaster explaining the poor human capital (APQLI) score in 2000, the latter was, in retrospect, considered by some as statistically flawed rather than reflecting an accidental downturn in the social performance of the country. The hypothetical flaw, however, did not cause the non-confirmation of Samoa's eligibility for graduation in 2000, since the score deterioration the 2000 review revealed related to another criterion, namely, the low-income criterion.

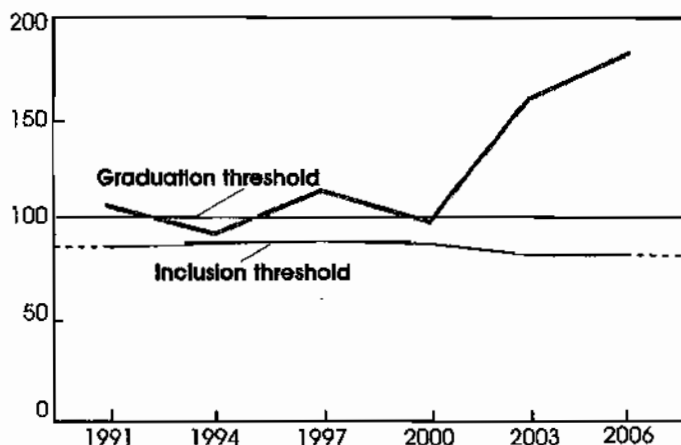
prosperous through their income per capita and social performance, but remain economically highly vulnerable. In the context of graduation, this naturally translates into scores above graduation borders with regard to the income and human assets criteria, and below the graduation line regarding economic vulnerability. This scenario is already exemplified by the ongoing graduation cases of Cape Verde and Maldives.

3. The situation of Samoa with regard to graduation thresholds at the time of the 2006 review of the list of LDCs

The three graphs below depict the evolution demonstrated by Samoa vis-à-vis the thresholds relevant to the three graduation criteria. All graphic data are based on the performance recorded, in the six institutional reviews of the list of LDCs (1991, 1994, 1997, 2000, 2003, 2006), through the relevant indicators: gross domestic product per capita (replaced in 2003 by the gross national income per capita); the Augmented Physical Quality of Life Index (renamed Human Assets Index in 2003); and the Economic Vulnerability Index, which replaced the Economic Diversification Index in 2000.

To make inter-temporal comparisons possible under any criterion (e.g., to compare the distance to the graduation threshold in 2006 with the counterpart distance in 2003), all data have been standardized into an index within which the graduation threshold equals 100. Each graph, at the same time, shows a line representing the threshold for adding a country to the list. The distance between the two lines is the margin between the addition threshold and the graduation threshold.

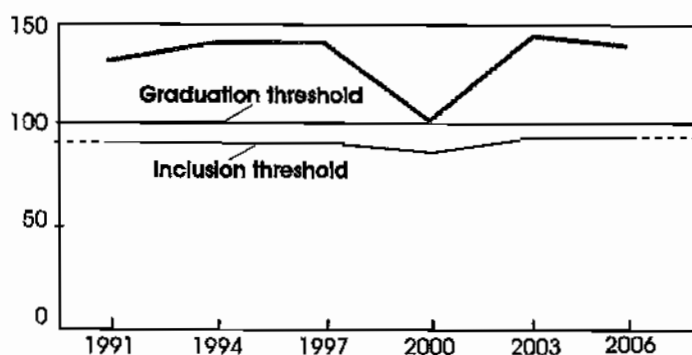
The low-income criterion (*gross national income per capita*)



Despite the reduced domestic growth performance achieved in 2002 (1%) and 2003 (-1%) in comparison with earlier years (7% in 2000, 6% in 2001), the country's performance above the graduation threshold continues to rise at the time of the 2006 review, because Samoa's GNI per capita rose significantly in the latest years for which data are available (\$1,390 in 2002, \$1,540 in 2003, \$1,860 in 2004). The high GNI per capita performance in 2004, a year in which real GDP growth reached 3%, was largely attributable to the increased remittances received after cyclone Heta (January 2004). Samoa has for several years demonstrated its capacity to enjoy a continuously rising

