

VANUATU

Options for promoting Environmental Fiscal Reform in EC Development Cooperation

Country case study Vanuatu

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EXECUTIVE SUMMARY

Vanuatu is a low-income country with a per capita income of about US\$1,200 a year. It suffers from a number of major constraints in its efforts to achieve its development objectives. One constraint is a widely scattered and mountainous island geography, with the population scattered across the islands, in association with poor transport infrastructure. Vanuatu is also vulnerable to natural disasters and suffers from a small domestic market with little potential for economies of scale. Approximately 77% of the population lives in rural areas. Vanuatu is particularly affected by negative impacts of climate change. Already now, inhabitants suffer from extreme weathers as mentioned above, but also from the erosion of coast lines, floods and – on the atolls – water scarcity.

Vanuatu does not have an established system of environmental fees and charges and is possibly foregoing some of the revenues that other countries have been raising for many years. Given the state and further development of the fiscal situation and of the environment and natural resources, there is a large potential for developing proposals for EFR-elements. Public revenue from taxes has increased steadily throughout the last decade and stood at 21% of GDP in 2009. At the moment tax revenue in Vanuatu is overwhelmingly dependent on a value-added tax and taxes on international trade (44 per cent and 38 per cent respectively in 2009).

1. INTRODUCTION

The country report Vanuatu is part of the study 'Options for promoting Environmental Fiscal Reform in EC Development Cooperation' commissioned by the European Commission providing an overview of Environmental Fiscal Reform (EFR) elements implemented in Vanuatu.

The main focus of this report is to discuss EFR in the context of the current situation in Vanuatu emphasizing whether EFR instruments are in use. Based on this discussion some initial remarks are drawn attempting to answer the question whether EFR and EFR instruments respectively could be anticipated as options for addressing some of the challenges in the fiscal and environmental sphere. Following this stock-taking exercise of the current situation, different criteria are derived which are deemed to be significant for promoting the concept of EFR in the context of low-income countries.

An overview of fiscal and environmental policy in Vanuatu is given in the first section. The focus of the subsequent sections is on EFR elements and further potential for EFR in individual sectors of the economy.

At this stage it is crucial to express a caveat as this report as its findings are based on a desk study. Owing to the limited amount of available resources the intention of this report cannot be to provide an extensive and comprehensive coverage of the situation of EFR in Vanuatu. The key findings of this country report are consolidated with the findings of similar country studies carried out under this project and discussed in the final report. A more detailed discussion of the EFR concept can also be found in the final report.

¹ I am very grateful for valuable contributions and comments by Eike Meyer, scientific staff at GreenBudgetGermany (www.foes.de).

2. BACKGROUND INFORMATION ON VANUATU

Vanuatu is an island nation consisting of approximately 82 islands (65 of them inhabited) located in the South Pacific Ocean – northeast of Australia. Vanuatu was first inhabited by Melanesian people. In the 1880s France and the United Kingdom claimed parts of the country, and in 1906 agreed on a framework for jointly managing the archipelago as the New Hebrides. An independence movement arose in the 1970s, and the Republic of Vanuatu was created in 1980. In 2006, Vanuatu's population was estimated at 221,000. With a total land area of 12,190 km², the population density was 18 per km². Approximately 77% of the population lives in rural areas. The Ni-Vanuatu (refers to all Melanesian ethnicities originating in Vanuatu) are with 94% the largest ethnic group in Vanuatu, followed by 4% Europeans and 2% other Pacific Islanders. The per capita income is about US\$1,200 a year. The climate is sub-tropical with approximately nine months of warm to hot rainy weather and the possibility of cyclones and three to four months of cooler drier weather characterized by winds from the southeast. Vanuatu is particularly affected by negative impacts of climate change. Already now, inhabitants suffer from extreme weathers as mentioned above, but also from the erosion of coast lines, floods and – on the atolls – water scarcity.

Vanuatu's economy is dominated by agriculture and the services sector, especially tourism and offshore financial services. The agriculture sector is not only important in terms of its overall contribution to GDP (about 20%) but for foreign exchange earned through export earnings. Copra, coconut oil, beef, cocoa, sawn timber, cowhides, kava and coconut meal together earn about 80% of all exports. A decline in exports over time from this sector has contributed substantially to an increasing imbalance in trade. Vanuatu is generally considered a tax haven. There is no income tax, withholding tax, and capital gains tax, inheritance tax, or exchange control. Until 2008, Vanuatu did not release account information to other governments or law-enforcement agencies. International pressure, however, influenced the government to begin adhering to international norms to improve transparency (Sokomanu 2007). Tourism brings in much-needed foreign exchange. Tourism increased 17% from 2007 to 2008 to reach 196,134 arrivals, according to one estimate (ADB 2009c). http://www.onecountry.org/e151/e15111ap_Copra_Bags_caption.htm

Vanuatu suffers from a number of major constraints in its efforts to achieve its development objectives. One constraint is a widely scattered and mountainous island geography, with the population scattered across the islands, in association with poor transport infrastructure. Vanuatu is also vulnerable to natural disasters and suffers from a small domestic market with little potential for economies of scale. There is overall macroeconomic stability with a modest level of growth. Vanuatu's real GDP growth was estimated at about 1.5% for 2005 and was expected to increase to around 3% in 2008. (International Labor Organisation 2009) However, real growth turned out to be much stronger: 3.8% (2009 estimated), 6.6% (2008 est.), 6.8% (2007 est.).²

2.1 An overview of the fiscal and tax policy

One of the interesting aspects of EFR is the linkage between environmental and fiscal policy, which implies a discussion of the overall fiscal strategy. Vanuatu has experienced a steady increase in real GDP growth rate since 2002; as well as a positive development of total recurrent revenue, with an exception in 2009. Furthermore, the table reveals a significant increase in grants during the years 2008 and 2009. In 2009 a new height was reached with almost 27% of the national budget. This indicates Vanuatu's currently high vulnerability to aid cuts³. Public revenue from taxes has increased steadily throughout the last decade and stood at 21% of GDP in 2009. The ratio of its contribution to the overall public revenue was stable at around

² CIA 2009.

³ Main donors are Australia, France, European Union (EU), Italy, Japan, New Zealand, People's Republic of China (PRC), the United States Millennium Challenge Corporation (MCC), Food and Agriculture Organization (FAO) and the Global Environment Facility (GEF) (UNDP is the main implementing agency) (MCC 2006).

80% throughout most of the 2000s and decreased only in 2008 and 2009 due to a sharp increase in international grants. Tax revenue in Vanuatu is overwhelmingly dependent on a value-added tax and taxes on international trade (44 per cent and 38 per cent respectively in 2009). Table 1 provides background information on Vanuatu's public revenue structure. Table 2 gives an overview of government expenditure during the years 2002 and 2008. A positive development was that slight fiscal surpluses have been maintained in all years since 2004.

