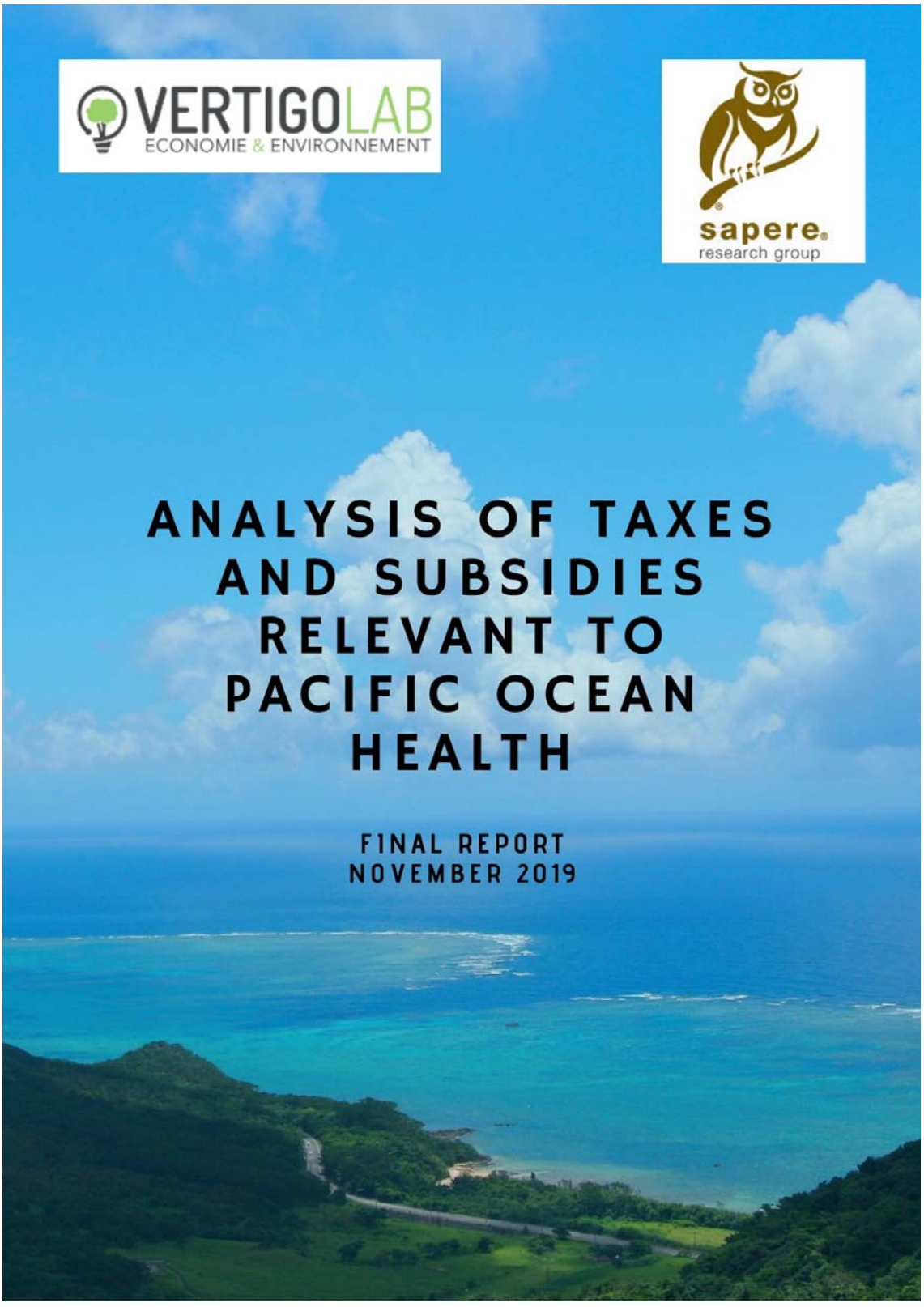
VERTIGOLAB
ECONOMIE & ENVIRONNEMENT
sapere
research group
ANALYSIS OF TAXES AND SUBSIDIES RELEVANT TO PACIFIC OCEAN HEALTH
FINAL REPORT
NOVEMBER 2019

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# Glossary

| Abbreviation | Stands for |
|---|---|
| CT | Consumption Tax |
| DTA | Double Taxation Agreement |
| FFA | Pacific Islands Forum Fisheries Agency |
| FSM | Federated States of Micronesia |
| GDP | Gross Domestic Product |
| ICT | Information and Communications Technology |
| IMO | International Maritime Organization |
| LOSC | Law of the Sea Convention |
| OECD | Organisation for Economic Community Development |
| RMI | Republic of the Marshall Islands |
| SIDS | Small Island Developing States |
| SDGs | Sustainable Development Goals |
| SDG-14 | Sustainable Development Goal 14 – Life Below Water |
| POFP | Pacific Ocean Finance Program |
| POFP11 | Refers to the 11 countries in the Pacific Ocean Finance Program: Solomon Islands, Vanuatu, Fiji, Tonga, Samoa, Kiribati, Nauru, Palau, Marshall Islands (RMI), Federated States of Micronesia (FSM) and Tuvalu. |
| SAMOA (Pathway) | SIDS Accelerated Modalities of Action Pathway |
| UN | United Nations |
| UNESCAP | United Nations Economic and Social Commission for Asia and the Pacific |
| VAT | Value Added Tax |
| WCPO | Western and Central Pacific Ocean |

# Executive summary

## Taxes, subsidies and ocean health

This report examines how Pacific governments can use taxes and subsidies as a financial lever to support the health of the Pacific Ocean. It surveys taxes and subsidies that are aligned with, or pose a risk to, ocean health in the Pacific.

The research describes:

- the links between taxation, subsidies and economic decisions related to the Pacific Ocean,
- a framework for analysing these taxes and subsidies and determining their potential impact on environment,
- the main taxes and subsidies that can have an impact if implemented by Pacific governments, given the constraints they face.

This report concludes with recommendations to Pacific Governments on how best to align taxes and subsidies with long term ocean health.

The research encompasses 11 pacific countries that are participating in the Pacific Ocean Finance Program (POFP). The countries are Solomon Islands, Vanuatu, Fiji, Tonga, Samoa, Kiribati, Nauru, Palau, Marshall Islands (RMI), Federated States of Micronesia (FSM) and Tuvalu (collectively, the POFP11).

**How do taxes and subsidies create economic incentives that are aligned with, or pose a risk to, Pacific Ocean health?**

## Ocean health

Ocean health requires sustained management of inshore and offshore fisheries, sustained management of coastal tourism and development, management and prevention of marine debris and plastic pollution, management and prevention of oil spills and ship pollution, sustained management of coastal agriculture and biodiversity preservation.

(Walsh, 2018) concludes that ocean finance is critical for achieving ocean health through sustained management. Ocean finance is needed to generate capital, invest it strategically, effectively and efficiently against ocean policies and frameworks, align public incentives with ocean health and account for how the ocean is used.


**Walsh (2018) Ocean Finance**

## Taxes and subsidies are instruments of government

Taxes and subsidies are a public ocean finance mechanism – they rely on sovereign governments, since only nations have the power to tax.

Taxes by definition are compulsory, unrequited payments to governments. The scope of this report therefore includes levies, customs excises and duties, tax exemptions and tax-based incentives adopted by Pacific governments. While resource rents or resource levies fall outside the scope of this analysis, taxes on resource rents are included.

Subsidies are also reliant on decisions by sovereign governments. By definition, subsidies are given by governments to external parties. The scope of this report therefore includes payments from Pacific governments to producers, individuals, organisations, non-profit-making associations, municipalities and international activities. The scope of subsidies excludes transfers from central government to government departments and state-managed marine protection areas but includes direct transfers of funds, tax expenditure (foregone revenue), accelerated depreciation, reduced tax rates, other foregone government revenue, transfers of risk to government and induced transfers.


When they are directed at ocean health, the instruments within our scope involve: (on the tax side) taxing negative externalities, levying uses of the ocean, hypothecating or targeting funds toward ocean health goals, taxing resource rents or imposing government royalties on ocean-generated resources, and (on the subsidies side) providing concessions or exemptions related to activities deemed helpful to the ocean or removing subsidies that have been shown to be harmful to the ocean. As a set, these instruments work by changing prices for polluters and users of ocean resources or changing expectations of future cash flows for investors in ocean resources. Social norms and values and the information-set about the ocean's uses and values can be affected by imposing a tax or offering a subsidy. And taxes can help generate a pool of money available to fund investments in the ocean's resources.

The primary purpose of this report is to explain how Pacific governments can use taxes and subsidies as a financial lever to support the health of the Pacific Ocean. As a policy instrument, a tax or subsidy offers three potentials:

- Potential to **align** with ocean health by modifying incentives (for example by internalising externalities from private decisions or subsidising ocean-positive activities).
- Potential to **generate** financial resources for environmental projects (or to save financial resources by minimising expenditures that harm the ocean).
- Potential to capture records of ocean-related economic activities and place rigours on reporting, which can help **account** for financial investments in the ocean.

Sadly, these potentials are often unfulfilled and unfulfillable because perfect policy is complicated by the real world. There are many reasons why taxes have limited usefulness as tools for ocean finance. The research in this report demonstrates that the range of taxes that are available to Pacific nations will likely have little impact on the largest threats to ocean health, the drivers of which are set by the

actions of a dispersed and international set. This includes climate change and ocean acidification. Pacific countries introducing new taxes or exemptions face other challenges, too. They can create uncertainty and/or unintentionally undermine investment. Therefore, the choice to use tax as a tool is not clear-cut, and Pacific governments need to be careful.

## A tax or subsidy can only be helpful if the policy is right, well-administered and politically acceptable

This report describes three headline conditions before taxes and subsidies can contribute to sustained ocean health: right policy, administered-well and politically acceptable. A government wishing to impose a tax needs to ensure that the objectives for the tax are clear and understood by the populace. The government needs to be assured that the tax is the best way to achieve the desired objective relative to other policies or actions. For example, tax is a difficult tool to use for behavioural change when the formal economy is small or when demand for harmful products is unresponsive to price changes. As tax operates in a system, all impacts on the system need to be evaluated before a new tax is imposed. The benefits of the tax must exceed all its costs.

Administration is key to considering whether a tax will work. Often the cost or complexity of administering a tax will rule out taxes as a useful solution for problems that are highly localised (as these problems might respond better to local or low-cost solutions) or problems that are highly dispersed (as these problems can require administration across too many locations or sources).

## Pacific countries are politically motivated to protect the ocean environment but constrained in what they can achieve

The leadership on bans of single-use plastic products and fisheries management in many of the POFP11 countries demonstrates they are keen to be good environmental stewards. Effective environmental policy instruments are needed most when the ecosystem is closely connected with livelihoods, as it is with the ocean and Pacific peoples. There is a willingness to consider tax as a tool.

Yet the Pacific (POFP11) countries are different from other countries that apply taxes and subsidies for environmental ends. They are small island developing states, which poses numerous development challenges including limited resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, excessive dependence on international trade and fragile environments.

These challenges are compounded by public finance issues including disproportionately expensive public administration and infrastructure due to their small size, little to no opportunity to create economies of scale, nascent market economies and very small tax bases. These characteristics mean that while the countries have high environmental consciousness, there is a gap between what they want to achieve and what can be financed or motivated using tax.

To give an example of the small tax base, all the countries in the POFP11 have urban populations of less than 100,000 people aside from Fiji (with urban population an indicator of taxable economies). Tax revenue ranges from US$6 million a year (Tuvalu) to US $1.1 billion (Fiji).

Pacific countries are changing, however, and their economies are expanding and becoming more formal. The set of countries in the POFP11 have improved tax revenue collection markedly following widespread reforms in the mid- to late-2000s. The countries are still working hard to improve the administrative capacity and capability. But they still need to improve more before tax can be a universally appealing option for conservation finance. This includes bettering the accountability and

transparency of tax administrations for the way they use public resources, and the way they exercise authority. Many Pacific countries are still working on ways to be more efficient with public revenue management. Some countries (Vanuatu, Solomon Islands, Palau) have comprehensive tax reforms underway or starting soon.

The growth in non-tax revenue (for example from fishing license income) in some of the countries (and in particular, the countries who are the parties to the Nauru Agreement) gives the ability for these countries to direct government income toward environmental protection. But still, expenditure on the environment must be traded-off against other government goals such as health, education, climate adaption and security.

There are other reasons why POFP11 countries cannot subsidise large-scale change on their own. These have to do with the size of the countries, the preferences of taxpayers and the nature of the problem. In sum,

- It may be politically difficult to convince taxpayers to subsidise solutions to problems caused by others (such as marine litter, impacts of climate change).
- When there's a small set of taxpayers and a large cost, each taxpayer will incur a large cost which is politically unsellable.
- Subsidies that add to the profitability of private entities may attract allegations of favouritism or nepotism, when Pacific governments are working hard to improve transparency.
- Subsidies are expensive: they take resources away from other development priorities.
- The countries (aside from perhaps, Fiji) lack the depth of domestic banking and financial services to be able to effectively use subsidies as incentives for financial investment (and some, like Vanuatu, Nauru and the Marshall Islands, are working hard to continue to avoid being categorised as a high-risk in the global fight against money laundering and terrorist financing).

The POFP11 countries also have their hands tied when it comes to others who affect the ocean in their part of the world. Due to their size and distance, they have a tiny voice at global level. Sadly, harmful fishing subsidies originate in other countries (Japan, US, France) (Sumalia, Dyck, & Baske, 2014) and so does a large proportion of marine litter (Boonstra, 2015). Climate change is a global problem which is already impacting on the ecosystems value of the Pacific Ocean through acidification and coral bleaching.

While the influence of governments may be stronger at regional level, we have not observed any examples of regional/multi-country environmental taxes or indeed tax alignment. There is potential, for example, to use regional non-tax income to finance regional approaches to environmental protection. Resource rentals/levies are a substantial source of revenues of most of the POFP11 countries. Levies earned by Parties to the Nauru Agreement (PNA) represent a substantial source of income for each signatory. The role of resource rentals stands alongside taxes and subsidies as a pillar that is equal to (or for many coastal states, substantially greater than) the role of conventionally defined tax or subsidies to improve the efficiency of finance for Pacific Ocean governance.

The initiatives taken by PNA signatories highlight the benefits of co-operation to capture resource rents. There is potential for all or a significant number of signatories to further benefit by increasing the extent to which they act in concert to sell 'vessel days' (a unit of fishing effort). Other signatories could be added in future.

Greater cooperation among coastal states offers the potential for them to benefit from persistent subsidies offered by jurisdictions with distant water fleets. Under a more contestable arrangement to 'sell' vessel days, subsidies provided by jurisdictions with distant water fleets would partly be captured by PNA signatories through a higher vessel day price than otherwise. The persistence of foreign subsidies would transfer wealth to coastal states, whereas domestic subsidies dissipate the wealth of coastal states, often with very low real local benefit.

Likewise, collective action would strengthen observer programmes inside and outside exclusive economic zones to more fully monitor waste at sea and the deployment of fish aggregation devices. An enhanced regime to capture resource rents would avoid the need for ad hoc and less effective taxes or levies that run the risk of adding needless transaction costs. Such impositions may do little other than increase compliance costs for distance water fleets. The result would be reduced value of prices paid for vessel days.

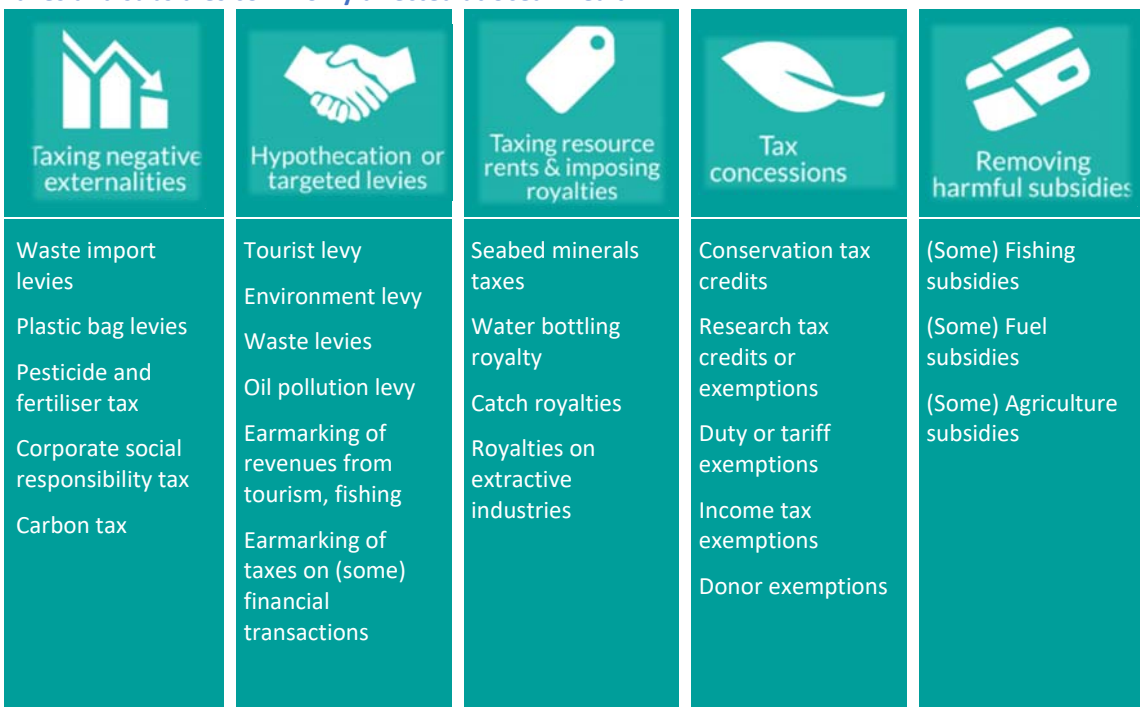
The capture of resource rents also adds potential for hypothecation toward environmental objectives. There are signs of this emerging, such as the new Community Vessel Day Scheme in Palau (which finances community projects including marine protection projects) and the proposed (but never implemented) Blue Fee in the Marshall Islands. These examples show that the case for hypothecation (earmarking) can be weak when there are conflicting priorities for a country. It can result in over-funding an environment project, relative to what might be judged optimal through the budget's prioritisation process. Governments should be cautious before earmarking funds, as this may contradict a government's Public Financial Management goals, and it has potential to 'crowd-out' both government and private expenditure on the environment because the tax and associated expenditures could be perceive as having fixed the problem (Carling, 2007) (Jerome Ballet, 2006).

Earmarking or hypothecation should not be ruled out in every case, however. Earmarking can be justified on grounds of transparency and accountability. Earmarking is generally considered to be less appropriate for taxes designed to capture revenues from a broad class of activities or citizens, and more appropriate for levies/user charges/fees, which are collected from a narrower class of activities or citizens.

## So, what can the governments of POFP11 countries do?

The research concludes that the use of taxes and subsidies in the POFP11 countries is heavily constrained as a tool for ocean health. This conclusion does not rule out taxes and subsidies, but instead highlights where the opportunities lie. The diagram overleaf illustrates the set of taxes and subsidies used elsewhere (or have potential to be used elsewhere) for ocean health:

**Taxes and subsidies commonly directed at ocean health**




*Source: Sapere and VertigoLab*

The research concludes that whilst the opportunities for POFP11 are limited when it comes to taxes and subsidies, they include:

- Eliminating harmful subsidies, where they exist.
- Beneficiary pays – national-scale tourist levies and harmonised approaches to hypothecate resource rents from ocean uses (alongside enhanced regimes to capture resource rents, strengthen observer programmes, more fully monitor waste at sea and the deployment of fish aggregation devices).
- Waste and/or border taxes to address imported waste.
- Low-cost 'nudge' subsidies like Fishing for Litter or 'buying change' (Niue example).
- Direct subsidies for establishing marine protection policies and zones (e.g. Spatial plans, MMAs, quotas, vessel days), provided there is transparency in budgets, clear objectives and a push toward clearer property and use rights.
- Pollution levies and/or self-insurance for pollution risk.
- Providing good foundations, for example:
    - Keep the tax system working well so the money for environmental programs is available.
    - Keep the tax system transparent, easy to navigate and fair for investors so that international investment is retained.
    - Invest in or subsidise environmentally beneficial infrastructure (e.g. recycling, water treatment), including through public-private arrangements.

- Tweaking and aligning existing taxes, for example:
    - Modify existing import and export taxes to provide for waste refund deposit schemes or externality prices.
    - Add a waste externality element to import taxes levied on cigarettes and soft drinks.
    - Add an ad valorem tax on water extracted for bottling, the rate of which can be renegotiated if waste reduction targets are met.
    - Review existing carriage taxes or transhipment taxes for their potential to capture accurate data about economic activities on the ocean and to ensure that they are not imposing a compliance burden disproportionate to value gained.
    - Use existing airport departure levies, yacht levies or cruise ship levies to generate funds for preservation and tourist-related environmental monitoring.

Many pacific countries are looking to border-based and tourist-based taxes as an easier-to-implement, more politically acceptable option for achieving ocean health. Taxes on imports of products that cause waste and tourist levies seem to be gaining traction with island nations worldwide.

## Subsidies are not recommended

Subsidies in general are not recommended. Subsidies are costly, tend to be inefficient and prone to error. However, the management of fishing waste and coastal litter is an emerging area of concern to the ocean that could respond well to low-cost 'nudge' subsidies that are designed to make it easier for people to 'do the right thing' rather than reward them for doing so.

Other subsidies are problematic for several reasons, and perhaps especially those subsidies that are implemented through the tax system through concessions (known as "tax expenditures"). First, tax expenditures are not transparent. The fiscal cost of tax expenditures tends to be less transparent than direct spending, and they are often not subject to the same level of legislative scrutiny as spending programmes.

Second, tax expenditures are expensive. Unlike negative externality taxes, tax incentives do not raise revenue. Instead, tax incentives are a form of government spending. This spending must be paid for by taxpayers, reducing their real disposable incomes – this is challenging in the Pacific with its small taxpayer base and low incomes.

A further limitation of all kinds of subsidies is that environmental problems caused by large, dispersed groups (climate change, ocean pollution, over-exploitation) need big payments across multiple jurisdictions to change behaviour. Changing behaviour can be too costly to be worthwhile. It is not always clear what a sustainable Oceans economy should look like and who the participants in that economy should be. Further, 'picking winners' can be a distraction away from a government's main focus, which is providing the conditions under which a sustainable oceans economy is most likely to develop (UNCTAD, 2018). Preparing for sustainable trade means, for example, continuing to work on sound regulatory and institutional frameworks, and promoting an understanding of how the international legal frameworks fit with national legal and governance frameworks to provide a rules-based approach to oceans use.

However, small, low-cost nudges can help to achieve immediate results (e.g. fishing for litter, a low-cost subsidy providing waste bins and processes).

