

**PACIFIC-ACP STATES
REGIONAL FINANCIAL FRAMEWORK
FOR DEEP SEA MINERALS
EXPLORATION AND EXPLOITATION**

June 2016

IMPORTANT NOTICE

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PACIFIC-ACP STATES REGIONAL FINANCIAL FRAMEWORK FOR DEEP SEA MINERALS EXPLORATION AND EXPLOITATION

Prepared under the SPC-EU EDF10
Deep Sea Minerals Project



Suva, Fiji 2016

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Original text: English

Pacific Community Cataloguing-in-publication data

Pacific-ACP states regional financial framework for deep sea minerals exploration and exploitation

1. Mines and mineral resources – Management – Oceania.
2. Mining – Oceania.
3. Marine mineral resources – Oceania.
4. Ocean mining – Oceania.
5. Minerals – Oceania.

I. Title II. Pacific Community

549.95

AACR2

ISBN: 978-982-00-1010-9

FOREWORD

The development of natural resources can contribute significantly to the economic prosperity of any country and the well-being of its people. This is only possible if the potential benefits from the extraction of any particular natural resource, such as fisheries, minerals and forest, are managed properly, and uphold the principles of accountability, transparency and good governance. With increasing activity and interest in Deep Sea Minerals (DSM) resources in the Pacific Islands region, the formulation of relevant legal instruments, including financial management and oversight to govern and administer these resources is crucially important.

After consulting widely with relevant stakeholders the Pacific Community (SPC) – European Union (EU) Deep Sea Minerals Project in collaboration with the International Monetary Fund's (IMF), Pacific Financial Technical Assistance Centre (PFTAC) have developed a regional financial framework for DSM activities to assist Pacific-ACP States in developing their national policies and legislation. Referred to as the 'Pacific ACP States Regional Financial Framework for Deep Sea Minerals Exploration and Exploitation', this volume is intended to provide an overview of key issues in the financial management of revenues and wealth associated with the development of DSM in the region.

The aim is to provide countries in the region with a guide on the major issues they will need to address in setting up frameworks, covering the tax or revenue regime, the management of revenues and expenditure, and the management of DSM wealth. Setting up such frameworks is a complex task and, in many cases, will require some external technical assistance. We hope that this volume will help relevant authorities in the region identify what they need to do themselves or with technical support to maximize the benefits of DSM wealth for their citizens.

The context for the preparation of the document was the joint hosting of two regional training workshops on DSM fiscal management issues under the umbrella of the SPC-EU Deep Sea Minerals Project. The first workshop was held in Rarotonga, Cook Islands from 13-16 May 2014, and the second was held in Nadi, Fiji from 24-27 August 2015. The purpose of this financial framework document is to make available to a much wider audience the knowledge and insights of the experts who were involved in the fiscal aspects of the workshops.

As the world progresses toward the realisation of DSM mining, Pacific ACP States must exercise prudence by putting in place the necessary fiscal policies and laws, as well as the monitoring and evaluation mechanisms that will capture all the mining proceeds that are legally owed to the government. Similarly, adequate resources and capacity must be made available to deal with tax administration issues, and relevant institutional and legal frameworks must be established to ensure extensive transparency and public disclosure of DSM revenues.

It is our fervent hope that this framework will be used extensively by Pacific ACP States, and will significantly contribute to the responsible and sound management of DSM revenues in the region.



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Pacific-ACP States Regional Financial Framework for Deep Sea Minerals Exploration and Exploitation is prepared by the Pacific Community through the SPC-EU Deep Sea Minerals Project in collaboration with the International Monetary Fund through the Pacific Financial Technical Assistance Centre.

The SPC-EU **Deep Sea Minerals (DSM) Project** is a partnership between the European Union and the SPC, working with the 15 Pacific-ACP States.

The SPC-EU DSM Project's objective is to strengthen the system of governance and capacity of Pacific ACP States in the management of deep-sea minerals, particularly through the development and implementation of:

- sound and regionally integrated legal frameworks and fiscal regimes;
- improved human and technical capacity; and
- effective data management, and environmental management and monitoring systems.

The SPC-EU DSM Project promotes a consultative and multi-stakeholder approach in implementing DSM activities in the Pacific Islands region. More information about the SPC-EU DSM Project and copies of other Project publications can be found here: www.gsd.spc.int/dsm/.

The **Pacific Financial Technical Assistance Centre** is an IMF office, based in Suva, Fiji, which provides technical assistance and training to 16 member countries in the Pacific. Assistance is provided in the areas of public financial management, tax administration, financial supervision, macroeconomic statistics, and macroeconomic analysis. PFTAC is funded by the Asian Development Bank, Australia, the European Union, Korea, and New Zealand. Additional information is available from the PFTAC website: www.pftac.org.

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ABBREVIATIONS

ACP	Countries in the European Union's "Africa-Caribbean-Pacific" grouping ¹
CIT	Company Income Tax
DSM	Deep Sea Minerals or Mining
DTA	Double Tax Agreement
EITI	Extractive Industries Transparency Initiative
EU	European Union
FOB	Free On Board
GDP	Gross Domestic Product
GST	Goods and Services Tax
IFSWF	International Forum of Sovereign Wealth Funds
IMF	International Monetary Fund
ISA	International Seabed Authority
IWG	International Working Group
NRGI	Natural Resource Governance Institute
OECD	Organisation for Economic Cooperation and Development
PEFA	Public Expenditure and Financial Accountability
PICs	Pacific Island Countries
PIH	Permanent Income Hypothesis
PITAA	Pacific Island Tax Administrators Association
PFTAC	Pacific Financial Technical Assistance Centre
RLRF	Pacific-ACP Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation
Pacific-ACP States	The Pacific Island Countries which are part of the EU's ACP grouping
PFM	Public Financial Management
SPC	Pacific Community
SWF	Sovereign Wealth Fund
UNCLOS	United Nations Convention on the Law of the Sea
VAT	Value Added Tax

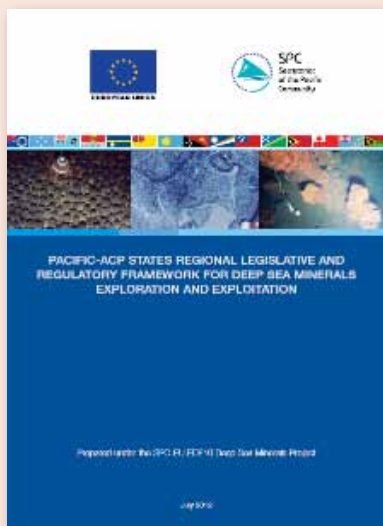
¹ Specifically: Cook Islands, Fiji, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu, and Vanuatu.



INTRODUCTION

- 1 The exploitation of Deep Sea Mineral (DSM) deposits in the Pacific has the potential to generate new, and possibly substantial, revenue for countries in the region. The benefits to Pacific Island Countries (PICs) will depend, in the first instance, on establishing strong and carefully designed fiscal revenue frameworks aimed at capturing a substantial share of the earnings from DSM mining while, at the same time, providing incentives for DSM mining investment. Equally important will be the need for PICs to manage their revenues well. Properly managed, DSM wealth can raise living standards and economic opportunities for current and future generations. Poorly managed, such wealth may not only be wasted, but also has the potential to cause great economic and social harm.
- 2 In May 2014, a four-day Pacific-ACP regional training workshop was held in Rarotonga, Cook Islands, to discuss issues relating to the financial management of DSM resources. A follow-up four-day regional training workshop was held in Nadi, Fiji in August 2015 that focused on developing fiscal regime and revenue management options for DSM. Both these workshops were co-organised by the Pacific Financial Technical Assistance Centre (PFTAC) and the Pacific Community (SPC) – European Union (EU) DSM Project. They brought together representatives from across the Pacific-ACP region, as well as experts in sovereign wealth fund (SWF) design and management; DSM mining technology; international law, the economics of DSM mining; taxation; and public expenditure management.² This Pacific-ACP States Regional Financial Framework for Deep Sea Minerals Exploration and Exploitation ('the Framework') presents key elements of the major topics discussed.
- 3 The Framework is designed to serve as a kind of "primer" for Pacific-ACP States on setting up national DSM fiscal revenue and wealth management frameworks. Some countries in the region have already begun to set up fiscal revenue frameworks, and a number of countries already have some form of long-term saving funds, which could be used in managing DSM wealth. Other countries are only at an early stage in thinking about these issues. The aim of the Framework is to assist those countries in navigating the path of setting up and implementing national DSM fiscal revenue and wealth management systems, with an introduction to the range of issues and challenges that they will need to address.
 - The Framework is part of a group of frameworks for DSM management developed over the years by SPC through the SPC-EU DSM Project (See Box 1-1). It does not include background scientific or technical information about DSM.

² Copies of the workshop papers can be found here: <http://gsd.spc.int/dsm/index.php/regional-meetings-and-trainings/36-pacific-acp-states-regional-training-workshop-on-fiscal-regime-and-revenue-management-of-deep-sea-minerals-activities-spc-imf-piftac-organised-9-13-december-2014>



Regional Legal and Regulatory Framework (RLRF)³

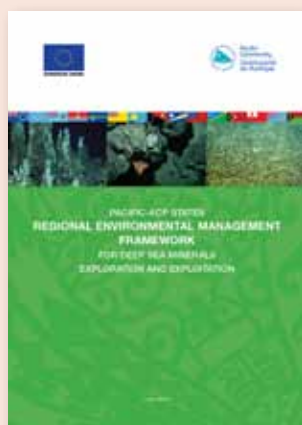
The overarching legal framework for DSM. Clear and comprehensive guidance for interested States to make informed decisions, develop robust regulatory regimes and facilitate harmonisation of national approaches throughout the region.

Regional Financial Framework (RFF)⁴



Fiscal regime and revenue management options. It covers design, establishment of regimes that integrates planning and budgeting, and strengthening of existing mechanisms as well as the importance of sovereign wealth funds.