Table 1: Government Revenues 2002-2009 (in Millions VUV)

	2002	2003	2004	2005	2006	2007	2008	2009
Total Revenue & Grants	6890.7	7056.0	8241.4	8002.3	10014.8	12032.80	16623.8	16824.5
Total Recurrent Revenue	6381.8	6674.5	7389.9	7878.9	9161.8	11052.7	12648.7	12295.9
Tax Revenue	5535.7	6021.5	6621.7	6853.7	8120.9	9847.3	11444.3	10858.2
Non-Tax Revenue	846.1	653.0	768.2	1025.2	1040.9	1205.4	1204.4	1437.7
Grants	508.9	291.8	851.5	1234.5	853.0	980.1	3975.1	4528.6
GDP at current prices	32,957	34,185	36,863	40,387	45,944	51,980	55,099	57,078
GDP - Real growth rate %	-4.10%	3.70%	4.40%	5.10%	7.20%	6.70%	6.30%	3.30%
total revenue in % GDP	19.36%	19.52%	20.05%	19.51%	19.94%	21.26%	22.89%	21.54%
Tax Rev. (% of total Rev.)	80,34%	85,34%	80,35%	85,65%	81,09%	81,84%	68,84%	64,54%
Tax revenue in % GDP	16.80%	17.61%	17.96%	16.97%	17.68%	18.94%	20.71%	19.02%
Grants in % of total budget	7.39%	4.14%	10.33%	15.43%	8.52%	8.15%	23.91%	26.92%

Source: Vanuatu Reserve Bank

Table 2: Government Expenditure 2000-2008 (in millions VUV)

	2002	2003	2004	2005	2006	2007	2008	2009
Total Expenditure	8410	7629	7693	7944	9567	11860	15305	16788
Salaries and Wages	3993	4130	4155	4298	5279	6528	7334	
Expenditures on Goods and Services	2246	1780	1728	1947	22227	3218	3370	
Interest Payments	319	353	369	349	338	390	348	
Subsidies and Transfers	1462	1117	1161	894	1276	1075	1209	
Capital Expenditure	376	242	280	442	350	631	2489	
Other Expenditure	15	8	1	14	98	18	52	
DEFICIT / SURPLUS	-717,1	-572,7	326,4	1170,1	205,6	69,7	1318,4	

Source: Vanuatu National Statistics Office

Vanuatu is generally considered a tax haven is a so called tax haven, which Slal defined as: “[A] country with little or no direct taxes and enhanced privacy provisions (not necessarily available to all classes of persons) and used as a facility for international tax planning, international banking and insurance and the conduct on international dealings and investment under conditions of secrecy.” (Slal 1998). The country was established as an international financial centre by the New Hebrides Government in 1971. Although this small tax haven only employs about 400 people, the finance centre is responsible for about 12 per cent of Vanuatu’s GDP.

The Asian Development Bank and other donors have been warning that the narrow revenue base imposes risks for future government revenue and urging Vanuatu to review the taxation system and undertake revenue reforms (ADB 2009a). Accordingly, the Vanuatu Priorities and Action Agenda 2006 – 2015 identifies the exploration of other tax options in order to expand the existing tax base as a reform priority (Government of Vanuatu and European Commission 2009). The Country is free of income tax at both the corporate and individual levels. There is also no corporation tax and no inheritance tax. This means that most revenue is raised by the imposition of business charges and licence fees, which imposes onerous burdens on small business. The majority of Government revenue is raised by levying trade, excises and a 12.5 per cent Value Added Tax (VAT) on goods and services. Free trade agreements are reducing income from import duties and are expected to be negligible by the year 2013. During the year 2006 tax revenues constituted approximately 90 per cent of the Government of Vanuatu (GoV) overall domestic revenues. (Pretorius/Certan 2006).

Table 3 gives an overview of the tax structure in Vanuatu. The last row in table 3 shows the dependency on international trade taxes, with tax revenues accruing from international trade between 30 and 40 per cent.

Hence an important interim conclusion is that the preconditions for broadening the tax base, e.g. including or even focusing on environmental/natural resources tax bases are very good.

Table 3: Tax structure overview (Millions of VUV)

		2002	2003	2004	2005	2006	2007	2008	2009
Total Tax Revenue		5535.7	6021.5	6621.7	6853.7	8120.9	9847.3	11444.3	10858.2
Taxes on income and profits		-	-	-	-	-	-	-	-
Taxes on property		60.5	67.6	106.5	133.2	211.9	603.6	684.8	463.3
Taxes on the use of goods		3212.8	3732.2	3995.6	4516.0	5227.2	5845.6	6919.9	6507.1
	VAT	2188.7	2405.4	2475.4	2738.9	3095.9	3752.5	4549.2	4833.9
	Business Licenses	141.6	141.3	150.1	192.2	181.6	217	243.0	294.4
	Turnover Tax	1170	1035	1228	1712	1972	2049	2379	2506
	Internet Casino	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	56.0
	Debits Tax	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Service Tax	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	120.0
	Excise	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	697.0
	Other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1106.2
Taxes on the use of goods as % of total tax revenues		58.04%	61.98%	60.34%	65.89%	45.37%	59.36%	60.47%	59.93%

Taxes on international trade		2204.4	2262.7	2519.7	2312	2681.7	3398	3839.6	4142.7
	Export duty	-	0.1	-	-	5.7	6.7	0.9	-
	Import Duty	2.204,4	2.262,6	2.519,7	2.312,0	2.767,0	3.391,3	3.838,7	4142.7
	beer& wine	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	250.0
	tobacco	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	573.5
	vehicles	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	350.0
	motor spirits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	684.0
	other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2285.3
int. Trade tax as % of total tax revenues		39,82%	37,58%	38,05%	33,73%	33,02%	34,51%	33,55%	36,11%

Table 4: Non-tax Revenue (Millions of VUV)

	Non Tax Revenue					Total	Sale of Fixed	Grants
	Property income	Admin.	fees & Charges	Other	Capital		from	
Items	Dividends	Property income	Other	fees & Charges	Other	Asset	abroad	
2002	(38,4)	-	202,3	384,3	13,5	561,8	284,3	508,9
2003	106,3	67,3	16,5	372,7	22,4	585,3	52,0	291,8
2004	83,2	73,4	63,9	468,1	19,8	708,3	59,9	851,5
2005	207,6	140,8	23,4	577,2	26,8	975,8	49,4	1.234,5
2006	199,3	143,0	20,9	643,9	28,5	1.035,6	5,3	853,0
2007	273,8	153,4	21,8	716,7	28,4	1.194,1	11,3	980,1

In a review of the agriculture and fisheries sectors in Vanuatu, ADB (2001) found that “a plethora of distorting taxes; policies and regulations have sapped the development of agriculture and fishing in Vanuatu.” Areas of comparative advantage for Vanuatu’s economy were seen as agriculture, processed agricultural products, and tourism – all based on Vanuatu’s natural and human resource endowments. To remove impediments, the review recommended introducing regulations to protect the community against inappropriate development and providing cost-effective market information, extension services and research – areas where private service providers are not likely to be active.

In the following the most important taxes are introduced according to their relevancy to tax revenue.