## Taxes and subsidies with clear connections to ocean health are already being applied

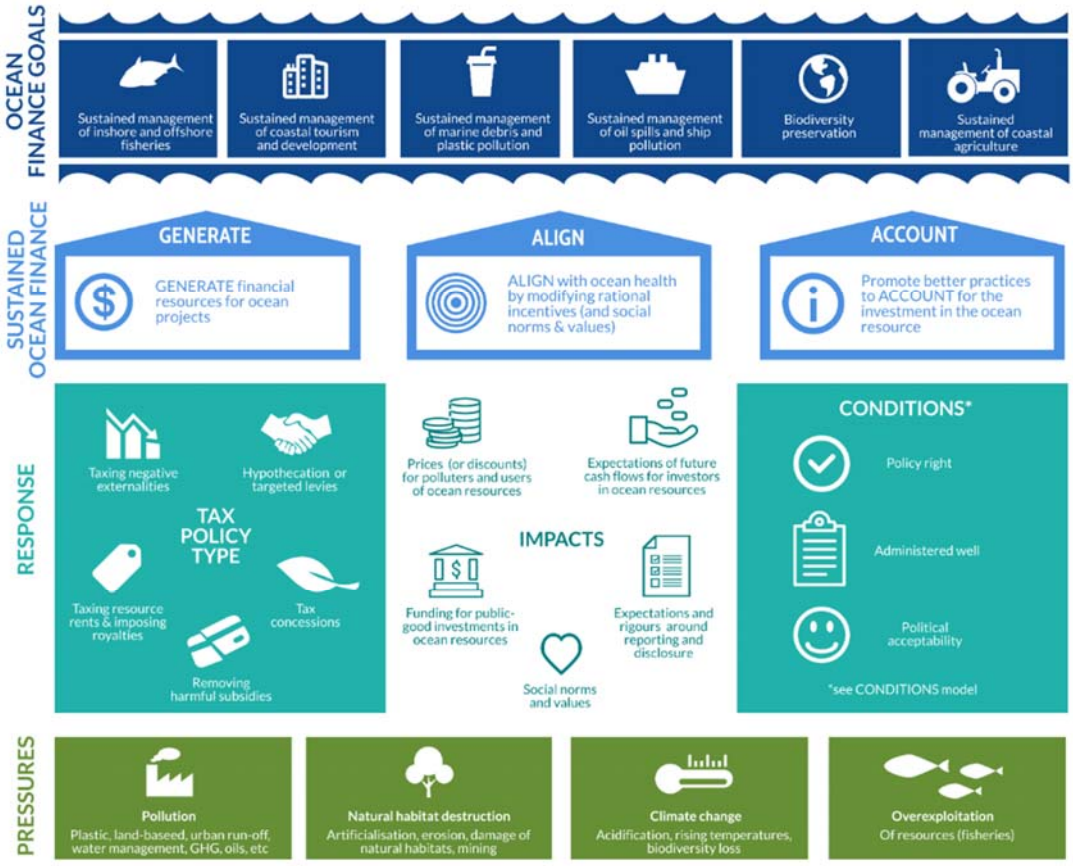
We found 34 examples of tax policies with a clear and likely positive connection to ocean health in POFP11 countries. These include:

- Waste Management (import) levies: Tuvalu, Tonga, Samoa (in development)
- Excises on products that are likely to end up as waste (such as excises on imported carbonated beverages or water bottling ad valorem levies): Palau, Tonga, Vanuatu
- Marine (oil) pollution levies: Fiji
- Plastic bag (consumption) levies: Fiji (we note there are bans on single use plastic bags in Vanuatu, Tonga, Samoa and Marshall Islands)
- Legislation providing for royalties and resource rent taxation on seabed minerals: Fiji, Tonga, Kiribati (in development)
- Taxes and levies as part of managed fisheries resource, including tonnage fees for purse seine tuna fishing (Fiji, Samoa, Tonga, Vanuatu) and transhipment fees (Fiji, Samoa)
- Tourist levies such as Fiji Environment and Climate Adaption Levy (ECAL), Palau's Pristine Paradise Environment Levy

Emerging, but not yet implemented examples include Tuvalu's Community Vessel Day payments and RMI's proposed Blue Fee. We found very few cases of tax-generated funds directed to sources outside government to sustainable tourism infrastructure, environmental zoning, environmental monitoring, ocean resource management.

We also found that Pacific countries have made progress on removing harmful subsides. Removing harmful subsidies has been an active policy choice in Vanuatu, Fiji, and the Marshall Islands. While the WTO has committed to working towards rules to eliminate harmful fishing subsidies, so far little progress appears to have been made.

## The intervention logic – how the conceptual framework fits together



# 1. About this report

Government taxes and subsidies create incentives, which drive economic decisions related to the Pacific Ocean. They have potential to be used as a policy tool to help protect the natural environment and ensure its sustainability. This report examines the links between taxes, subsidies and economic decisions that impact the health of the Pacific Ocean.

Sapere and VertigoLab were contracted by the Pacific Ocean Finance Program to describe and assess the links between the incentives created by taxes and subsidies and the health of the ocean. Our task was to evaluate the context of the Pacific Islands and assess whether and how taxes and subsidies can be used as an ocean finance tool there. This research was funded by the World Bank and Global Environment Facility, through the Pacific Ocean Finance Program. The aim of the Pacific Ocean Finance Program is to improve the amount and efficacy of finance for Pacific Ocean governance. The Program is implemented by the Pacific Islands Forum Fisheries Agency and the Office of the Pacific Ocean Commissioner. The material in this report was presented at the Ocean Finance Conference in Fiji in November 2019.

We have researched taxes and subsidies that are aligned with, or pose a risk to, ocean health in the Pacific. Our research includes information about what taxes and subsidies are currently used by Pacific governments, and what might be used. The research encompassed 11 pacific countries that are participating in the Pacific Ocean Finance Program (POFP). The countries are Solomon Islands, Vanuatu, Fiji, Tonga, Samoa, Kiribati, Nauru, Palau, Marshall Islands (RMI), Federated States of Micronesia (FSM) and Tuvalu (collectively, the POFP11). Attached is a collection of ocean tax profiles, which we have developed for each country in the POFP11 (attached).

To evaluate and understand the role of taxes and subsidies in achieving ocean health, we have looked through a policy lens. A policy lens provides a focus on the conditions required before a government policy instrument can be helpful. For example, a government wishing to impose a tax or subsidy needs to be assured that the tax is the best way to achieve the desired objective relative to other policies or actions. Tax can be a difficult tool to use for behavioural change when the formal economy is small or when demand for harmful products is unresponsive to price changes. As tax operates in a system, all impacts on the system need to be evaluated before a new tax is imposed. The benefits of the tax must exceed all its costs. And lastly, a government imposing a tax or subsidy needs to ensure that the objectives for the tax are clear and understood by the populace.

This report:

- presents the results of desktop and face-to-face research showing the regional economic context, which consists of information on the POFP11 countries' economic characteristics, tax settings and ecosystem services values (section 2)
- notes the conceptual models used to define and understand the role of taxes and subsidies in ocean health, including lessons from the literature on environmentally related taxation (section 3)
- drawing from the findings in previous sections, outlines the methodology used to identifying ocean-relevant environmental taxes and subsidies (status and opportunities) (section 4)
- outlines our conclusions (section 5).

# 2. Regional economic context

This chapter highlights the tax context for the POFP11 countries and provides statistical background.

## The POFP11 consists of small island developing states

Each of the countries in the POFP11 are small island developing states (SIDS) according to the United Nations definition established following United Nations resolution 56/227. [1]

SIDS are a group of small island countries that tend to share similar sustainable development challenges, including small but growing populations, limited resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, excessive dependence on international trade, and fragile environments. Their growth and development are also held back by high communication, energy and transportation costs, irregular international transport volumes, disproportionately expensive public administration and infrastructure due to their small size, and little to no opportunity to create economies of scale.[2]

SIDS are working on the implementation of the SAMOA Pathway[3] in recognition of the Sustainable Development Goals (SDGs). The SAMOA pathway emphasises that small island developing States remain a special case for sustainable development in view of their unique vulnerabilities. Small Island Developing States are constrained in meeting their goals for sustainable development but remain committed to integrated and sustainable management of natural resources and ecosystems.

Healthy, productive and resilient oceans and coasts are critical for poverty eradication, access to enough, safe and nutritious food, livelihoods, economic development and the production of essential ecosystem services, including carbon sequestration, and represent an important element of identity and culture for the people of SIDS.[4]

Sustainable fisheries and aquaculture, coastal tourism, the possible use of seabed resources and potential sources of renewable energy are among the main building blocks of a sustainable ocean-based economy in SIDS.[5]

SIDS often rely heavily on imported fossil fuels and fuels for shipping, and due to the dispersed nature of their populations and lack of fuel production, they spend a large proportion of GDP on energy imports. This results in political pressure to offer fuel-based subsidies and incentives, or at least to resist fuel taxes.

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[1] Website of the UN Office Of The High Representative For The Least Developed Countries, Landlocked Developing Countries And Small Island Developing States < http://unohrlls.org/about-sids/ >

[2] Ibid.

[3] In 2014, the international community met in Apia, Samoa (1-4 September) for the Third International Conference on Small Island Developing States the outcome of which was the SIDS Accelerated Modalities of Action Pathway, commonly known as the SAMOA Pathway.

[4] SAMOA Pathway document, paragraph 53.

[5] SAMOA Pathway document, paragraph 53.

## They have very small tax bases

The statistics show that the largest country, Fiji, has a population of 884,000. The smallest, Tuvalu, has a population of 11,000. The median population size of the set is Federated States of Micronesia with a population of 102,000.

All the countries have urban populations of less than 100,000 people aside from Fiji. Urban population can be used as an indicator of the structure of the economy in the islands. Non-urban areas of the Pacific Islands have largely subsistence agricultural or fishing-based economies with low rates of tax registration relative to urban areas. For example, Federated States of Micronesia, Samoa, Solomon Islands, Tonga, Vanuatu have urban populations of less than 25 percent of the total. These countries have small and highly dispersed populations on outer islands. On outer islands and rural areas there is typically a lack of access to public services such as safe drinking water, sanitation, reliable sources of energy, education and health care (UNESCAP annual report, 2018).

The 'taxable' resident population is typically a subset of the urban population (subsistence activities are seldom taxed, because income tax thresholds are set deliberately to exclude the very poor and VAT is applied to consumer goods sold through stores that have high turnover, which excludes roadside stalls or markets, and import taxes and duties affect consumers of imported products not locally-farmed or fished products).

With all that in mind it makes the taxable populations in the POFP11 countries very small; any additional tax is imposed on a small set, any tax expenditure (i.e. tax subsidy) is a cost subsidised by a small set.

The ability to use a tax and subsidy policy for environmental purposes can be weakened in less structured economies like those seen in the POFP11, and especially in countries where the primary sector is highly subsidised. This creates a conundrum as effective policy instruments are needed more in countries that directly depend on ecosystem services to guarantee their resilience.

A small taxable population base does not preclude subsidy policies, but a small taxable population does affect how widely the cost of a subsidy can be spread. All else being equal, countries with very few taxpayers will find it harder to justify subsidies financed by taxation because the few taxpayers will each incur a relatively large cost. If there are very few taxpaying businesses, it may be difficult to issue subsidies that affect the profitability of private entities without allegations of favouritism or nepotism.

There is no current dataset summarising the number of registered taxpayers or the number of revenue administration staff in each POFP11 country.[6] To provide an indication of scale, the smallest tax administration, a division of the Ministry of Finance in the Republic of Marshall Islands, has 9 staff. Nauru has 12 tax administration staff which covers 2500 registered taxpayers, including 120 large employers and 140 small businesses.

[6] According to the Pacific Islands Tax Administration Association, Suva.

*Figure 1 Taxpayer base, POFP11*

| Country | Population (000s) | Urban population (000s) | Urban population (%) |
|---|---|---|---|
| **Fiji** | 884.9 | 494.7 | 56% |
| **Kiribati** | 113.1 | 61.1 | 54% |
| **Marshall Islands, Republic of the** | 54.4 | 41.9 | 77% |
| **Micronesia, Fed. States of** | 102.5 | 22.6 | 22% |
| **Nauru** | 13.6 | 13.6 | 100% |
| **Palau** | 17.9 | 14.0 | 78% |
| **Samoa** | 197.5 | 35.6 | 18% |
| **Solomon Islands** | 620.8 | 142.8 | 23% |
| **Tonga** | 100.1 | 23.0 | 23% |
| **Tuvalu** | 11.4 | 7.1 | 62% |
| **Vanuatu** | 278.4 | 66.8 | 24% |

*Source: Asia Development Bank Statistical Database System (SDBS) << https://sdbs.adb.org/sdbs/>>,*

*Note 12: Urban population refers to people living in urban areas as defined by national statistical offices. It is calculated using World Bank population estimates and urban ratios from the United Nations World Urbanization Prospects. Marshall Islands - urban population sourced from World Bank United Nations Population Division. World Urbanization Prospects: 2018 Revision. Nauru – urban population assumed from prior years.: Fiji - population and urban population sourced from 2017 Fiji Census. Kiribati - urban population sourced from World Bank United Nations Population Division. World Urbanization Prospects: 2018 Revision. Palau - ADB estimate for 2015. Urban population includes Koror and Airai States only. The US Bureau of Census defines ``urban`` as places with 2,500 persons or more. Tuvalu - Urban population: World Bank United Nations Population Division. World Urbanization Prospects: 2018 Revision.*

## They all have growing economies and support a medium quality of life

The POFP11 countries have land areas with limited resources and a narrow economic base which makes them vulnerable to external shocks like natural disasters.

As a group, the economic base is expanding. In 2017, Pacific island developing economies collectively grew by 2.6 per cent, supported notably by tourism activities, resource and agricultural production and infrastructure upgrades. (The UN Economic and Social Survey of Asia and the Pacific 2019). It is however crucial to acknowledge that the larger Pacific countries can skew this result (notably Fiji) and considering the economic performance of Pacific island countries as a group is not necessarily relevant to considering the role of taxes and subsidies in achieving ocean health.

The quality of life in the POFP11 countries is average, on a global scale. The Human Development Index is in the 'medium' band except for Tonga and Fiji, which are in the 'high' band.

*Figure 2 Human Development Indices, POFP11 states*

| | Human Development Index (HDI), 2015 |
|---|---|
| **Fiji** | 0.736 |
| **Kiribati** | 0.588 |
| **Marshall Islands, Republic of the** | N/A |
| **Micronesia, Fed. States of** | 0.638 |
| **Nauru** | N/A |
| **Palau** | 0.788 |
| **Samoa** | N/A |
| **Solomon Islands** | 0.515 |
| **Tonga** | 0.721 |
| **Tuvalu** | N/A |
| **Vanuatu** | 0.597 |

*Source; Asia Development Bank Online Statistical Database*

*Note 1: The Human Development Index (HDI) is a statistic composite index of life expectancy, education, and per capita income indicators, which are used to rank countries into four tiers of human development. 0.800–1.000 (very high); 0.700–0.799 (high); 0.555–0.699 (medium); 0.350–0.554 (low); Data unavailable*

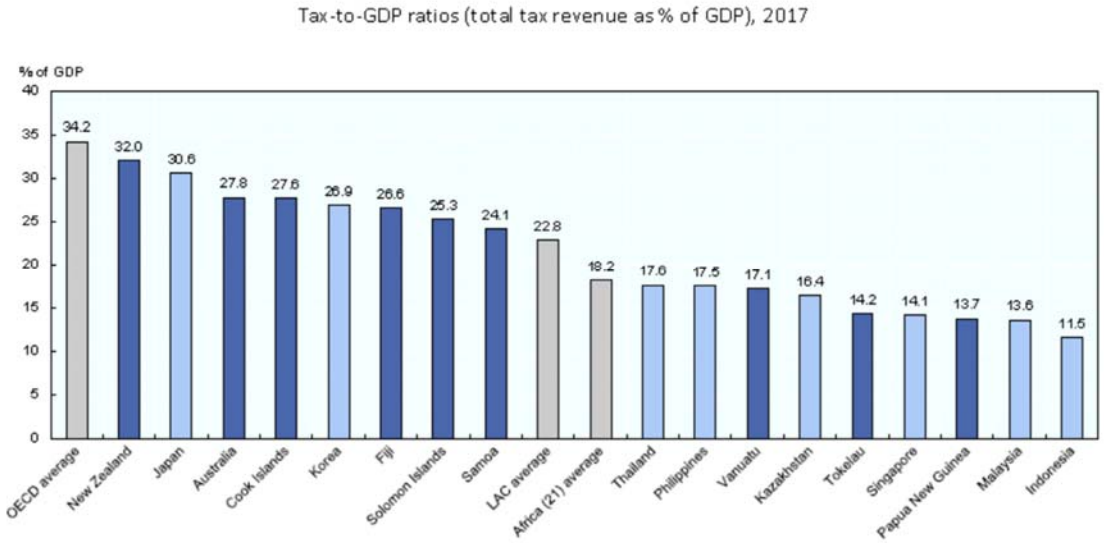
## In general, they are focused on revenue mobilisation, debt sustainability and alignment with the Sustainable Development Goals

Domestic revenue mobilisation refers to the generation of government revenue from domestic resources, from tax or non-tax sources (royalties, licenses, levies or other income). The need to sustain a focus on domestic revenue mobilisation is a universal theme in the annual reports, strategic reports and donor reports relating to POFP11 countries (Murray, Oliver, & Wyatt, 2014).

Revenue mobilisation has been successful over the years 2007 to 2017, with all but two in the set having tax to GDP ratios improve over that period. Notably, Vanuatu is the one country in the set without any form of income taxation.

In 2017, most Pacific Countries had tax-to-GDP ratios above 24 percent of GDP. This chart, from the OECD report on Asia Pacific countries (OECD, 2019) illustrates the spread. Not all POFP11 countries are included on this chart, only Fiji, Samoa, Solomon Islands and Vanuatu.

*Figure 3 Tax to GDP ratios in Asia Pacific Economies, 2017*




*Source: OECD 2019 Revenue Statistics in Asian And Pacific Economies*

Compiling comparable tax statistics in each POFP11 country is challenging due to the size of the countries and different standards used for reporting, both from within the countries and between the sources of aggregated data.[7] The table below attempts to provide an overview of the most relevant indicators related to tax take in the POFP11 countries.

[7] For example the Asia Development Bank (ADB) statistical methods differ from the Organisation of Economic Cooperation and Development's (OECD).

*Figure 4 Tax statistics for POFP11 countries, in US Dollars Millions, all figures 2017 or estimated to 2017*

| Country | Total Tax Revenue (Million USD) | Tax Revenue (% of GDP) | Annual tax Revenue per head ($USD) | Improvement in Tax to GDP ratio (2007 to 2017) (percentage points, pp) |
|---|---|---|---|---|
| Fiji | 1,197 | 26.6* | $1,353 | +1.7 pp* |
| Kiribati | 42 | 25.0 | $373 | Data unavailable |
| Marshall Islands, Republic of the | 41 | 18.3 | $750 | + 0.2 pp |
| Micronesia, Fed. States of | 43 | 12.6 | $417 | + 1.6 pp |
| Nauru | 15 | 15.9 | $1,103 | Data unavailable |
| Palau | 57 | 19.5 | $3,172 | 2.8 pp |
| Samoa | 196 | 24.1* | $991 | 3.5 pp* |
| Solomon Islands | 358 | 25.3* | $577 | 1.1 pp* |
| Tonga | 88 | 21.3 | $876 | 2.2 pp |
| Tuvalu | 6 | 16.6 | $531 | -2.5 pp |
| Vanuatu | 123 | 17.1* | $441 | - 1.9 pp* |
| Latin American and the Caribbean (LAC) average | | **22.8*** | Data unavailable | 0.2* |
| Africa 21 average | | **18.2*** | Data unavailable | Data unavailable |

** Data from OECD (2019) Revenue Statistics in Asian And Pacific Economies*

*Source: Estimates by authors using data from Asia Development Bank Statistical Database System (SDBS) << https://sdbs.adb.org/sdbs/>>*
*Note 1: Currencies converted into US Dollars at 30 July 2019, using mid-market live rates from <www.xe.com>.*

*Note 2: Tax data sourced from Asia Development Bank Statistical Database System (SDBS) << https://sdbs.adb.org/sdbs/>>, except for Kiribati - tax figure is from SDBS but is from 2016. Tax and revenue data from 2017-18 Budget and Estimate of Revenue and Expenditure Budget Paper 1, << http://www.naurugov.nr>>. Vanuatu - 2016 tax figure.*

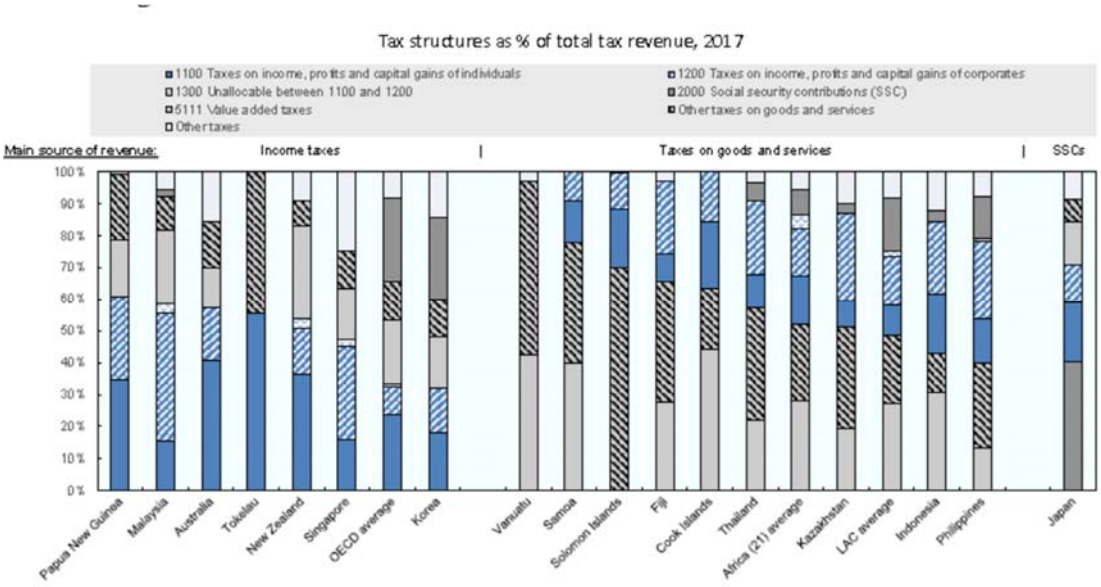
*Note 3: improvements in Tax to GDP ratios checked for congruence with OECD brochure, Revenue Statistics in Asian And Pacific Economies, https://oe.cd/revenue-statistics-in-asia-and-pacific*

## Reliance on goods and services taxation

As a set, Pacific countries receive the greatest share of their income from taxes on goods and services (OCED, 2018), including VAT and excises, sales taxes and tourism taxes (35 percent in all Pacific Island countries excluding Papua New Guinea). The share of income from corporate taxation is low compared to other countries in the OECD tax statistics dataset (OECD, 2019).

Grants form an important part of non-tax revenues in all five of the Pacific economies in the OECD tax statistical set with this data8 (OECD, 2018). There are two POFP11 economies in that set: Samoa and Vanuatu. Grants in the form of general aid to the government make up 51 percent of non-tax revenue in Samoa, where 6 percent of GDP is non-tax revenue. In Vanuatu, grants in the form of general aid to the government makes up 52 percent of non-tax revenue, where 14 percent of GDP is non-tax revenue. These statistics exclude grants for specific purposes, like hospitals, airports or public facilities, which are frequently given in the Pacific (OECD, 2019).

*Figure 5 Tax structures in Pacific Island economies (illustrating reliance on goods and services taxation)*

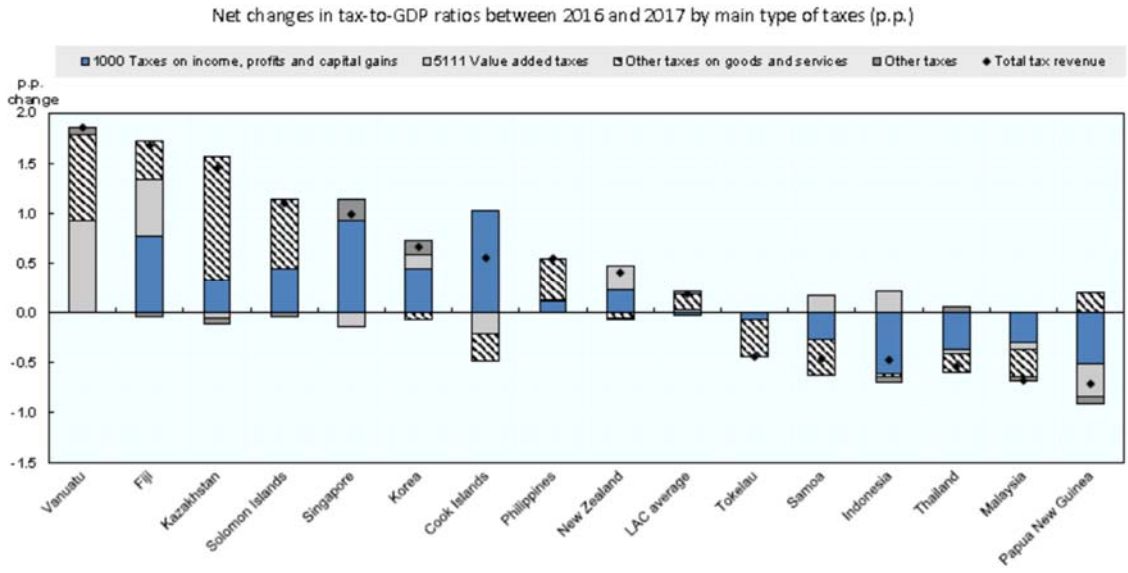



*Source: OECD (2019)*

The rightmost column in Figure 4 above shows that tax to GDP ratios are growing in the POFP11 countries. The OECD tax data shows that VAT and other taxes on goods and services drove the larger increases between 2016 and 2017. Figure 6, below, illustrates.