Regional Environmental Management Framework (REMF)⁵



Overview of DSM environments, potential impacts, strategic and project-specific environmental management components which States can implement, including a template for environmental impact assessment report.

Regional Scientific Research Guidelines (RSRG)⁶



Scientific and regulatory guidelines for establishing national guidelines and/or regulations for marine scientific research, prospecting and exploration activities relating to deep sea minerals research.

³ SPC (2012). Pacific-ACP States Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation. The Pacific Community. <http://gsd.spc.int/dsm/public/files/2014/RLRF2014.pdf>

⁴ SPC (2016). Pacific-ACP States Regional Financial Framework for Deep Sea Minerals Exploration and Exploitation. The Pacific Community. http://gsd.spc.int/dsm/images/public_files_2016/RFF2016.pdf

⁵ SPC (2016). Pacific-ACP States Regional Environmental Management Framework for Deep Sea Minerals Exploration and Exploitation. The Pacific Community. http://gsd.spc.int/dsm/images/public_files_2016/REMF2016.pdf

⁶ SPC (2016). Pacific-ACP States Regional Scientific Research Guidelines for Deep Sea Minerals. The Pacific Community. http://gsd.spc.int/dsm/images/public_files_2016/RSRG2016.pdf

- 4 The Framework is divided into four sections:
- **Section I: Elements of a DSM fiscal management framework.** This section provides a broad guide to the main elements involved in establishing a comprehensive DSM fiscal management framework, including institutional and legal arrangements; the design of the fiscal revenue framework; the need to strengthen public financial management (PFM) and adopt a medium-term fiscal policy framework; and the importance of developing a framework for managing DSM wealth.
 - **Section II: Design of a DSM revenue regime.** This section focuses on the design of a DSM revenue framework, drawing extensively on international experience concerning the tax treatment of extractive industries. The chapter also considers international dimensions of DSM mining, including the potential benefits to Pacific-ACP States from regional coordination in designing DSM revenue regimes.
 - **Section III: Public financial management** and the fiscal policy framework. This section focuses on (i) the need to strengthen various aspects of PFM and administration in handling DSM revenues; and (ii) the importance of adopting a medium-term fiscal policy framework that integrates planning and budgeting.
 - **Section IV: DSM wealth management.** This section addresses the deployment of DSM revenues and, especially, the important role to be played by SWFs in managing DSM revenues so as to maximise the benefits to the country over time.
- 5 The Framework focuses on financial arrangements for the development of DSM resources within a Pacific-ACP State's national jurisdiction only (where the state has sovereign rights to explore and exploit the DSM, in accordance with the United Nations Convention on the Law of the Sea (UNCLOS). This Framework does not cover the seabed beyond national jurisdiction, known as 'the Area': a zone in which the DSM resources are managed by an intergovernmental body, the International Seabed Authority (ISA). UNCLOS signatory states (including all Pacific-ACP States) may access the DSM of the Area by applying to the ISA, or may sponsor a corporate body to do so.
- 6 Between 2011 and 2014, four Pacific-ACP States had become sponsoring states in the Area (Nauru, Tonga, Kiribati and the Cook Islands), in partnership with foreign companies and investors. The financial arrangements between a sponsoring state and a commercial partner in the Area are a matter for negotiation and contractual agreement between the two parties. The obligations and liabilities that fall to the sponsoring state should be taken into account. This is not further explored in this Framework, but Pacific-ACP governments wishing for further advice on this issue should contact SPC.

I ELEMENTS OF A DSM FISCAL MANAGEMENT FRAMEWORK

- 7 A sound DSM fiscal management framework comprises of several different elements which, together, can help ensure that the potential benefits of DSM resources are used to achieve the maximum benefits for current and future generations in PICs. The main elements include:
- a high degree of transparency in all areas of the framework to ensure good understanding and support for the various major elements, as well as to guard against mismanagement of the framework;
 - a clear institutional and legal framework governing the exploitation and revenues of DSM;
 - a well-designed and stable fiscal revenue framework aimed at balancing multiple objectives to maximize the benefits to the country, while also meeting the needs of investors;
 - a strong PFM system to ensure efficient implementation of the fiscal framework;
 - a medium-term fiscal policy framework to ensure that the flow of revenues from DSM does not destabilize the economy; and
 - a wealth management framework to ensure that the benefits of DSM revenues are shared appropriately between current and future generations, and to minimize the potentially damaging macroeconomic effects of spending too much too quickly.

A INSTITUTIONAL, LEGAL AND TRANSPARENCY ARRANGEMENTS

- 8 A clear institutional framework is needed for establishing the DSM fiscal framework. The lead department should be the Ministry of Finance, working in consultation with the departments responsible for managing DSM activities.
- 9 Implementation of the DSM fiscal and revenue management regime will be helped if, from the outset, there is public discussion and consensus on the objectives and key features. This will require public consultation processes, as well as robust discussions within government and parliament, before final decisions are made. The importance of participatory processes cannot be over-emphasised, particularly given uncertainty over whether DSM resources can be replenished over economically relevant horizons. More information about public participation in DSM issues can be found in the SPC-EU DSM Project Information Brochure 14.⁷
- 10 It is important to establish the fiscal framework in advance of issuing initial prospecting or exploration licences and before the national DSM revenue stream starts to flow. Shortcuts might be costly and it is, therefore, important to start the process as soon as possible. Pacific-ACP governments are now encouraged to spend the time required to develop a sound framework, involving stakeholders in the design and implementation process. Although a broad and inclusive planning process may take more time, a consultative approach should ease implementation and lead to a more sustainable framework in the long term.
- 11 SPC and PFTAC are available to provide technical assistance to Pacific-ACP States in this regard.
- 12 Transparency is a prerequisite for a successful DSM revenue management framework. Accordingly, the DSM fiscal regime should incorporate:
- competitive procurement procedures;
 - quarterly and annual reporting;

⁷ http://gsd.spc.int/dsm/images/pdf_files/dsm_brochures/DSM_Brochure14.pdf

- independent audits;
- clearly delineated decision-making and oversight roles; and
- regular and accessible public disclosure of non-confidential/non-commercial information.

- 13 Embedding such transparency and oversight mechanisms in the law will assist in reducing the risk of corruption and mismanagement, and will be key to enabling parliament, non-governmental organisations, private sector, and society at large to hold government accountable for the collection and management of DSM revenues. State commitment to transparency initiatives also benefits mining companies by reducing political and reputational risk, and assisting to highlight the contribution of their investment to the country.
- 14 DSM tax rules should be set out clearly in national law. Negotiation of project-specific fiscal arrangements should be avoided. Historically, developing states have not tended to strike favourable deals in negotiations with extractive industry companies. Many Pacific-ACP States are new to mining, with limited knowledge of the relevant economics, technical/commercial realities of the potential DSM industry. They are also unaware of the size and nature of natural resources in the country, and so are poorly placed to engage in complex negotiations with well-resourced multinational operators (and their lawyers). The project-specific negotiation approach is also administratively burdensome, can lead to inequity and inconsistent treatment of taxpayers and, crucially, lacks transparency.
- 15 National fiscal laws should also aim to close tax avoidance loopholes; and should aim for progressivity (i.e. the government share in the profits of a project gets larger, the more profitable the project is and, conversely, the tax burden on the mining company is reduced in times of lower profitability). Such flexibility may reduce the need for project-specific negotiations in response to unforeseen development.

B THE FISCAL REVENUE FRAMEWORK

- 16 In designing the DSM revenue regime, it is necessary to take into account specific characteristics of the DSM sector.
- At this stage of the development of the industry, DSM resources are predominantly in the inferred category, and the feasibility of mining is yet to be proven. Moreover, it is uncertain whether such resources should be considered as essentially finite over timeframes relevant for commercial exploitation, as some deposits may be renewable.
 - The infrastructure used for DSM exploration and mining is mobile and can move from project to project, and jurisdiction to jurisdiction. DSM exploration is costly⁸, and is unlikely to proceed unless the company has a degree of confidence in the geological potential; for this reason, the DSM sector may see a much higher proportion of exploration projects move to a mining phase.
 - Monitoring (and civil society oversight) of DSM operations may be logistically challenging.
 - Environmental impact assessment and management costs to the company may be high, but rehabilitation and decommissioning obligations may be limited.
 - Most capital investments made by DSM mining companies (for example the mining vessel, specialised DSM mining equipment, equipment for secondary processing) will be made outside of Pacific-ACP States. Also, apart from limited employment related to the provision of some local goods and services, there may be very little direct job creation within the host country (compared to onshore mining, which may require thousands of locally recruited staff).
- 17 Achieving maximum benefits from DSM for current and future generations is not a simple matter of charging the highest tax rate possible. International experience indicates that the

⁸ For example, vessel costs for exploration may exceed USD 100,000 per day.

design issues are multi-faceted, with the result that revenue regimes for exhaustible resources such as DSM need to be relatively complex to get the maximum benefit over time. Some major issues that should be taken into account in the design of the regime are:

- the mix of royalties, income and additional tax on economic rent and other levies needed to ensure an appropriate stream of revenue to the government over time, and the flexibility needed to cope with potentially significant changes in DSM profitability over the life of the investment;
- the appropriate incentives to be provided to DSM mining companies to attract and sustain their investment over time, recognizing the high degree of mobility of DSM operations;
- the desirability of providing a stable fiscal regime to reduce uncertainty, both for investors and for the government; and
- a high degree of transparency surrounding the revenue regime and the disposition of revenues to promote broad domestic support for the regime, minimize misuse of revenues, and enhance investor confidence.