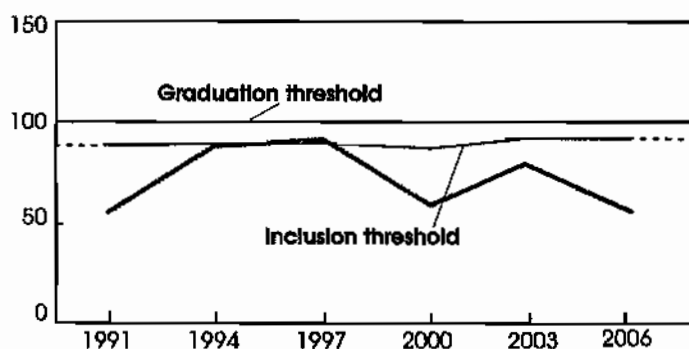
national income, primarily as a result of remittances from Samoans abroad, more than of durable progress through economic diversification.

The human assets weakness criterion (*Human Assets Index*)



The human assets performance remains well above the graduation line in 2006. Among the four indicators entering the Human Assets Index, child mortality (under age 5) and secondary school enrolment tend to be the two main areas of concern, while under-nourishment is nearly non-existent and adult literacy is estimated to be high.

The economic vulnerability criterion (*Economic Vulnerability Index*)



Substitution of the Economic Vulnerability Index for the Economic Diversification Index in 2000 had substantially lowered the score under the graduation line (from 93% in 1997 to 59% in 2000). Of the various components of the EVI at that time, smallness alone explained the high vulnerability of the economy. In 2003, the country came nearer to the graduation line (83%) as a result of the growing prominence of tradable services (notably tourism) which was considered as reducing the exposure to shocks while maintaining relative stability in foreign exchange earnings. In 2006, three factors contribute to bringing another downturn: instability of agricultural production and of overall exports as a result of cyclone Heta; a methodological change in one of the indicators of exposure to shocks (a greater share of services in the economy now implies greater vulnerability); and the introduction of a remoteness component in the EVI, considering the country's distances from major markets.

4. The situation of Samoa with regard to the economic vulnerability criterion

Samoa never rose above the graduation threshold with regard to this fundamental criterion. Its score, in percentage of the graduation threshold, decreased significantly in 2000, when the vulnerability dimension was introduced, before coming nearer to the graduation border (at 83%) in 2003. In 2006, at 57%, it is again near to its lowest historical level of 1991 (56%).

4.1 *Natural shocks affecting the economy*

In this sub-section, the main risks of external shock are considered, and the vulnerability of the economy is discussed in terms of the frequency, magnitude, and impact of these shocks.

4.1.1 **Cyclones**

Cyclones have been the worst external threat to Samoa. Since 1981, there have been over 15 major cyclones with wind speeds ranging from “gale force” (8 events) through “storm force” (2 events) to “hurricane force” (5 events). Three hurricanes (Ofa in 1990, Val in 1991, Heta in 2004) caused massive devastation. In addition to wind damage, cyclones have often resulted in tidal surges, which also caused serious damage.

Both agricultural production and manufacturing, in Samoa, are vulnerable to the risks associated with cyclones, in particular, because much manufacturing for export involves processing of local agricultural products. The fish catch also fell after many fishing vessels had been destroyed.

Inevitably, the reduction or elimination of agricultural and industrial production was reflected in the export performance. Prior to the early 1990s cyclones, five products (coconut oil, coconut cream, copra meal, copra, cocoa) accounted for 63% of total exports. By 2003, the collapse of coconut oil and cocoa production had transformed the structure of merchandise export earnings, bringing about automotive wire harnesses, taro and coconut cream as the only three significant export products.

Cyclones have also caused severe damage to the tourism industry. The destruction of about half of hotel facilities and the adverse international publicity given to Samoa as a tourist destination have several times resulted in sharp declines in visitor numbers (by nearly 50%).

The aftermath of hurricanes has also revealed the difficulty of maintaining food security in the context of major disasters. Food crops generally suffer much in the context of natural disasters, and imports of food have to rise dramatically (population growth, even in normal circumstances, already threatens food security). However, there has never been any threat of starvation, as resources always remained available, through remittances and aid, to finance substantial food imports.