[8] Reliable, comparable data is not available for the remaining nine POFP11 countries.

*Figure 6 Net changes to tax-to-GDP ratios (illustrating that VAT and goods and services taxation is driving increases in tax take across the region)*




*Source: OECD (2019)*

## Pacific countries are being asked to achieve sustainable development while being efficient with expenditures and raising revenues

Pacific countries as a set suffer from structural factors, including modest long-term economic growth prospects, high vulnerability to natural disasters and climate change, and high costs for public services and infrastructure. This places Pacific countries at higher risk of debt distress than their counterparts with similar levels of debt. This prompted an observation in the World Bank's April 2019 edition of the World Bank East Asia and Pacific Economic Update for Pacific Countries to "ensure debt sustainability by improving debt management, quality of spending, and building fiscal space."

The United Nations SAMOA plan emphasises the need for fiscal policies to "step up investment in sustainable development for short-term growth as well as long-term prosperity. Policymakers can reprioritize investments into the Sustainable Development Goals (SDGs) while improving the efficiency of expenditures and raising revenues."

With tax-to-GDP levels in the region being lower on average than those in other regions of the world with a similar quality of tax administration, there is also room to improve revenues through the addition of progressive taxes and removal of harmful subsidies. To compare, in 2017, tax-to-GDP ratios in the Asia and Pacific region ranged from 11.5% in Indonesia to 32.0% in New Zealand. The tax-to-GDP ratio refers to total tax revenue, including social security contributions, as a percentage of gross domestic product (GDP). All economies in the POFP11 had lower ratios in 2017 than the OECD average of 34.2%, whereas only three of the economies included in this publication had tax-to-GDP ratio above the Latin American and the Caribbean (LAC) average of 22.8% (Fiji, Kiribati and Samoa). Four of the 11 countries covered in this publication had a tax-to-GDP ratio below 18% (the Africa 21 average).

## Fishing and tourism drive the economies of the POFP11

Fishing and tourism are the biggest contributors to the economies of the POFP11 countries, except for Nauru where the biggest driver is government services from the housing of refugees and (subsidised) extraction of phosphate.

*Figure 7 Tourism and Fishing in the POFP11*

| Country | Total value of fishing catch $USm 1. | License and access fees revenue $USm 1. | License and access fees as % of total catch | Contribution of fishing to GDP % 2. | Receipts from tourism 3. | Tourism receipts as % of GDP | Also: number of cruise ship arrivals 3. |
|---|---|---|---|---|---|---|---|
| **Federated States of Micronesia** | 330 | 63.2 | 19% | 38% | 81.8 | 26% | n.a. |
| **Fiji** | 46 | 1.4 | 3% | 1% | 889.3 | 40% | 184,425 |
| **Kiribati** | 702 | 118.3 | 17% | 63% | 9.1 | 6% | 1,343 |
| **Marshall Islands** | 166 | 29.2 | 18% | 37% | 11.8 | 5% | 1,908 |
| **Nauru** | 195 | 27.8 | 14% | 24% | 3.3 | 3% | n.a. |
| **Palau** | 24.7 | 6.8 | 28% | 3% | 196.4 | 7% | n.a. |
| **Samoa** | 8.9 | 1 | 11% | 0% | 236.9 | 20% | n.a. |
| **Solomon Islands** | 326 | 41.6 | 13% | 8% | 71 | 10% | 12,061 |
| **Tonga** | 13 | 2.6 | 20% | 1% | 156.7 | 18% | n.a. |
| **Tuvalu** | 184 | 23.4 | 13% | 59% | 2.7 | 7% | n.a. |
| **Vanuatu** | 30 | 2.7 | 9% | 0% | 207 | 46% | 223,551 |

*Note 1: Value of fishing catch and value of license and access fees sourced from Compendium of Economic and Development Statistics 2017, and refer to the 2016 year*

*Note 2: Annual GDP figures are sourced from the Asian Development Bank data library for the 2016 year (see https://data.adb.org/search/field_tags/pacific-581/field_tags/key-indicators-751/type/dataset?sort_by=changed). The value of fishing includes license and access fees and the value of harvesting and onshore processing.*

*Note 3: Tourism data comes from Annual Review of Visitor Arrivals in Pacific Island Countries 2017`and refers to the 2017 year.*

## Tuna fisheries give an opportunity for further collective action

Tuna fisheries offer a great opportunity for the future of POFP11 countries (World Bank, 2015). Tuna only supports economic growth for a prolonged period if it is used in a sustainable manner.

The Pacific is endowed with some of the world's largest tuna stocks. In particular, the 11 Pacific Island country members of the World Bank (including Papua New Guinea) control over 55 percent of the Western and Central Pacific Ocean (WCPO) area and indeed almost 5 percent of the global ocean. From these waters alone, 34 percent of world's global tuna catch is supplied each year, with

an estimated delivered value of over US$3.4 billion annually (FFA, 2014). Some 77 percent of the WCPO purse seine tuna was caught in the waters of Pacific Island countries in 2014, and almost 50 percent in the waters of Kiribati and PNG alone.

The initiatives taken by PNA signatories highlight the benefits of co-operation to capture resource rents. Resource rents are out of scope for this research but there is potential for all or a significant number of signatories to further benefit by increasing the extent to which they act in concert to sell 'vessel days' (a unit of fishing effort). Other signatories could be added in future.

There is one link between vessel days and subsidies: greater cooperation among coastal states offers the potential for them to benefit from persistent subsidies offered by jurisdictions with distant water fleets. Under a more contestable arrangement to 'sell' vessel days, subsidies provided by jurisdictions with distant water fleets would partly be captured by PNA signatories through a higher vessel day price than otherwise. The persistence of foreign subsidies would transfer wealth to coastal states, whereas domestic subsidies dissipate the wealth of coastal states, often with very low real local benefit.

Likewise, collective action would strengthen observer programmes inside and outside exclusive economic zones to more fully monitor waste at sea and the deployment of fish aggregation devices. An enhanced regime to capture resource rents would avoid the need for ad hoc and less effective taxes or levies such as requiring trans-shipping or imposing other needless transaction costs. Such impositions may do little other than increase compliance costs for distance water fleets. The result would be reduced value of prices paid for vessel days.

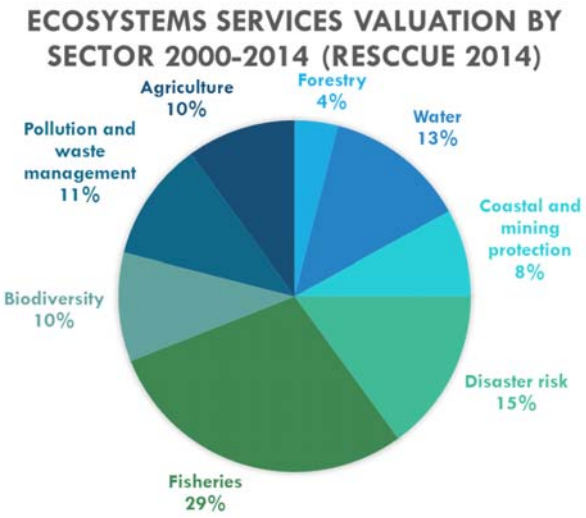
## Analysing the local environmental challenges through ecosystem services valuations

The tourism and fishing economies of the POFP11 are strongly dependent on the ocean's natural habitats, ecosystems and the different services they support. There is not one globally accepted methodology for valuing marine systems, but there are numerous methods and examples of valuations that can be adapted. Some marine systems have existing baseline data about the economic values of marine ecosystem services, but most marine systems require better resolution of data and monitoring of economic values before this data could be usefully applied for taxation purposes.

Fisheries has a large contribution to ecosystems services, contributing almost a third of the value of all ecosystems in the Pacific (see Figure 8, overleaf). This conclusion is based on analysis of more than 50 economic valuations of ecosystem services that have been conducted on Pacific countries since 2000 (RESCCUE, 2014).[9] Figure 8 presents the different sectors identified in these assessments as dependent of natural habitats (coral reefs, mangroves, forests, etc.). These results need to be considered with care as ecosystems valuations involve a variety of methods. Consequently, valuations can be interpreted differently.

[9] Economic assessments of marine and coastal ecosystem services were undertaken under the Marine and Coastal Biodiversity Management in Pacific Island Countries (MACBIO), for Fiji, Kiribati, the Solomon Islands, Tonga and Vanuatu (MACBIO, n.d.). The project has undertaken national-level ecosystem valuation studies in the countries.

*Figure 8 Ecosystem services in the Pacific (Source: Economic valuation in the pacific – A snapshot, Resccue, 2014)*




*Source: VertigoLab*

Valuations of ecosystems services is a new and emerging area of analysis. Ecosystems valuations are finding their way into cost benefit analyses or policy evaluations in many countries around the world. In response to this trend, training for Pacific-based analysts on how to perform ecosystems services valuations has been delivered by Secretariat of the Pacific Regional Environment Programme (SPREP) or SPC as part of discrete projects in coastal zone management.[10]

## Legal obligations in relation to ocean pollution

All POFP11 countries have either ratified or acceding to the UN Law of the Sea Convention (LOSC). Article 192 of the LOSC provides that in all areas of the ocean

> *States have the obligation to protect and preserve the marine environment.*

Article 194(2) creates a general obligation on all States not to cause harm by pollution to ocean areas beyond their control, namely the high seas areas, and obliges States to implement their international commitments via detailed national laws that take account of the agreed international standards.

Amongst other things, LOSC also requires (Art 207) all States to

> *…adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures.*

[10] In the last five years it is estimated that approximately 246 people were trained to economic valuation in Nauru, Fiji, Samoa, Kiribati, Tuvalu, Tonga, Palau and Solomon Islands between 2011 and 2014 (Economic valuation in the pacific – A snapshot, Resccue, 2014).

Further all States are obliged to work together to regulate pollution, harmonize policies and cooperate at regional levels in this regard. Article 208 extends similar requirements for seabed mining by coastal States on areas within their jurisdiction.

Therefore, a first, and pressing, role of fiscal policy is to prevent, reduce and control pollution. LOSC, with the help of scientists defined "pollution" widely to include both land-based sources of pollution and other sources of marine pollution. Pollution is defined by LOSC as the "man-made" introduction of any:

> *"Substances or energy into the marine environment, including estuaries which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities."*

Pollution is a classic externality, so lends itself to market-based instruments like effluent charges, deposit-refund schemes, user charges, insurance type levies (paid into pools for clean-up), import taxes, point of sales taxes and so on. Deliberate dumping can be addressed through criminal or fine-based mechanisms.

The major challenges (particularly for PICs) are then enacting the appropriate laws and enforcing them. While international shipping is well regulated by the International Maritime Organization (IMO) pursuant to MARPOL (Sloan, 2019) particular concerns arise regarding the regulation of pollution caused as a result of international fishing and this includes pollution from fishing boats in the Pacific Ocean. This pollution includes the dumping of fishing gear from fishing vessels in the Pacific that results in a host of adverse consequences for marine living resources in the Pacific. This issue has also arisen because generally speaking IMO has been focused on the regulation of international shipping and not commercial fishing (Sloan, 2019).

At the time of writing, however, various PICs and the appropriate regional organisations including the Forum Fisheries Agency (FFA) are working towards the implementation of the Western and Central Pacific Ocean (WCPFC) Conservation Measure ("Conservation and Management Measure on Marine Pollution, Conservation and Management Measure 2017-04").

This states, inter-alia:

> 5. *Commission Members, Cooperating Non-Members and Participating Territories (CMMs) shall encourage their fishing vessels within the WCPFC Convention Area to retrieve abandoned, lost or discarded fishing gear and retain the material on board, separate from other waste for discharge to port reception facilities. Where retrieval is not possible or does not occur, CCMs shall encourage their fishing vessels to report the latitude, longitude, type, size and age of abandoned, lost or discarded fishing gear.*
>
> *6. CCMs are requested to ensure adequate port reception facilities are provided to receive waste from fishing vessels. SIDS CCMs are requested to utilise, as appropriate, regional port reception facilities in accordance with international standards.*

The list of taxes shown in chapter 4 shows that Pacific Countries are advancing quickly in their efforts to implement strategies to deal with land-based sources of waste. Border-based taxation relating to land-based sources of waste is relatively easy to facilitate, because Pacific countries import their waste. Border-based taxation works to complement other mechanisms like plastic container deposit recycling schemes and bans.

More challenging is what to do with pollution that has its source at sea. The main challenge with imposing taxes on sea-sourced pollution is that the causes of that pollution are dispersed and often, the country lacks enforcement jurisdiction. The waste at sea includes land-based sources of pollution from other countries and dumping of waste that occurs outside a country's territorial sea or while a ship is not berthed at one of a country's ports. The enforcement difficulties this gives rise to are summarised in (Sloan, 2019).

The challenge is that if each nation State does not implement and enforce adequate laws to address land or marine based sources of pollution the problem will continue to the detriment of ocean health. So, the onus is on all Pacific nations to try to address ocean-sourced pollution. A combination of private action, state action and multi-national collective action is needed.

# 3. Conceptual model used to define and understand the role of taxes and subsidies in ocean health

## Overview

This section describes our approach to assessing if and how government taxes and subsidies create economic incentives that are aligned with, or pose a risk to, ocean health. The conceptual model incorporates four logic steps:

1. defining the characteristics of a tax and a subsidy
2. identifying what is meant by ocean health
3. identifying ocean health objectives and linking fiscal policy choices to those objectives
4. understanding the role and limitations of fiscal policy

Each of these logic steps is discussed below.

## Definitions and characteristics of ocean taxes and subsidies

Taxes and subsidies are a public ocean finance mechanism. (Walsh, 2018) concludes that ocean finance is critical for achieving ocean health. Ocean finance is needed to generate capital, invest it strategically, effectively and efficiently against ocean policies and frameworks, align public incentives with ocean health and account for how the ocean is used.

### Taxes

The OECD defines taxes as compulsory, unrequited payments to general government (OECD Revenue Statistics (2018)). There are three elements to this definition.

*The payments are compulsory:* Governments impose an obligation on taxpayers to pay particular amounts; rules set by governments determine the tax base and the rates that are applied to this tax base.

*The payments are unrequited:* Payments made by taxpayers are not normally in proportion to the benefits provided by governments to those taxpayers. This means that there is a redistributive element to taxes—implying redistribution across households.

*The payments are made to general government*. General government is defined broadly and includes state and local governments and their administrations and autonomous government entities.

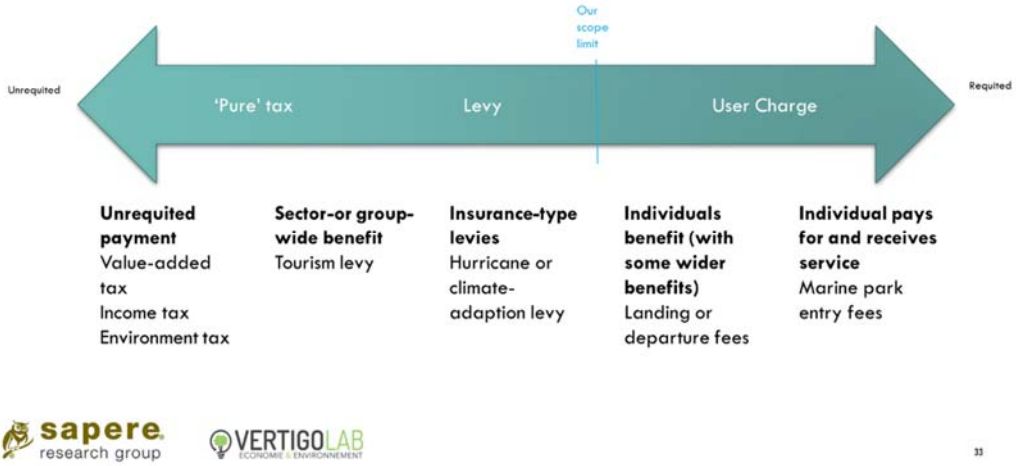
### Environmentally related taxes

For a tax to be 'environmentally related', the tax base must have a proven, specific negative impact on the environment (OECD metadata definition of Environmentally Related Tax, 2016). Environmentally related taxes increase the costs of a product or activity that creates a negative impact, which tends to discourage its production or consumption, regardless of what was the intention behind the introduction of the tax.

## A broad definition of ocean-related taxes

Our research includes all ocean-related taxes. That is, the tax has an impact related to an ocean threat. Not all ocean-related taxes will meet the definition of environmentally related described above. This is because we have opted to take a broad definition. The definition includes levies, customs excises and duties, tax exemptions and tax-based incentives. It also includes taxes on resource rents but not resource rents themselves ("vessel days" income is a resource rent).

*Figure 9 Scope of taxes*






## Borderline cases

There are some borderline cases that needed to be considered when deciding which taxes to include or exclude.

Levies can be a borderline case. Levies are compulsory charges that typically have group-wide benefits; an individual may benefit differently from the levy than the group. A levy could be considered as unrequited in the following cases: where the payment greatly exceeds the cost of providing the service, where the payer of the levy is not the receiver of the benefit, where the government is not providing a specific service in return for the levy which it collects or where benefits are received only by those paying the levy but the benefits received by each individual are not necessarily in proportion to his payments. We have included levies in scope where they meet these examples of 'unrequited' and where they are being paid to central government.

Taxes on resource rents are another borderline case. Resource rents are not "environmentally related". In the OECD definitions taxes on resource rents (or any other taxes on profits) are not included in the definition of environmentally related taxes, because they do not affect relative prices, while revenues from auctioning of emission permits are included and labelled as ''taxes''.[11] The research includes taxes on resource rents because they can help provide data to account for

[11] The OECD's definition is is fully aligned with the System of Environmental Accounting (SEEA 2012 – Central Framework) see <unstats.un.org/unsd/envaccounting>

investments in ocean resources.[12] Also, we have opted to include taxes on resource rents where they exist as part of a tax regime for extractive industries and cannot be easily separated.[13]

Local taxes are another borderline case. The OECD's definition of tax is limited to "national taxes and subsidies" which excludes state and local government administrations. For the most part (with the exception of municipal waste levies and regional sales taxes) tax policies in the Pacific Islands are national policies so the distinction is minor.

A final borderline area is harmonised regional approaches in which revenue is collected multi-lateral government entities instead of general government.[14] Sometimes this revenue is tax-like; sometimes it is better characterised as a fee or charge or resource rental. We have not found examples of harmonised ocean taxes or subsidies in this research.[15] However we emphasise the importance of collective action. There is a strong case for further research to understand the links between inefficient policy mechanisms and non-tax revenue from vessel days for example. An enhanced regime to capture resource rents would avoid the need for ad hoc and less effective taxes or levies such as requiring trans-shipping or imposing other needless transaction costs. Such impositions may do little other than increase compliance costs for distance water fleets. The result of increased compliance costs would be reduced value of prices paid for vessel days. A further result of better collective action is the ability to strengthen observer programmes inside and outside exclusive economic zones to more fully monitor waste at sea and the deployment of fish aggregation devices.

[12] The Account function is described in Walsh, 2018 as "Account for how financial capital is deployed against performance benchmarks, and account for values of marine ecosystem services through time".

[13] Applying the definition of tax becomes complex in the case of a fiscal regime for extraction of natural resources. Such a regime (often consisting of royalties, corporate income tax and related withholding payments, and resource rent taxation) is designed to remunerate the owner of a resource for some or all of the value of the resource. because some components of a tax regime could be described as 'requited' and other components may not. Often the components are so closely linked that one cannot consider the requited component separately from the unrequited component. For example, one might see an access component (e.g. exploration or permit fees) and a royalty on value of the item extracted (e.g ad valorem royalty). In this event, often the exploration permit is requited (because the company gets a benefit equal or greater than the tax) but the royalty in some cases can be requited depending on the tax is designed. The minerals, and access to them, has value to the mining company often far beyond the cost of the royalty. As such many royalties are not strictly taxes and the redistributive element is in favour of the extracting entity rather than taxpayers generally. For this reason, often resource tax regimes impose resource rent taxes (or superprofits taxes) on top of royalties. As individual policies, they may not be compulsory or unrequited; as a set of fiscal levers, they can be. For this research, we have included as all parts of a fiscal regime for resource extraction, including royalties, as 'taxes'.

[14] The OECD may include multi-lateral government entities in its definition of general government in the near future according to a senior OECD tax specialist.

[15] We have found no harmonised taxes or subsidies but note that the most prominent example of non-tax revenue in the Pacific are harmonised. For example, the access arrangements for fishing such as license fees and vessel day fees. In the future we might see specific taxes on these fees being levied – at the moment they are typically treated is business costs for locally-registered boats and are therefore deductible for income tax purposes and in some cases the fishing entities who pay license fees are registered for VAT.

### Subsidies

Subsidies are given by governments to producers, individuals, organisations, non-profit-making associations, municipalities and international activities. (The definition of subsidies excludes transfers to government departments and state-managed marine protection areas). The definition includes direct transfers of funds, tax expenditure (foregone revenue), accelerated depreciation, reduced tax rates, other foregone government revenue, transfers of risk to government and induced transfers.

### Environmentally motivated subsidies

A subsidy is environmentally motivated if it has the aim of reducing directly or indirectly the use of something that has a proven, specific negative impact on the environment (OECD metadata definition of Environmentally Related Tax, 2016). This definition covers all environmentally motivated subsidies consisting of payments from government to producers, or of preferential tax treatments with the objective of influencing the level of production, the price, or the remuneration of the factors of production. Environmentally motivated subsidies could take the form of a VAT exemption or another favourable tax treatment, such as the VAT exemption for electrical vehicles. Alternatively, these subsidies could take the form of import duty credits or tax credits for investment in ocean health. Other types of environmentally motivated subsidies would be grants or loans totally or partially financing projects or activities aimed at protecting or restoring the ocean environment.

### Fishing subsidies

Because of the importance of fishing in the Pacific, we considered the literature on fishing subsidies. Sumaila et al (2010) found it useful to divide fishing subsidies into three broad categories:

*Subsidies for management and research:* Sumaila et al (2010) considered such subsidies as "good" from the perspective of ocean health, as they generally have a positive effect on ability to manage fishery and ocean resources sustainably.[16]

*Capacity-enhancing (e.g., fuel, construction) subsidies:* Sumaila et al (2010) considered such subsidies as harmful as they tend to promote overexploitation of fish stocks by motivating overcapacity and overfishing.

*Ambiguous subsidies*: Sumaila et al (2010) considered subsidies such as those for vessel buy-back programmes and rural fisher community development, can either promote or undermine the sustainability of fish stocks depending on how they are designed and implemented.

To capture all subsidies that might be of political interest we have applied the definition of a subsidy according to the World Trade Organization's (WTO), Agreement on Subsidies and Countervailing Measures (ASCM) (Uruguay Round Agreements, 1994). This definition is recommended by the Global Subsidies Initiative (GSI, 2010). For ease of reference, we refer to this definition as the "WTO definition of a subsidy".

Under the WTO definition, a subsidy is deemed to exist if:

[16] A subsidy that might be perceived as 'good' from the perspective of Ocean health might conceivably be perceived as 'bad' from another perspective, such as economic efficiency or equity.

- there is a financial contribution by a government or public body,[17] or
- there is a form of income or price support; and
- a benefit is conferred by the financial contribution or price support.