- 18 The design of the fiscal regime needs to balance the government's interest to maximise its share of the earnings with the need to preserve the profit incentive for the private sector and to minimise tax distortions. This is not an easy balance to strike. Government is likely to prefer DSM revenue that is both early and dependable in its timing – e.g. a royalty based on mineral production (rather than profits, which may be achieved only later in the project). DSM companies may prefer the opposite, with royalties being a cost irrespective of the profitability of the project and, therefore, may prevent marginal projects from proceeding. With a range of different objectives in mind, even the simplest fiscal regime is likely to involve a mix of different taxes and levies.
- 19 It is not easy to design a fiscal regime for an emerging industry, whose practices, timeframes, and feasibility are not yet known. Assumptions on which national DSM fiscal framework is based must be carefully made, drawing upon all available economic data. The regime also needs to take into account the volatility of mineral prices.
- 20 The fiscal regime for DSM must take into account the possibility that mining companies (or 'investors') may earn economic rents (i.e. profits in excess of a required rate of return). For this reason, an effective fiscal regime for DSM requires a mix of:
- pay-as-you-produce instruments (e.g. royalties) – to ensure an early and minimum level of revenue to the government for its DSM resources; and
 - profit-based instruments (e.g. income tax, and additional tax on economic rent) – to ensure that the government's share increases as profitability increases.
- 21 Mining companies may seek income tax incentives, such as tax holidays (that is, a period when the company is exempt from income tax). This is not recommended. The government should not limit its ability to obtain a fair share of the wealth generated from the mining of DSM resources that belong to the state. Even for non-mining sectors, these types of exemptions create economic distortions, complicate the tax system, are open to abuse, and cost revenue. Further, any tax that is not collected as a result of a tax holiday may simply be collected by the investor's country of residence (which is likely to be a developed country). It is better to avoid such incentives in the tax system, so that commercial decisions (at exploration and mining phases) are guided by factors other than taxation.
- 22 Fiscal stability — that is, stability in the structure and rates of taxation, levies and fees — is an important consideration in a DSM framework. Fiscal stability is more likely where an effective fiscal regime is in operation from the outset: if the government is receiving an equitable share in profitable outcomes from a DSM operation, then it is less likely to seek alternative terms; if it is clear to the general public that the state is receiving a fair share, then it is less likely to raise political pressure.

- 23 Investors in DSM companies may seek some form of fiscal stability clause in mining contracts to insulate themselves against changes in the fiscal regime. These are not recommended, partly because the economics of the DSM industry is still highly uncertain, so changes in fiscal arrangements may need to be made over time. Additionally, such clauses can also be difficult for the tax authorities to administer. If fiscal stability clauses are offered, then they should be time-limited, restricted to the key rates of tax and duty and to major deductions, such as capital allowances, and symmetrical protection (i.e. the company will be exempted or indemnified from tax or duty increase, but will not benefit from decreases during the stability period).

C PUBLIC FINANCIAL MANAGEMENT AND THE FISCAL POLICY FRAMEWORK

- 24 Effective implementation of the DSM fiscal regime and use of revenues collected from DSM mining will require Pacific-ACP States to put in place appropriate PFM arrangements. Access to relevant information and adequate capacity to handle the particular complexities of the DSM sector will be essential factors.
- 25 In addition, a medium-term macroeconomic policy framework, integrating planning and budgeting, is essential to ensure that the flow of revenue does not destabilize and undermine good macroeconomic performance.
- 26 Effective implementation of the DSM fiscal regime requires addressing of the following areas.
- Weaknesses in institutional and legal arrangements. As discussed earlier, the legal and institutional framework needs to be clear, including the fiscal revenue legislation. Within the fiscal revenue framework, issues are likely to arise that may not be adequately covered in existing legislation; for example, international aspects of revenue management. Institutional and legal arrangements should be put in place for some form of fund to manage the accumulation of wealth from DSM, as is discussed in greater detail below. Weaknesses in these areas can lead to losses of revenue, inefficient revenue management, poor macroeconomic outcomes, and undermine the credibility of the framework for domestic residents and foreign investors alike.
 - Weaknesses in administrative processes. For the fiscal framework to be implemented as intended and in an efficient manner, appropriate administrative processes need to be put in place. These include monitoring and enforcement processes to ensure that the government's revenues are indeed paid; reporting and accounting frameworks to ensure that the flow of funds within the government are properly monitored; as well as strong transparency and accountability mechanisms to ensure that revenues are not mismanaged. In the absence of strong administrative processes, there is a high risk of revenue loss, inefficiency and, potentially, corruption with adverse consequences for the credibility of the entire DSM framework.
 - Risks that DSM revenues will destabilize macroeconomic performance. If the pace of DSM revenue spending significantly exceeds the ability of the economy to absorb such expenditure, the likely consequence of overheating the economy, particularly in the non-tradable goods and services sectors, can lead to accelerating inflation and deterioration in the external competitiveness of domestic producers. Over time, this can lead to the economy becoming heavily dependent on DSM revenues, with little other income being generated. To avoid this problem, the pace of DSM revenue spending should be put on a sustainable path that is uncoupled from the potentially volatile path of DSM revenues. This requires establishing a medium-term fiscal policy framework that integrates both planning and budgeting. A significant portion of the revenues may need to be saved in an offshore wealth fund, for use when DSM revenues decline.

D THE WEALTH MANAGEMENT FRAMEWORK

- 27 Sovereign Wealth Funds (SWFs) have become a standard tool for managing exhaustible and volatile revenues, typically associated with natural resource exploitation. They can play an essential role in the macroeconomic policy framework by allowing the path of public spending to be smoothed and uncoupled from the path of revenues. They can also be used to establish long-term national savings in order to facilitate sharing of exhaustible resource wealth between current and future generations.
- 28 The design and operation of SWFs for DSM revenues should, as much as possible, be guided by the internationally agreed Santiago Principles⁹ for management of SWFs.
- 29 Transparency is an essential element needed to sustain and depoliticise support for SWFs. This should include:
- a legal framework, providing for clear and accountable SWF management and governance;
 - a well-specified, prudent investment policy; and
 - regular public reporting of flows into and out of the SWF and investment performance.
- 30 Revenues accruing to the SWF should be held largely in offshore investments to avoid adverse domestic macroeconomic effects. When funds are used to finance domestic expenditure, they should go through the normal budget process.

⁹ www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf

II DESIGN OF A DSM REVENUE REGIME

- 31 There is currently little precedent for DSM-specific fiscal rules.
- The Cook Islands has taken a lead with its Seabed Minerals (Royalties) Regulations 2013, and Income Tax Amendment Act 2014.
 - The ISA has yet to establish financial arrangements for DSM mining (by states or state-sponsored companies beyond national jurisdiction). Its governing instrument specifies that consideration should be given to the adoption of a royalty system, or to a combination of royalty and profit-sharing; and that the regime must:
 - include a fixed annual fee payable upon commencement of commercial production;
 - be fair to both the contractor and the ISA;
 - provide adequate means of determining compliance with the system by the contractor;
 - have rates of payment within the range of those prevailing for land-based mining of similar minerals;
 - not be complicated;
 - not impose major administrative costs on the contractor or on the ISA; and
 - give the contractor the right to choose between options, if the system offers alternative payment systems.

Box 1: Location of a Country's DSM Tax and Royalty Laws

An initial issue to consider is where to locate DSM fiscal provisions in the national statute books. The most common approach is to locate them with other tax aspects (income tax, rent tax, withholding tax) that are in tax legislation, with the DSM mining legislation providing for royalties and other fees and charges.

Having all fiscal provisions for extractive industries (or just DSM) in a single piece of legislation is a transparent option, which can assist government to: counter arguments that the sector is under-taxed; facilitate the establishment of a specialist tax administration unit for extractive industries or DSM; promote the adoption of uniform rules on issues common to the different fiscal instruments (e.g. transfer pricing); and reduce the tendency for sector ministries to try to control revenues included in their laws. However, the disadvantage to this approach is that sector-specific fiscal laws do not replace, and run alongside, the more general income tax regime. Therefore, the DSM company and government would need to apply both sets of laws to determine the complete tax position.

A good middle-ground option may be to include the DSM fiscal provisions in the general income tax legislation, but to group them together in a separate Part or Schedule to that law.

- 32 Drawing from this and other extractive industries¹⁰, are four broad options for collecting revenue from the DSM sector:
- indirect taxes, fees and other levies;
 - royalty regimes and income taxes;
 - production sharing contracts; and
 - state equity.
- 33 The different options are not mutually exclusive. Although a combination of the different options may make the regime more complicated than a single type of taxation, a combination is generally needed to achieve the objectives and principles outlined in Part I of this Framework. Each mechanism also contains variables, enabling further permutations to achieve the desired revenue yields.
- 34 The most common fiscal regime for the mining sector is a combination of licensing fees, tax and royalty payments, and this is also recommended to be the main source of revenue from

¹⁰ For a detailed discussion of the design and implementation issues for extractive industry fiscal regimes see Fiscal Regimes for Extractive Industries: Design and Implementation, IMF Paper, August 2012.

DSM mining for Pacific-ACP States. Such a regime would usually involve:

- exploration license fees aimed at covering costs of licensing;
- a royalty to secure a minimum and early payment to the state in return for the DSM extracted (regardless of company profit at that stage);
- the regular company income tax (CIT) applicable to all companies;
- a rent tax to capture a larger share of the profits of the most profitable projects; and
- other taxes and levies, including Value Added Tax (VAT), import duties, and withholding taxes.