Value Added Tax

A Value Added Tax was introduced in 1998 in a move to broaden the tax base in order to increase government revenue, while allowing for a fairer and equitable tax system. It replaced the Sales Tax and the ad valorem Business Licence fee and made Vanuatu less dependent upon revenue collected on international trade. At present, the VAT rate is 12.5 per cent and VAT accounted for 44.52 per cent of total tax collection during the year 2009 or around VUV 4,833.9 million. Accordingly, the VAT has become by far the largest contributor to government revenue in Vanuatu. There are several exemptions, including any activity carried on by a company registered under the International Companies Act No. 32 of 1992. Such companies, instead, pay a business licence fee. Also exempted is any occupation, or employment under any contract of service or as a director of a company. There is also no VAT on the making or supply of goods or services, which are already exempt under the Act. The First Schedule of the Value Added Tax Act designates supplies that are exempt under the Act. From an investor’s perspective, this schedule includes a number of financial services possibly applicable to an investment. The Second Schedule of the Act exempts certain goods from VAT that are imported free of duty under the Import Duties (Amendment) Act No.27 of 2003. However, these exemptions, in general, do not apply to investment related goods. The Third Schedule

of the Act establishes supplies that are zero-rated. From an investment perspective, these supplies include exports (Government of Vanuatu 2005).

Business licenses

A business License is an official document showing that permission has been granted by the licensing authorities to carry out an activity for the purpose of making profit. The licence is issued under the Business Licences Act No 19 of 1998 and is administered by the Department of Customs. In 2009 the fee accounted for 2.7 per cent of the total tax revenue only. In the same year receipts from business licenses decreased some 83.5 per cent during the over the first quarter, but increased 17.8 per cent compared to the same period of 2008 to VUV 6.3 million. This is most likely explained by legal stipulations relating to when annual renewals are due. The extent of the fee varies with the type of business and turnover as follows:

Table 5:

Turnover	Business License fee / year
< VT 10 million	VT 20,000
VT 10 million – <50 million	VT 50,000
VT 50 million – < 200 million	VT 250,000
> VT 200 million	VT. 1,000,000

Source: Government of Vanuatu, *National Investment Policy*, March 2005

Commercial banks and other financial institutions pay a minimum fee of VUV 5,253,000 and VUV 315,180 respectively. Insurance companies and professional and business services that are zero rated for VAT purposes pay a fee equivalent to 5 per cent of turnover. There are some exemptions from Business Licence fees. Currently artists and sculptors, planters, farmers and dairymen; market and other gardeners; stock breeders, vegetable and fruit hawkers as well as Fishermen benefit from this regulation.

Turnover Tax

Turnover tax is a fee charged particularly on income derived from export services, which are not taxable under the Value Added Tax Act. These businesses mainly involve financial institution (Banks, Accounting firms, Insurance companies) and other professional businesses (Law firms, Consultancy firms, Security services etc). The turnover tax rate was at 5 per cent of gross income. Collections from turnover tax decreased by 12.4 per cent in 2009 to be around VUV 7.7 million contributing 2.31% to overall revenue.

Trade taxes

Trade taxes are a major source of Government revenue. Because the current schedule contains many different rates, inconsistencies and complexities, the rates and administration arrangements are currently under review. This review will also ensure compliance with Vanuatu's obligations under the Melanesian Spearhead Group and the Pacific Island Countries Trade Agreement (PICTA). It is anticipated, in the short term, that the review will result in a reduction of the number, spread and magnitude of the rates and that by 2015 trade taxes will, essentially, be phased out.

2.2 Environmental policy

2.2.1 Environmental Challenges in Vanuatu

There are many causes of environmental change in Vanuatu: population growth, rural–urban migration, real estate and tourism developments, deforestation, invasive species, imported energy and transport goods, waste disposal, runoff into bays and lagoons, and increasing numbers of tourists. The following paragraph depicts key environmental issues that confront the country. Vanuatu's first national conservation strategy in 1993 identified much the same issues.

Climate change and sea level rise

Vanuatu, as a small island developing state, is highly vulnerable to climate change and sea level rise owing partly to their small land masses surrounded by ocean. Inhabitants rely on natural resources from agriculture, forestry and fishery which are affected negatively by climate change. Alternative forms of land use are almost not known which makes adaptation a great challenge, let alone mitigation of greenhouse gas emissions. However “political commitment to the environment is lacking, the budget allocation to it is tiny, and the requirements of the Environmental Management and Conservation Act of 2002 are evaded. The Department of Environmental Management and Conservation, which is mandated by the act, has not yet been established, while the Environment Unit is under resourced” (ADB 2009a).

To address problems originating from climate change, a project, by the German Development Cooperation Agency GTZ in cooperation with the Secretariat of the Pacific Community (SPC) was implemented between 2009 and 2012. It aims at strengthening the competences and performance ability for sustainable management of natural resources, e.g. by avoiding deforestation (GTZ 2009). Climate change is to be integrated into strategies and policies, focusing on agriculture, forestry and land use planning. National adaptation strategies are developed and relevant policies and guidelines are climate-streamlined. Forms of land use which can cope with other climates are developed and supported.

A link to EFR in a broader sense exists through the selling of Clean Development Mechanism (CDM)-allowances which are ensuring the funding for the protection of forests. However, this is the case for the neighbouring island Fiji only. Until now it is unclear whether this scheme will also be implemented for Vanuatu.

Land Resources

Vanuatu's population is relatively fast growing (estimated in 2008 at 2.4 per cent annually) [http://en.wikipedia.org/wiki/Vanuatu - cite_note-10#cite_note-10](http://en.wikipedia.org/wiki/Vanuatu_-_cite_note-10#cite_note-10) and therefore placing increased pressure on local resources for agriculture, grazing, hunting, and fishing. The main problems associated with the use of land resources are soil and coastal erosion, land degradation as well as loss of forests and bio-diversity. [http://en.wikipedia.org/wiki/Vanuatu - cite_note-pc-5#cite_note-pc-5](http://en.wikipedia.org/wiki/Vanuatu_-_cite_note-pc-5#cite_note-pc-5)

While well vegetated, most islands also show signs of deforestation. They have been logged (particularly of higher-value timber), subjected to wide-scale slash-and-burn agriculture, converted to coconut plantations and cattle ranches, and show evidence of increased soil erosion and landslides.

Proper waste disposal and water and air pollution are also increasingly troublesome issues around urban areas and large villages. Additionally, the lack of employment opportunities in industry and urban areas and inaccessibility to markets have combined to lock rural families into a subsistence or self-reliance mode, putting tremendous pressure on local ecosystems. [http://en.wikipedia.org/wiki/Vanuatu - cite_note-pc-5#cite_note-pc-5](http://en.wikipedia.org/wiki/Vanuatu_-_cite_note-pc-5#cite_note-pc-5)

Water Resources

The challenges ahead in the area of water resources are:

- Water pollution;
- Integrated planning and management of catchments to maintain water quality and maximize groundwater recharge;
- Improved management and maintenance of water supply networks;
- Promotion of water conservation;
- Policy to restrict extraction of freshwater from coastal aquifers; and
- Expansion of rainwater storage capacity.
- Reef destruction and over-exploitation of marine resources;

Some 90 per cent of Ni-Vanuatu households fish and consume fish, which has caused intense fishing pressure near villages and the depletion of near-shore fish species. Freshwater is becoming increasingly scarce and many upland watersheds are being deforested and degraded.