### Summary of study inclusions

In summary, a tax or subsidy meets the study criteria if

a. It is ocean-related (has an impact related to an ocean threat); and
b. It can be described as a tax or levy (and not a user charge or fee) or subsidy under the OECD's definitions (OECD Revenue Statistics (2018)) and/or the definition on Agreement on Subsidies and Countervailing Measures; and
c. It may or may not be environmentally motivated.

### Identifying what is meant by ocean health

It goes beyond the scope of this work to precisely define ocean health. Generally speaking, an ocean is healthy when its natural habitats and its species sustain people now and in the future, to deliver a range of benefits. For example, the main indicators to the Ocean Health Index developed by Conservation International[18] include indicators for the following benefits:

- Food provision
- Artisanal fishing opportunities
- Natural products
- Carbon storage
- Coastal protection
- Coastal livelihoods
- Tourism and recreation
- Sense of place
- Clean Waters
- Biodiversity

Threats to the sustained provision of these benefits include pollution, natural habitat destruction, over-exploitation of fish stocks and other ocean resources and climate change. These threats, and their economic drivers, are explained further in the paragraphs below.

### Identifying ocean health objectives and linking fiscal policy choices to ocean objectives

Fiscal policy in the form of taxes and subsidies is a form of ocean finance (see, for example, UNDP Biodiversity Finance Program). Ocean finance has been defined as encompassing *generating* funds

[17] Financial contribution includes direct payments, transfer of liabilities (e.g., loan guarantees), government revenue that is foregone including tax credits, and government provided goods and services. This definition captures subsidies in the form of direct payments linked to volume of sales, setting input prices artificially below market rates, loans below market rates provided by the government, assumption of liabilities, reduced tax rates, and accelerated depreciation allowances.

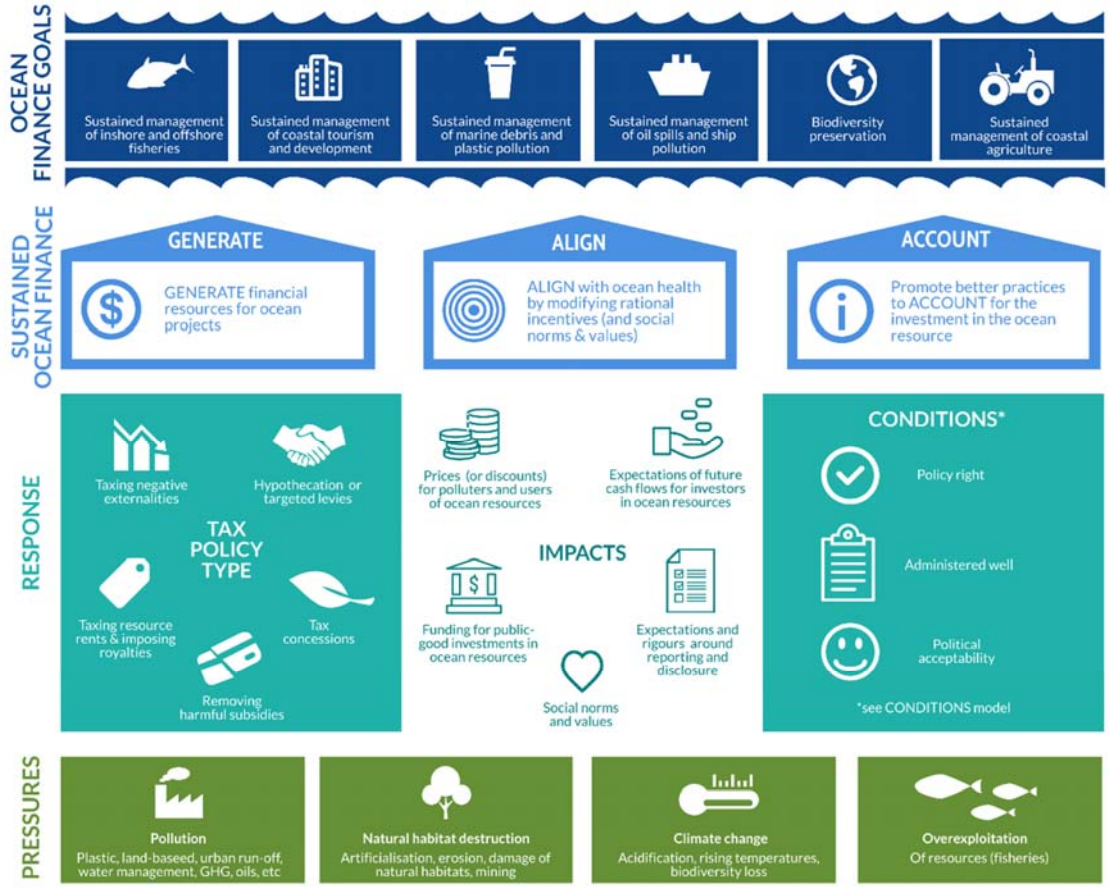
[18] Conservation International, Ocean Health Index, <www.conservation.org>

for ocean projects, *investing* in ocean projects, *aligning* incentives toward ocean health, and *accounting* for achievements made (Walsh, 2018).

The conceptual model for linking ocean threats to taxes and subsidies and then to ocean finance goals is illustrated Figure 10 below. The ocean finance goals at the top of our conceptual model relate to the management of human threats to the ocean and summarise the goals of ocean finance set out in the Pacific Ocean Finance Program's *Ocean Finance: Definition and Actions* (June 2018).

The bottom layer of the conceptual model illustrates the environmental threat requiring a societal response. In the discussion following the image we discuss the factors that determine whether taxes or subsidies will help and their attributes relative to other tools.

*Figure 10 Conceptual model linking taxes and subsidies to ocean pressures and responses*



### *Top layer, ocean finance goals and sustained ocean finance*

Before one can address whether any policy helps or hinders one must understand the policy's goals. The various regional and national frameworks for Pacific Ocean finance and governance are set out comprehensively in *Finance for Pacific Ocean Governance* – Background document (Walsh, 2018). It is not necessary to repeat that material here, except to note that the key concept in each the Governance frameworks identified in the Walsh paper is 'sustainability' of the ocean, which incorporates a concept of balancing three dimensions: economic, social and environmental.[19] This balancing is done through management of ocean threats in order that the ocean can be healthy and continue to provide sustenance (i.e. sustain people now and in the future, to deliver the types of benefits set out in the Ocean Health Index). The role of ocean finance is effective investment of financial capital to produce sustained ocean governance (Walsh, 2018). Sustained ocean governance is intentionally holistic and includes inshore and offshore fisheries, coastal tourism and development, marine debris and plastic pollution, coastal agriculture, and any other activities and sectors that impact upon the oceans (Walsh, 2018).

In accordance with the Pacific Ocean Finance Program's *Ocean Finance: Definition and Actions* (June 2018) we have included taxes and subsidies as being ocean-related if they contribute to:

- Sustained management of inshore and coastal fishing (which includes the management of unreported and unregulated fishing)
- Sustained management of coastal tourism and development
- Sustained management of marine debris and plastic pollution
- Sustained management of oil spills and ship pollution
- Biodiversity preservation (which includes mitigation of, and adaptation to, the effects of climate change on the ocean)
- Sustained management of coastal agriculture (which includes management of land-based discharges to the ocean).

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[19] The three-way-balance concept of 'sustainability' underpins the Goal Targets set out under the UN's Sustainable Development Goal 14, *Life Below the Ocean*. And, sustainability features strongly in the Framework for a Pacific Oceanscape reporting framework, which defines the vision as "A secure future for Pacific Island Countries and Territories based on sustainable development, management and conservation of our Ocean". The concept of 'sustainability' is reflected in the outcomes statement found at paragraph 158 of the United Nation's General Assembly resolution 64/236 of 24 December 2009 (which instigated the UN's Sustainable Development Goals): "We recognize that oceans, seas and coastal areas form an integrated and essential component of the Earth's ecosystem and are critical to sustaining it, and that international law, as reflected in the United Nations Convention on the Law of the Sea, provides the legal framework for the conservation and sustainable use of the oceans and their resources. We stress the importance of the conservation and sustainable use of the oceans and seas and of their resources for sustainable development, including through their contributions to poverty eradication, sustained economic growth, food security and creation of sustainable livelihoods and decent work, while at the same time protecting biodiversity and the marine environment and addressing the impacts of climate change. We therefore commit to protect, and restore, the health, productivity and resilience of oceans and marine ecosystems, and to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations, and to effectively apply an ecosystem approach and the precautionary approach in the management, in accordance with international law, of activities having an impact on the marine environment, to deliver on all three dimensions of sustainable development."

*Bottom layer, ocean pressures*

As taxes and subsidies are pricing instruments designed to encourage broad-based action to reduce environmental damage, we have opted to use a framework based on human-caused threats to ocean health and management of those threats. This follows the precedent set by the OECD in defining environmentally-related taxes with reference to threats (the OECD defines environmentally-related taxes as "taxes levied on tax-bases deemed to be of particular environmental relevance", i.e. taxes that have a tax base with a proven, specific negative impact on the environment).[20]

The threats we identified were based on the top four threats that were identified by ocean scientists (Boonstra, 2015). They are:

- overexploitation of resources (notably, fisheries)
- pollution (plastic pollution, land-based pollution, urban run-off, water management, GHG, oils, etc)
- natural habitat destruction (artificialisation, erosion, damage of natural habitats, mining)
- climate change (acidification, rising temperatures, biodiversity loss).

These threats mirror the stressors identified by IPSO State of the Ocean report, which include Extractive industries, Fishing overcapacity, Climate change impacts and Pollution. Again, it goes beyond the scope of our work to tightly define these threats and the management of activities in relation to them – loose definitions will suffice for identifying ocean environmentally-related taxes and subsidies.

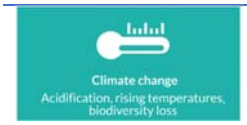
The threats to the Pacific Ocean are urgent, and serious. The 2018 State of the Ocean workshop concluded that not only are we already experiencing severe declines in many species, to the point of commercial extinction in some cases, and an unparalleled rate of regional extinctions of habitat types (e.g. mangroves and seagrass meadows), but we now face losing marine species and entire marine ecosystems, such as coral reefs, within a single generation.

The State of the Ocean Report noted,

> *Unless action is taken now, the consequences of our activities are at a high risk of causing – through the combined effects of climate change, overexploitation, pollution and habitat loss – the next globally significant extinction event in the ocean. It is notable that the occurrence of multiple high-intensity stressors has been a pre-requisite for all the five global extinction events of the past 600 million years (State of the Ocean Report (International Program on the State of the Ocean, 2019)*

[20] OECD Glossary of Statistical Terms and in particular, Metadata definitions, see: http://www.oecd.org/environment/tools-evaluation/PINE_Metadata_Definitions_2016.pdf

The connections between ocean threats and economic activities are described in more detail in the table below.

| Human threat | Negative impacts on ocean health | Positive actions/Investments | Sectors and stakeholders considered |
|---|---|---|---|
|  | Plastic, waste, water pollution, land-based pollution, urban run-off, ships oil pollution | Waste prevention at border, waste management on land, waste management at ports and on fishing boats, water management, marine oil waste management | Importers, Waste Sector, Tourism, Construction, Aquaculture, Agriculture, Shipping, Fishing, Ports |
|  | Expanding of economic activities, artificialisation, extraction of resources (damage of marine habitats: mangroves, coral reefs, seagrasses, ecologically or biologically significant areas) | Ecological restoration, zoning and environment impact assessment, monitoring, sustainable tourism activities relying on natural habitats | Tourism (cruise and tour operators), hotel development, deep sea mining, fisheries, mining, aquaculture |
|  | Overexploitation of offshore fish resources (incl. tunas, billfish and allied species)<br>Overexploitation of coastal resources (incl. a wide range finfish and invertebrates) | Sustainable management of fish stocks (offshore and coastal) | Offshore fishing (including by distant water fishing nations); Coastal fishing |
|  | Activities emitting GHG | Attenuation and mitigation activities (Blue carbon?) | Electricity generation, vehicles, agriculture, vessels, forestry, tourism |

*Second layer, taxes and subsidies and the policy approach*

The second step of our conceptual model introduces the ocean finance framework, and notes that policy around taxes and subsidies has potential to:

- GENERATE financial resources for government investment in environmental projects.
- ALIGN with ocean health by modifying incentives (minimize environmental costs and damages).
- promote better ACCOUNT practices (that is, better data and reporting to inform progress toward ocean health goals).

Could environmentally related taxes and subsidies work in the POFP11 to support ocean health?

The answer is both simple and complex. The simple answer is yes, for some taxes and subsidies, ocean health can be supported. The complex answer is 'it depends'. The ability of environmentally related tax or subsidy achieve ocean finance goals depends on a combination of rules, politics and administrative practice. Some environmentally related subsidies and taxes fail at a design level: they create more costs than benefits. Other taxes and subsidies fail at an implementation level: They may be well designed to respond to a problem that exists elsewhere but may fail in the POFP11 countries. Others fail at a political level: they are implemented for a time and then removed because they are not accepted by the community or valued by politicians.

Therefore, it is essential to apply a 'policy approach' to considering the role of taxes and subsidies in the POFP11. A policy approach considers policy, implementation and political context. Using this approach helps recognise the limitations of taxation and when it can be applied.

*Third layer, defining a policy response*

The literature review uncovered four ways a government's fiscal system can impact on the ocean finance goals of generate, align and account. First, **taxes create prices** (and tax concessions create discounts) for polluters and users of ocean resources. This is the classic 'pricing' role of environmentally related tax. In the words of the OECD, "Pricing instruments encourage broad-based action to reduce environmental damage at least cost and should be a central pillar of green growth policy. They provide incentives for further efficiency gains, green investment and innovation and shifts in consumption patterns. Increased or more effective use of environmentally related taxes can drive growth-oriented reform by shifting the tax burden away from more distortive taxes, e.g. on corporate or personal income, and contribute to fiscal consolidation."

Ocean environmentally related taxes (or indirect taxes with a link to an activity related to the ocean, like tourism) can used to provide **funding for public-good investments in ocean resources**.

Taxes and subsidies also affect **expectations of future cashflows for investors** in ocean resources. So, the presence of a tax or subsidy (depending on how it is designed) can make the difference between whether an investment goes ahead or not. For example, an import tax concession or tax-free period will affect how much profit an investor receives from a project, and when. This affects whether a project is Net Present Value positive or not.

Taxes and subsidies provide a signal of what a government values and condition a response from populations. So, they affect **social norms and values** around the use of ocean resources and protection of ocean health. For example, taxing plastic bags can start to change behaviour around bag use and start people thinking about bags as 'pollutants' rather than useful items.

Taxes and subsidies, because they are administered by governments, are subject to Public Financial Management (PFM) standards. Depending on the quality of a government's PFM system, taxes and subsidies can **create expectations of rigour and reporting and disclosure around an economic activity** that might not have been there otherwise. For example, subsidies might be conditional on agreeing to investment in protection or clean-up of an ocean resource. Taxes often require disclosures of income and expenditure at entity-level, providing visibility over the economic returns from the use of an ocean resource.

The tax system can also indirectly impact on environmental outcomes, for example, through the overall balance of different types of taxes. In part because taxes and prohibitions are politically unpopular, governments can rely on a combination of taxes, subsidies and regulatory instruments to try to influence society toward environmentally friendly choices.[21]

Broader tax settings will likely also impact environmental outcomes; however, these are not the focus of this research. For example, higher levels of income and wealth inequality are associated with worse environmental outcomes, such as biodiversity loss and generation of waste (Holland, 2009). Causal pathways are difficult to prove, but a recent UN working paper suggested progressive tax reform as a potential path to reducing inequality and improving environmental outcomes (Islam, 2015).

### *Impacts of taxes and subsidies*

Taxes and subsidies that have these impacts can be loosely classed into policy types:

1. **Taxing negative externalities**—taxes put a price on activities that pollute the environment or degrade natural capital, and where the polluter does not otherwise pay for that damage.
2. **Hypothecation—**using tax revenues—ring-fencing revenues raised from environmentally-related taxes for a specific use.
3. **Royalties and resource rent taxes**—taxes related to the extraction or use of natural resources, including but not limited to profit taxes.[22]
4. **Tax concessions and other subsidies with environmental impacts**—tax concessions targeting activities that have either positive or negative environmental impacts—and, by extension—**removing harmful subsidies—**removing subsidies that work against sustainable use and protection of natural capital.

[21] Don Fullerton & Robert D. Mohr, Suggested Subsidies are Sub-Optimal Unless Combined with an Output Tax 1 (Nat'l Bureau of Econ. Research, Working Paper No. 8723, 2002), available at http://www.nber.org/papers/w8723.

[22] Taxes on resource rents (profits) are included in this framework but are not included as environmentally-related taxes in the OECD framework. We have described our reasons for including them above at page 14.

*Figure 11 Types of ocean tax*


### *Understanding the role and limitations of taxes and subsidies*

A tax or subsidy can only be helpful in achieving sustained ocean finance if it is the right 'tool' for the job. The conceptual model describes three conditions before taxes or subsidies can be helpful:

- Policy right
- Administered well
- Politically acceptable.

If any of these conditions are not met, there is a strong chance the policy will be unhelpful as the tax or subsidy will create undue administrative costs, complexities, uncertainties for ocean investors or will waste time in solving the issue.

We have captured the various dimensions that influence whether a policy is right, can be administered well and will be politically acceptable. We have tried to simplify these dimensions down into a manageable set. This set is shown in Figure 12 below.

*Figure 12 Conceptual model showing the conditions for a tax or subsidy to be helpful*


*Figure 13 Table explaining the conditions for a tax or subsidy to be helpful*

| Factor | HELPFUL | NOT HELPFUL |
|---|---|---|
| Urgency of problem | For an existing tax, an ocean pressure needs to be sufficiently urgent to be seen by policy makers and politicians as requiring government intervention.<br><br>Very urgent ocean threats can mean tax is not a useful tool because legislation can be slow to pass and slow to change behaviour. Allow time to politically socialise the idea of a tax, change tax legislation and update administrative processes relating to the tax (this can take 2-10 years). A subsidy may need to go through budget process (6 | Taxes are not helpful when there's urgent action required (emergency) or when a threat isn't appreciated by policy makers and politicians as requiring government intervention |

| | | |
|---|---|---|
| | months to -2 years). Allow time for behaviour to change. | |
| Scale of problem  | The scale of the threat to ocean health is large enough to deal with at national level | The threat to ocean health is at local or community scale or relates to a very specific set of behaviours |
| Power to respond  | The contributors to the environmental problem lie within the jurisdiction of the country (e.g. the polluters are local, not international) | The contributors to the environmental problem lie outside the jurisdiction (e.g. the solution might require regional or international policy changes rather than national) |
| Administrative capacity  | The country's tax administration is working reasonably well to ensure compliance, enforcement, registration at the location of the problem | The country's tax administration is insufficient to collect, monitor and enforce the tax |
| Relevance to ocean finance goals  | The objective of the policy – and its connection to ocean health - is specific and understood. | The objective of the policy – and its connection to ocean health - is not clear or well-understood. |
| Best option  | The policy can pass a preliminary cost-benefit analysis, and is best policy relevant to the identified alternatives<br><br>There has been research done so that the economic impacts of the policy are understood, and the equity impacts of the policy are understood. | The policy cannot pass a preliminary cost-benefit analysis and is not best policy relevant to the identified alternatives.<br><br>The policy has not been investigated for its economic and equity impacts, or these impacts are not feasible to measure |
| Tax design  | The tax is passed into legislation in a way that achieves the objective of the policy with the least-cost and complexity. | The tax design incorporates features which make it costly or complex and add to economic inefficiency. |
| Regional harmonisation  | The policy works elsewhere by Small Island Developing Nations or in the Pacific Region. | The policy is new and untested by other, similar countries or has been found not to work in those countries. |

| | | |
|---|---|---|
| Social acceptability  | The policy has been discussed with businesses and the community and they have had an opportunity to comment. | The policy has not been socialised or tested prior to being passed into law. |
| Growth supportive  | The policy will not adversely impact on the ability of the country to pursue economic self-determination | The policy will have adverse impacts on the growth or security of the country |
| Measurability of pollutant (for externality taxes)  | The pollutant, or a reasonable proxy for it, can be measured | The pollutant or the source of it is not measurable |

*Source: Sapere Research Group and VertigoLab*

### *Start with the problem definition*

When considering whether tax or subsidy is the right policy (and by extension, whether an existing tax or subsidy should be removed), it is incumbent on the analyst to consider firstly the problem definition—what is the issue and what is the change that is being sought? Is the main goal revenue generation, or behaviour modification? In the case of behaviour modification, what is the externality and the societal cost?

The literature emphasises the need to be specific about the goal and the targeted responses, as this is key to communicating the tax and achieving public acceptability for it. For example, see the Policy guidance on environmental taxation from the OECD.

A detailed policy analysis will precisely identify the different pressures on ocean health that need to be addressed. This is part of defining a problem definition. For example,

- What is the ocean threat that is the issue?
- Is the threat the result of an externality, or another type of market failure?
- If it is an externality, can it be measured, and the sources identified?
- What valuation of the threat can be made, e.g. qualitative and quantitative impacts on ocean health (direct, indirect, positive, harmful, etc.)? This helps to define the 'benefits' of introducing a tax policy relative to the policy's cost.
- What is the scale of the threat (local, regional, national)?
- What economic sectors are causing the impacts, and who is impacted?
- Are the sectors that are causing the impacts within the jurisdiction of the country, or are they foreign (e.g. in the case of over-fishing, can the problem be attributed to long distance fishing fleets operating in the offshore EEZ, or in the Area, or is it inshore coastal fishing that is the problem, what fish stocks are affected)

*Lessons from the literature on considering alternatives to taxes and subsidies*

Even if all the conditions shown in Figure 12 exist, a thorough tax policy exercise will involve considering the alternative ways to solve the problem (i.e. other ways to control ocean externalities, or generate and sustain sources of ocean finance). Other solutions to ocean externalities include:

- Property rights over the environmental good (and a better understanding of existing ocean zones and property rights).
- Behavioural 'nudges' (e.g. providing every fishing vessel with a bin suitable for collecting ocean waste and providing receptacles for waste on ports).
- Private collective action (e.g. hotel and beverage companies investing in recycling plant, tourist operators voluntarily adopting industry codes of practice).
- Mandatory disclosures / information sharing / international pressure / name and shame
- Bans.
- Regulation or zoning to limit activity that might cause negative externalities
- Liability allocation.
- Government or international provision of services with positive externalities.
- Lawsuits to compensate affected parties for negative externalities.
- Mediation or negotiation between those affected by externalities and those causing them.

Other ways to generate revenue include:

- Redirecting existing subsidies or budgets
- Grants and philanthropic donations
- Bonds
- Loans
- Payments for ecosystem services
- Fines
- Fees

(A comprehensive catalogue of finance mechanisms that are relevant to the Pacific Ocean governance context is included as Appendix 2 in Walsh (2018) *Finance for Pacific Ocean Governance*).

Other alternatives exist too, like continuing to invest in revenue mobilisation, and progressive tax structures. The more funds in a country's revenue chest, the more likely it is to invest in better drinking water, quality legal systems and better enforcement and articulation of property rights. A recent UN working paper suggested progressive tax reform as a potential path to reducing inequality and improving environmental outcomes (Islam, 2015).

There is a long-standing debate about the relative advantages and disadvantages of different types of instruments, such as the relative efficiency of market-based instruments (e.g., taxes) as opposed to the more traditional command and control approach (e.g., regulations requiring a form of pollution control device). Policy instruments such as penalties, regulations, and incentives may thus be required to achieve significant behaviour modification in order to compete with command and control in terms of direct effectiveness (Kinzig, et al., 2013)). Nudges are an emerging topic in the environment policy literature, with good potential to change social norms and values without the element of compulsion. For example, (Mont, Lehner, & Heiskanen, 2014)

*Lessons from the literature on taxing negative externalities*

An externality[23] tax puts a price on a damaging activity, or a reasonable proxy of it. This assumes a damaging activity can be measured. Externality taxes are designed to 'internalise' social or environmental costs in private consumption and production decisions. They are sometimes known as 'Pigouvian' taxes—after Arthur Pigou, a British economist who worked at the turn of the last century and was influential in developing theory in the area of environmental taxes.