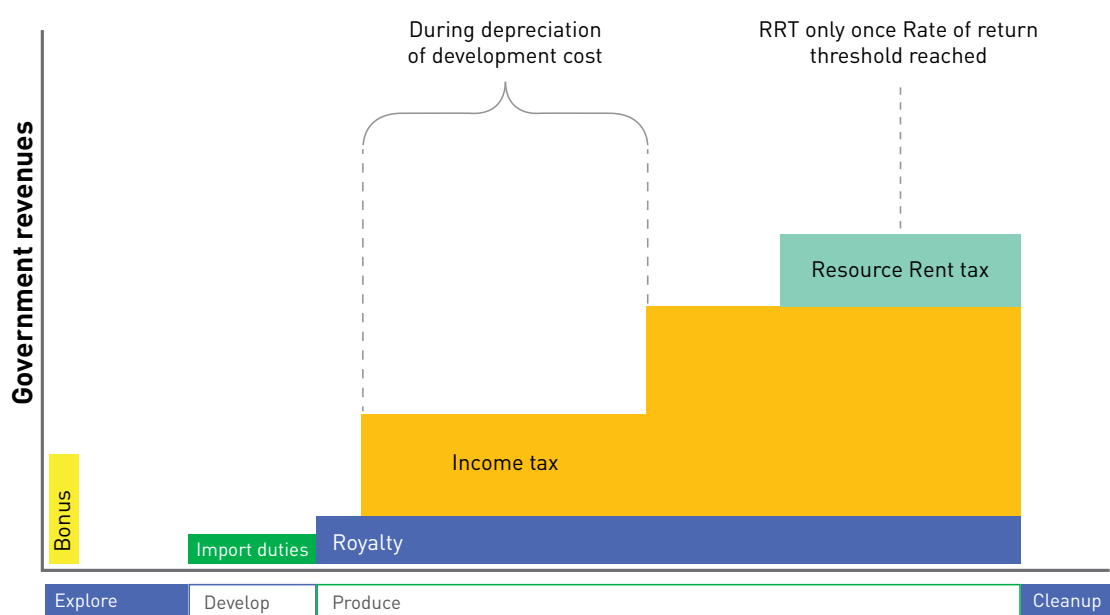


Figure 1. Stylised Government Revenue Profile

- 35 Frequent changes in tax treatment of DSM projects may cause investments to be delayed (e.g. in the expectation of future incentives), or discouraged (e.g. by fear that future competitors will be able to receive more favourable treatment).
- 36 Investors emphasise their need for certainty of critical fiscal terms, in order to reduce the range of risks they face, and thus to increase the likelihood of a positive investment decision in the country. DSM companies are likely to seek some form of assurance that they will not be affected by changes in the national fiscal law once an investment is made. However, fiscal stability clauses in individual mining project contracts are not recommended. As DSM is a new and, as-yet untested, industry, there may be a need for government to impose new laws or renegotiate fiscal terms as circumstances change or more information becomes available. Such clauses can also be difficult for the tax authorities to administer, for example, due to uncertainties over what is covered by the stability clause.
- 37 However, if fiscal stability clauses are offered, then the protection provided to the company should be:
- time-limited;
 - restricted to the key rates of tax and duty, and to major deductions, such as capital allowances explicitly listed in the clause. They should not offer protection from reasonable and non-discriminatory regulations, or administrative rulings made for general improvement of the tax or duty systems; and
 - symmetrical (i.e. the company will be exempted or indemnified from tax or duty increase, but will not benefit from decreases during the stability period).

A LICENSING FEES

- 38 Government will usually charge companies various administrative fees for DSM licences. These are generally a cost-recovery mechanism, to fund the staff time and any other costs of processing licensing applications, issuing licences, and monitoring the licensed activities. As the state's regulatory burden is likely to increase as a DSM project progresses, the fees are likely to increase as a company moves from the exploration phase to the mining phase.
- 39 **Prospecting** (general research work undertaken prior to exploration): does not usually entail any exclusive rights for the prospector. As long as the data gathered is shared with the state, and the prospector's activities are limited to those with negligible environmental impact (these items should be a condition of a prospecting permit), the state may not wish to impose too high fees on prospectors, in order to encourage prospecting activities.
- 40 **Exploration:** gives the licence-holder exclusive rights over an area of the seabed, and will also require more involved regulation by government, where the state will then wish to charge fees to reflect this benefit and to cover the costs of regulation. The fee can be charged per licence (in which case it is important to make sure tenement sizes are set appropriately), or per km² of the licence area.
- 41 The tenement size for exploration (and mining) will be much larger for some types of DSM (e.g. manganese nodules) than for others (e.g. seafloor massive sulphides).
- Fees should not be set too high as to act as a disincentive to exploration because, through exploration, the government can gather useful data; without exploration, there will be no mining. Also, at exploration stage the company is expending large amounts of money and yielding no financial return, with no guarantee that the exploration activities will lead to commercially viable mining operations.
 - Equally, the government does not want a company to hold a DSM license and then do nothing – effectively blocking another company from accessing and developing the DSM resources in that site. There are other ways of providing incentives at the exploration phase (including relinquishment and/or minimum expenditure requirements), but charging an annual fee for each square kilometer of an exploration tenement could help focus the licensee on restricting their attention to a smaller site and/or actively exploring.
 - What level of exploration fees a country charges will also depend on country-specific conditions, e.g. the level of current knowledge of the DSM potential, commercial interest in a particular DSM and its inferred metal content, national priorities, development strategy and DSM policy.

Box 2: DSM Exploration Fees: Examples

Tonga, which has known seafloor-massive sulphide potential with three different exploration companies currently active within their jurisdiction, increased their overall annual exploration licensing take from TOP 20,000 to TOP 3 million in 2014.^{1/} The fees are based on TOP 5 per km² for the first 2-year term, TOP 10 per km² for the second 2-year term, and TOP 20 per km² thereafter. One reason for this uplift was to incorporate a 'capacity-building' component in the fee, using licensees' payments to enable the government to increase the size and skills of the national DSM regulatory authority.

The **ISA** responsible for managing DSM activities beyond national jurisdiction, charges USD 500,000 for an application, and USD 47,000 per year annual fee at exploration stage – although they did not do so for their pioneering investors in the early days.

^{1/} TOP 100 is approximately equal to USD 0.49

- 42 Mining: is the main source of state income from DSM extraction, derived from the royalties and tax regime. However, the state may wish to continue to cover its administration and regulation costs for the site by way of annual licensing fees; those costs (and fees) are likely to be higher than for exploration, as much more active monitoring and review of activities will be required. For onshore regimes, this payment is usually termed 'annual rent', and calculated by tenement size.

- The only offshore precedent for mining is 'Solwara 1', Nautilus Minerals Inc.'s seafloor massive sulphides mining project in the archipelagic waters of Papua New Guinea, where the pre-existing onshore mining laws (Mining Act 1992) were used by the Papua New Guinea Government to issue the license. This entails an application fee of PGK 50,000 (for a mining lease >500 hectares), and annual rent of PGK 12 per hectare (for a mining lease >50 hectares).¹¹
- The ISA has not yet set DSM mining contract fees, but have started discussions about their financial system.¹²

B ROYALTY REGIMES

- 43 Overview: It is usual for unextracted DSM to be vested in the State (i.e. owned and managed) on behalf of the people.¹³ This may be provided for in the Constitution and/or the DSM legislation. Under a royalty regime, the company is given a licence to extract DSM as specified in the mining licence. Ownership of the DSM usually transfers to the mining company upon extraction. A royalty is an amount paid to the government for the right to take the DSM. A royalty secures revenue for the government as soon as mining commences and is a pay-as-you-produce instrument. Consequently, a royalty provides a certain minimum and early revenue flow to the government from its minerals, and is consistent with the notion of the government as owner of the country's mineral resources prior to extraction. Royalties also tend to be easier to administer than many other fiscal instruments.
- 44 Royalty Rates: Generally, the calculation of the amount of royalties does not take account of the costs of extraction. Royalties increase the costs of mining and, if the royalty rate is set too high, it may render a proposed mining project financially unviable for the investor. For this reason, the rate of royalty is usually set low, aiming to balance between collecting a fair share of revenue and not deterring investors. Ad valorem royalties on minerals are usually in the range of 3 to 7 per cent of the value of the mining product, although higher rates may apply for precious metals.
- 45 Traditionally, a separate royalty rate was specified for each type of mineral. This approach ensured that the royalty regime took account of the physical properties, rarity and worth of individual minerals. However, such an approach can add complexity to the royalty regime, particularly with an ore body such as DSM, which may contain multiple minerals with different royalty rates. DSM in the Pacific poses a further challenge to the design of royalty regimes, as processing will generally take place outside the country, and so accessing information held offshore about DSM content will be difficult. While it is possible to design a multi-rate royalty regime based on assumptions about mineral content, it may be preferable to have a single royalty rate applicable to all minerals, mainly for simplification for both taxpayers and the revenue administration.
- 46 **Royalty Base:** Royalties are typically either:
- **'Specific royalties':** based on the volume of minerals extracted, such as \$x per tonne, or per m³ of ore extracted) – the oldest form of royalty base. A unit-based measure can be easily applied at the point of extraction, and can be collected periodically (e.g. monthly). The downside is that a unit-based royalty does not adjust in accordance with fluctuations to the commodity price. For this reason, such a royalty base tends to be used now only for more abundant (lower-value) minerals for which the price is relatively constant; or

¹¹ PGK 100 is approximately equal to USD 36.

¹² So far, it has been identified that it is a complex issue - see pages 46-54 of ISA Technical Study 11: <http://www.isa.org.jm/en/documents/publications>.

¹³ In some countries, there may be differences to this general rule, e.g. rights in DSM vested in sub-national authorities (state government, local or provincial authorities, etc.) There may also be customary rights or claims by individual landowners or communities (depending on the location of the DSM).

- **‘Ad valorem royalties’**: based (as a percentage) on the value of minerals extracted. Under an ad valorem royalty regime, State revenue increases as the commodity price increases, and typically used for more valuable minerals, such as those likely to be extracted from DSM (e.g. gold, silver, copper, nickel).