Natural disasters

Geographically located on the seismically active Pacific “rim of fire”, Vanuatu suffers from a wide range of natural disasters such as earthquakes, volcanoes, and tsunamis. They occur at a rate of one every second year. The Commonwealth Secretariat ranked Vanuatu as the most vulnerable state of 110 small developing countries (United Nations 2002a). There is some evidence that frequency of natural disasters is increasing in the Pacific islands region (World Bank 2006) (ADB 2007).

Mining

Mining is not a significant industry in Vanuatu and does not even appear in the national accounts as a sector. Gold, manganese and possibly hydrocarbons have some potential but there has been no major exploitation to date. Nevertheless, the rapid increases in the construction industry and road construction have created burgeoning demand for construction materials like gravel, sand, and coral aggregate. Excavation of sand from coastal areas like Blacksands is causing aggravated coastal erosion. Sourcing road construction material from custom owned land may also lead to conflicts over royalties and inadequate rehabilitation of borrow pits and quarries.

2.2.2 Government Policy

The Government itself states that it recognises “the intrinsic value of Vanuatu’s natural environment and is concerned about its conservation, sustainable development and management” (Government of Vanuatu, National Investment Policy, 2005). The Government’s environment policy is reflected in the Environmental Management and Conservation Act No 12 of 2002. Although the Act requires the development and implementation of a comprehensive National Environment Plan, detailed work on this plan is yet to begin. However, Vanuatu’s natural environment has clearly not only intrinsic value, but is also critical to livelihoods and the nation’s principal export industries, particularly tourism and agriculture.

The Asian Development Bank identified the following priorities for an improvement of environmental policy in Vanuatu (ADB 2009):

- Establish the Department of Environment and Conservation and position it in the government structure, possibly in the Office of the Prime Minister.
- Examine the potential for sustainable environmental financing through fees, charges, and performance bonds.
- Seek technical assistance from funding agencies to examine sustainable environmental financing through fees, charges, and performance bonds; develop a system for examining all policies, plans, and programs for their environmental outcomes.
- Establish a National Council on Sustainable Development and hold a national environment summit.

Government policy on environment and conservation is to provide an affordable framework of environmental protection and compliance within Vanuatu. This is realised through the enactment of the Environmental Management and Conservation Act No. 12 of 2002, which is the only legislation governing environmental protection of all natural resources in Vanuatu (Tom’Tavala/Hakwa 2004). Environmental regulation in Vanuatu consist of laws that are specific to a particular resource such as the Water Resources Management Act and laws that cover a whole ambit of natural resources such as the Environmental Management and Conservation Act of 2002. A lack of coordination produces legal and administrative overlaps, gaps and sometimes conflicts. Areas of conflict for environmental protection are more prominent where environmental policies are not stream lined with current trade, commercial development and investment policies of national government, Local Government Councils (LGCs) and municipal councils (Tom’Tavala/Hakwa 2004).

3. EXPERIENCES WITH MARKET-BASED INSTRUMENTS/EFR IN VANUATU

Overall there are only very few experiences with market-based instruments and EFR-elements in Vanuatu. In the following sections they are presented along different sectors.

3.1 Energy sector

A tax levied on different energy products – often being listed under the term excise duties in public finance – are probably the most striking example of an EFR instrument. Sometimes a slight confusion exists with this type of an environmental tax as the underlying motivation for introducing this tax is to generate revenues. As discussed above the concept of an EFR can be summarised as domestic resource mobilisation that is furthering environmental goals.

Energy is one of the keys for economic growth and for improving the living conditions. Vanuatu does not have indigenous sources of fossil fuels. The dependence on imported fossil fuels is a burden to the country. Two of the ten high imported value items in Vanuatu– fuels and motor spirit – belong to the energy sector (table 6). Electricity prices in Vanuatu are increasing due to rapidly rising diesel costs.

Table 6: High Imported Value Items (millions of VUV)

	2006	2007	2008	2009
Fuels	3.177	2215	3433	2130
Motor Spirit	696	513	672	553

The energy consumption in the four largest towns and the total countrywide consumption is listed in table 7. The second part of the table shows itemized energy usage.

Table 7: Energy Consumption									
Year	'000 Kwh / x 1000 Kwh					Imports Cleared for Home Consumption('000 litres)			
	Port Vila	Luganville	Malekula	Tanna	Total	Petrol	Diesel	Kerosene	Total
2002	35.287	6.586	221	110	41.874	4.836	24.940	785	30.561
2003	34.386	6.303	445	208	41.341	5.809	23.799	911	30.519
2004	35.614	6.512	510	214	42.849	4.808	22.789	783	28.381
2005	37.834	6.070	528	229	44.661	3.518	16.694	511	21.118
2006	39.238	5.888	526	254	45.906	6.863	16.429	1.385	20.769
2007	42.043	6.106	516	279	48.944	5.864	31.074	219	37.157
2008	48.495	6.476	573	300	55.844	6.913	38.150	906	45.968
2009	49.520	6.529	503	372	56.924	8.238	36.747	295	45.280

Source : Unelco Vanuatu Limited and Department of Customs

However, Vanuatu is endowed with some renewable energy sources. Biomass is used as an energy source by a large percentage of the rural population for household cooking. Coconut oil replaces biofuel for diesel generation for small power grids. Additionally, Vanuatu has considerable technical potential for hydropower generation and there are a number of potential geothermal and wind power sites which have been identified. Household solar power systems have been trailed extensively for schools and health facilities, however issues with high cost and maintenance have prevented widespread upscaling (Asian Development Bank 2009). The most promising future for renewable energy prospects include blending of coconut oil with diesel, geothermal and wind power systems, solar and possibly hydropower for areas currently not connected to the

grid. These resources offer considerable potential to provide Vanuatu with a diverse energy supply sources and reduce its dependence on imported fossil fuels. However, the challenge is how to make a transition from the traditional energy supply source to the renewable energy sources. Currently, there appears to be no significant incentive scheme for increased utilization of renewable energies.

Import substitution of fossil fuels by copra

Given the potential high use of copra, i.e. coconut oil, a clean domestic source, this could be an interesting option to follow, though also concerns regarding the revenues need to be taken into account. Vanuatu imports 12 Billion VUV of goods per annum but exports only 4 Billion VUV of goods. With this level of trade deficit it is imperative that Vanuatu does everything in its power to increase exports and reduce imports. Import substitution is one way to reduce imports. Diesel fuel imports total approx. 24 million litres per annum, worth 12 million VUV (USD 9M). This is 10% of all imports. Therefore it can be readily seen that substitution of an indigenous fuel on even a small scale will make a large difference to the balance of payments.