The best example of a Pigouvian tax is carbon tax. Carbon tax is a form of pollution tax. It levies a fee on the production, distribution or use of fossil fuels based on how much carbon their combustion emits. The government sets a price per ton on carbon, then translates it into a tax on electricity, natural gas or oil.

A Pigouvian tax is levied on a polluting activity to 'privatise' the cost to third parties of that activity. The objective of the tax (and the rate that is decided upon) is to increase the price of a good or activity to reflect the cost of the environmental harm that it imposes on others.[24] The cost of the harm to others—an "externality"—is thereby internalised into market prices. This ensures that (assuming economic rationality) consumers and firms take these costs into account in their decisions.

Taxes and market-based pricing instruments can also improve market efficiency by allocating scarce environmental resources to their highest value use. The economic value of a resource is maximised when it is allocated to users who can derive the most benefit from being able to access it. A price helps achieve this by ensuring that only those deriving a benefit higher than that price will pay for it and access it.

When designed well, externality taxes have the potential to achieve an environmental outcome at a lower cost than regulations or subsidies (OECD, 2017) (Institute for Fiscal Studies, 2011)). Externality taxes are particularly well suited to situations where the lowest cost response varies between firms and individuals, and where the regulator does not have the necessary information to determine what these different responses are (New Zealand Tax Working Group, 2018).

Externality taxes can provide ongoing incentives to abate and innovate. Once a polluter meets a regulatory emissions standard, they can lack an incentive to abate further. Externality taxes can help maintain incentives for polluters and resource users to find further ways of reducing harmful activities. This continuous incentive to reduce harm and to do so flexibly can strengthen incentives to innovate.

Externality taxes also raise revenue. Regulations typically do not. Revenues raised can be used to reduce other more distortionary taxes (also known as "revenue recycling"), fund environmental initiatives, or pay for other government spending priorities. The ability of externality taxes to reduce

[23] A "negative externality" exists when people do not face the costs of their actions, so they act in ways that are optimal for them, but not optimal for society. Negative externalities are a common market failure that negatively impact on the environment. For example, my petrol-powered car emits CO2 into the atmosphere. In the absence of a price on carbon, the damage caused by my CO2 emissions is an externality – I am imposing costs on society by contributing to global warming, and I am not paying for those costs.

[24] A perfect Pigouvian tax gives an incentive to cut back externalities (like pollution, for example) to the level where social and environmental effects can be compensated (through tax payments), and the economic benefits of further production exceed the environmental costs associated with it.

more distortionary taxes means they can support economic growth. The OECD reports that environmental taxes can be implemented "with potentially significant positive (or at least without negative) consequences for economic growth or overall employment" (OECD, 2017).

Despite these benefits, we have not found any examples of a pure externality tax being applied directly to ocean-damaging activities anywhere in the world. This is because setting appropriate externality price is difficult where a pollutant is not able to be measured. That is, externality taxes are challenging when damage does not have a clear source or where there are multiple political perspectives to consider.[25]

Plastic waste taxes and health excises such as higher tariffs on imports of high-sugar beverages are the closest examples of externality taxes we have found in the Pacific. These taxes put a price on an item which reflects the cost to society when someone consumes an item – for example, in Fiji a plastic bag tax puts a price on plastic bag purchase (to account for the 'externality' of plastic pollution), and in Samoa sugared beverages are taxed at the border (to account for the 'externality' associated with diabetes and poor health). Externality taxes do not prevent the pollution or make people stop drinking high-sugar drinks altogether, only reduce it. So, a choice to use an externality tax instead of a ban shows a willingness to tolerate some of the product.

The principle for taxing externalities is to price as close as possible to the marginal external cost – that is the extra cost to society or environment that a purchase decision causes. If this can be done the tax is said to be efficient in reallocating choices towards optimal. However, in most cases, it is not possible to measure exactly what the marginal cost to society is – so a proxy is used.

Plastic pollution is a good candidate for an externality tax, if effective coordination can be achieved between countries on how to value the externality. While it is challenging to identify the source of ocean plastic once it is in the ocean, it is possible to identify where plastic is produced and how it is used and how it ends up in the ocean. Growing information on plastics means that it is becoming easier to measure an impact per unit of non-biodegradable plastic, then translate it into a tax on consumer goods with plastic components or packaging.

[25] See, e.g., Richard Posner, Catastrophe: Risk and Response 125–27, 163–65 (2004) (discussing the political difficulties in imposing instruments such as taxes in the context of climate change). Taxes may not be technologically feasible, such as where there are a large number of sources or emissions that are not easily measured for technological reasons.

Box 1: Plastics taxes

**Source: David Powell (2018), The Price is Right: Or Is It, The Case for Taxing Plastics, New Economics Foundation.**

A recent study on plastics taxes investigated an ambitious set of taxes on the use of plastic, to:

- reduce the overall level of plastic use in the economy, and
- incentivise widespread reuse and recycling of the plastic that is used

The study concluded that instead of a single Pigouvian tax, a suite of taxes may be needed.[26] The plastics 'chain' is long and complex. Behavioural changes from both producers and consumers are needed, moving both to using less plastic overall and radically increasing the reuse and recycling of the plastic that is used. There is very unlikely to be 'one tax' that can meet all those objectives. A tax could be levied at any point from the initial production of monomers, through to the sale or purchase of plastic resins through to final consumption. The closer to the consumer any tax is levied, the more visible it is, and the less likely to be simply absorbed within the supply chain; however, the more administratively complex, and potentially politically contentious, it may become. Taxes could also be levied on usages of plastic, such as the charges we already see being applied on plastic shopping bags, although regulation may be a more effective lever.

The study concluded that if Pigouvian taxes (such as per unit plastics taxes) are to be applied, then urgent further economic research is needed to enable policymakers to develop the tax(es) with a deeper and more detailed understanding of how the behaviour of producers or consumers may respond to any new taxes, where in the supply chain to levy the tax; and how to ensure that the tax is effectively born by the actors that are intended. Policymakers should also consider whether measures such as regulation or a ban may be a more effective intervention than taxation.

### *Design criteria for taxing negative environmental externalities*

The literature review uncovered a framework (a set of criteria and design principles) for taxing negative environmental externalities, such as ocean pollution. The framework was compiled by the New Zealand Tax Working Group (2018). Taxes are more likely to be feasible when the following criteria are met:

- Measurability: The damaging activity, or a reasonable proxy of it, can be measured
- Risk tolerance: There is enough time for a tax instrument to be developed and refined
- Enough scale: The environmental problem is sufficiently large-scale and persistent to justify administration and compliance costs

The relative benefits from a tax approach (as compared to a regulation or ban approach) are potentially larger when:

- Diversity of responses: the tax works, and there is a range of low-cost abatement responses.
- Revenue raising potential: The revenues that could be raised from the tax are large, allowing for the reduction of more distortionary taxes (or spending on other government priorities).

An externality tax will work better where the damage is estimable and the cost of the damage is nationally uniform (McLeod et al., 2001). This is challenging when the damage is done to something that does not clear market value, like ocean biodiversity or ecosystems value.

[26] David Powell (2018), The Price is Right: Or Is It, The Case for Taxing Plastics, New Economics Foundation.

The suggested design principles relate to:

- addressing native rights and interests;
- distributional impacts;
- pricing to the marginal external cost;
- the degree of localisation of tax instruments; and
- addressing industry competitiveness concerns.

In summary, a government needs a considerable amount of information in order to be able to design a pure externality tax effectively – but proxies are acceptable where the causes of damage are identifiable and measurable.

Box 2: Pricing Waste Levies according to the externalities of dumping

**Reference: Covec, Economic Factors of Waste Minimisation in New Zealand, 2012**

The most common form of charging for municipal solid waste is a usage-pricing model, charged at the point of throwing or roadside collection ("pay as you throw schemes"). Pay as you throw schemes are prices; users are charged a rate based on how much waste they present for collection to the municipality or local authority. The rate is typically set based on the financial costs to the waste management authority of managing the waste, then averaged across all users. This approach generates income for waste management activities, which is useful, but it suffers from two shortfalls:
1) The rate fails to incorporate an externality price. If a waste disposal levy has the objective of correcting for externalities alongside raising revenues to fund waste minimisation activities, then the price of the externality needs to be built in.
2) The rate will not pass on costs to people who dispose of waste "at the margin", that is the rate will not reflect how costs increase with increasing amounts of waste disposed of.

The externalities of landfill disposal that are not included in current charges include those relating to disamenity effects, leachate and emissions of methane, which is a greenhouse gas. These effects can be significant per tonne of waste when populations are small, landfills are close to the coast, landfills are close to tourist or population centres or where landfill operators do not use leachate controls. These conditions are common in PICs.

Theory suggests that the appropriate response to these shortfalls includes correcting pricing arrangements such that waste producers pay for every unit of waste produced at a price that is equal to the full costs to society of managing another unit. This may include removing subsidies of disposal costs (which are often subsidised via municipal rates) and unit-based pricing; and introducing a disposal charge that ensures that costs of disposal equal the full social costs of that disposal.

In some Pacific Island nations, such as Tuvalu, the marginal cost of dumping is very high due to severe constraints on landfill. At the Tuvalu dump site there is a lack of equipment, a lack of land and a lack of topsoil to cover the waste. In this situation, the marginal price to dump waste would need to be set very high to cover marginal cost. This creates a different problem: the required price may be so high as to disincentivise dumping there, and illegally dump instead.

Theory also suggests that in an event like this, it is not efficient to impose a high price. The potential to create perverse incentives for illegal dumping would render the tax ineffective. That suggests that a mixed-incentives approach to waste levies is often best. A mixed-incentives approach will apply a rate that is as high-as-possible, then include subsidies to encourage recycling or other waste minimisation actions (like nudges, like easy to use recycling bins, or establish schemes like container deposit refund schemes). And other policies consistent with this include producer responsibility systems that essentially privatise the funding and subsidy.

### *Lessons from the literature on tax concessions for positive environmental impacts*

A subsidy is defined as environmentally motivated if it reduces directly or indirectly the use of something that has a proven, specific negative impact on the environment. This covers environmentally motivated subsidies consisting of payments from government to producers, or of preferential tax treatments with the objective of influencing the level of production, the price, or the remuneration of the factors of production (OECD Metadata definitions, 2016).

One option for reducing a specific negative impact on the environment is to provide tax relief for environmentally 'good' alternatives. Tax concessions (and other subsidies) change the relative cost

of a targeted activity and have an expansionary effect on the activities targeted—working in a broadly similar way (but opposite direction) to a Pigouvian tax.

Thus, the principles for evaluating a tax concession or subsidy are like those for a Pigouvian Tax, which are outlined above. Tax concessions are more likely to be feasible when the following criteria are met:

- Measurability: the damaging activity, or a reasonable proxy of it, can be measured.
- Risk tolerance: there is enough time for the subsidy instrument to be developed and refined and put into practice.
- Enough scale: the environmental problem is sufficiently large-scale and persistent to justify administration and compliance costs.

The relative benefits from a subsidy approach are potentially larger when:

- Diversity of responses: there is less 'picking winners' required (and the range of acceptable responses to the subsidy is wide).
- Cost: the cost of the subsidy is small, allowing for the fact that a subsidy will displace spending on other government priorities.

Like for taxes, policy considerations for tax concessions include:

- distributional impacts
- as much as possible, ensuring the value of the subsidy aligns with the marginal private benefits needed to incentivise behavioural change
- the degree of localisation of the concession or subsidy
- addressing industry competitiveness concerns.

Box 3: Problems with using tax incentives / tax expenditures

There are significant practical issues arising from the use of tax incentives ("tax expenditures") that typically don't arise when using negative externality taxes (OECD, 2017). This suggests a more cautious approach. This is not to say the Government shouldn't ever subsidise positive environmental behaviours using tax incentives. Only that tax incentives may be a relatively blunt and expensive way to do it.

First, the effectiveness of tax incentives and subsidies can be limited for some types of environmental problem. Effective action on environmental issues that are caused by a large, dispersed group (like climate change, ocean pollution, over-exploitation) require substantial changes in choices not just by individual citizens or countries, but globally and collectively. Such substantial changes would require large subsidies, across a number of jurisdictions. Not only would government need to raise taxes to fund these subsidies (or make up for revenue foregone through tax exemptions), but there is a deadweight loss to the economy of these higher taxes: that is, loss to economic growth because individuals react negatively to higher taxes. The high direct and deadweight loss cost of subsidies may make them politically unacceptable on a sufficiently large scale to address the various issues affecting ocean health.

Second, as is the case with externality taxes, the government needs a considerable amount of information in order to be able to use subsidies to effectively impact consumption decisions in this manner. It must have information about the relative advantages and disadvantages of different products or choices and the level of incentive required to induce individuals to make the desired choice. The potential for government error is high, and the stakes are high, as subsidy programs influence production and research and development. Even if the government can allocate funds optimally, there remains a risk of rent-seeking (i.e. private interests influencing taxes and subsidy policies in their favour).

Third, since it is difficult to subsidise all the environmentally beneficial alternatives to the harmful activity, tax subsidies inevitably involve "picking winners", which may prejudice other good alternatives. For example, unlike a tax on road fuel, a subsidy for low-emission vehicles does not provide any incentive for commuters to consider alternative forms of transportation such as public transit or cycling. In some cases, tax subsidies may indirectly increase the harmful behaviour.

Fourth, subsidies are costly, and must be paid for by other taxpayers, reducing their real disposable incomes. Further, since it is difficult to restrict the benefit of subsidies to those who required the subsidy to induce them to undertake the environmentally preferred activity, a significant portion of the cost typically relates to "free-riders" – those who would have undertaken the activity even without a subsidy.

Fifth, the fiscal cost of tax subsidies tends to be less transparent than direct spending, and they are often not subject to the same level of legislative scrutiny as spending programmes. International experience with tax concessions suggests they can be vulnerable to lobbying, potentially undermining the coherence of the tax system. Tax concessions can potentially be directed towards causes with the loudest voice, as opposed to causes with the greatest positive environmental externality.

Finally, unlike negative externality taxes, tax incentives do not raise revenue. Instead, tax incentives are a form of government spending.

Creating schemes where parties receive valuable credits for environmental services is an alternative approach to tax concessions and direct subsidies. For example, in the same way foresters can claim carbon credits through the emissions trading scheme for engaging in abatement activity, it may be possible in the future to design credits for engaging in coral planting and penalties for damage to corals.

### Box 4: Tax treatment for donors

**Reference: Oliver, R, Murray K and Wyatt, S (2014) Evaluation of Tax Revenue Reform in Pacific**

Pacific countries are heavily reliant on donor and foreign aid to deliver projects. It is tempting to consider donor funds as 'free money' for furthering ocean goals, and to consider ways to use tax concessions to incentivise donors to undertake projects. This box explains why the temptation should be avoided where possible.

Tax exemptions, and especially tax holidays which are time-limited exemptions from the corporate income tax, are among the most damaging of tax practices. A high occurrence of tax exemptions reduces the tax base, creates room for bribery and corruption, and increases the appearances of loopholes for tax evasion. Often, exemptions are misguided: private investment is more likely to respond positively to more predictable, unambiguous tax policies and practices than to specific changes in tax regimes.

Projects involving development, humanitarian and other assistance provided by donors often enjoy tax exemptions. Often these exemptions are at the insistence of donors, due to an underlying presumption that such projects should be tax-exempt. Exemptions may apply to imports and procurement of goods and services, and may extend to both direct and indirect taxes (including customs duties). The means by which exemptions are provided for could include a variety of legal instruments and administrative practices: exemption might be granted by the general domestic tax rules, by general rules of double tax treaties, by specific exemptions in domestic law directed to international assistance, or by bilateral agreement.

Possible transactions and taxes to which exemptions apply include non-residents importing goods either temporarily or permanently (possible exemption from customs duties, VAT and other indirect taxes) or non-residents coming to the country to provide services to be paid for using project funds and stays in the country for only a limited period of time (possible exemption from individual income tax and social contributions, perhaps under a general provision of domestic law, under treaty provisions or under a bilateral agreement).

Tax exemptions impose costs on tax administrations of recipient countries in keeping track of the various exemptions provided and administering them. This difficulty is amplified by the diversity of the practices and expectations of the multiple donors that recipient countries may need to deal with. The administrative burden and the risk of fraud can vary depending on the way that exemptions are structured. Not least, granting exemptions to any market participants always runs the risk of creating pressures for further exemptions, whether directly as a means of alleviating competitive distortions that the initial exemption created or indirectly by creating a precedent that others can call on.

Amongst the international aid community there is increased awareness of the difficulties created by exemption. Simultaneously, there has been an easing of some of the concerns that have traditionally made donors reluctant to pay tax on their support. For example, in the past donors may have had concerns about "unreasonable" taxation in recipient countries (high tax rates or tariffs, or double taxation), or about how their contribution to the host country government coffers might be spent. Pacific countries, and developing countries worldwide, have made substantial progress in reducing rates of tax, removing trade taxes and improving the transparency in public expenditure. For these reasons, it is hard to find a convincing rationale for a donor who is simultaneously providing both targeted and general budgetary support to insist on tax exemptions.

### Box 5: Taxes on ocean bonds

The introduction of environmental (green, blue) bonds is prompting questions about whether there are tax incentives policy makers can put in place to encourage issuers. The international literature highlights three possible incentives that can be provided either to the investor or to the issuer:

- Tax credit bonds: bond investors receive tax credits instead of interest payments, so issuers do not have to pay interest on their green bond issuances. An example of this in the area of clean energy is the U.S. federal government Clean Renewable Energy Bonds (CREBs) and Qualified Energy Conservation Bonds (QECBs) program. The program allows for the issuance of taxable bonds by municipalities for the purposes of clean energy and energy conservation, where 70% of the coupon from the municipal is provided by a tax credit or subsidy to the bondholder from the federal government.
- Direct subsidy bonds: bond issuers receive cash rebates from the government to subsidize their net interest payments. This structure is used under the U.S. federal government Clean Renewable Energy Bonds (CREBs) and Qualified Energy Conservation Bonds (QECBs) program
- Tax-exempt bonds: bond investors do not have to pay income tax on interest from the green bonds they hold (so issuer can get lower interest rate). This type of tax incentive is typically applied to municipal bonds in the US market. In the green bond space specifically, an example to highlight is tax-exempt bond issuance for financing of wind projects in Brazil.

A recent bond project in the Seychelles highlights the policy choices available to governments. The Seychelles government was tasked with considering how it could make a proposed project with Thai Union (a very large fishing company) possible. To make this project viable, the Seychelles government had three options to consider:

a) provide a tax credit or direct subsidy to the bond using one of the forms of incentive highlighted above,
b) provide indirect support, or
c) provide a long-term commitment to share risk.

According to an interview with a blue bond specialist, the Seychelles government recognised that tax incentives were the least-best option. Tax incentives were not preferred because:

- The chances of getting a tax incentive wrong are high and an incentive policy is inflexible once in place
- Tax incentives provide a signal to all investors, but it is incumbent on the government respond to the proposals that are on the table, not the ones that 'might come about eventually'; frequent changes to tax policy can create policy uncertainty and undermine investment incentives across the board
- Incentives are financed from tax revenue and collecting tax involves deadweight losses
- Administering a tax incentive invokes compliance and administrative costs.

There is context to consider, also. The Pacific context for investment is different to New York or Zurich. There is very little bond financing and a shallow pool of expertise to draw from.

Box 6: Low cost subsidies to encourage the voluntary collection of abandoned, lost and discarded fishing gear

Perhaps the best opportunities to subsidise ocean health is through low-cost direct subsidies and 'nudges' (which prompt better behaviour simply by making it easy for people to do the right thing). One low-cost possibility for encouraging vessels to retrieve abandoned, lost or discarded fishing gear is a Fishing for Litter subsidy. This low-cost mechanism is widely used in Europe and has been successfully promoted by an NGO called KIMO. It does not involve financial payments for fishing vessels who retrieve abandoned, lost or discarded gear. Research in Europe found that fishing vessels simply wanted an 'easy' place to put the waste they caught or the fishing waste they created – a nudge in the right direction rather than payments. Fishing for Litter requires a government to 'subsidise' the fishing industry simply by placing very low-cost bins on board fishing vessels and providing easy-to-offload waste facilities at ports, with consistency of treatment of waste between ports. < www.kimointernational.org/fishing-for-litter/>

Over time, the cost of a Fishing for Litter scheme could be financed using tax or non-tax revenue from the fishing industry.

### *Lessons from the literature on removing harmful subsidies*

Some types of tax concession create negative environmental impacts on the ocean (for example harmful fisheries subsidies and subsidies for seabed resource extraction). The literature unanimously supports the removal of these subsidies where the costs of providing the subsidy exceed the benefits.

The guiding principle for removing harmful subsidies is:

- Quantify the cost of a subsidy: what are the subsidy's net effects and are their costs and benefits positive;
- and remove it they are not delivering enough benefits to justify the 'harm'.

The literature suggests that detailed reviews are necessary to establish if subsidies are delivering enough benefits to justify the foregone revenue. For example, a recent, detailed look at fuel subsidies in Kiribati (Pacific Community, 2017) found that the Kiribati government spends millions of dollars a year subsidising fossil fuels (estimated on average AUD 7.1 million a year on the three main fuels, excluding possible subsidies on electricity consumption). It recommended phasing out those subsidies. The study estimated that in the Gilbert Islands, the average estimated subsidy in 2011–2014 received by fishing is about AUD 1.2 million per year.

### Box 6: Do fuel subsidies exist in the POFP11 countries? And do fuel subsidies help or harm?

We have undertaken a desktop review to try to answer two central questions. First, which countries among the POFP11 have fuel subsidies and what form do those subsidies take? Two, what are the possible ocean effects of those fuel subsidies?

The identification of fuel subsidies is not altogether straightforward. Subsidies can arise through various mechanisms, such as direct support or reduced tax rates; subsidies may also come about via implicit or indirect support through other mechanisms such as subsidisation of port facilities, or non-recovery of the costs of a price control mechanism.

*How fuel subsidies affect the ocean*

There are clear interactions between the price of fuel and the ocean environment.

First, a subsidised fuel price will (all else being equal) incentivise greater use of that fuel than would otherwise be the case. This, in turn, would lead to more shipments of fuel, a higher risk of accidents with resulting fuel spillages, and greater discharges from tankers visiting the territorial waters of Pacific islands. Furthermore, subsidies that affect the price of marine gasoil, marine dieseloil, diesels and benzenes might incentivise more fishing activity or longer trips, which can lead to greater exploitation of fish stocks if the stocks are inadequately managed. Numerous studies have shown that fuel costs are an important predictor of fisher behaviour: fuel represents one of the largest costs associated with individual fishing trips, while the actual proportion attributable to fuel varies greatly between fisheries (Sumaila et al., 2008). The fuel consumption of a fishing vessel at a given fuel price varies depending on a variety of factors and conditions, for example vessel size, age, and condition, engine power, vessel speed and gear configuration, sea state and weather conditions. For these reasons it is difficult to formulate conclusions about the effects of a fuel subsidy on fisher behaviour, aside from a general conclusion that trips will be longer and more profitable with a fuel subsidy than without. Incentivisation of more industrial activity in coastal areas than otherwise could also be a problem.

Second, subsidised fuel prices could incentivise residents in Pacific islands to make different decisions regarding household uses of fuel. Low prices of kerosene might incentivise continued use of that fuel instead of switching to electricity (using either solar panels or connected supply). Equally, subsidies that incentivise the application of certain fuels for electricity generation, which might help move residents away from other types of fuel (e.g. use of firewood which depletes forests and may cause runoff to coastal waters). (The use of firewood is less of a concern in Pacific island countries than in other SIDs. Biomass in the form of coconut shells is a more prominent source of household energy than firewood (Pacific Community, 2017).

Third, the use of government revenue to support a fuel subsidy scheme means that there is less overall government revenue to support other spending choices, which may include support of initiatives to improve ocean outcomes.

Last, the consumption of fossil fuel has a demonstrated and well-understood effect on global warming.