- 47 Neither of these bases takes account of the company’s costs or profitability. Modern royalty regimes in some developed countries have been designed to take account of profitability, either through a profit-based royalty, or through a hybrid royalty system (i.e. a mix of ad valorem and profit-based royalties). This may be rather complex to calculate and administer, and many developed countries continue to use one or both of the traditional royalty bases. For Pacific-ACP States and DSM, it is recommended that a simple ad valorem royalty system is adopted, with costs and profitability left to profit-based fiscal instruments.
- 48 The key design issue with ad valorem royalties is the determination of the value of the resource. In theory, value should be determined at the point of extraction, but there is unlikely to be an observable value at that point. Thus, it is usual to base the value on the price in the first sale of the resource or the free-on-board (“FOB”) export value of the resource, if the first sale is outside the jurisdiction. The problem with this approach is that the value of the resource captures some value added after extraction (i.e. it captures value added downstream from extraction). At a minimum, it captures the value added by transportation and handling to the point of first sale, or the port when the first sale is outside the jurisdiction. If the same entity that extracted the resource also does some processing before first sale or export, then the value added by processing may also be captured in the royalty base.
- 49 One way to deal with this is to adopt a “netback” approach to valuation. This involves starting with the first observable value (i.e. the price in the first sale or export value) and netting back for downstream costs, such as processing and transportation. However, this requires access to accurate information on downstream costs. This may be difficult, especially where the downstream services are provided in-house (i.e. within the same company group) rather than acquired from a third party at an arm’s length market price.
- 50 An alternative to a netback approach is to base valuation on the first observable value but apply a lower royalty rate to compensate for downstream costs. This will involve some loss of accuracy as the first observable value may be a price at the point of extraction, or it may be a price or value that includes significant downstream value added.
- 51 Unlike with unit-based royalties, ad valorem royalties are subject to abuse through transfer pricing practices. The first sale price or FOB value for export could be undervalued through a ‘related party’ transaction. To counter the impact of transfer pricing, the royalty legislation should provide for the substitution of the arm’s length value in cases of non-arm’s length transactions. In this regard, the royalty legislation could cross-refer to the transfer pricing rules applicable under the income tax legislation. As transfer pricing is a highly specialized discipline, this would work best when there is common administration within government of both income tax and royalties, so that those with transfer pricing expertise for income tax are also applying the transfer pricing rules to royalties. If royalties are administered by the government’s DSM authority (rather than the revenue authority), it is unlikely that the administrators will have adequate training in transfer pricing and, therefore, there will need to be collaboration with the income tax transfer pricing experts.
- 52 As processing of DSM is likely to be done offshore for most Pacific-ACP States, the first observable value will be the FOB export value. To keep the royalty system simple, ad valorem royalties can be set at a low rate based on the export value of the minerals. As stated above, a low rate also compensates for the fact that ad valorem royalties do not take account of costs and profitability.

C COMPANY INCOME TAX

- 53 Company income tax (CIT) will be an important component of a DSM fiscal regime. Income tax is imposed on an annual basis on “taxable income”. The taxable income of a person for a tax year is computed as the gross amount of income and gains derived during the year, reduced by the total amount of deductions allowed to the taxpayer for the year, according to the tax rules (see the discussion of company income tax and deductible expenditure, paragraphs 72-87, below). Resident companies are usually liable for tax on worldwide income, while non-resident companies are liable for tax only on domestic source income.¹⁴ CIT is usually levied on a mining company in the same way as any other company, and based on company profit.
- 54 There is likely to be a significant involvement of foreign investors in DSM activity. A foreign investor may structure its investment in a country through a subsidiary or permanent establishment.¹⁵ A subsidiary is a locally incorporated company and, therefore, is likely to be a resident and liable for tax on worldwide income. A permanent establishment is an internal division (such as an office) of a non-resident company and, therefore, only domestic source income of the company is subject to tax. A DSM project may be conducted by a single company or by multiple companies (possibly including the national mining company) through a joint venture. A joint venture may be incorporated or unincorporated. An incorporated joint venture is a separate company (“joint venture company”) in which each joint venturer has an equity interest. An unincorporated joint venture is a purely contractual relationship with the contract setting out each company’s rights and obligations (including work obligations and financial contributions). The advantage of an unincorporated joint venture is that the tax position of each joint venturer is kept separate.¹⁶
- 55 The life cycle of an extractive industries project is not consistently profitable. It usually involves large losses in the early years of the project, with high expenditure but little or no income at the exploration stage, high profits during the mining phase of the project, and potentially large losses at the end of the project, where there may be high rehabilitation expenditures but little or no income. Because of the high risks and costs involved, particularly in the exploration phase, and the long lead time before profits may be earned, it is common for special income tax rules to apply to the extractives industries sector, particularly to encourage investment in the sector. From what is known about its likely operation, these factors can apply similarly to the early DSM industry.

¹⁴ There are two international norms for determining the residence of companies: (i) place of incorporation; and (ii) place of management and control (i.e. the place where the superior directing authority of the company, usually the board of directors, meets to exercise the management of the company). Some countries use one only of these tests, while other countries use both tests as alternatives.

¹⁵ A permanent establishment is the tax term for what is commercially known as a branch. There are two main bases on which a non-resident may have a permanent establishment in a country: (i) a fixed place of business through which the non-resident carries on business in the country; or (ii) a dependent agent in the country with authority to conclude contracts on behalf of the non-resident.

¹⁶ This is in contrast to an incorporated joint venture in respect of which each joint venturer’s tax position is, in effect, merged together as the tax position of the joint venture company. An unincorporated joint venture avoids classification as a partnership for tax purposes through the sharing of output rather than profit.

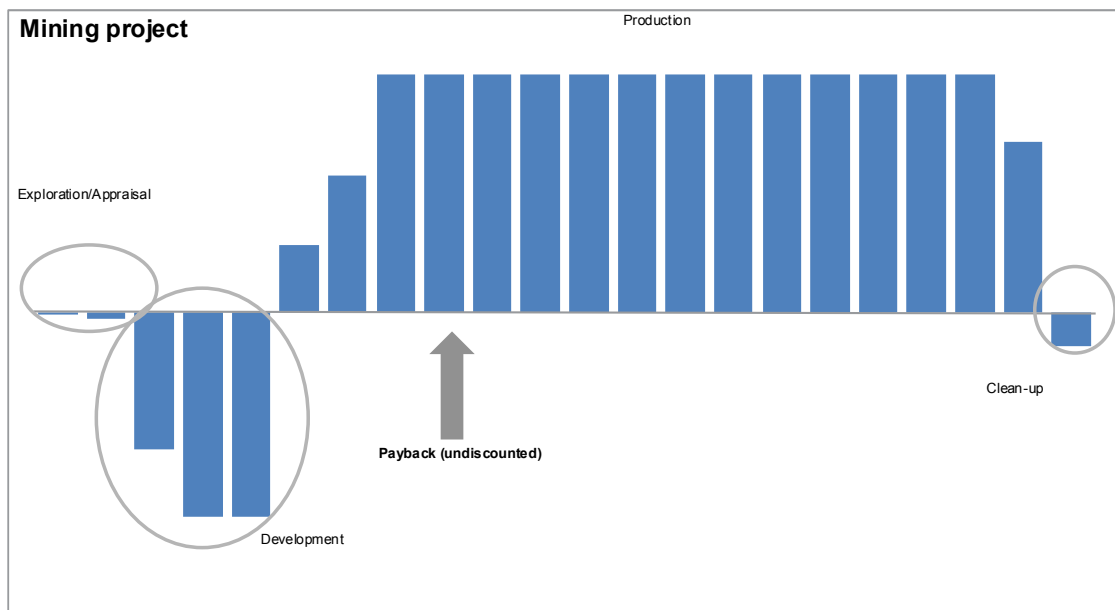


Figure 2. Cash Flow Profile of a Mining Project

- 56 Some countries apply longer loss carry forward periods for mining companies, including unlimited loss carry forward. This reflects the higher upfront investment required, and the back-loaded revenue profile for a mining project. The decision on the length of time for loss carry forward needs to take into account the ability of the tax administration to verify old losses and the period for amendment of assessments.
- 57 Given the large upfront investment required from a DSM company in order to commence mining (which will be off-set against company income – so as to reduce taxable income), the CIT may not provide any state revenue until several years after mining commences. However, for profitable mining projects, the CIT is likely to provide a significant portion of the revenue over the project life.
- 58 Apart from the revenue potential, there are two other principal reasons for focus on CIT:
- to maintain consistent treatment with returns in other sectors; and
 - to make it possible for foreign companies to obtain a tax credit against foreign income in their home country – if that jurisdiction operates a residence-based worldwide income tax system, such as the United States.
- 59 **CIT Rate:** A higher CIT rate is sometimes used as a way for the state to capture a share of the economic benefits from a mining project. The advantage of the higher CIT rate is its simplicity, but it may deter investors as it can tax a project before it has reached its required rate of return (i.e. the minimum return that an investor wanted, in order to have made the investment in the first place).
- 60 An alternative approach is the variable income tax, pioneered in South Africa's gold sector, which replaces the standard CIT with a tax on the same base but levied at a rate, ranging from the standard CIT to a higher rate. The rate levied is determined by a formula under which the rate reduces to the standard CIT rate at low levels of current profitability, but increases non-linearly with the ratio of taxable income (from mining) to gross revenue.

Company Income Tax and Tax Treaties

- 61 The significant involvement of non-residents (i.e. foreign companies) in the DSM sector means that tax treaties may modify the application of domestic law in particular cases. The main impact of a tax treaty is that it limits or excludes a Contracting State's right to tax income and gains sourced within its territory, but derived by a resident of the other contracting State. In particular, a tax treaty may limit or exclude a country's right to tax subcontractor fees,

equipment lease payments, and capital gains on a direct or indirect transfer of mining rights.

- 62 Further, tax treaties are vulnerable to corporate tax planning through a practice known as “treaty shopping”. This involves funnelling investment into country X through a conduit company established in country Y, which has a favourable tax treaty with country X. This can have the effect of shifting profits out of country X for little or no taxation.
- 63 Tax treaties, therefore, can have a significant negative impact on the level of government’s take from the extractive industries sector: particularly where, as is the case with Pacific-ACP States and DSM, the developing country is the host state and the mining company is resident (for tax purposes) in the other Contracting State. So it is recommended that Pacific-ACP States take care in entering into such tax treaties, and be fully aware of the potential revenue consequences for the country. If a country does have tax treaties, then it is important that the treaty or domestic legislation includes a measure to counter the loss of tax revenue through treaty shopping.
- 64 Discussion in this Framework on the impact of tax treaties is relevant only for countries that have already entered tax treaties (or are planning to do so).¹⁷

Box 3: Organisation for Economic Cooperation and Development (OECD) Model Tax Convention on Income and on Capital

A tax treaty is an agreement between (most often) two countries (“Contracting States”). Tax treaties were originally developed to avoid the potentially harmful effects on cross-border trade that can arise as a result of double taxation (the imposition of comparable taxes in more than one jurisdiction on the same taxpayer in respect of the same subject matter and time periods). However, countries today that tax residents on worldwide income provide double taxation relief unilaterally under domestic law. This means that the main role of tax treaties now is the sharing of tax revenues arising from business and investment activities conducted by persons between the two Contracting States.