A substitution of diesel fuel to coconut oil will likely result in a significant loss in governmental revenue from import duties related to fuel. However, it has been pointed out by Vanuatu's Head of the Energy Unit that some of the lost income to the Government can be offset by the Government fleet being converted to using the indigenous fuel at the lower cost price. Also advisers in Vanuatu's VAT Office have pointed out that the money staying in the country turns over at least 6-7 times so VAT is payable each time. Whereas the Import duty on diesel (25 VUV/l) is only collected once on imported fuel products as the purchase price is remitted overseas never to return!⁴

Vanuatu imports on average approx 24 million litres of Diesel oil per annum worth 11.5 million VUV. This amounts to about 10% of all imports. The duty is 26 VUV/l plus energy taxes of 5 VUV/l + 12.5% VAT. Of the price of fuel in Vanuatu 40% consists of added government taxes. Thus the economic implications would be to lose this revenue if the fossil fuel would be substituted by fuel from coconut oil.

Due to the increasingly high diesel price and increase in coconut oils production since 2000, the Government should now consider assisting the private sector in taking the lead role to develop the infrastructure of bio-fuels by setting up mills in the islands to extract copra oil to meet the demand in the future.

However, there are also cases of deforestation for a wide-scale slash-and-burn agriculture, converted to coconut plantations and cattle ranches, and show evidence of increased soil erosion and landslides. So any policy supporting biofuels would have to ensure that such negative side-effects do not occur, e.g. by only reducing tax rates for sustainable grown coconuts.

The current reform of the electricity prices and tariffs is a huge window of opportunity to make price incentives consistent with sustainable development. To this end the structure should be as follows:

- All commodities for which it is environmentally desirable to be used more there should be a reasonable lump sum to be paid independent of the factual consumption.
- All commodities for which it is environmentally desirable to be used as less as possible there should be no lump sum to be paid independent of the factual consumption.

Electricity pricing

Electricity pricing is one of the EFR instruments and the discussion regarding the full cost recovery principle – as it is the case concerning water tariffs – also applies to the setting of the electricity tariffs. The table below presents the costs and consumption of electricity in comparison to other Pacific Islands.

Table 8: Electricity Costs and Consumption in Comparison with other Pacific Islands

	Fiji	Samoa	Tonga	Vanuatu
Electricity costs, U.S: dollar per kwh (2003)	0.16	0.18	0.31	0.26

⁴ Deamer 2005.

Electricity consumption per capita, kwh (2004)	904	547	374	189
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Most electricity in Vanuatu is generated by oil fired thermal power plants. Some bottled liquefied petroleum gas (LPG) is imported by Origin Energy for household use in Port Vila. Only an estimated 27 per cent of the Vanuatu population has access to electricity. Access rates to electricity in the main urban centres of Port Vila and Luganville are high at about 75 per cent, dropping off considerably in rural areas. Table 9 provides an overview of electricity production and consumption during the years 2003 and 2010.

Table 9: Electricity Production and Consumption

Year	Electricity-Production	Per cent Change
2003	43,460,000	
2004	43,460,000	0.00%
2005	48,420,000	11.41%
2006	41,000,000	-15.32%
2007	43,000,000	4.88%
2008	46,000,000	6.98%
2009	46,000,000	0.00%
2010	42,000,000	-8.70%

Year	Electricity - consumption	Per cent Change
2003	40,420,000	
2004	40,420,000	0.00%
2005	45,030,000	11.41%
2006	38,130,000	-15.32%
2007	39,990,000	4.88%
2008	39,990,000	0.00%
2009	39,990,000	0.00%
2010	39,060,000	-2.33%

Source: http://www.indexmundi.com/vanuatu/electricity_production.html

Power is supplied to the main urban areas of Port Vila, Luganville, East Malekula and Tanna under a concession arrangement to a private power company UNELCO. While the cost of electricity under the concessions is relatively high, the quality of supply is superior to neighbouring countries such as Solomon Islands or Papua New Guinea. Tariffs are set for Luganville on the basis of diesel generation costs, and the savings are deposited into the Sarakata Special Reserve Fund, established in 1995, which is used to finance rural electrification (Asian Development Bank 2009).

The establishment of the Utilities Regulatory Authority, with support from Australia and the World Bank, created an institution responsible for regulating the power sector, with the aim of ensuring prices are fair and power is widely available. High prices and poor access to power are key development issues for Vanuatu. (AusAid, 2008). The Government's concern about the high cost of electricity has led to the URA undertaking a full review of the level and structure of tariffs for all concession areas. This review of electricity tariffs and regulatory requirements was a key priority of the Utilities' Regulatory Authority (URA) in 2009. However, this is yet an ongoing process, as comments on the paper could be submitted until 12 April 2010.⁵

The URA has put out two sets of papers, *Tariff Application Report* and *Position Paper*, to the public for information and consultation⁶. This document sets out the current position of the URA on the tariff review,

⁵ <http://www.presse.com.vu/component/content/article/34-daily-vanuatu-news-briefs/145-invitation-to-public-consultation-sessions-on-the-electricity>.

⁶ This paper sets out the approach and methodology for calculating and setting the electricity price for the four UNELCO electricity concessions. As part of this process, UNELCO are required to submit its tariff application to the URA setting

and invites comment from all stakeholders. It unveils a very detailed and differentiated position on electricity tariffs. It would be too demanding to comment on every single detail of it in this desk study. However, the general guideline of the structure should be as follows:

- All commodities for which it is environmentally desirable to be used more there should be a reasonable lump sum to be paid independent of the factual consumption.
- All commodities for which it is environmentally desirable to be used as less as possible there should be a no lump sum to be paid independent of the factual consumption.

The initial reason for the Act was to review the power sector where a high standard of service is provided to those areas serviced by the utility but where prices are very high. There is currently a review of the electricity tariff with an intention of tendering when the Luganville contract comes up for renewal. The Utilities Regulatory Authority could be given wider powers, if and when various SOEs are privatized, to safeguard the interests of users where market failure occurs as a result of service provision by a monopoly.

3.2 Transport sector

Private transport services, including buses and taxis, registered 20.4 per cent growth in 2006 and during peak hours the number of vehicles in the urban area of Port Vila is reaching a stage of congestion. Table 10 below shows the increasing rate of registration of new vehicles in Vanuatu. As a reserved occupation, the increase in mini-buses and taxis appears to be uncontrolled and some rationalization of licenses should be considered. Imports of second-hand or reconditioned vehicles and engines are also creating air quality and ultimate disposal problems. The Millennium Challenge Corporation (MCC) is providing \$65.7 million in grant funding over five years to reconstruct priority transportation infrastructure on eight islands covering roads, wharfs, an airstrip, and warehouses and institutional strengthening of the Public Works Department (a project originally prepared for ADB loan funding). Completion of the project by 2010 is expected to add three per cent each year to Vanuatu's GDP and benefit over 65,000 poor, rural inhabitants, with an economic rate of return of 25 per cent (MCC 2006).

Table 10: Private Motor Vehicle Registrations in Port Vila and Luganville

Year	Motorcars	Pick-Ups	Trucks	Buses	Motor-cycle	Total
2002	136	102	5	28	20	301
2003	131	146	27	40	16	360
2004	175	158	19	25	21	398
2005	233	192	53	100	37	615
2006	243	262	72	85	104	766
2007	340	332	152	138	46	1.008
2008	592	541	214	259	102	1.708
2009	391	385	105	151	86	1.118

Source: Rates and Tax Office, Department of Customs and Inland Revenue

Currently the duty on diesel and gasoline is at 25 VUV/l (ca. 0.17 EUR/l) plus VAT at 12.5 per cent to give a total return to the Government of approx 35 VUV/litre. This is very low, compared to European standards where the price is around 1.20-1.50 EUR/l, of which around 50-70 per cent is energy taxes. However there is no interest in a higher taxation of the transport sector. The government identified in its "Prioritized Action Agenda" of 2002 the reduction of costs for transportation and utilities as one of the priorities.