All these effects will work in connection with each other, and the strength of the effect will vary from location to location. Fuel consumption behaviours in urban areas (where connected electricity supply is more established) will differ from those in outer islands. So even if a subsidy is identified the effect at a national level can be difficult to determine. It may be unambiguously harmful or beneficial, or the combined environmental impacts may provide a mixed view. For example, a subsidy on diesel may stimulate uneconomic fishing activity in locations where fish stocks are low and unmanaged (an environmental cost). On the other hand the same subsidy might make the generation and supply of electricity more reliable, which could then have a positive effect on coastal resources through reduced demand for kerosene and portable fuels that rely on containers that are more likely to be dumped in a coastal environment (an environmental benefit). And the same subsidy might result in a changed profile of

carbon emissions (an environmental cost or benefit, depending on what sources of energy have been displaced).

*Identifying fuel subsidies*

A 2017 study into fuel subsidies in Kiribati using a "price-gap" approach determined that price controls and tax reductions gave rise to fuel subsidies of between AUD 0.20 and AUD 0.60 per litre for different fuels over the 2011-2015 period (Pacific Community, 2017). The expenditure on the fuel subsidy programme equated to between 4% and 5% of the GDP of Kiribati.

The price-gap approach is a widely used method for determining the existence of a subsidy. The method involves establishing a cost recovery price for a commodity, including a return to capital, which is then compared with the actual price. The difference is the price gap. Where the cost recovery price exceeds the actual price, it can be inferred that a subsidy exists.

While this approach is theoretically appealing, a difficulty arises when trying to compare the small developing countries in the POFP11. Consistent information which includes the POFP11 is not readily available. For example, the United Nations Conference on Trade and Development (UNCTAD) holds fuel data for only Fiji, Vanuatu and Samoa. A recent UNCTAD report, Sustainable fish and seafood value chains and trade,[27] did not provide data for any of the POFP11 when comparing the price of marine gasoil. We followed up the source data for the report and were not able to add to locate additional data. Another difficulty presents itself when looking at the transport, unloading, and storage costs of fuel, which can be difficult to determine across different countries. Publicly available information can provide an indication of these costs, but not in enough detail to determine with accuracy what those costs are.

*Our approach is simpler, but avoids data challenges*

We have therefore taken an approach which aims to identify possible subsidies without a full price-gap analysis for each. We

- Compared the pre-tax price of fuel across similarly connected countries (e.g. countries that are served by larger tankers)
- Searched tax legislation to determine if a fuel (e.g. benzene) has preferential treatment compared to other fuel types.
- Searched tax legislation to determine if fuel has preferential treatment compared to other commodities

*Limitations of our approach*

Our approach is limited because often we only had the information available to us to use one or two of these three available desktop methods. Because of these limitations in published data, the analysis only identifies *possible* subsidies in POFP11 countries rather than conclusively determine whether they exist. Other subsidies can emerge through other policies, such as price-controls on electricity: for example, a subsidy could emerge through a government-owned electricity supplier making an on-going loss.

The analysis may show a subsidy, but it is more complex to determine - with certainty - the effect of subsidies. For example, we may have found lower rates of excise on one fuel compared to another (bullet two, above). But differential rates of excise can be justified on the grounds that road user charges are applied appropriately elsewhere, or that import duties on certain types of vehicle ensure that correct economic incentives are preserved. Differential rates might arise due to price control policies. The presence of a price control policy on its own is not enough evidence that fuel subsidies exist. Price controls may exist as part of a policy to ensure that a sector with natural monopolies (e.g. port infrastructure) is not able to extract monopoly rents. So long as the costs of operating price controls are recovered over time it is not likely that the price control scheme serves to underwrite a subsidy on fuel.

[27] UNCTAD, Achieving the targets of Sustainable Development Goal 14: Sustainable fish and seafood value chains and trade, July 2018

Lastly, one size does not fit all: the interactions with other policies and with ocean health are not consistent between countries or indeed consistent over time. Because of this a fuel subsidy does not necessarily lead to outcomes that are detrimental to oceans, and in some circumstances may be consistent with other policies designed to bring about positive environmental outcomes. All in all, identifying the linkages between fuel subsidies and ocean health is challenging.

**Table of possible fuel subsidies identified for POFP11 countries**

| Country | Is there a subsidy that affects the ocean? | Finding | Method used |
|---|---|---|---|
| Fiji | Maybe. There is possibly a subsidy that applies to fuels used by fishing vessels (IMF study). | Lower excise rates on diesel compared to gasoline<br>Also, IMF[28] notes a very low level of subsidy on a price-gap measure | Search of tax legislation to determine if a fuel (e.g. benzene) has preferential treatment compared to other fuel types<br>Comparison of pre-tax price of fuel across similarly connected countries |
| Samoa | One cannot conclude that there is a subsidy using the methods we used. | Lower pre-tax cost of all fuel types compared to countries with similar supply costs<br>Lower excise rate on diesel compared to gasoline | Comparison of pre-tax price of fuel across similarly connected countries<br>Search of tax legislation to determine if a fuel (e.g. benzene) has preferential treatment compared to other fuel types |
| Marshall Islands | One cannot conclude that there is a subsidy using the methods we used. | Lower excise rate on diesel compared to gasoline | Search of tax legislation to determine if a fuel (e.g. benzene) has preferential treatment compared to other fuel types |
| Nauru | Maybe. It appears benzene is treated favourably. | Lower excise rate on benzene compared to other types of motor spirit | Search of tax legislation to determine if a fuel (e.g. benzene) has preferential treatment compared to other fuel types |
| Tonga | One cannot conclude that there is a subsidy using the methods we used. | Lower pre-tax cost of fuel compared to countries with similar supply costs | Comparison of pre-tax price of fuel across similarly connected countries |
| Vanuatu | One cannot conclude that there is a subsidy using the methods we used. | Lower pre-tax cost of fuel compared to countries with similar supply costs (however, IMF[29] price-gap study does not support the existence of such subsidies) | Comparison of pre-tax price of fuel across similarly connected countries |

[28] Ibid p.22

[29] Ibid

| | | | |
|---|---|---|---|
| Kiribati | Maybe. There is possibly a subsidy that applies to fuels used by fishing vessels. (Pacific Community, 2017) | Study shows a price-gap indicative of a subsidy<br>Lower excise duties on fuel oil compared to other types of fuel | Comparison of pre-tax price of fuel across similarly connected countries<br>Search of tax legislation to determine if a fuel (e.g. benzene) has preferential treatment compared to other fuel types |
| Federated States of Micronesia | One cannot conclude that there is a subsidy using the methods we used. | Lower rate of excise on fuels compared to other commodities | Search of tax legislation to determine if fuel has preferential treatment compared to other commodities |

*Source: Sapere Research Group analysis*

See appendix 4 for detailed tables.

*Lessons from the literature on taxing resource rents and imposing royalties.*

In many PICs, the Crown has a significant ownership interest in seabed minerals (or the Crown acts as an agent for the native owners of such minerals, as is the case in Fiji). Resource taxes can compensate the Crown (or other owner) for the right to take ownership of its property.

The fiscal regime for resource extraction (such as deep sea mining) typically includes three main fiscal instruments namely royalties, corporate income tax and related withholding taxes, and resource rent taxation (Mullins, 2016). It is acknowledged that other instruments, such as licence fees and bonuses will form part of the overall fiscal regime and that any assessment of the fiscal regime must take account of all fiscal instruments.

The rationale for taxing resource rents and imposing royalties is different to taxing externalities. For this reason, the New Zealand Tax Working Group suggested a different framework for setting them, specifically:

- Ensuring a "fair" return to the resource owner: the tax should seek to recover the resource rent, while ensuring adequate incentives for investors to develop resources.
- Efficiency: deadweight losses should be minimised.
- Administrative complexity: tax instruments should aim to be simple and transparent.
- Risk sharing between the Crown and industry: risk should be allocated to the party best able to manage it.

Source: (Tax Working Group (New Zealand), 2018)

Taxing resource rents are sometimes advocated as a means of efficiently raising revenue because they can be non-distortionary when they tax only the economic rent. Economic rent is the income generated by a resource over and above what is needed to keep it in its current use. It is sometimes referred to as "surplus profit" (Tax Working Group (New Zealand), 2018).[30]

[30] Rents or surplus profits can be especially large in natural resource markets because of restrictions on competition. If firms are earning surplus profits, other firms are incentivised to enter the market, driving down

Corporate Income Taxes can be applied to resource rent payments, so that even if the resource owner is not the Government, the Government earns a portion of the payment received by the resource owner. A detailed review of taxation principles for deep sea mining taxation is provided in (Mullins, 2016).

### *Lessons from the literature on hypothecation or earmarking*

An advantage of environmental taxes (both externality taxes and resource taxes) as a policy tool is that they raise revenue. One of the ways governments can use this revenue is "revenue recycling" to reduce other more distortionary taxes. Alternatively, revenues can be earmarked for funding specific projects or area of government spending—a process known as hypothecation.

Hypothecation of tax is the dedication or earmarking of revenue raised from a specific tax for a programme or service. In Tonga for example, the waste disposal levy is hypothecated to waste minimisation projects. In Fiji, the plastic bag environmental levy is not hypothecated to waste management, but to a broader goal of environmental adaptation. But in other countries (like Ireland) they have opted to hypothecate plastic bag levies to support waste management, litter and other environmental initiatives. In the UK, revenues raised by the plastic bag levy is given to charity, clearly demonstrating that the levy is about behavioural change (and not a revenue collection exercise for government).

Earmarking of revenues for environmental purposes can not only ensure that revenues are used in the economic sector within which they are raised but can help to make an explicit link between taxes and environmental benefits, thereby increasing support amongst policymakers, the public and those paying the tax. Earmarked taxes create strong expectations of transparency and immediacy, which can put political pressure on governments to account effectively for monies they gather and spend (but also put pressure on them to spend on short-term 'quick wins' instead of long-term investments).

Despite these benefits, tax revenues are generally not hypothecated. There are several good reasons for this. The principle reason is that hypothecation is generally inconsistent with the objective of directing the Government's revenue towards its highest value use. Hypothecation can result in under or over funding of an expenditure item, relative to what might be judged optimal through the budget's prioritisation process. Further—

- Hypothecating revenues from environmental taxes into 'earmarked' funds can 'crowd-out' both government and private expenditure on the environment—the tax and associated expenditures could be perceived as having 'fixed' the problem (Bazin, Ballet and Touahri, 2004).
- The technology and capabilities may not be present in the country to invest in projects that will create change.
- The revenue raised by the tax may be higher or lower than the optimal level of expenditure on correcting the environmental problem.

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the price. However, this is not always possible with natural resources – a firm might have exclusive access to a scarce resource, and there may be high barriers to entry.

If hypothecation is used, there are several potential principles for guiding where revenue from ocean taxes should be allocated (Tax Working Group, 2019). These include:

- Compensation for harm: Where a tax instrument is linked to an environmental externality, the community most negatively impacted by that externality might have a stronger claim to compensation. This points towards local recycling of revenue from local environmental problems.
- Compensation to owners: Where a tax instrument aims to capture rents of a natural resource, there is a case for revenue going to those with the strongest ownership claims on the resource.
- Efficiency of revenue use: Revenue can be directed to its highest value use, be it improving environmental outcomes or funding broader government priorities, if it is not hypothecated and instead collected by central government. Efficient revenue recycling also requires central collection—central government cannot reduce more distortionary taxes if they are not collecting the offsetting revenue from externality taxes.

It may well be true that there is a clear rationale both to raise green taxes and to spend more on environmental objectives. But if so the case for each should be made on its own merits rather than making one contingent on the other.

*Lessons from the literature on social norms and values*

Sociologists recognise that people's identities can be influenced by their behaviours and the behaviour of those around them. People can also learn to value something through their experiences. Recycling provides a simple example. In many places, it began with much grumbling under the pressure of increased costs for oversized garbage loads. Today in many developed countries it is 'second-nature' for many people, who have come to view it as a normative behaviour. This has led to increased recycling even under reduced enforcement. Prohibition provides an illuminating counterexample; short-term declines in consumption of alcohol in the face of severe penalties did not lead to widespread or long-term temperance. Effective policies, then, are ones that both induce short-term changes in behaviour and longer-term changes in social norms. So, in many ways a tax or subsidy should be judged not just on its efficiency or direct effectiveness, but its effectiveness at changing values, opinions and social norms.

Box 7: Shifting values and norms

**Reference: Andrew Green (2006), You Can't Pay Them Enough: Subsidies, Environmental Law, And Social Norms, Harvard Environmental Law Review Vol.30**

Some environmental economists argue that making progress on climate change or ocean pollution depends not on efficiency concerns, but instead on a fundamental shift in values—a new "environmental ethic" displayed in everyday social 'norms'. The ultimate of environmental policy is to motivate behaviours that become self-reinforcing even in the absence of external regulations or penalties.

Recent research on environmental economics has emphasised the point that external, transactional incentives (which include charges, fees, levies, taxes, subsidies and tax concessions) are less likely to change behaviour in the large-group, negative payoff contexts that characterize many environmental problems, such as climate change and over-fishing in the open seas (Green, 2006). While transactional incentives do help individuals to acquire information that helps them determine their personal set of preferences, they are weak at changing underlying values. As Doremus notes, "paying people for environmentally responsible behaviour may erode the societal desire to conserve." (Doremus, 2003)

For example, subsidies are intended to change the relative cost of the environmentally friendly action and therefore increase the number of individuals engaging in it. While subsidies may have such a relative price effect, they may have an unintended effect: they may negatively alter individuals' environmental values and make it more difficult to address environmental harms in the long run (Green, 2006). Subsidies may have this effect by signalling that care for the environment should be viewed as a price, rather than a responsibility—if someone is willing to pay the price (forego a subsidy for importing biodegradable plastics for example), they have no further responsibility.

Further, such subsidies may "crowd out" responsible behaviour—either simply offsetting existing motivations or changing an individual's commitment to a behaviour. It may reduce the impact of externally or internally enforced norms or commitment (Green, 2006)Such impacts are context dependant but must be taken into account if real environmental change is to occur.
Furthermore, any discussion on changing behaviour should recognise that government is only one of many parties and interests in democratic systems acting to influence values and social norms; other parties include, for instance, corporations, charitable organizations, neighbourhood groups, churches and schools.

Others argue that influencing social norms depends on who you influence. If enough people, or certain people (e.g., those with disproportionate social influence adopt these norms, there may be a "tipping point" (Gladwell 2000, Levin et al. 1998) such that environmentally friendly norms become widely shared, and positive behaviours pervasive.

### *Lessons from the literature on ensuring there is political support for a new tax*

The literature highlights the need to pay attention to the political situation (Murray, Oliver, & Wyatt, 2014). Political support is needed before implementing a new tax or subsidy into law. Therefore, there is an emphasis in the literature on the procedure used to introduce new taxes.

The indicators of good tax procedure include (Murray, Oliver, & Wyatt, 2014):

- there is clarity as to objectives of reform
- informed and reasonable expectations as to what can be achieved
- a shared and credible evidence base, including evidence to evaluate the proposal in against tax policy principles
- taxation advice is consistent with good tax design principles and accounts for local conditions and context
- If there is an external sponsor or donor pushing the tax, that external party must negotiate the reform programme with the host country on relatively equal terms and maintain formal and informal dialogue.

### *Tax policy principles*

The third bullet notes the importance of a shared and credible evidence base, and the need to evaluate new taxes against tax policy principles. The principles, for all taxes, include:[31]

- efficiency (to what extent will the policy help the tax system to minimise impediments to economic efficiency and growth);
- equity and fairness (the degree to which the proposal will support the Government's goals for vertical and horizontal equity);
- compliance costs for the taxpayer or customer are minimised;
- administration and system costs are minimised; and
- integrity and coherence of the tax system is maintained and enhanced.

### *Ensuring a new tax has political and social support*

A new tax is less likely to be introduced where there is a low degree of social acceptance of the need for the new tax, relative to other needs. Unpopular taxes or subsidies will be removed, or cause uncertainty. If there is no effort to win hearts and minds prior to adopting legislative change, it will be less likely to be passed into law and less likely to be maintained. There needs to be a high degree of trust in the taxpaying community in government to deliver on promises.

There is a need to think about the tax system as a system. The way that different taxes fit together matters, as does being clear about the role of the possible new tax in the system.

[31] These are the principles adopted in New Zealand's Generic Tax Policy Process.

# 4. Methodology for identifying ocean-related taxes and subsidies (status and opportunities)

This section builds on the conceptual model set out in section 3 to provide an analytical tool kit to help in assessing whether a proposed tax or subsidy is currently supporting ocean health goals ("Status" assessment) and/or would be a preferable intervention (relative to other plausible policy measures) to promote ocean health objectives ("Opportunity" assessment).

In our analysis of existing taxes and subsidies used by POFP11 countries, we have followed a test which considers the connections between the tax or subsidy and ocean health alongside the stated goals and legislated settings.

### *Populating the status list*

The **Status** list has been assessed by considering whether there appears to be a **current connection** between Pressures →Policy Type →Impacts → Sustained Ocean Finance. Taxes and subsidies were included in profiles if they met the existing policy meets the study criteria (see page 19) and if they had a connection to ocean health (i.e. is motivated by environmental objectives or relates to one of the ocean pressures). We looked for good not perfect as it is not possible to judge things like political acceptability or administration for every type of tax. Any evaluation will be highly subjective and 'authors' opinion. Objective, replicable analysis is not possible because we have not found objective or replicable ways of judging the administration or political aspects. There *are* tools for accessing tax administrations like the IMF's TADAT diagnostic tool, but they are not currently applied to the smaller PICs.

### *Sources*

Taxes used by POFP11 governments were identified from tax legislation, customs legislation, government budget documents, press search and interviews with tax professionals and/or public servants from the country.

Subsidies provided by POFP11 governments were identified from mostly online sources:

1. Customs and tax legislation of POFP11 countries, to identify tax-based subsidies
2. A web search based on the terms "incentives" or "investment" and the country name
3. The budget statements of POFP11 countries, including budget statements for Ministry of Fisheries, Ministries for Environment and Ministries of Commerce/Industry
4. The websites of Paclii, SPREP, Edge Effects (Fishing Subsidies), IMF, PFTAC, IISD, ICRI Forum
5. FFA annual report
6. BIOFIN database
7. The online SIDS Action Platform database, filtered by SDG 14 "Life Below the Water"
8. A list of activities and projects co-funded by the European Union (provided to the research team by the European Union)
9. Interviews with officials in Vanuatu, Marshall Islands, Fiji, Samoa and Tonga

The resulting list of taxes and subsidies was evaluated by an analyst to distinguish between taxes and subsidies that had a strong, clear connection and those for which the connection was not clear.

A positive connection was noted where the tax or subsidy results in increased value of the ocean resource because it:

- intensifies ocean-friendly behaviours, values or norms (ALIGN)
- reduces ocean-harming behaviour, values or norms (ALIGN)
- funds or it materially benefits ocean-friendly projects and activities (GENERATE)
- sufficiently meets the policy right, administered well, political acceptability conditions.

### *Validation*

In Tonga, Vanuatu, Samoa and Fiji we supplemented online research with interviews with government officials, business operators and NGOs. Thus, the quality of the evidence for Fiji, Vanuatu, Samoa and Tonga is higher than for the remaining countries.

At a conference event for Pacific Island tax administrators we met individually with representatives of the tax administrations of Palau, Nauru, Republic of Marshall Islands, Federated States of Micronesia, Vanuatu and Tonga. We individually validated the tax profiles during those meetings, as much as practicable.

### *Ocean tax profiles*

We prepared an ocean tax profile for each POFP11 country, which outlined its tax settings, its tax context and the taxes and subsidies we identified that have a connection to ocean health.

### *First cut – 80 taxes or subsidies identified*

We identified 80 existing taxes or subsidies that have a link somehow back to ocean health. This collated represented what we could establish about each country's tax system from online research using tax and customs legislation, literature search and press search. The result was a more comprehensive list of taxes that incorporated the RESCUUE (2014) *Greening Taxes and Subsidies in the Pacific* project list.

### *Considering opportunities*

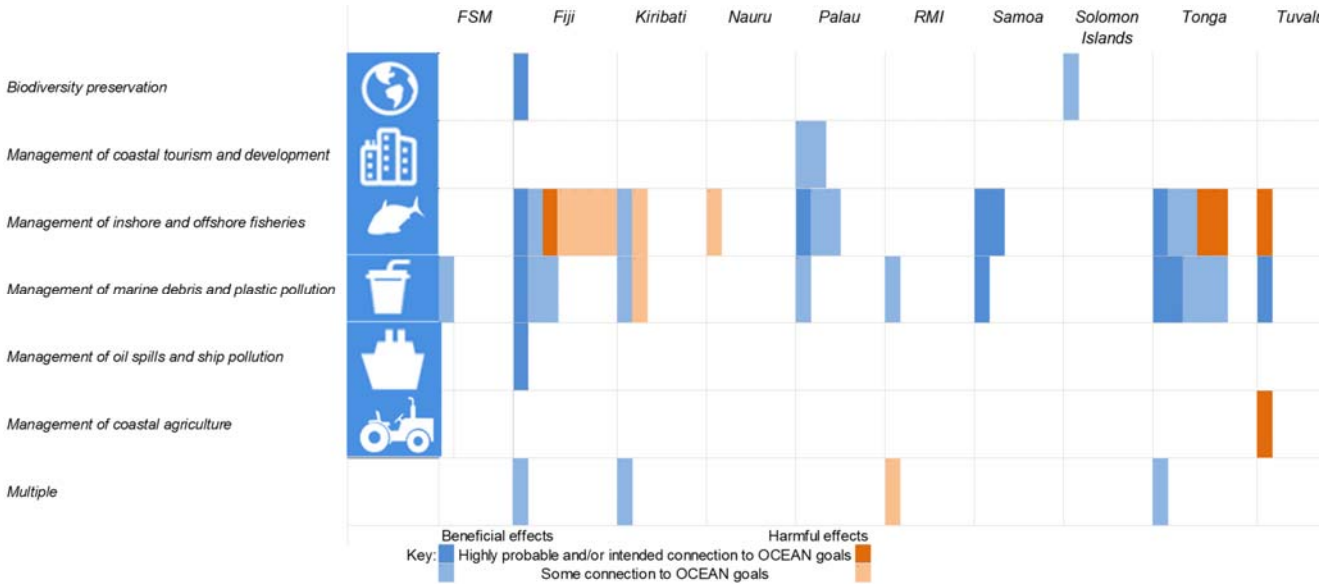
**Opportunity** is assessed by considering whether there are taxes or subsidies that might create a **future connection** between Pressures → Policy Type → Impacts → Sustained Ocean Finance, and where criteria 1)a.-b. and 2)a. – d. above could be achieved, say, in the next five years?

# 5. Findings: ocean-related taxes and subsidies

## Overview of taxes and subsidies with clear connection to ocean health

The infographic present below shows the repartition of taxes and subsidies among the POFP11 countries depending on their ocean health goal. The adjudged strength of the connection between the tax or subsidy and ocean health is indicated by colour. Dark blue shows a highly probable beneficial effect; dark red shows a highly probable harmful effect.

*Figure 14 Taxes and subsidies and connection to ocean health*




*Source: Sapere and VertigoLab*

## Which ocean-relevant environmental taxes are currently being used?

We have observed 34 taxes for POFP11 countries that have a probable beneficial connection to ocean health. These are taxes with a clear connection between ocean pressures and ocean health, following the method set out in section 4. These include:

- Deliberate waste Management (import) levies
  - Tuvalu, Tonga, Samoa (in development)
- Excises on products that likely to end up as waste (such as excises on imported carbonated beverages or water bottling ad valorem levies)
  - Palau, Tonga, Vanuatu
- Marine (oil) pollution levies
  - Fiji
- Plastic bag (consumption) levies
  - Fiji (we note there are bans on single use plastic bags in Vanuatu, Tonga, Samoa and Marshall Islands)
- Legislation providing for royalties and resource rent taxation on seabed minerals
  - Fiji, Tonga, Kiribati (in development)
- Taxes and levies as part of managed fisheries resource

    - Tonnage fees for purse seine tuna fishing (Fiji, Samoa, Tonga, Vanuatu)), transhipment fees (Fiji, Samoa)
- Tax finance directed to sustainable tourism infrastructure, environmental zoning, environmental monitoring, ocean resource management
    - Tourist levies such as Fiji Environment and Climate Adaption Levy (ECAL), Palau's Pristine Paradise Environment Levy

## Progress on removing harmful subsidies

In recent years some POFP11 countries have rationalised and removed tax subsidies, including harmful fishing subsidies and tax exemptions (we are aware that this has been an active policy choice in Vanuatu, Fiji, Marshall Islands for example).