Most tax treaties follow the structure of the model tax treaty developed by the OECD. While the United Nations (UN) has developed a model tax treaty intended for negotiations between developed and developing countries, the UN Model follows the structure of the OECD Model, but with greater source country taxing rights in relation to some classes of income.

For more information, visit: <http://www.oecd.org/tax/treaties/oecdmtcavailableproducts.htm>

Company Income Tax and Ring-Fencing

- 65 Normally for CIT purposes, a company’s business income and deductions are consolidated across all business activities undertaken by the company. This means that a loss from one business activity is deducted against the income from other business activities of the same company. However, in the extractive industries sector, this can significantly delay or reduce the government’s take, as a mining company can deduct the exploration expenditure incurred under a new project against the income derived from an established project; or can reduce tax payments on upstream operations by off-setting losses from expenditure on downstream operations. The consolidation of projects in this way can also act as a barrier to new investors into the sector, as they have no current income against which to deduct exploration expenditure.
- 66 In order to avoid this outcome and to protect government revenue (particularly where a company is operating in more than one licence area), it is recommended that PICs “ring-fence” DSM mining operations on a project-by-project basis. Ring-fencing is a limitation on the consolidation of income and deductions for tax purposes across different mining projects undertaken by the same taxpayer, so that the expenditure incurred in mining operations under one project cannot be deducted against the income derived from another mining project of the same company. The excess of deductions, i.e. a loss, is instead carried forward on a project

¹⁷ The following PICs have entered into tax treaties: Fiji, Kiribati, PNG and Solomon Islands.

basis, e.g. the costs of DSM exploration can be off-set against future income from DSM mining carried out by the same company in the same site, following on from the exploration work¹⁸.

- 67 A government may decide in its regime to make an exception to ring-fencing for unsuccessful exploration, to ensure exploration is not discouraged. So the rules may allow exploration costs in an unsuccessful licence area to be offset against taxable income in a successful licence area.
- 68 In order to alleviate any hardship that project-by-project ring-fencing may cause, given the potentially long timeline for a DSM project to make a profit, the loss carry forward period should not be limited for DSM in the same way as it may be for other industries under the normal operation of the CIT.
- 69 Particular consideration should also be given to treatment of a terminal loss (a loss that cannot be carried forward to a following tax year, as the mining operations have ceased), which may arise as a result of ring-fencing, e.g. due to rehabilitation expenditure incurred at the end of the project. Three possible tax treatments for a final year loss for a DSM mining project are to:
- allow transfer of the final year loss to another DSM licence area. This appears the most sensible option for Pacific-ACP States dealing with final year losses, arising from DSM projects. The rules may limit the type of licence area to which the transfer can be made, e.g. only to a licence area involving the same DSM resource type, or only to a licence area that is contiguous with the licence area for which the loss arose;
 - treat the final year loss as a terminal loss with no relief provided. This may be justified if there are rules, allowing early recognition of rehabilitation expenditure (see paragraphs 86-87, below);
 - permit carry back of the final year loss to the previous tax year. This will involve re-opening the tax assessment for the previous year, and will likely result in the state giving a tax refund to the company for that previous year. If the loss is not fully utilised through carry back to the previous tax year, then it may be carried back to the year before the previous tax year, and so on until fully deducted or until a maximum loss carry back period (e.g. three years) is reached. The re-opening of assessments and the giving of tax refunds may not be practicable for some Pacific-ACP States, so this loss carry back rule for DSM may not be the best option.
- 70 Ring-fencing requires separate accounting for each project, which can increase compliance costs for the company, and the administrative burden for the state. General overhead and management expenses will need to be allocated across all projects. This could include foreign incurred expenses, provided there is a sufficient connection between the incurring of the expense and the derivation of income subject to tax. Companies will report tax losses and tax liabilities on a normal self-assessment basis. Companies may seek to over-allocate expenses to mature projects to reduce the profits of those projects, so this needs careful policing through post-assessment checking, including the auditing of costs.

Company Income Tax and Deductible Expenditure

- 71 Under the normal operation of CIT, the company's operating expenditure is deducted outright from the gross income, while capital expenditure is deducted on either a depreciation basis (for tangibles) or amortisation basis (for intangibles) over the useful life of the expenditure. This broadly aligns the income tax treatment with the financial accounting treatment of the expenditure.
- 72 The tax treatment of expenditure incurred by a mining company may differ, depending on the phase of operations, during the life cycle of a DSM project. The discussion below explains the options for the CIT treatment of capital expenditure, and of operating costs, separated according to: exploration, extraction and rehabilitation expenditure.

¹⁸ It is usual for the mining legislation to include rules requiring the company to relinquish parts of the licence area, during the exploration phase of a DSM project. This means that the mining licence is likely to cover only a smaller part of that area, so it is important that this is recognised in the design of the ring-fencing rules.

- 73 **Exploration Expenditure:** exploration expenditure is expenditure incurred on a mining project before the decision is taken to commence mining (i.e. extraction). Exploration expenditure may constitute a “sunk cost”, i.e. a cost that once incurred cannot be recovered. While, for example, a submersible remotely-operated vehicle used in DSM mining operations may be relocated to another project, the intangible costs of exploration (such as geological and preliminary environmental impact studies, pertaining to a particular seabed site) are lost (“sunk”) if a commercial discovery is not subsequently made in that same site. The risk that exploration expenditure may be a sunk cost means that exploration is regarded as a “tax sensitive” activity. Therefore, it is usual to provide acceleration in the deduction of exploration expenditure (including expensing exploration expenditure) as an incentive to encourage exploration.
- 74 As companies may be able to expense exploration expenditure for CIT purposes, it is important to define precisely in the tax law what is and what is not exploration expenditure for DSM projects. A recommended approach is to link the definition to the DSM legislation, e.g. any expenditure incurred in the performance of a DSM exploration licence. Alternatively, the definition could list specific items of exploration expenditure, or activities whose costs qualify as exploration expenditure.
- 75 Examples of exploration expenditure for DSM would include costs of: geological mapping, geophysical surveys, water and sediment sampling, rock sampling/drilling, oceanographic and hydrographic measurements, feasibility studies, and environmental impact studies. Exploration expenditure is intangible in nature, and it is usual for the definition of exploration expenditure to expressly exclude expenditure incurred in acquiring tangible assets (such as plant and machinery).
- 76 The definition of exploration expenditure commonly also includes the cost incurred by the company in acquiring the exploration right and related information. However, the cost of acquiring exploration rights or exploration information should be treated as exploration expenditure only when the right or information is acquired in circumstances involving uncertainty about a commercial discovery (i.e. the right or information is acquired from the government or under a farm-out transaction, see paragraph 103, below). The cost of acquiring exploration rights and information in any other circumstances should be treated the same as extraction, not exploration expenditure. Thus, the national tax rules should not permit the cost of acquiring exploration rights or information to be expensed as exploration expenditure when there is certainty about a commercial discovery. At this point, those costs must be treated as extraction expenditure.
- 77 Exploration expenditure is incurred (and deduction allowed) at a time (exploration) when there is no offsetting income. The expenditure is effectively carried forward as a loss until offset by income derived once production commences. Consequently, it may take many years until the expenditure is actually offset against income. It is important, therefore, that a longer tax loss carry forward period applies to exploration expenditure to avoid eroding the tax benefits of the accelerated deduction.
- 78 It is usual to apply the same accelerated deduction to tangible assets (such as plant and equipment), provided they have their first use in exploration operations.
- 79 **Extraction Expenditure:** In broad terms, extraction expenditure is expenditure incurred on a mining project after the decision is taken to move to a mining phase, which may include the costs of acquiring the mining right insofar as that cost has not already been treated as exploration expenditure. As with exploration expenditure:
- it is preferable that the income tax definition of extraction expenditure is linked to the DSM licensing legislation; and
 - extraction expenditure is usually intangible in nature, with the definition excluding expenditure incurred in acquiring tangible assets, such as plant and machinery.

- 80 As extraction expenditure is incurred after there has been a commercial discovery, there is much less risk involved with the expenditure than with exploration expenditure. This means that extraction expenditure is less tax sensitive than exploration expenditure. For that reason, unlike exploration expenditure, its deductibility should not be accelerated. Extraction expenditure should be deducted over the life of the project, but that timeframe may not be known at the start of commercial production. There are two different ways to manage this:
- specify in the CIT legislation the write-off period for extraction expenditure, e.g. “the lesser of ten years or the life of the DSM mining project”; or
 - require the company to make an estimate of the project’s life, taking into account all information known about the quality and extent of the DSM deposit.¹⁹
- 81 It is recommended to delay deductions for extraction expenditure until the commencement of commercial production.²⁰ Thus, all extraction expenditure incurred by a company before commercial production starts is treated for tax purposes as having been incurred at the time of commencement of commercial production.
- 82 This deferral provides for the accumulation of lower carry forward losses in the early years of extraction operations, thereby resulting in earlier recognition of taxable income by the company (and receipt of income tax by the state) for those years. The impact of this rule, though, depends on the period of time between the start of mining operations, and the commencement of commercial production. The longer the period, the greater the benefit to the government of the deduction deferral rule. For DSM, there may be only a short time between the start-date of mining operations and the commencement of commercial production.
- 83 This rule will require the CIT law to define “commencement of commercial production”, for example: “the first day of the first period of 30 consecutive days, during which the average level of production on the 25 highest production days in the 30-day period reaches a level that the Commissioner of Taxation, acting on the advice of the Mining Commissioner (or similar officeholder) determines to be commercial production”. Computing the average over 25 days rather than the full 30-day period allows for the possibility of any exceptional or temporary production difficulties, affecting operations in the early period of production.
- 84 The normal depreciation rules should apply to the cost of tangible assets (such as plant and equipment) used in extraction operations. This ensures that depreciation is based on the useful life of the tangible asset and not the life of the project, which may be much longer than the life of the asset or, indeed, vice versa for DSM operations where the same vessels and equipment may be moved from site to site.
- 85 Rehabilitation Expenditure: It is usual for government (by legislation or the mining license) to require a company to ‘rehabilitate’ a mine site at the end of the project. It is yet to be seen to what extent remedial work to the seabed and other environmental repair is practicable in the case of DSM. Unlike land-based mine sites, the seafloor will not be able to be ‘rehabilitated’ to a pre-mining state, although there may be potential for partial recovery. Different types of DSM deposits (i.e. seafloor massive sulphides, manganese nodules, and cobalt-rich crusts) will have different recovery potentials, as will individual sites within these categories. Recovery mechanisms should be addressed in the project environmental impact assessment, and incorporated into the mining license work plan. There will be costs associated with these measures. A DSM mining company will also have other post-mining obligations that will incur a cost, such as post-closure monitoring and reporting.