Description	Dec 08	Mar 09	Jun 09	Sep 09	Dec 09	Mar 10	Jun 10
Diesel super, 1litre, Gas station	167	150	137	142	142	127	133
Benzine super, 1litre, Gas station	170	150	135	140	140	140	146
Kerosene, 1 litre, Gas station	170	157	177	177	177	170	170

Source: Vanuatu National Statistics Office

Road traffic tax fee

Road traffic taxes comprise taxes on Vehicle Registration, Vehicle Transfers, Road Tax, Drivers License, Learners Driving License and Driver's Public Vehicle Permit. The fee for motor cars varies from VUV 11.200 to VUV 38.000 according to their tonnage and cylinder capacity number.

3.3 Water related EFR instruments

The use of economic instruments in the field of water has been advocated by many as an effective means of promoting the protection of the environment and internalising environmental concerns and impacts into economic actors' decisions. Economic instruments, such as water abstraction taxes addressing the water supply and trade effluent taxes or wastewater discharge taxes tackling water quality issues, are tools guaranteeing that environmental and resource costs are being part of water and wastewater tariffs.

The more than 80 islands of the archipelago of Vanuatu are heterogeneous such that some of the larger more mountainous islands have good ground and surface water resources whilst others have either ground or surface water or rely entirely on rainwater collection. Water reuse has not been considered and desalination has been important after natural disasters destroyed water sources. (Sopac 2007)

Until recently most Vanuatu government programmes and policies were sectoral in approach, lacked strategic vision and tended to be reactive rather than proactive. There are several pieces of legislation that if implemented and enforced would provide an excellent basis for managing Vanuatu's water resources. Yet much of it is not activated. Policies tend to be reactive rather than proactive and implicit or inferred rather than explicit (Sopac 2007).

Tariffs for urban water supplies are high, caused by high costs of delivery and operation. In the case of water supply provided by UNELCO, prices are set according to an agreement with Government, under the Ministry of Lands. The price is indexed to a variety of inputs and there is no scope within the agreement and concession contract to take account of increased economies of scale. The UNELCO tariff structure from January 2007 is based on a connection fee, a fixed fee for < 25m³ per quarter and tariffs of

- <50m³ = 55.13 VUV/m³;
- 50-100m³ = 71.67 VUV/m³;
- 100-200m³ = 75.18 VUV/ m³;
- >200m³ = 82.70 VUV/ m³. (Sopac 2007)

The Priorities and Action Agenda (PAA) 2006-2015 is a high-level set of priorities and strategies with a ten-year timeframe giving the vision for Vanuatu as "An Educated, Healthy & Wealthy Vanuatu". For the water sector, the PAA establishes "the provision of better basic services; especially in rural areas" as a strategic priority. Regarding the financing of water services the PAA establishes the principle that tariffs for service delivery should fully recover capital and operating costs, or if there are social obligations, they should be determined and funded in a transparent manner through government subsidies (Sopac 2007).

Wastewater management is currently uncontrolled and unregulated with consequently no tariffs or government revenue. On the other hand, there are a variety of non-government organisations and donors funding community-based sanitation and wastewater management (Sopac 2007).

Rural water supplies are donor-funded and managed and operated by communities, and urban water supplies are funded by fees and tariffs with prices set according to government agreements. UNELCO provides a working model for privatised service delivery whereas PWD is subsidised by government even though operating under the same fee and tariff structure (Sopac 2007).

3.4 Other EFR instruments

Waste Management

In the Vanuatu the use of legislation or tariffs to influence the purchasing and distribution policies for imported goods is a waste management option that should be considered in detail. Government can also have influence on the success of waste minimisation schemes through tax structures. The exemption of taxes for the export of recyclable materials from the Vanuatu or other tax incentives should be considered as part of the waste management strategy (Sinclair Knight Merz 2004).

The charges for waste collection and disposal in Vanuatu are low compared with other Pacific Island countries. In Western societies the rate structure for waste management is moving towards full cost recovery. Full cost recovery for waste collection and disposal in Port Vila is the ultimate aim. However the public “ability to pay” is a significant factor to be considered in Port Vila. It is recommended that the costs of waste collection and disposal are accounted for on an annual basis and that charges are set for the public based on a survey of ‘ability to pay’, pay”, with increases towards full cost recovery over the medium term (Sinclair Knight Merz 2000).

Payment for ecosystem services (PES)⁷

The sectors most dependent on a clean environment, such as tourism, currently obtain free ecosystem services from a resource that belongs to all Vanuatu people. Such sectors should be prepared to pay for these services, provided that they are assured that the fees they pay are directly used to maintain or improve the environment. Some examples include⁸

- Payment of a portion of the revenue stream from hydropower stations to cover the cost of watershed management and to compensate upstream landholders from undertaking logging or other land uses that would cause problems for the power station;
- Payment of a volumetrically determined fee for bottled mineral water that would be used to compensate landowners and cover the cost of watershed management and mandatory water quality monitoring;
- Payment of an environmental “bed tax” for all tourists based on the number of nights occupation in hotels or guesthouses (typically €2-4 per night), with an assurance that the tax is used for keeping the environment clean;
- An environmental “docking fee” for all yachtsmen and cruise boat tourists, dedicated to monitoring and management of the harbour environment;
- An air ticket tax to be added to all airline tickets, partly to offset carbon emissions, but also noise emissions and to finance appropriate infrastructure and environmental compensation measures,
- Increase the taxation of fossil fuels in small predictable steps to increase energy productivity and to stimulate the use of the domestic sources, particularly copra; and
- A small portion of government tax on fossil fuel levied to fund additional investment in renewable energy and to support producers of high quality coconut oil, with environmental benefits from toxic emissions of diesel fuel and reduced carbon emissions.

⁷ Payments for ecosystem services (PES) are somewhat at the edge of conventional EFRs, but are yet very attractive and rely on a very similar price mechanism. That explains why they are also considered here.

⁸ ADB 2007.

4. OVERVIEW OF AVAILABLE INFORMATION ON EFR-ELEMENTS OR EFR-RELATED STUDIES

There is not much information available as far as it is accessible via internet given this is a desk study. The information available has been included above in the chapter on fiscal and tax policy, but also the environmental policy. However, it appears that there is almost no application of EFR-elements. Hence, one of the slightly more comprehensive studies dealing with EFR elements is the one by the Asian Development Bank 2007 on “Regional: Mainstreaming Environmental Considerations in Economic and Development Planning Processes in Selected Pacific Developing Member Countries.