Appendix 2 includes a list of approximately 80 taxes that POFP11 countries are using that are somehow related to ocean finance goals. For the vast majority of these, there is an assumed connection to ocean environment but the relationship to ocean finance goals is weak. (These taxes may in the future be used to align economic incentives with, or generate revenue for, ocean health so they have been kept on the master list, but the connection is highlighted as weak).

Our related observations on ocean-relevant environmental taxes include:

- There are fewer ocean-relevant taxes than we expected, and our field work interviews in Tonga, Fiji, Samoa, Vanuatu and Marshall Islands have revealed that while there is a desire to use taxes and subsidies to further ocean goals, officials have found it challenging to translate these objectives into active projects on the policy agenda. For example, while Marshall Islands committed to implementing a Blue Fee in 2016, this has not yet been implemented.[32]
- The ocean environment-related taxes that we did observe are recent additions to the tax settings in the countries (i.e. in the past five years). This indicates a trend toward environmental consciousness. Our desktop research indicates that Pacific countries are starting to use a mixture of policy tools to control waste. In the POFP11 set, waste policy employs a variety of policy tools including bans (Vanuatu, Samoa, Marshall Islands and Palau), plastic bag levies (Fiji), levies that finance waste management (Tuvalu and Tonga), whole-of-life cost charges (Palau) and container recycling deposit schemes (Marshall Islands). Fiji has recently announced it will include tax incentives to encourage the import of specialist recycling equipment, but this has not yet passed into legislation.
- There is no evidence of hypothecation to ocean projects in any of the POFP11 countries. There is one example of hypothecation of tourist taxes to environment and climate change adaptation outcomes (Fiji's ECAL) but there is no direct hypothecation of that tax to the ocean environment.
- There is no evidence of tax harmonisation between any of the POFP11 countries to achieve ocean health outcomes or environmental outcomes. While there are international tax

[32] The Blue Fee was to be an internal financial initiative that uses a percentage of the islands tuna fund for financing national biodiversity conservation effort and climate adaptation efforts. The Blue Fee was a commitment made by the Marshall Islands at a 10-year celebration of Island Leadership including the 10th anniversary of the Micronesia Challenge, coordinated by the Global Islands Partnership (GLISPA) during the Thirteenth Conference of the Parties to the Convention on Biological Diversity.

treaties that many of the countries have signed, these are motivated by protecting the revenue base, identifying fraud or avoidance or eliminating double taxation.

- No linkages between ocean health and tax have been demonstrated by POFP11 in published policy evaluations (even the detailed analysis of fuel subsidies in Kiribati did not explore the impact of those subsidies on fishing; the analysis of the ECAL tax did not highlight linkages back to the ocean). We have not seen evidence of tax policy documents exploring the links to ocean health.
- The taxes with impacts on the sustained management of marine debris and plastic pollution are have their greatest impacts on the hospitality, tourism and consumer sectors; meanwhile the fishing sector, while being a recognised contributor of plastic waste through 'ghost gear' is not taxed nor is waste collection subsidised (aside from the provision of basic waste collection facilities at some ports).
- Aside from the Marine Pollution Levy in Fiji, there appear to be no taxes and subsidies for the management of oil spills and ship pollution (subject to some further checking).
- Resource rental taxation (royalties) is in place in Tonga and Fiji for extractive industries. Interestingly, Fiji provides for compensation to indigenous landowners with an allocation of 80 percent of royalties from extractive industries in their territories on land or at sea.

In summary and as pointed out by RESCUUE (2014), there remains a mixed picture in terms of the greening of fiscal instruments and subsidies in the PICTs to achieve environmental objectives. Many of the tax and subsidy instruments used would benefit from a clear rationale and clear environmental objectives or criteria.

It is also evident that more can be done in the POFP11 to encourage coordination in policy instruments and reforms to ensure actions in one country does not lean against, or prevent, the achievement of the environmental objectives of another. The current push by the WTO to prompt the removal of harmful subsidies and the push by entities like the Pew Trust to reform reporting of transhipment at sea is a step in the right direction. As the pressures of pollution, natural habitat destruction, climate change and overexploitation of resources (fisheries) can occur in overlapping zones, there is scope for further harmonised approaches.

## Which subsidies are being used?

There are not many environmentally motivated subsidies being used in POFP11 countries, fewer than we expected. Fiji is the most active at providing environmentally motivated subsidies and has several aimed at changing the country's carbon emissions.[33] These subsidies have a weak connection to ocean health, however.[34]

[33] While their global influence is small, Pacific countries can reduce their carbon emissions by changing vehicle fleets and sources of energy. Tax concessions is one way of achieving this change. There are tax concessions provided in Fiji in relation to the import of low-emissions vehicles and low-emissions energy generation. This is the only example of subsidies provided in relation to climate change outcomes we have seen. (Regulation is used elsewhere, for example, Samoa uses regulation to restrict imports of cars older than 8 years old).

[34] Fiji's emissions reductions, while important, will not meaningfully impact on Pacific ocean acidification due to the scale of the global warming problem. Pacific countries have very little ability to influence climate change outcomes due to their size and low levels of industrialisation.

There are numerous examples of subsidies that are not environmentally motivated, but which have a likely, but unintended connection to ocean health. These include customs duty exemptions for fuel, agricultural equipment and fishing equipment. In Fiji there are also income tax exemptions which act as incentives for investing in small and medium sized fishing companies and sea cruise and tour operators. Samoa uses income tax exemptions to provide incentives for hotel investment.

Tax concessions and/or direct subsidies are provided to the fishing industry in Fiji, Palau, Tonga, Tuvalu and Vanuatu. In addition, Nauru and Kiribati have possible fuel subsidies. In each case, the subsidies impact on the profitability of inshore coastal fishing by small and medium sized vessels rather than deep sea fishing.

Subsidies for Near shore Fish Aggregating Devices (FADs) are provided in Vanuatu (with assistance from the FAO – the FADs are manufactured and deployed in compliance with environmental guidelines) and Tuvalu (the subsidy provided by the government is the working hours of relevant department and funding under the NAPA II (Tuvalu National Adaptation Programme of Action)).

The subsidies we have captured in this research are subsidies that affect incentives by providing a benefit to a party outside of government, so they are distinguishable from investments by governments in ocean programs that provide the foundations for investment by private parties and donors. [35] The fact that POFP11 governments are not providing many subsidies to incentivise ocean investment does not mean that they are not participating in ensuring ocean health. Increasingly they are mobilising resources from the ocean to pay for it. For example, the Marshall Islands Marine Resources Authority is in ongoing active collaboration with the Forum Fisheries Agency's (FFA) Surveillance Centre and Sea Patrol. It uses finance from Vessel Days Scheme to participate in the Vessel Monitoring Scheme (VMS), and the voluntary sharing of VMS data. Broader fisheries enforcement cooperation has allowed for improvement in regional monitoring, control and surveillance through tracking of the fishing vessels in the Western and Central Pacific Ocean. This has seen strengthened monitoring, control and surveillance implemented to address the issue of illegal, unreported and unregulated (IUU) fishing activities. This is one example of a regional conservation management measure employed by the Western and Central Pacific Commission.

[35] As an observation, POFP11 governments appear to be contributing a very small proportion of the current global investment in Pacific ocean protection, ocean mapping or clean up efforts. Instead, this work is overwhelmingly financed using donor funding. For example, the SPREP program includes Programmes for Climate Change, Biodiversity and Ecosystem Management, Waste Management and Pollution Control and Environmental Monitoring and Governance. Jointly, the POFP11 countries contribute $USD162,904 to the SPREP annual budget, of a total of $29.7 million. POFP11 countries are members of the Forum Fisheries Agency and are active participants in ocean initiatives such as those run by UNCTAD, FAO and UN Environment. The cost of the staff time is subsidised by the country but often the direct costs of travel (for example) are covered by donors. The donor sector appears to be extremely active on ocean initiatives. There are numerous multi-donor initiatives including the Pacific European Marine Partnership, BIOPAMA, the Pacific Regional Oceanscape Program and a slew of ocean-focussed partnerships listed in the UN's database of Small Island Developing States Partnership Framework.

# 6. Conclusions

## There are opportunities in the POFP11 countries, despite the constraints

Domestic resources are a stable source of finance for the achievement of all development goals. Sustainable use of the ocean is one such goal, as set out in SDG14 – Life Below Water. POFP11 countries have grown their tax take substantially in the past decade and this is allowing the governments of these countries more scope to invest in their own development.

The serious challenge ahead is in translating SDG14 – Life Below Water into practical actions that governments of SIDs can fund or part-fund within their limited available budgets, policy capacity and administrative capacity. So far, globally SDG14 is the least funded SDG (Walsh, 2018).

This research has highlighted that a tax or subsidy can only be helpful in achieving sustained ocean health if a government is satisfied it is the right policy, it can be administered well, and it is politically acceptable. Imposing a tax requires a delicate balancing. A government needs to ensure that the tax is the best way to achieve the desired objective relative to other policies or actions. As tax operates in a system, all impacts on the system need to be understood before a new tax is imposed. The benefits of the tax must exceed all its costs, including hidden costs such as introducing inefficiencies into systems for collectively managing fish stocks (which may flow through to lower revenues from vessel days, for example). Governments need to work hard to make sure that those who they expect to comply with the tax, understand it. And they need the capacity to administer the new tax.

Often the cost or complexity of administering a tax will rule out taxes as a useful solution for problems that are highly localised (as these problems might respond better to local or low-cost solutions) or problems that are highly dispersed (as these create administrative burdens in a number of locations). Pacific countries are working hard to improve the administrative capacity and capability. Most Pacific tax administrations have upgraded their systems and processes but still need to improve more before tax can be a universally appealing option for conservation finance. This includes bettering the accountability and transparency of tax administrations for the way they use public resources, and the way they exercise authority. Many are still working on ways to be more efficient with public revenue management. Some countries (Vanuatu, Solomon Islands, Palau) have comprehensive tax reforms underway or starting soon.

The research concludes that whilst the opportunities for POFP11 are limited when it comes to taxes and subsidies, they include:

- Eliminating harmful subsidies, where they exist.
- Beneficiary pays – national-scale tourist levies and harmonised approaches to hypothecate resource rents from ocean uses (alongside an enhanced regime to capture resource rents, strengthen observer programmes, more fully monitor waste at sea and the deployment of fish aggregation devices).
- Waste and/or border taxes to address imported waste.
- Low-cost ‘nudge’ subsidies like Fishing for Litter or ‘buying change’ (Niue example).
- Direct subsidies for establishing marine protection policies and zones (e.g. Spatial plans, MMAs, quotas, vessel days), provided there is transparency in budgets, clear objectives and a push toward clearer property and use rights.

- Pollution levies and/or self-insurance for pollution risk.
- Providing good foundations, for example:
    - Keep the tax system working well so the money for environmental programs is available.
    - Keep the tax system transparent, easy to navigate and fair for investors so that international investment is retained.
    - Invest in or subsidise environmentally beneficial infrastructure (e.g. recycling, water treatment), including through public-private arrangements.
- Tweaking and aligning existing taxes, for example:
    - Modify existing import and export taxes to provide for waste refund deposit schemes or externality prices.
    - Add a waste externality element to import taxes levied on cigarettes and soft drinks.
    - Add an ad valorem tax on water extracted for bottling, the rate of which can be renegotiated if waste reduction targets are met.
    - Review existing carriage taxes or transhipment taxes for their potential to capture accurate data about economic activities on the ocean and to ensure that they are not imposing a compliance burden disproportionate to value gained.
    - Use existing airport departure levies, yacht levies or cruise ship levies to generate funds for preservation and tourist-related environmental monitoring.

Many pacific countries are looking to border-based and tourist-based taxes as an easier-to-implement, more politically acceptable option for achieving ocean health. Taxes on imports of products that cause waste and tourist levies seem to be gaining traction with island nations worldwide.

## Subsidies are problematic

While stimulating short-term growth in individual oceanic sectors using subsidies might be comparatively easy, governments should be wary about 'picking winners' by providing subsidies or tax concessions. It is not always clear what a sustainable Oceans economy should look like and who the participants in that economy should be. Further, 'picking winners' can be a distraction away from a government's main focus, which is providing the conditions under which a sustainable oceans economy is most likely to develop (UNCTAD, 2018). Preparing for sustainable trade means, for example, continuing to work on sound regulatory and institutional frameworks, and promoting an understanding of how the international legal frameworks fit with national legal and governance frameworks to provide a rules-based approach to oceans use.

Considering the vital role of fisheries for many coastal developing countries, SDG 14 does make specific mention to the need to increase economic benefits for these countries (Target 14.7) and to provide market access to small-scale artisanal fishers (14.b). Governments of the POFP11 countries can continue to take practical steps toward implementing policies and strategies that empower small scale fishing communities to take a more active role in terms of resource stewardship and management (United Nations, 2018). This includes defining customary ownership rights and responsibilities. This can be achieved through investments in marine spatial planning, like the spatial

planning project in Tonga, Oceans 7. The Community- Vessel Days Scheme in Palau, which uses non-tax revenue from fishing licenses to finance community development including community management of inshore fisheries, is one mechanism to watch.

## Using taxes and subsidies for generating funds for ocean health

This research has highlighted lessons for tax and environment policy professionals considering how to generate finance for ocean positive projects.

Removing harmful subsidies provides a way to generate funds (the case for removing subsidies is clear when the costs of offering them (including the costs to ocean ecosystem services) outweigh the benefits). Any countries offering 'harmful' subsidies should attempt to value the cost of the subsidy (in terms of tax expenditure) and could consider shifting these toward beneficial subsidies that contribute to sustainability commitments, including marine conservation, research and creation of marine protected areas.

If the goal is to encourage financial instruments like blue bonds, then tax incentives attached to these instruments are not as efficient as direct subsidies or wide-based exemptions (like tax-free status for charitable purposes).

If there is to be resource extraction from the ocean (fishing, seabed mining) then it is appropriate for governments to obtain royalties from those activities or otherwise capture all or part of the economic rents. When designing a regime for capturing economic rents the principles of allocating rentals to resource owners should be considered.

Earmarking or hypothecation is often considered to be inefficient but should not be ruled out in every case. Earmarking can be justified on grounds of transparency and accountability, and is best used when there is a clear connection between where the revenue has been captured from and what it is being used for. This feature makes it more appropriate for levies/user charges/fees, which are collected from a narrower class of activities or citizens. Earmarking is less appropriate for taxes which captures revenues from a broad class of activities or citizens. Governments are also advised to be cautious before earmarking funds, as this may contradict a government's Public Financial Management goals (Carling, 2007).

## Aligning taxes and subsidies with ocean health

This research has highlighted lessons for tax and environment policy professionals considering how to **align** fiscal policy for ocean positive projects.

First, consider whether there is an incentive problem in the form of an externality. If there is, then economists generally view 'market-based instruments' (which includes taxes, charges and economic instruments like marketable permits) as the most effective and efficient instruments at addressing externality problems. The research has indicated that such instruments may not be politically or technically feasible in Small Island Developing States which vary in the depth of their market economies and their capacity and capability to apply such taxes, so proceed with caution. Externality taxation for environmental goals is particularly difficult to get 'right' without sources of reliable information about the nature and source of the externality, market economies and consistent administration free of corruption or bias. Recent research has highlighted that externality taxes run the risk of only responding to external incentives and can have an unintended negative influence on commitments and norms (which is what is needed to promote widespread ocean-positive behaviour).

If the fiscal system is going to be used to further environmental aims, then those aims tend to be served more efficiently by tax, rather than subsidy, approaches. Subsidies can, in theory, provide incentives to address environmental problems. In practice, however, many subsidies promote economically inefficient and environmentally unsound practices. Moreover, tax incentives are costly; the cost is hidden (and can be regressive, depending on how the country taxes its population). Tax incentives and exceptions contradict stated goals of simplifying the tax system and widening the tax base.

Tax incentives are a poor way to incentivise the flow of capital toward ocean projects—if a subsidy is to be used, then direct subsidies are better and more transparent.

Good governance, implementation, enforcement and monitoring are crucial to determine whether instruments are successful in achieving their environmental objectives.

Finally, it is important that the design of instruments is tailored to the local context in which they are applied, and that distributive impacts are properly considered.

## Sustainable development of the ocean will continue to compete with terrestrial development priorities

Any government investment in SDG14 is competing with investment in other, terrestrial, SDGs. The common tax context for the POFP11 is that they each have very small tax bases, they are each small island developing states and while they are all have growing economies, they still maintain a funding 'gap' between their ambitions and their ability to finance them. The UN Economic and Social Survey of Asia and the Pacific 2019 noted that SIDS have an 'investment gap' of around $200 million (or 1.39 percent of GDP).[36] [37]The investment gap is the difference between infrastructure investment needs and current investment in transport, ICT, and water and sanitation. Ocean preservation and environmental goals in general fall lower down the priority list than these investment needs.

Pacific countries experience considerable structural constraints in their efforts to mobilise more domestic resources. Small populations thinly dispersed over many islands can make revenue collection difficult and expensive. Investments in sustaining ocean health may not seem especially expensive, but when measured as a proportion of national output the costs of projects like zone mapping or satellite monitoring of fishing vessels can be prohibitive. In many cases, private investment may not flow because there are low to no economic returns to these activities. Added to this are frequent and severe extreme weather events which can result in heavy relief and reconstruction costs.

Because of these competing priorities and the difficulties in raising more tax revenues, POFP11 countries are limited in their ability to use tax revenues to finance the projects needed to achieve sustainable development of the ocean and achieve ocean health. International public finance, donor and grant funding and the continued mobilisation of non-tax revenues from ocean resources like tuna fishing will therefore remain indispensable in the future for many countries to achieve ocean health objectives.

[36] United Nations, Economic And Social Survey Of Asia And The Pacific 2019 - Ambitions Beyond Growth, 55.

[37] Due to a lack of reliable estimates of the current level of public investment in infrastructure in several countries, the group of small island developing States includes only Fiji, Kiribati, Maldives and Solomon Islands.

In conclusion, while Pacific tax revenues have grown considerably in the past decade, there are still significant challenges associated with using tax revenues and fiscal policy for ocean health.

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# Appendix 1 Taxes and subsidies with a likely or intended positive connection to ocean health

## Table 1A – taxes and subsidies with an intended or likely positive connection to ocean health

Detailed information about these taxes can be found in the Tax Profile for the country. Tax profiles are listed in Appendix 4.

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Import duty on soft drinks** | FSM | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **(Part of ECAL) Plastic Bag Levy (20c per plastic bag, increasing to 50c in 2020)** | Fiji | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Deliberate or highly probable connection | 1. Positive | Taxing negative externalities |
| **(Part of ECAL) Tax on high income earners (applying to income above FJ$270,000 per year)** | Fiji | Private consumption | Tax | Multiple | GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | Generating |
| **Excises on imported carbonated drinks (Health excises)** | Fiji | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Excises on imported cigarettes (Health excises)** | Fiji | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Royalties on value of seabed mined minerals and Fair Share of Mineral Royalties Act (and associated income taxes on royalties)** | Fiji | Mining | Tax | Biodiversity preservation | ACCOUNT, GENERATE | Pollution, Natural habitat destruction | Deliberate or highly probable connection | 1. Positive | Taxing resource rent and imposing royalties |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Marine pollution levies** | Fiji | Maritime industries | Levy | Management of oil spills and ship pollution | ACCOUNT, GENERATE | Pollution, Natural habitat destruction | Deliberate or highly probable connection | 1. Positive | Hypothecation to ocean |
| **Fish levy on transhipment** | Fiji | Fishing | Levy | Management of inshore and offshore fisheries | ACCOUNT, GENERATE | Overexploitation | Likely connection (unintended) | 1. Positive | None currently |
| **Cruise ship head tax** | Kiribati | Tourism | Tax | Multiple | ALIGN (possible opportunity), GENERATE (possible opportunity), ACCOUNT (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Excises on imported sugar-enhanced drinks (40%)** | Kiribati | Private consumption | Tax | Management of marine debris and plastic pollution | GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Green Fee from departure tax - now Palau Pristine Paradise Environmental Fee (PPEF)** | Palau | Tourism | Tax | Management of coastal tourism and development | ALIGN, GENERATE, ACCOUNT | Pollution | Likely connection (unintended) | 1. Positive | Generating |
| **Beverage container deposit fees** | Palau | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | Generating |
| **Foreign water vessel tax** | Palau | Fishing | Tax | Management of inshore and offshore fisheries | ACCOUNT, GENERATE | Overexploitation | Likely connection (unintended) | 1. Positive | None currently |
| **Fish export tax** | Palau | Fishing | Tax | Management of inshore and offshore fisheries | ALIGN, GENERATE, ACCOUNT | Overexploitation | Deliberate or highly probable connection | 1. Positive | Generating |
| **Tax on carbonated soft drinks** | Palau | Private consumption | Tax | Management of marine debris and plastic pollution | grey | Pollution | Weak connection (unintended) | 1. Positive | None currently |
| **Bottled water - 25% ad valorem** | Palau | Private consumption | Tax | Management of marine debris and plastic pollution | grey | Pollution | Weak connection (unintended) | 1. Positive | None currently |
| **Vessel cabin tax** | Palau | Tourism | Tax | Management of coastal tourism and development | ALIGN, GENERATE, ACCOUNT | Pollution | Likely connection (unintended) | 1. Positive | None currently |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Waste Management Levy (in development)** | Samoa | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE, ACCOUNT | Pollution | Deliberate or highly probable connection | 1. Positive | Hypothecation to ocean |
| **Cruise ship levy** | Tonga | Tourism | Tax | Multiple | ALIGN, GENERATE, ACCOUNT | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Waste levy on plastic bags and imported disposable plastics (10%)** | Tonga | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Deliberate or highly probable connection | 1. Positive | Taxing negative externalities |
| **Excises on imported carbonated drinks (Health excises)** | Tonga | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Excises on imported cigarettes (Health excises)** | Tonga | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Import duties on manufactured plastic items (15%)** | Tonga | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Import duties (15%) on shark fin** | Tonga | Private consumption | Tax | Management of inshore and offshore fisheries | ALIGN | Overexploitation | Likely connection (unintended) | 1. Positive | None currently |
| **Import duties on certain aquatic invertebrates (20%)** | Tonga | Private consumption | Tax | Management of inshore and offshore fisheries | ALIGN | Overexploitation | Likely connection (unintended) | 1. Positive | None currently |
| **Super-profit tax on extractive industries / deep sea mining (25% on profit (net income) in addition to 20% income tax)** | Tonga | Mining | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE, ACCOUNT | Natural habitat destruction | Deliberate or highly probable connection | 1. Positive | Taxing resource rent and imposing royalties |
| **Importation levy on large items such as fridges and vehicles** | Tuvalu | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN | Pollution | Deliberate or highly probable connection | 1. Positive | Taxing negative externalities |
| **Import duties and excises on imported cigarettes (Health excises)** | Vanuatu | Private consumption | Tax | Management of marine debris and plastic pollution | ALIGN, GENERATE (possible opportunity) | Pollution | Likely connection (unintended) | 1. Positive | None currently |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Tonnage fees for purse seine tuna fishing** | Fiji | Fishing | Levy | Management of inshore and offshore fisheries | ACCOUNT, GENERATE | Overexploitation | Deliberate or highly probable connection | 1. Positive | Taxing resource rent and imposing royalties |
| **Transhipment fee on fish** | Samoa | Fishing | Levy | Management of inshore and offshore fisheries | ALIGN (possible opportunity), GENERATE (possible opportunity), ACCOUNT (possible opportunity) | Overexploitation | Likely connection (unintended) | 1. Positive | None currently |
| **Tonnage fees for purse seine tuna fishing** | Samoa | Fishing | Levy | Management of inshore and offshore fisheries | ALIGN (possible opportunity), GENERATE (possible opportunity), ACCOUNT (possible opportunity) | Overexploitation | Deliberate or highly probable connection | 1. Positive | Taxing resource rent and imposing royalties |
| **Tonnage fees for purse seine tuna fishing** | Tonga | Fishing | Levy | Management of inshore and offshore fisheries | ALIGN (possible opportunity), GENERATE (possible opportunity), ACCOUNT (possible opportunity) | Overexploitation | Deliberate or highly probable connection | 1. Positive | Taxing resource rent and imposing royalties |
| **Tonnage fees for purse seine tuna fishing** | Vanuatu | Fishing | Levy | Management of inshore and offshore fisheries | ALIGN (possible opportunity), GENERATE (possible opportunity), ACCOUNT (possible opportunity) | Overexploitation | Deliberate or highly probable connection | 1. Positive | Taxing resource rent and imposing royalties |
| **(In development) Seabed mining taxation** | Kiribati | Mining | Tax | Management of inshore and offshore fisheries | ALIGN; GENERATE | Overexploitation | Likely connection (unintended) | 1. Positive | Taxing resource rent and imposing royalties |
| **Green Climate Fund subsidy** | RMI | Government | Subsidy | Management of marine debris and plastic pollution | ALIGN | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Tax losses for mining companies can be carried forward seven years instead of five; unlimited carry forward for primary production (see Deloitte)** | Solomon Islands | Mining | Subsidy | Biodiversity preservation | ALIGN (possible opportunity) | Overexploitation, pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Giant clam development revolving fund** | Palau | Aquaculture | Subsidy | Management of inshore and offshore fisheries | ALIGN | Overexploitation | Likely connection (unintended) | 1. Positive | Environmentally motivated subsidy |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Community Vessel Day Scheme (in development)** | Palau | Community management of resources | Subsidy | Unclear | Unclear | Overexploitation | Likely connection (unintended) | 1. Positive | Unclear |