¹⁹ This approach is consistent with self-assessment of income tax liabilities, and may apply well to DSM projects (where the deposit may be easier to evaluate at the outset, being all above-ground, and possibly comprising smaller individual deposits, and shorter extraction phases, e.g. the Solwara 1 Project in Papua New Guinea has a mining site of 0.11 km², comprising around 1000 tonnes of mineral resource estimates, anticipated to take around three years to extract).

²⁰ Further, a part year amortisation rule should apply in the year that commercial production commenced (i.e. the deduction for the first year is apportioned by reference to the part of year remaining after commercial production commences).

86 Rehabilitation costs will usually be incurred when the company is no longer generating income from mining. This can give rise to a terminal loss, i.e. a loss that cannot be carried forward to a subsequent tax year because the company's income-earning operations have ceased. This is particularly the case when ring-fencing applies and the losses cannot be offset against other company projects (see paragraphs 66-71, above). It is important to ensure a deduction is available for such costs, as it encourages companies to undertake this work. There are three options for avoiding terminal losses with rehabilitation expenditure.

- Deductions could be allowed for agreed company contributions at the time they are made, during the life of the project (e.g. annually) to an interest-bearing 'rehabilitation fund', established to finance the rehabilitation of a mine site (usually an escrow account jointly held by the company and the government). Rehabilitation costs financed out of the rehabilitation fund would not be deductible (again) to the company, but any additional rehabilitation costs incurred by the company would be. If, after rehabilitation, there is a surplus in the fund, the surplus would be returned to the mining company and taxed as income.
- Deductions could be allowed for agreed amounts transferred to a provision in the company's financial accounts for rehabilitation. The mechanics of such 'tax-deductible provisioning' are similar to those explained above, for contributions to a rehabilitation fund, and any over-provision is treated as income and taxed in the same way. However, as the 'transfer' in this option is only an accounting entry and not an actual cash outlay, it is important that the company is required to provide security (such as a bond, or bank or parent company guarantee) for the carrying out of its rehabilitation obligations, and that the deduction be allowed only when adequate security is in place. A cap could also be imposed on the provision, to prevent excessive over-provisioning.
- A loss carry back rule could apply (as explained in paragraph 70 above on ring-fencing). As it involves the reopening tax assessments and the giving of refunds, it may not be a viable option for some Pacific-ACP States.

Transfer Pricing

87 Abusive transfer pricing is the misstatement of values and prices charged on transactions between 'related parties' (e.g. a sale between two entities who are both subsidiaries to a common parent company, or where one entity sub-contracts to a company in which it owns significant shareholding, or can appoint a director), in order to shift the apparent source of profits to the taxpayer or jurisdiction that provides the most advantageous tax outcome. Transfer pricing may be used where a taxpayer seeks to minimise income and maximise deductions in high-tax jurisdictions, and vice-versa in low tax jurisdictions. For example, a mining group conducting DSM operations could extract minerals in one country, using technology owned and developed at a research and development centre in a second country. The product could be shipped by a vessel owned by the group, while administrative services could be provided by an affiliate in a third country, and financial services by an affiliate financing company in a fourth country. Each of these transactions may be subject to transfer pricing abuses.

88 It is important to address abusive transfer pricing to ensure it does not threaten government revenues from DSM projects. This would usually be addressed in the tax law through an arm's length rule²¹; that is, a requirement that the price in transactions between related parties be one that truly independent parties would reasonably expect to pay – and the specification of acceptable methods for determining arm's length prices. The latter would usually be based on the OECD's transfer pricing guidelines, which are internationally accepted²².

²¹ The "arm's-length principle" of transfer pricing states that the amount charged by one related party to another for a given product must be the same as if the parties were not related. An arm's-length price for a transaction is, therefore, what the price of that transaction would be on the open market.

²² See OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations.

Thin Capitalization

- 89 Thin capitalisation is a situation in which the owner(s) of a company, either directly or through related entities, provide it with an artificially large amount of capital by way of debt rather than equity. While there may be commercial reasons for financing a project with a large amount of debt, governments and revenue authorities are concerned that this can provide significant tax savings because, unlike dividends on shareholders' equity, interest payments on a loan reduce the corporate tax base. As foreign investors enter the market, as is likely with DSM projects, Pacific-ACP States may be exposed to thin capitalisation practices.
- 90 The three thin capitalisation rules generally adopted in national regimes are:
- debt to equity ratio: interest is denied where the debt to equity ratio is more than a specific level (international practice for setting the ratio ranges between 1.5:1, to 3:1); and/or
 - interest expense limit: (sometimes referred to as an 'earnings stripping rule'): a deduction for interest is limited to a certain percentage of earnings before interest, tax, depreciation and amortisation (e.g. in Germany the limit is 30 per cent); and
 - arm's length debt: the DSM company could establish that the company's debt level is consistent with the amount of debt that a financial institution that is not related to the company would be prepared to lend, having regard to all the circumstances of the company (particularly the level of equity and consequent capacity to repay the debt).

Hedging Transactions

- 91 'Hedging' is an investment strategy designed to alleviate risk. It involves the purchase of derivatives (such as a futures contract – a legally binding agreement to buy or sell something at a specific price in the future). Hedging transactions usually seek to cover opposite positions in the market, with the aim to off-set loss from an adverse move in the price of a financial asset.
- 92 Hedging transactions tend to be very complex and may involve related offshore entities. A particular risk is that hedging transactions may be structured so that hedging gains are derived offshore and hedging losses onshore. These losses can be significant and may adversely impact on the tax collected from mining companies. In order to avoid the CIT being impacted by these transactions, hedging could be treated as a separate business activity with hedging losses deducted only against hedging gains.

Taxing Subcontractors and Lease Payments

- 93 The extractive industries sector generally is characterized by a high level of use of non-resident subcontractors, who may not have a permanent establishment in the country. This can result in the erosion of the corporate tax base: the service fee paid by the license-holding company to the subcontractor will be a deductible expense for the company's CIT, but the subcontractor's receipt of the fee may be untaxed entirely, or taxed to the subcontractor at a lower rate of tax on a withholding basis.
- 94 If the fee can be taxed on an ordinary assessment basis, there is symmetry in the tax treatment of the fee (i.e. it is deductible and taxable at the same rate). However, taxing on an assessment basis should be limited to cases when the subcontractor has a permanent establishment in the country, otherwise the tax will be difficult to compute and collect.
- 95 If there is no permanent establishment in the country, there are two possible approaches to taxing subcontractors.
- Extend the application of the non-resident withholding tax system to service fees. Under this system, the mining company paying the subcontractor fee is obliged to withhold tax at the specified rate from the gross amount of the fee. The design of the withholding tax could be similar to that applicable to royalties. For practical reasons, the withholding tax

will be a final tax on the service fee.²³ The withholding tax rate will usually be lower than the CIT rate applicable to the company, which can still lead to erosion of the corporate tax base as the fee is being deducted and taxed at different rates.

- Apply a 'deduction denial' rule rather than taxing the subcontractor on the fee. The company paying the service fee may be denied a deduction if it is paid to a non-resident subcontractor without a permanent establishment in the country. Symmetry in the source country is achieved through non-deductibility and non-taxation. Non-deductibility effectively means that the fee is taxed at the mining company's tax rate. However, the non-resident subcontractor will not be entitled to double tax relief in their country of residence as they are not explicitly subject to tax on the fee.

96 Tax treaties will impact on the tax treatment of non-resident subcontractors when a withholding tax system applies. The services provided by non-resident subcontractors will be business profits for the subcontractor; therefore, the source country is permitted to tax the fee under a tax treaty only if the fee is attributable to a permanent establishment of the subcontractor in the country. Some countries protect against this outcome by preserving the non-resident subcontractor withholding tax in their tax treaties, either through a separate technical services article, or by including a services fee in the definition of royalties.

97 The equipment used by a DSM company may be leased from a non-resident leasing company rather than owned by the DSM company. While a lease payment is a form of business income, many countries treat a lease payment as royalties; therefore, the non-resident withholding tax rules applicable to royalties apply to the lease payments.²⁴ As with subcontractor fees, this may result in the erosion of the corporate tax base as the lease payment is deducted and taxed at different rates. Further, a tax treaty may treat a lease payment as business profits and permit taxation of the payment only when it is attributable to a permanent establishment of the leasing company in the country.

Taxing Transfers of Interest

98 The transfer of interests in mining rights can give rise to large capital gains; therefore, it is important for countries to have rules in place to properly tax the gain.

99 An interest in a mining right can be disposed of in two different ways, each with differing tax consequences:

- a transfer from one party to another of the whole or part of the mining right (direct transfer); or
- a transfer of an interest in the mining company that holds the mining right (indirect transfer).