5. IDENTIFICATION OF CRITERIA AND THE IMPLEMENTATION OF EFR

Economic instruments have a multiplicity of advantages over regulatory policies, i.e. command-and-control policies, in developed countries as well as in economies in transition and developing countries (Panayotou 1994 and OECD, 2001 and 2005). Economic instruments can lead to substantial cost-savings while achieving environmental goals and generating revenues. However, different criteria can be identified which have to be addressed when discussing whether economic instruments, and EFR in general, will be able to achieve the attributed policy objectives successfully. Potential challenges and problems with regard to the applicability of economic instruments can be identified as follows (Nguyen, 2008 based on Panayotou, 1994):

- Low capita income has effects on the policy priorities as well as on willingness to pay for environmental amenities in poor countries. The critical concern for many developing countries is economic development and poverty alleviation instead of quality of life and environmental quality.
- The legal and institutional capabilities and capacities are insufficient to support the economic instruments. This results in the weakness of the administrative and enforcement systems.
- The short supply of fiscal and technical resources for environmental policy implementation is another serious problem facing developing countries.
-

Many of these problems are also evident in Vanuatu. Keeping this in mind criteria for the applicability of an EFR can be derived⁹:

- Defining and prioritising of environmental policy objectives – as part of overall policy objectives - and good governance¹⁰
- Property rights must be properly defined and also enforced. Property rights, especially on land, must be exclusive, transferable and safe.
- A well defined and stable regulatory framework is a decisive criterion for EFR policies.
- An appropriate legal and institutional framework must be developed over time.
- Good cooperation between different ministries (cross ministry co-operation, sectoral working groups, etc.), in particular Ministry of Finance/Planning and Ministry of Environment. An important role lies with the Ministry of Finance, in particular when the Ministry of Finance supports the role of EFR in fiscal policies¹¹.
- Political willingness must be available, i.e. the entire government supports the application of any new policy programme.

⁹ See also Barde, 1994 and Panayotou, 1994 for a more detailed analysis in particular in the context of the use of economic instruments in developing countries.

¹⁰ See also GTZ, 2008.

¹¹ See for example the development in South Africa in the other case study of this project (Speck, 2010).

6. DEVELOPMENT OF A PROPOSAL FOR EFR-ELEMENTS

Vanuatu does not have an established system of environmental fees and charges and is possibly foregoing some of the revenues that other countries have been raising for many years. Given the state and further development of the fiscal situation and of the environment and natural resources, there is a large potential for developing proposals for EFR-elements. To this end, the following proposals are derived and made:¹²

- Examine alternative approaches to make environmental administration in Vanuatu essentially self-financing.
- Make full use of the significant funding for climate change adaptation under the Kyoto Protocol for which small island developing states are given preferential treatment for access to these funds.
- Consider imposition of an environmental fee for cruise ship tourists visiting Vanuatu, with the funds earmarked for management of coastal waters.
- Consider levying a water charge in order to encourage the rational use of water given its scarcity and costs for cleaning.
- Consider effective ways to minimize the powers of Ministers to enter into agreements with foreign investors without full departmental review and environmental assessment. Request an environmental research institute to undertake case studies of controversial project decisions where Vanuatu's environmental safeguards were either ignored or easily sidelined, with a view to strengthening current legislation and operating procedures. The rationale behind is to avoid or even abolish existing environmentally harmful subsidies which would run counter the objectives of an EFR.
- Consider an incentive scheme for substitution of imported diesel fuel by domestic coconut oil.
- Consider environmental performance bonds for land developers and forest concessionaires,
- Consider lodgement fees for environmental impact assessments (EIA),
- Consider charges for annual inspections of manufacturing facilities,
- Consider discharge fees for discharge of treated water to watercourses,
- Consider fees for accepting used batteries or e-waste for recycling,
- Consider higher business licensing fees for registration or certification of environmental industries
- Consider licences for mini-buses and taxis, but also parking fees should be considered, since the growth of private transport services, including buses and taxis, is currently around 20% p.a. and the number of vehicles in the urban area of Port Vila is reaching a stage of congestion at peak hours,
- A registration fee should be introduced and graded according to emission levels of classical pollutants (guided by the Euro-norms of the EU) and CO₂-emissions and the price of the car, since imports of second-hand or reconditioned vehicles and engines are also creating air quality and ultimate disposal problems. Furthermore they add to the increasing congestion in the bigger towns, where mostly relatively wealthy people are living who can thus afford to pay that.
- As construction is on the sharp increase using partially environmentally sensitive resources such as coral aggregate, gravel and sand, contributing to aggravate coastal erosion, it is proposed to consider the potential of an aggregates levy like e.g. in the UK or partially in Denmark.¹³

But it is stressed that many more, not directly and not exclusively linked to EFR only, additional recommendations on potential political alliances, institutional changes, alliance building etc. could be made

¹² Very up to date information and literature was hard to access, given that this is a desk study only. Many of the recommendations set out here are based on ADB 2007. These proposals were expected to be proposed/discussed by the environmental summit or national forum, which should have been held at the turn of 2007/2008, see: ADB 2007. However, no information was available if this had taken place. In any case, substantial changes cannot be considered likely and hence, they are still very much valid and updated here where appropriate.

¹³ EEA 2008.

here, but go beyond the scope of that study. This would then be part of a potential follow-up study regarding institutional changes and windows of opportunities and how to use them. These would e.g. include formulating government policy to encourage growth of the environment industry in Vanuatu and promote more widely existing industries such as organic agriculture and eco-tourism. These would also comprise considering amending the duty statements of one or more existing staff in key sectoral agencies (agriculture, forestry, fisheries, public works, health, education, trade etc.) to make them responsible for environmental issues associated with their sector, including environmental input to sector strategies and plans, preliminary environmental assessments, and environmental monitoring, among others.