Satellite data indicated that about 85 cyclones affected the South Pacific region over the 1990s decade. Samoa incurred eight cyclones in the 1980s decade, seven during the 1990s, and one in the first decade of the new century. Most of these events caused relatively little damage, passing over the exclusive economic zone of Samoa without

touching land. But where cyclones did impact on land masses, the effects were serious, and in three cases, disastrous.

Samoa anticipates to experience nearly 8% of the total cyclone activity in the South Pacific, or an average six cyclones per year. A cyclone causing significant damage to crops is considered an "8-year event", and one causing "considerable damage" is a 30-year event. Cyclone Ofa was described as "a 48-year event" for Samoa. Ralph Carter estimated that there is "a 65% probability of a 47-year event in Apia in any 10-year period, and a 35% probability of a wind greater than 47 knots in that same period, or a 63-knot hurricane force wind in any 17 to 18-year period. A wind of about 92 knots can be expected every 100 years". The risks associated with tidal surges were also estimated: the return period for a 23-foot (6.9-metre) wave height in Apia is expected to be 24 years, that for a 25-foot (7.7-metre) wave 30 years, and that for a 30-foot (9.1-metre) wave 75 years. Given the potential destructiveness of tidal surges along the Samoan coastline, where most of the population and economic activity is located, these projected frequencies indicate a serious risk of economic disruption.

4.1.2 Floods

Flooding associated with cyclones and earthquakes (storm surges, tsunamis) has been a source of damage in recent years. Flooding due to other causes (in particular, heavy rainfall) was not a major concern in the past, but it is now occurring with increased frequency, presumably as a result of long-term changes in weather patterns.

4.1.3 Fluctuations in the ocean temperature

Rises in the ocean temperature threaten Samoa's production and exports because the related risk of drought affects the dominant agricultural sector, and the catch of skip-jack tuna tends to be much less plentiful during periods of elevated sea temperature.

4.1.4 Sea level rise

The phenomenon of sea level rise is a long-term shock to Samoa, as virtually all dwelling and economic activity is located along the low-lying coastal belts of Upolu and Savai'i, where serious inundation is likely to happen as a result of any modest rise in the sea level. Related adverse impacts are the erosion of beaches, the destruction of coastal villages and farm land, and damage to coastal roads and other infrastructure. This effect has yet had no measurable influence, but it is likely to cause socio-economic disturbances in the future.

4.1.5 Drought

Drought occurs periodically in Samoa, causes major fire risks, and can affect agriculture seriously. A five-month drought in 1972 caused severe damage to crops in Upolu. In 1983, poor rainfall on Savai'i caused major bush fires. In 1987-1988, a prolonged drought significantly depressed agricultural production and exports. In 1997 and 1998, lengthy drought again occurred. In the latter year, it lasted six weeks on Savai'i, extending over some 200 km², causing massive fires, and destroying 80% of food crops.

For economic, technological, and topographic reasons, fire-fighting is very difficult in Samoa, which adds to the vulnerability of the country.

The increasing frequency of drought events is believed to reflect the impact of the El Niño Southern Oscillation phenomenon (which also causes ocean temperature variation with consequential variation in fish stocks). One anticipates that the combination of drought and resultant fire damage to crops and forests will become more prevalent in the future.

4.1.6 Earthquakes

Samoa is frequently affected by earthquakes. Significant earth tremors occur on average four times a year. In recent years, the cost of earthquake damage has been limited, although the vulnerability of high-rise buildings and hydroelectricity infrastructure to such disasters remains considerable (cracking of pipework feeding hydroturbines).

4.1.7 Volcanic activity

Though not on the "Ring of Fire", Samoa has a number of potentially active volcanoes. The latest period of volcanic activity began in 1902, with the eruption of Mauga Mu. This was followed by continuous eruptions, between 1905 and 1911, of Matavanu, which destroyed several villages and large areas of arable land, and affected lagoon and reef areas along the north-east coast. Steam vents continued to deposit sulphur long after the eruption period.

Lava flows are likely to be 'thin' and can quickly cover large areas. The main economic activities in the most vulnerable areas are subsistence farming, fishing, and tourism. Savai'i is developing rapidly as an unspoiled tourist destination. Most of the existing hotel facilities on the island would be put at risk by a resumption of volcanic activity, and the roads connecting tourist facilities would almost certainly be severely damaged. Howorth noted that "today on Savai'i, each and every person is exposed to the risk of such an event occurring"¹⁴.