# Appendix 2 Taxes and subsidies with unclear or negative connections to ocean health

Table 2A: Negative impacts – taxes and subsidies with a negative or unclear connection to ocean health in POFP11 countries

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Fuel concession for fishing industry** | Fiji | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN, ACCOUNT (possible opportunity) | Overexploitation | Deliberate or highly probable connection | 2. Negative | Subsidy |
| **Excise and duty exemptions on specialist fishing equipment** | Fiji | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN, ACCOUNT (possible opportunity) | Overexploitation | Likely connection (unintended) | 2. Negative | None currently |
| **Accelerated depreciation on buildings associated with fishing** | Fiji | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN, ACCOUNT (possible opportunity) | Overexploitation | Likely connection (unintended) | 2. Negative | Subsidy |
| **Income tax exemption for small and medium sized fishing companies and sea cruise and tour operators** | Fiji | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN, ACCOUNT (possible opportunity) | Overexploitation | Likely connection (unintended) | 2. Negative | Subsidy |
| **Fisheries subsidies (license concessions, direct payments, goods in kind)** | Fiji | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN, ACCOUNT (possible opportunity) | Overexploitation | Likely connection (unintended) | 2. Negative | Subsidy |
| **Fuel subsidy (in particular, for benzene)** | Kiribati | Multiple | Subsidy | Management of marine debris and plastic pollution | counterALIGN | Pollution, overexploitation | Likely connection (unintended) | 2. Negative | Subsidy |
| **Fuel subsidy** | Kiribati | Multiple | Subsidy | Management of inshore and offshore fisheries | counterALIGN | Overexploitation | Likely connection (unintended) | 2. Negative | Subsidy |
| **Exemption from revenue taxes** | RMI | Primary industries, tourism, manufacturing for export | Subsidy | Multiple | counterALIGN | Overexploitation | Likely connection (unintended) | 2. Negative | None currently |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| | | and local use, mining | | | | | | | |
| **Green Climate Fund subsidy** | RMI | Government | Subsidy | Management of marine debris and plastic pollution | ALIGN | Pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Tax losses for mining companies can be carried forward seven years instead of five; unlimited carry forward for primary production (see Deloitte)** | Solomon Islands | Mining | Subsidy | Biodiversity preservation | ALIGN (possible opportunity) | Overexploitation, pollution | Likely connection (unintended) | 1. Positive | None currently |
| **Excise and duty exemptions on fuel and specialist fishing equipment** | Tonga | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN | Overexploitation | Deliberate or highly probable connection | 2. Negative | Subsidy |
| **Fisheries subsidies for small-scale inshore fishers** | Tonga | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN | Overexploitation | Deliberate or highly probable connection | 2. Negative | Subsidy |
| **Exemptions on import duties for fishing gear, mining equipment, agriculture and forestry** | Tuvalu | Primary industries | Subsidy | Management of inshore and offshore fisheries | counterALIGN | Overexploitation | Deliberate or highly probable connection | 2. Negative | Subsidy |
| **Exemptions on import duties for fishing gear, mining equipment, agriculture and forestry** | Tuvalu | Primary industries | Subsidy | Management of coastal agriculture | counterALIGN | Overexploitation | Deliberate or highly probable connection | 2. Negative | Subsidy |
| **Fisheries subsidies for small-scale inshore fishers** | Vanuatu | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN | Overexploitation | Deliberate or highly probable connection | 2. Negative | Subsidy |
| **Possible fishing fuel subsidy (Lower excise rate on benzene and diesel compared to other types of motor spirit)** | Nauru | Fishing | Subsidy | Management of inshore and offshore fisheries | counterALIGN | Overexploitation | Likely connection (unintended) | 2. Negative | Subsidy |
| **Tuvalu Fish Aggregating Devices (subsidy consists of working hours of relevant department and funding under the NAPA II (Tuvalu National** | Tuvalu | Fishing | Subsidy | Management of inshore and offshore fisheries | ALIGN | Overexploitation | Likely connection (unintended) | 3. Unclear | Subsidy |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Adaptation Programme of Action))** | | | | | | | | | |
| **Duty and Income Tax exemptions for agricultural development** | Fiji | Agriculture | Subsidy | Biodiversity preservation | counterALIGN, counterGENERATE | Natural habitat destruction | Likely connection (unintended) | 2. Negative | Subsidy |

## Table 2B: Grey areas – taxes and subsidies with a weak connection to ocean health

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Hotel occupancy tax** | FSM | Tourism | Tax | Management of coastal tourism and development | grey | Unclear | None | 3. Unclear | None currently |
| **Import tax exemptions for specialised machinery for fishing and agriculture** | Fiji | Multiple | Subsidy | Multiple | grey | Pollution, natural habitat destruction | Weak connection (unintended) | 2. Negative | None currently |
| **Subsidies under Sugar Development Programme** | Fiji | Agriculture | Subsidy | Management of coastal agriculture | grey | Pollution, Natural habitat destruction | Weak connection (unintended) | 2. Negative | None currently |
| **Provision of free rainwater collection tanks** | Fiji | Multiple | Subsidy | Management of marine debris and plastic pollution | grey | Pollution | Weak connection (unintended) | 1. Positive | None currently |
| **Bus operator and travel incentives** | Fiji | Tourism | Subsidy | Management of coastal tourism and development | grey | Unclear | None | 3. Unclear | None currently |
| **(Part of ECAL) 'Tax on prescribed services (10%) and Service Turnover Tax (6%)** | Fiji | Private consumption | Tax | Management of coastal tourism and development | grey | Unclear | Weak connection (unintended) | 1. Positive | Generating |
| **Tax holiday and duty exemptions for Tax Free Regions** | Fiji | Multiple | Subsidy | Multiple | grey | Overexploitation | Weak connection (unintended) | 1. Positive | None currently |
| **Various mining incentives relevant to seabed mining (tax holiday, duty free import, loss carry forwards, accelerated depreciation)** | Fiji | Mining | Subsidy | Management of marine debris and plastic pollution | grey | Pollution | Weak connection (unintended) | 1. Positive | None currently |
| **Hotel room tax** | Palau | Tourism | Tax | Management of coastal tourism and development | grey | Unclear | None | 3. Unclear | None currently |
| **Tax on hotel and resort facilities** | RMI | Tourism | Tax | Management of coastal tourism and development | grey | Unclear | None | 3. Unclear | None currently |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Tax exemption on income from primary produce** | Samoa | Agriculture | Subsidy | Management of coastal agriculture | grey | Pollution | Weak connection (unintended) | 2. Negative | None currently |
| **Tax exemption for hotel investments** | Samoa | Tourism | Subsidy | Management of coastal tourism and development | grey | Unclear | Weak connection (unintended) | 1. Positive | None currently |
| **Deductibility of expenditure for scientific research** | Samoa | Tourism, Resource extraction | Subsidy | Multiple | grey | Unclear | Weak connection (unintended) | 1. Positive | None currently |
| **Tax exemption for international organisations (according to contract)** | Samoa | Government | Subsidy | Multiple | grey | Unclear | Weak connection (unintended) | 1. Positive | None currently |
| **Export duties on logs and other raw products** | Solomon Islands | Forestry | Tax | Biodiversity preservation | grey | Overexploitation, pollution | Weak connection (unintended) | 1. Positive | None currently |
| **Bed levy** | Solomon Islands | Tourism | Tax | Management of coastal tourism and development | grey | Unclear | Weak connection (unintended) | 1. Positive | None currently |
| **Income tax concessions to various primary industries (zero rate five out of first ten years of operation)** | Solomon Islands | Primary industries | Subsidy | Multiple | grey | Overexploitation, pollution | Weak connection (unintended) | 1. Positive | None currently |
| **Inconsistent treatment of export products** | Solomon Islands | Multiple | Subsidy | Multiple | grey | Unclear | Weak connection (unintended) | 1. Positive | None currently |
| **Shipping/carriage tax for non-residents (3% on gross value of goods or passengers carried, and tax on resource amount generated in Tonga)** | Tonga | Private consumption | Tax | Management of coastal tourism and development | grey | Unclear | Weak connection (unintended) | 1. Positive | None currently |
| **Tax exemption for all income derived from investment in Government of Tonga issued securities** | Tonga | Financial sector | Subsidy | Multiple | grey | Unclear | Weak connection (unintended) | 1. Positive | None currently |
| **Consumption Tax exemption for fishing companies** | Tonga | Fishing | Subsidy | Management of inshore and offshore fisheries | grey | Overexploitation | Weak connection (unintended) | 2. Negative | Subsidy |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Duty free import of fish** | Tonga | Fishing | Subsidy | Management of inshore and offshore fisheries | grey | Overexploitation | Weak connection (unintended) | 1. Positive | None currently |
| **Duty and Consumption Tax exemptions for agriculture equipment and fertiliser** | Tonga | Agriculture | Subsidy | Management of coastal agriculture | grey | Natural habitat destruction | Weak connection (unintended) | 1. Positive | None currently |
| **Cruise line fees** | Kiribati | Tourism | Levy | Management of marine debris and plastic pollution | grey | Pollution | Weak connection (unintended) | 1. Positive | None currently |
| **Tax incentives for 'pioneer companies'** | Kiribati | Multiple | Subsidy | Management of marine debris and plastic pollution | grey | Unclear | Weak connection (unintended) | 1. Positive | Subsidy |
| **Distant Water Fishing Nations (DWFN) licensing fees** | Tuvalu | Fishing | Fee | Management of inshore and offshore fisheries | grey | Overexploitation | Weak connection (unintended) | 1. Positive | None currently |
| **Duty and Income Tax exemptions for agricultural development** | Fiji | Agriculture | Subsidy | Biodiversity preservation | grey | Natural habitat destruction | Weak connection (unintended) | 2. Negative | Subsidy |
| **Fiscal duty &import excise exemptions for hybrid & electric vehicles** | Fiji | Transport | Subsidy | Biodiversity preservation | grey | Climate change | Weak connection (unintended) | 1. Positive | Environmentally motivated subsidy |
| **Duty exemptions on renewable energy plant and machinery** | Fiji | Multiple | Subsidy | Biodiversity preservation | grey | Natural habitat destruction, Climate change | Weak connection (unintended) | 1. Positive | Environmentally motivated subsidy |
| **Duties on imports of animal derived products favoured by Pacific artisans** | Vanuatu | | tax | | grey | Overexploitation | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Federated States of Micronesia | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Fiji | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Kiribati | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Marshall Islands | | neither | | grey | all | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Nauru | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Palau | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Samoa | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Solomon Islands | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Tonga | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other regional environment programs (inter-governmental)** | Tuvalu | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Membership contribution to SPREP and other** | Vanuatu | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **regional environment programs (inter-governmental)** | | | | | | | | | |
| **Marine spatial planning budget** | Tonga | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Tuvalu Coastal Adaptation Project by Climate Change Policy & Disaster Coordination Unit, Tuvalu ($36 million by GCF with co-financing of $2.6 million by the Tuvalu Government)** | Tuvalu | | neither | | grey | Natural habitat destruction | Weak connection (unintended) | 1. Positive | |
| **Fiji Ministry of Fisheries support for MSC certification and monitoring** | Fiji | | Subsidy | | grey | Overexploitation | Weak connection (unintended) | 1. Positive | |
| **Rural electrification project, including solar systems** | Vanuatu | | Subsidy | | grey | Climate change | Weak connection (unintended) | 1. Positive | |
| **Energy pricing reforms to promote RES (renewable energy)** | Vanuatu | | neither | | grey | Climate change | Weak connection (unintended) | 1. Positive | |
| **Tax rules for non-profits. For example, tax exemption for all income to non-profits aside from business income** | Tonga | | Subsidy | | grey | Unclear | Weak connection (unintended) | 1. Positive | |
| **Tax exemptions for foreign donors** | Tonga | | Subsidy | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Withholding taxes, for example withholding of taxes on returns from Tongan-source financial products (withholding tax of 10%)** | Tonga | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Non-resident taxation (tax rules for non - residents receiving insurance premiums, interest, dividends, royalties)** | Tonga | | neither | | grey | All | Weak connection (unintended) | 1. Positive | |

| Tax name | Country | Industry targeted | Subsidy/Tax/Levy | Ocean health goal | Response | Pressure | Degree of connection to Ocean health | Correlation with goal | Ocean tax policy |
|---|---|---|---|---|---|---|---|---|---|
| **Tax rules for non-profits. For example, tax exemption for all income to non-profits aside from business income** | Fiji | | Subsidy | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Tax exemptions for foreign donors** | Fiji | | Subsidy | | grey | All | Weak connection (unintended) | 1. Positive | |
| **Withholding arrangements** | All | | neither | | grey | Unclear | Weak connection (unintended) | 3. Unclear | |
| **Non-resident taxation (tax rules for non - residents receiving insurance premiums, interest, dividends, royalties)** | All | | neither | | | All | Weak connection (unintended) | 1. Positive | |

# Appendix 3 Country tax profiles

# Appendix 4 Fuel subsidies information

*Fiji table*

https://www.frcs.org.fj/wp-content/uploads/2018/09/tariff-classification.pdf

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Benzene | Not to our knowledge | 9% | 46c per litre |
| Kerosene, household | Not to our knowledge | 9% | 5% |
| Diesel | Not to our knowledge | 9% | 20c per litre |
| Residual fuel oil | Not to our knowledge | 9% | 12c per litre |
| Fuel for electricity | Not to our knowledge | Not clear | Not clear |
| Liquified petroleum gases | Not to our knowledge | 9% | 4c per kg |

*Federated States of Micronesia table*

Standard import duty is 4%

http://www.paclii.org/fm/legis/consol_act_2014/tac215/

http://pacificsbdc.com/docs/chuuk-government-and-business-resource-listing.pdf

| | Price control item | Sales tax (Chuuk) | Excise rate |
|---|---|---|---|
| Gasoline | Not to our knowledge | 0 | 5 cents per gallon |
| Kerosene, household | Not to our knowledge | 5 cents per gallon | 0 |
| Diesel | Not to our knowledge | 5 cents per gallon | 5 cents per gallon |
| Residual fuel oil | Not to our knowledge | Not stated | Not stated |
| Liquified petroleum gases | Not to our knowledge | Not stated | Not stated |

*Samoa table*

VAT rate 15%

https://www.revenue.gov.ws/images/2015/Legislations/Principal_Legislation/Excise-Tax-Rates-Act-1984.pdf

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Motor spirits | Not to our knowledge | 15% | 56 sene per litre |
| Kerosene and white spirit | Not to our knowledge | 15% | Tariff free |
| Diesel | Not to our knowledge | 15% | Not clear |
| Residual fuel oil | Not to our knowledge | 15% | 56 sene per litre |

*Marshall Islands table*

Excise rate 8% on other items

http://rmiparliament.org/cms/images/LEGISLATION/PRINCIPAL/1989/1989-0049/ImportDutiesAct1989_1.pdf

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Benzene | Not to our knowledge | 0% | 0.25 cents per gallon |
| Kerosene, household | Not to our knowledge | 0% | 0.08 cents per gallon |
| Diesel | Not to our knowledge | 0% | 0.08 cents per gallon |
| Fuel for electricity | Not to our knowledge | 0% | Appears to be exempt |

*Nauru table*

Standard rate is 10%

http://www.naurugov.nr/media/56999/wd_hs_nauru_2017_date___3july_version.pdf

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Motor spirits | Not to our knowledge | 0% | 0.60 per litre |
| Benzene | Not to our knowledge | 0% | 10% |
| Kerosene, household | Not to our knowledge | 0% | 10% |
| Diesel | Not to our knowledge | 0% | 0.60 per litre |
| Gases (petroleum and other gaseous hydrocarbons) | Not to our knowledge | 0% | 10% |

*Palau table*

Most rates are 0.03 or 0; tobacco is 294.12

http://www.palaucustoms.org/files/common_unit_id/b14d3ed9-2dea-4e86-ab43-096d38ae1239/Palau%20HS%202017%20_Booklet_10_23_2018_15_05_09.pdf

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Motor spirits | Not to our knowledge | 0% | .0132086 |
| Kerosene, household | Not to our knowledge | 0% | .0132086 |
| Diesel | Not to our knowledge | 0% | .0132086 |
| Heavy fuel oil and residual fuel oil | Not to our knowledge | 0% | .03 |
| Liquified and gaseous state natural gases | Not to our knowledge | 0% | .03 |

*Solomon Islands table*

0% to 15% is rate of import tax

http://www.ird.gov.sb/Article.aspx?ID=606

http://www.ird.gov.sb/Article.aspx?ID=607

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Motor spirits | Not to our knowledge | 15% | $0.10 per litre |
| Kerosene, household | Not to our knowledge | 15% | Appears to be zero |
| Diesel | Not to our knowledge | 15% | $0.10 per litre |
| Heavy fuel oil and residual fuel oil | Not to our knowledge | 15% | Appears to be zero |
| Liquified and gaseous state natural gases | Not to our knowledge | 15% | Appears to be zero |

*Tonga table*

15% is standard rate

http://www.palaucustoms.org/files/common_unit_id/b14d3ed9-2dea-4e86-ab43-096d38ae1239/Palau%20HS%202017%20_Booklet_10_23_2018_15_05_09.pdf

https://www.revenue.gov.to/Resource.aspx?ID=1328

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Motor spirits | Not to our knowledge | 15% | 65 cents per litre |
| Kerosene, household | Not to our knowledge | 15% | 65 cents per litre |
| Diesel | Not to our knowledge | 15% | 65 cents per litre |
| Heavy fuel oil and residual fuel oil | Not to our knowledge | 15% | 65 cents per litre |
| Liquified and gaseous state natural gases | Not to our knowledge | 15% | $300 per metric tonne |

*Tuvalu table (limited information)*

http://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/1982/1982-0012/SalesTaxAct_1.pdf

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Motor spirits | Not to our knowledge | 0% | 2.5% |
| Kerosene, household | Not to our knowledge | 0% | 0% |
| Diesel | Not to our knowledge | 0% | 2.5% |
| Heavy fuel oil and residual fuel oil | Not to our knowledge | 0% | 2.5% |
| Liquified and gaseous state natural gases | Not to our knowledge | 0% | 2.5% |

*Vanuatu table*

(note that there appear to be reductions for off-road applications, generation of electric power, inter-island transport, commercial fishing)

12.5% is standard rate

https://customsinlandrevenue.gov.vu/images/legislations/Customs/Import_Duties/Import_DutiesConsolidationCAP_91.pdf

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Motor spirits | Not to our knowledge | 12.5% | 0 |
| Kerosene, household | Not to our knowledge | 12.5% | 0 |
| Diesel | Not to our knowledge | 12.5% | 0 |
| Heavy fuel oil and residual fuel oil | Not to our knowledge | 12.5% | 0 |
| Liquified and gaseous state natural gases | Not to our knowledge | 12.5% | 0 |

*Kiribati table*

VAT is 12.5%

| | Price control item | VAT rate | Excise rate |
|---|---|---|---|
| Benzene (gasoline unleaded) | Yes | 0% | AUD 0.07 per litre |
| Kerosene, household | Yes | 0% | 0% |
| Diesel | No | 0% | AUD 0.06 per litre |
| Oil 30 | No | 12.5% | 0% |
| Oil 50 | Yes | 0% | 0% |
| Petroleum gases | No | 12.5% | 0% |
| Electricity (PUB) | No | 0% | % |

# Appendix 5 Stakeholders engaged

We undertook five field trips, to Fiji, Vanuatu, Tonga, Samoa and the Marshall Islands.

*Fiji (March 2019)*

- The project team presented the conceptual model and a discussion on the role of taxes and subsidies to a Workshop hosted by FFA in Suva.
- The project team attended a discussion with PFTAC technical advisors in Suva.
- The project team interviewed representatives of Fiji Revenue and Customs Services on two separate occasions. First, to discuss the ECAL. Second, to discuss fishing subsidies.
- The project team interviewed stakeholders including the Ministry of Economy, Fiji Department of Fisheries, the Fiji Tourism Association, WWF Pacific, IUCN Oceania, Oxfam, Dr Hugh Govan, PIFS, Wildlife Conservation Society, National Trust of Fiji, Conservation International, Fiji Chamber of Commerce and tourism operators.

*Vanuatu (April 2019)*

- Sally Wyatt interviewed stakeholders including a representative from the Department of Finance and Treasury, IUCN, the Department of Fisheries and private tourism operators. A representative from Department of Customs and Inland Revenue was interviewed later.

*Tonga (May 2019)*

- Sally Wyatt presented to, and participated in, the Tonga Ocean Finance Profile two-day workshop. Participants included Representatives from line Ministries and Special Management Areas (SMA) community of Nukuleka and Ha'atafu also the staff of the Ministry of Fisheries Tonga.
- Sally Wyatt prepared a chapter on taxes and subsidies for the Tonga Ocean Profile.
- Sally Wyatt interviewed stakeholders including the Ministry of Revenue and Customs and Ministry of Fisheries.

*Samoa (August 2019)*

- Sally Wyatt interviewed stakeholders including representatives from the FAO, Fisheries Division of the Ministry of Agriculture and Fisheries, SPREP, Ministry of Revenue, UNEP, Conservation International, Faasili Law, Ministry of Natural Resources and Environment.

*Marshall Islands (September 2019)*

- Sally Wyatt presented at the Pacific Islands Tax Administration Association (PITAA) meeting in Majuro. PITAA conferences are attended by delegates from the tax administrations of Cook Islands, Fiji, Kiribati, Nauru, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. The meeting was also attended by regional and international observers such as the Pacific Financial Technical Assistance Centre, the Delegation of the European Union in the Pacific, International Monetary Fund, INSPUR, New Zealand Inland Revenue, the Australian High Commission, Inter-American Center of Tax

Administrations, the Organization for Economic Co-operation and Development, Data Torque, Oceania Customs Organization and New Zealand Customs Service.

- Sally Wyatt interviewed stakeholders including the Customs and Revenue Division, Ministry of Finance, the Marshall Islands Conservation Society, the Office of Commerce, Investment and Tourism, Office of Environmental Planning Policy Coordination and the Marshall Islands Marine Resources Authority.

*Other communications*

Sally Wyatt presented our findings at the Pacific Ocean Finance Conference, in November 2019 in Fiji.