7. REFERENCES

- Asian Development Bank (ADB) 2009a: Vanuatu Economic Report 2009. Accelerating Reform. Executive Summary (<http://www.adb.org/Documents/Books/Vanuatu-Economic-Report-2009/VAN-Economic-Report-Executive-Summary.pdf>).
- ADB 2009b: Vanuatu Country Partnership Strategy (2010-2014). (<http://www.adb.org/Documents/CSPs/van/default.asp>).
- ADB 2009c: Asian Development Bank & Vanuatu – Fact Sheet (http://www.adb.org/documents/fact_sheets/van.asp).
- ADB 2007: Regional: Mainstreaming Environmental Considerations in Economic and Development Planning Processes in Selected Pacific Developing Member Countries (<http://www.adb.org/Documents/Reports/Consultant/38031-REG/38031-07-REG-TACR.pdf>).
- ADB 2001: Vanuatu: Agriculture and Fisheries Sector Review 2000 (http://www.adb.org/Documents/Reports/Vanuatu_Agri_Fisheries/agri_fish.pdf).
- AusAID 2008: Annual program performance report for Vanuatu 2007–08.
- Chensavasdijai, Varapat/Nakabayashi, Shinichi: Vanuatu - Selected Issues. IMF-Report No. 07/93. 2007, (<http://imf.org/external/pubs/ft/scr/2007/cr0793.pdf>).
- Central Intelligence Agency (CIA 2009): World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/geos/nh.html>.
- Cottrell J., A. Olearius and S. Lorek, 2008, Lessons learned from the Special Workshop on Environmental Fiscal Reform in Developing, Emerging and Transition Countries, in: GTZ, 2008, p. 7-11.
- Deamer, Tony et al. (March 2005): Using Coconut Oil as a Fuel in Vanuatu. First published for the Cook Islands REM 2002, with additions 3 years on, www.sopac.org/tiki-download_file.php?fileId=352.
- Donald W 2005: Vanuatu's biodiesel from coconut oil, its economic and environmental impact, (www.sopac.org/tiki-download_file.php?fileId=337).
- Duncan, Rod: Solomon Islands and Vanuatu: an economic survey. In: Pacific Economic Bulletin Volume 23 Number 3 2008. (http://csusap.csu.edu.au/~rduncan/Academic/PEB23_3_DUNCAN_WEB.pdf).
- ECORYS Nederland BV: Vanuatu Public Expenditure and Financial Accountability. Report on behalf of the European Commission Delegation Vanuatu. 2006. (http://ec.europa.eu/europeaid/what/economic-support/public-finance/documents/vanuatu_pefa_en.pdf).
- European Environment Agency (EEA 2008): Effectiveness of environmental taxes and charges for managing sand, gravel and rock extraction in selected EU countries http://www.eea.europa.eu/publications/eea_report_2008_2/.
- Eurostat, 2001, Environmental taxes – A statistical guide, Office for Official Publications of the European Communities, Luxembourg.

- Eurostat, 2009, Taxation trends in the European Union Data for the EU Member States and Norway, 2009 edition, Luxembourg.
- Government of Vanuatu: National Investment Policy. March 2005-
- Government of the Republic of Vanuatu: National Budget 2010. (<http://www.governmentofvanuatu.gov.vu/documents/category/20-2010-budget.html?download=107%3Afiscal-strategy-report-vol.1-eng>).
- Government of Vanuatu and European Commission 2009: Draft 2009 Joint Annual Report (http://www.delvut.ec.europa.eu/en/eu_and_country/vujar2009.pdf).
- GTZ 2009: Adaptation to climate change in the pacific islands region [Anpassung an den Klimawandel in der pazifischen Inselregion], (<http://www.gtz.de/de/praxis/27718.htm>).
- Gupta S and S. Tareq, 2008, Mobilizing Revenue Strengthening domestic revenue bases is key to creating fiscal space for Africa's developmental needs, Finance & Development, September 2008, pp. 44-47.
- Howes, Stephen/Soni, Nikunj: Fast growth in the Pacific is possible - look at Vanuatu. Pacific Institute for Public Policy Briefing No. 10. 2009. (http://www.tongachamber.org/files/brief-vanuatu-03_08_09.pdf).
- International Labour Organization 2009: Decent Work Country Programme. Vanuatu (http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/genericdocument/wcms_105160.pdf)
- Lane, Marcus B.: Evaluating the governance of coastal resources and environments in Vanuatu SPREP Report 2006. (http://www.sprep.org/att/publication/000537_IWP_PTR37.pdf).
- Millennium Challenge Corporation (MCC – 2006): Congressional Notification – Millennium Challenge Compact between the USA and Vanuatu. Millennium Challenge Corporation, Washington D.C.
- National Integrated Water Resource Management Diagnostic Report: Vanuatu. 2007. (<http://www.sprep.org/att/IRC/eCOPIES/Countries/Vanuatu/29a.pdf>)
- Nguyen T. N., 2008, The Use of Economic Incentives for Environmental Protection in Less Developed Countries, Department of Agricultural Economics, Texas A&M University, College Station.
- OECD, 2001, Environmentally Related Taxes in OECD Countries – Issues and Strategies, Paris, France.
- OECD, 2005, Environmental Fiscal Reform for Poverty Reduction, OECD DAC Guidelines and Reference Series, Paris, France.
- Overseas Development Institute (ODI), 2006, Addressing Environmental Objectives in the Context of Budget Support, London, UK.
- Pagiola S. et al., 2002, Generating Public Sector Resources to Finance Sustainable Development Revenue und Incentive Effect, World Bank, WTP 528. – http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2003/02/15/000094946_03020504033653/Rendered/INDEX/multi0page.txt or <http://www.sprep.org/att/IRC/eCOPIES/Countries/Fiji/25.pdf>.
- Panayotou T., 1994, Economic Instruments for Environmental Management and Sustainable Development, International Environment Program Harvard Institute for International Development Harvard University, Prepared for the United Nations Environment Programme's Consultative Expert Group Meeting on the Use and Application of Economic Policy Instruments for Environmental Management and Sustainable Development, Nairobi, February 23-24, 1995, Environmental Economics Series Paper No. 16
- Pretorius, C. and C. Certan, 2006: Vanuatu Public Expenditure and Financial Accountability. Report prepared by ECORYS Nederland BV for the European Union Delegation in Vanuatu.

- Reserve Bank of Vanuatu: Half-Yearly Monetary Policy Statement. September 2009. (<http://www.rbv.gov.vu/Publications/Monetary%20Policy%20Statements/Monetary%20Policy%20Statement%20September%202009.pdf>).
- Slal, R., 1998: The Tax Haven Industry of Vanuatu. The Costs and the Benefits of the Industry, Journal of South Pacific Law - Working Papers (http://www.vanuatu.usp.ac.fj/journal_splaw/working_papers/lal2.htm)
- Sinclair Knight Merz 2000: Solid Waste Characterisation and Management Plan. Final Report (<http://www.sprep.org/att/IRC/eCOPIES/Countries/Fiji/25.pdf>).
- Sokomanu et al. (2007): The unfinished State. Drivers of Change in Vanuatu. (http://www.usaid.gov/au/publications/pdf/vanuatu_change.pdf)
- Sopac 2007: National Integrated Water Resource Management Diagnostic Report Vanuatu. Draft SOPAC Miscellaneous Report 648.
- Speck, Stefan (2010): South Africa, case study of this project.
- Speck S., M.S. Andersen, H. Nielsen, A. Ryelund and C. Smith, 2006, The Use of Economic Instruments in Nordic and Baltic Countries 2001-2005, Nordic Council of Ministers, TemaNord 2006:525, Copenhagen, Denmark.
- Tom'Tavala, Y. and M. Hakwa 2004: Review of environmental legislation and policies in Vanuatu. IWP-Pacific Technical Report (International Waters Project) No. 7 (http://www.sprep.org/att/publication/000370_Vanuatu_Report.pdf).
- UNEP, 2004, Financing wastewater collection and treatment in relation to the Millennium Development Goals and World Summit on Sustainable Development targets on water and sanitation, Eighth special session of the Governing Council/ Global Ministerial Environment Forum, Jeju, Republic of Korea, 29-31 March 2004, UNEP/GCSS.VIII/INF/4
- Vijaya, Nagarajan: Finding the right regulatory fit for economic growth and private-sector development in Vanuatu. In: Pacific Economic Bulletin Volume 23 Number 3 2008.
- World Bank, 2005, Environmental fiscal reform. What Should be Done and How to Achieve It, Washington D.C.