4.1.8 Plant diseases and pests

Samoa's agriculture is vulnerable to the adverse effects of a number of plant diseases of external origin. Despite attempts to isolate the country from such intrusions, Samoa suffered several invasions over the last two decades, and domestic production and exports were seriously affected. Of particular gravity were the effects of the taro leaf blight, banana fungus, African snail, fruit fly, and fruit moth.

4.1.9 Human diseases

Like all small developing countries, Samoa has always been vulnerable to externally sourced health problems. A major shock in Samoan history was, in November 1918, the arrival of the influenza epidemic, which was introduced by a ship evading quarantine restrictions. Today, HIV is the most serious potential threat in social and

¹⁴ Russell Howorth, "Our Islands that Could Erupt", *Islands Business*, August 1999

economic terms. The dengue fever is already present, but outbreaks can be contained by spraying campaigns. Malaria is unlikely to arrive in the absence of the relevant mosquito vector. However, should the average ambient temperature rise by 2°C as predicted, the vulnerability of Samoans to outbreaks of vector-borne diseases could increase significantly.

4.2 Shocks of non-natural origin affecting the economy

4.2.1 Loss or erosion of preferential access to foreign markets

Changes (in particular, declines) in the foreign demand, an area of potential external shocks to the economy, may take place for a variety of reasons. Of particular importance are the erosion of preferential access to foreign markets and resultant foreign competition.

Samoa enjoys preferential (duty-free) market access to the New Zealand and Australian markets under SPARTECA, and to the EU market as a result of the Everything But Arms (EBA) 2001 initiative. In addition, garments made in Samoa enter the United States market under a duty-free agreement. Automotive products gained free access to the Australian market under the terms of a special agreement with the Australian government and car makers. Tuna exports enter American Samoa, for canning, duty-free.

All of these arrangements are subject to changes beyond Samoan control. SPARTECA benefits and EBA preferences are subject to erosion.

4.2.2 Hardening of foreign competition

Samoa's foreign exchange-earning capacity is vulnerable to foreign competition and to the risk of declines in market shares, especially in two sectors: tourism and kava.

The tourism sector is highly vulnerable to shifts in the international demand, in particular, because of the concentrated nature of Samoa's tourist market. The proportion of visitors coming from the four leading source countries (American Samoa, New Zealand, Australia, United States) has been increasing over time. This may have rendered Samoa's tourism industry more vulnerable to eventual declines in the economic activity of one or more of the four market countries, or to losses of market shares as a result of exchange rate appreciation vis-à-vis other tourist destinations, notably in South-East Asia.

A second export market on which the threat of new competition is severe is the kava market. Exportation began in 1993, and expanded rapidly in 1998 (10% of total exports) and early 1999. The threat to this relatively new export product stems from potential suppliers in Hawaii, Guatemala and Australia, and from the strong possibility that the active ingredient of kava (kavalactone) will be synthesized inexpensively in developed countries through tissue culture technology. Under this threat, relevant exports could fall back to minimal levels.

4.2.3 Possible withdrawal of foreign-owned exporting firms

The presence of some multinational firms in Samoa is a valuable source of income and employment. However, the country is vulnerable to possible sudden changes resulting from location or re-location decisions taken overseas in the context of the intense competition, among potential host countries, to attract multinationals through incentives.

Samoa hosts two foreign-owned manufacturing firms: a Japanese company making automotive wire harnesses for the Australian market (Yazaki Samoa Ltd.), and a Chinese firm producing garments for the United States and European Union markets (Cashmere Ltd.).

In early 1999, Yazaki threatened to depart (in an attempt to persuade the government to devalue the tala), but remained in Samoa despite the non-devaluation. Yet, there is anxiety over the risk, as this important firm provides 1,700 jobs, i.e., 16% of all jobs in the formal private sector. Factors of a possible departure could be the low productivity of labour (which is not an external factor), but also, in the case of Yazaki, competition from South-East Asian countries offering alternative sites for production (and perhaps a context of currency devaluation), and in the case of Cashmere, the fierce international competition on the United States market since the elimination of MFN quotas.

4.2.4 Fluctuations in export prices

Samoa, as a price taker in all but one of the few commodity markets it exports to, is highly vulnerable to externally determined price changes. Since the 1980s, considerable price instability has taken place in the world markets for copra, cocoa, kava, coconut oil, fish and taro. Taro is the only product in which Samoa possesses market power, because of the unique nature of the variety of taro grown in the country. Variations in production levels (occasionally caused by major natural shocks) and in commodity prices have caused major fluctuations in commodity export earnings.

4.2.5 Decline in remittance inflows

Remittances of cash and goods by Samoans living abroad (primarily in New Zealand and American Samoa) provide an important supplement to the country's foreign exchange earnings. A prolonged decline in remittances would have an immediate impact on domestic living standards, affecting directly the capacity of Samoans to import consumer goods. It would also remove the "cushion" these funds provide in times of natural disaster.

Furthermore, by forcing many Samoans to enter the labour market or to focus more on cash cropping, a decline in remittances would probably decrease the availability of subsistence crops, thereby hindering the nation's food security and resilience to the immediate impact of cyclones. In addition to providing funds, the emigration-remittance process also reduces the growth of the population: a natural increase at the rate of 3% per annum translates into a 0.5% population growth as a result of steady emigration. The Government estimated that, if the emigration of Samoans stopped, the population of the country would increase by over 30% in the first decade of the twenty-first century.

4.2.6 Reduction of inflows of foreign aid

Like most developing countries, Samoa is vulnerable to changes in the availability of foreign aid, since relevant decisions are made abroad. Over the last two decades, there has been little sign of a declining or erratic trend in aid flows, and the donor structure has been relatively stable. Samoa's relations with donors are good, and the instability of future funding is not presently regarded as a problem.

Aid inflows finance a very large proportion of domestic investment and imports, and virtually all the public sector investment programme. Moreover, the donor base is narrow, with only four sources (New Zealand, Australia, Japan, European Union) providing a very large part of all grants. This high level of concentration has been a long-lasting feature of the aid pattern. This external dependence, in theory, exposes Samoa to the risk of destabilizing variations in aid inflows.

4.2.7 Criminal influences in the financial sector

Samoa has a small, but well established offshore financial sector, with a few sizeable trust companies and local operators acting as registered agents for international business companies. The jurisdiction is less an offshore banking centre than an offshore company formation centre. As such, it is relatively little exposed to the risk of undesirable investor intrusion which in theory threatens all small offshore centres. However, Samoa is not exempt from external criminal influences beyond its prevention capacity, in spite of the legislative and regulatory precautions that the national supervisory authority imposes on the registered agents vis-à-vis their international clients.

4.3 *Structure of the economy and exposure to external shocks*

Vulnerability to the risk of external shocks depends on the extent to which the economy is exposed to these shocks. The economic stability of an open, externally dependent economy will be at risk if its foreign exchange earnings are primarily derived from sectors that are themselves vulnerable to the effects of external shocks. In this section, the exposure of Samoa's economy to the risks and effects of external disturbances is examined.

4.3.1 The external dependence of the Samoan economy

Over the last two decades, the current account has been balanced as a result of steady increases in tourism receipts, remittances from Samoans abroad, official grants and loans (aid) and increases in merchandise exports. All of these elements are threatened by risks of external shocks, in varying degrees. A major downturn in any one of these sources of foreign exchange could have serious implications for the country.

Agricultural exports are vulnerable to natural disasters, but also subject to destabilizing price variations. The situation is different with respect to fish exports, which have increased sharply over the years. Exports of fish are highly vulnerable to cyclones (which can destroy fishing vessels), as well as they are to increases in ocean temperature (which reduce fish catches), and radical downturns in tuna prices.

Exports of manufactured products are vulnerable to external shocks of various kinds. Processed agricultural products (such as coconut cream and coconut oil) are subject to the same natural and economic threats as their raw material inputs. Non-agricultural exports consist almost entirely of sales of automotive wire harnesses by Yazaki Samoa Ltd. These exports are vulnerable to changes in the preferential access to the Australian market. There is also a risk beyond Samoa's control in the possibility that the Japanese plant, which provides nearly 16% of all private sector jobs in Samoa, will decide to move to an alternative location.

4.3.2 Merchandise export concentration

Over the last two decades, virtually all of Samoa's merchandise exports were directed at seven countries: New Zealand, Australia, American Samoa, the United States, Germany, the United Kingdom, Japan.

While the value of exports increased significantly in the last two decades, one observed a failure to develop new markets, and an intensified dependence on traditional markets. The geographical concentration of exports entails vulnerability to possible shifts in tastes and economic recession on the relevant export markets.

4.3.3 Increasing dependence on tourism

Tourism plays an increasingly prominent role in the Samoan economy. In 2003, the share of tourism in the total foreign exchange earnings of the country was estimated at 55%.

The tourism economy is highly vulnerable to natural disasters (cyclones and floods), and could also be severely affected by competition from other Pacific islands and South-East Asian countries, especially if exchange rate depreciation makes these destinations cheaper to tourists from Australia and New Zealand. Other factors of vulnerability are the fact that a high proportion of visitors come from only four countries, and the high dependence on a small number of airlines for passenger transport to and from the country.

4.4 *Smallness and remoteness, factors of exposure*

Fundamentally, the vulnerability of Samoa to external shocks is attributable to the structural handicaps the country suffers from, i.e., essentially, the consequences of its smallness and remoteness. These handicaps are briefly discussed below.

4.4.1 Smallness and fragility

Samoa has a small and compact surface area. This has a direct bearing on the vulnerability to, and impact of natural shocks. The impact of cyclones, fires, flooding, volcanic activity and earthquakes is aggravated by the smallness of the land mass. Almost any natural disaster is likely to affect a large part or all of Samoa, whereas in a larger country, only parts of the surface area will be affected. Moreover, most of these shocks are specific to coastal areas: cyclones cannot sustain themselves over land, and tidal surges and tsunamis are coastal phenomena. Thus, as a small island State with a high coastline to land area ratio, Samoa is naturally vulnerable.

In this context of vulnerability to natural disasters, possibilities for mitigating action are limited. Construction of sea walls (as around Apia) can reduce the damage that is anticipated to be caused by inundation. The introduction of building codes emphasizing cyclone proofing is likely to cut storm damage to buildings. However, it is not possible, technically or financially, to guard against all risks. For this reason, it is important that natural disaster preparedness be carefully organized (and adequately funded), and that disaster insurance be facilitated.

4.4.2 Resource limitations

Samoa has a narrow range of natural and human resources. This is reflected in the limited diversification in production and exports, which explains the exposure and vulnerability to possible external shocks. In Samoa, only 10-12 (fairly homogeneous) products account for nearly the entire value of merchandise exports.

Responses to the handicap of economic concentration involve efforts to diversify into viable new products and services while avoiding policies that protect industries that are inherently inefficient. The advent of the regional free-trade zone in the Pacific has broadened the scope for diversification as a new regional market opens to intra-regional trade.

4.4.3 Small market size and diseconomies of scale

In Samoa, few producers (especially in manufacturing) can achieve the economies of scale that would allow competitiveness on foreign markets. When a rise in the foreign demand occurs and allows island producers to enter a market, this often will be a short-lived phenomenon, lasting only until market equilibrium is restored by the emergence or re-emergence of larger, more efficient and competitive producers. Samoa has experienced several such episodes. This intrinsic economic limitation is best answered by identifying and promoting products that can be produced efficiently on a small scale. The case for "niche" trade relations involving island-specific export products and services, albeit with small numbers of producers and trading partners, is generally considered as the most desirable approach to overcoming the lack of scale economies.

4.4.4 Remoteness and transport costs

The geographical remoteness of Samoa from its main markets explains the relatively high cost of transport to and from the country, and accordingly, the difficulties in achieving competitive diversification of exports. The setting up of the Forum Line to provide shipping services at the regional level was an attempt to reduce the transport cost disadvantage incurred by most Pacific island countries, but it proved to be vulnerable to commercial realities, as long-haul freight rates were diminishing, thereby reducing the disadvantage faced by Samoa. Maritime transport price reductions have contributed to reduce the structural competitive handicap of Samoa as an exporting country.