100 Both forms of disposal can raise complex tax issues. These are only briefly discussed below.

101 Direct transfer of interest: the gain arising from a direct transfer of a mining right should be taxed either as business income or a capital gain. The cost of acquiring a mining right may be deducted outright as exploration expenditure, or on an amortization basis as extraction expenditure. In this case, the normal rules applicable to transfers of amortized assets should

²³ A potential problem for a non-resident subcontractor under a final withholding system for services fees is the possible loss of foreign tax relief in the subcontractor's country of residence. In broad terms, foreign tax relief is limited to foreign taxes that are income taxes. A key characteristic of an income tax is that tax is imposed on net income (i.e. gross income less expenses incurred to earn the income). A withholding tax imposed on the gross amount of business income (such as the non-resident subcontractor's fee) may not qualify as an income tax as no deductions are allowed for expenses incurred in deriving the income. This will be particularly relevant when the method of relief in the subcontractor's country of residence is the foreign tax credit. It is likely to be less of an issue if the exemption method of relief applies.

²⁴ It is noted that a different tax treatment may apply to payments made under a finance lease (i.e. a lease that is, in economic substance, a sale on terms). In this case, each lease payment may be treated as part principal and part interest. Common examples of a finance lease are: (i) a lease that contains an option to purchase at the end of the lease for a fixed or determinable amount; (ii) the term of lease (including under an option to renew) is equal to at least 75% of the estimated economic life of the leased asset; (iii) the estimated residual value of the leased asset at the end of the lease is less than 20% of the asset's fair market value at the commencement of the lease; and (iv) the present value of the minimum lease payments equals 90% of the fair market value of the leased asset at the commencement of the lease.

apply in respect of the transfer. In particular, any recaptured deductions should be included in income. If the application of the amortization rules does not tax any gain above cost, it is important to include a separate taxing rule to cover this.

- 102 If the previous licence-holder is a non-resident, then there is the additional issue of whether there is jurisdiction to tax the gain. For a gain that is income, this will depend on whether the gain is sourced in the jurisdiction. It is usual for ‘source’ rules in the national tax laws to provide that a gain on disposal of immovable property is sourced in the jurisdiction. Governments should ensure that the meaning of ‘immovable property’ under the law includes a DSM licence or an interest in a DSM licence. Also, it is important that the tax law definition includes DSM information, as well as the licence, to avoid planning that allocates the amount derived to the disposal of DSM data rather than the mining right itself. There may also be more complex types of transactions for the transfer of a DSM mining interest, such as farm-out²⁵ or overriding royalty agreements.²⁶ The relevant tax laws will need to take account of this as well.
- 103 Tax treaties preserve the right of the source country to tax gains on disposal of immovable property (Article 13(1) of the OECD Model). Importantly for this purpose, the definition of immovable property under the domestic law of the source country applies for the purposes of the treaty. This may be a tax law definition or a definition under general law.
- 104 **Indirect transfer of interest:** shares in a company derive their value from the assets held by the company. Thus, if the principal asset of a company is a mining right, the value of the shares in the company will equate to the value of the right. Consequently, a similar gain can be achieved by the disposal of shares in a company holding a mining right (an ‘indirect transfer’), to the gain that the company would derive on a direct disposal of the right. A special rule should be included in the tax law to ensure that the gain arising from such an indirect transfer of interest is included in income. This will necessitate that the source rules in the tax law treat the gain as sourced within the national jurisdiction. This can be done by reference to the location of the immovable property (i.e. the mining right) that is the principal asset of the company whose shares are being transferred. The design of the rule needs to take account of the following factors:
- **the rule must not be limited to transfer of an interest in the entity directly holding the interest in the licensee**, but must apply also to entities higher up the chain (indirectly holding an interest in the licensee);
 - **the rule must apply to an interest in any entity** and not just shares in a company, as the gain may be made through the disposal of an interest in a non-corporate intermediary (such as unit trust or partnership);
 - **the definition used in the rule for ‘immovable property’** must clearly cover mining rights and information; and
 - **the “principal assets” threshold.** Under current international norms, the rule applies only when the property of the entity consists “principally” of interests in immovable property in the jurisdiction. If this threshold is satisfied, then the whole of the gain is taxable. Recently, multinational mining enterprises have sought to avoid the rule by establishing an entity to hold interests in mining rights in several countries and then selling the interest in the holding entity. The arrangement is structured so that the “principally” test is not satisfied in relation to any country because of the multi-country holdings. The impact of this sort of planning can be limited by legislating for a lower threshold, such as 25% or 20%, for the operation of the rule. However, in this case, the taxation of the gain will need to be on a pro-rata basis when taxation is based on the lower threshold, and this adds to the complexity of the rule.

²⁵ A farm-out agreement is the assignment by the holder of a mining right (farmor) of part of the mining right to a third party (farmee) in return for the farmee undertaking some or all of the farmor’s work commitments, in relation to the retained part of the interest. The farmee may pay the farmor a sum of money up front for the interest in addition to undertaking the farmor’s work commitments.

²⁶ An agreement to transfer a mining right in return for a percentage of revenues arising from any successful discovery made in relation to the transferred right.

- 105 Tax treaties should ensure that gains on disposal of indirect transfers are taxed in the source country. The right to tax such gains is recognized under Article 13(4) of the OECD model. In tax treaties, the “principally” threshold usually requires that more than 50% of the value of the underlying assets is immovable property (and this will apply, even if a lower threshold is set in domestic law).
- 106 While rules can be designed to tax the gains on indirect transfers, the real task is in ensuring the rules can be administered. This requires the tax administration to (i) discover the transaction, and (ii) collect the tax, which can be difficult for a developing country with limited administration capacity, particularly where the transactions are offshore and the entities are non-resident for tax purposes. Mechanisms to address this include:
- requiring DSM licence holders to notify the DSM regulatory authority of any significant change in the underlying ownership of the licence holder;
 - sharing of tax information between countries;
 - requiring the DSM licence holder to pay the tax due as agent for the non-resident making the indirect transfer; and/or
 - imposing non-tax penalties for non-payment (e.g. withdrawing a DSM licence).

Withholding Tax

- 107 Withholding tax is where a person (payer) making a payment to another person (recipient) remits a portion of the payment directly to the tax authority, as payment of income tax for the recipient.
- 108 Withholding taxes can provide a government with protection of its tax base by ensuring some taxes are paid on profits derived in the source country. The regime should include withholding taxes on: salary and wages, dividends, interest, royalties, and supply of services (see paras 94-98).
- 109 It is important for a country to preserve its right to extract reasonable withholding taxes when negotiating tax treaties. Tax Treaties assist in determining the taxing rights of the source country, as well as in avoiding double taxation, and can be a source of certainty in taxation arrangements for foreign investors seeking to invest in another country. However, there has been a trend in some double tax agreements (DTA) to lower withholding tax rates – even to zero. This trend is beneficial for both negotiating countries, only where there is a significant flow of income each way. For many developing countries, the flow of income is from the developing country to the developed country, so that low withholding tax rates are beneficial to the developed country, but are of little benefits to the developing country. If the developing country agrees to a lower withholding tax rate clause, government is effectively giving up revenue on source income for little benefit in return.

D RENT TAX

- 110 Exploitation of finite resources, like DSM, may lead to above-normal profits (‘economic rent’) where the return to the company exceeds both the costs of exploration and mining, and the required rate of return. A rent tax provides an opportunity for the government to receive a larger share in the profits of the most profitable projects. Rent taxes are charges that target profits in excess of those generally required to attract investment. These taxes can be known by different names, including ‘additional profits tax’, ‘resource rent tax’, and ‘super profits tax’.
- 111 The approach adopted by the Cook Islands (an ‘additional profits tax’ introduced by the Income Tax Amendment Act 2014 to address DSM) is a relatively simple example of a resource rent tax that can apply to DSM. The tax applies only when the licensee has reached a legislatively mandated rate of return after taking account of all costs. This ensures that the tax applies only to highly profitable projects. Company concerns that an additional profits tax should not apply

because of high costs is addressed, as the tax is only triggered when significant profits have been made (that is, if significant costs are incurred, this will likely result in lower profitability and the tax will not be triggered).

- 112 Conceptually, a rent tax has strong economic features. A well-designed rent tax will capture a share of the natural resource rent (essentially the above-normal profit), so that the project continues to be viable regardless of the tax. The rent tax may enhance fiscal stability for the industry because it automatically increases the government's share in highly profitable projects, thus reducing political pressure for tax changes to capture a greater share in such projects. There are, however, challenges to designing a rent tax that will yield significant revenue in practice. If the accumulation rate (i.e. when the tax is triggered) is set too high, it is possible that the rent tax will never apply; if it is set too low, the rent tax may become a deterrent to investment. In order to ensure government revenue, a rent tax is usually combined with royalties and a standard CIT.
- 113 Under a simple rent tax, the tax base starts with the taxable income calculation under the ordinary operation of the income tax; however, the taxable income amount is adjusted to convert it into a net cash flow amount. If a licensee has a positive net cash flow for a tax year, the rent tax applies. If the licensee has a negative net cash flow for a tax year, the negative amount is carried forward, uplifted by the legislatively mandated rate of return. The tax is computed on a ring-fence basis so that there is a separate computation for each mining operation.
- 114 The precise adjustments that are needed to convert a taxable income amount into a net cash flow amount will depend on the technical detail of the income tax. The calculation involves both add backs to, and subtractions from, taxable income.
- The main add backs are:
 - Depreciation and amortisation deductions (such as for development expenditure). These amounts are added back because an immediate deduction is allowed for the full cost of new capital investment.
 - Interest and other financing deductions. These amounts are added back because the negative cash flow uplift compensates for both the return on equity and interest on debt so that there is neutrality in the treatment of the different sources of funding for mining operations.
 - Deductions relating to derivative financial instruments and foreign currency hedges. While there is a cost associated with reducing the risk relating to cash flows, these costs are added back because they do not directly affect the value of the extracted resource.
 - Loss carry forward deduction. This amount is added back as the uplifted negative cash flow for a tax year is a subtraction from taxable income (see paragraph 112, above).
 - The main subtractions are:
 - The total expenditure incurred by the licensee in acquiring depreciable assets and intangibles (including development expenditure) to the extent used in the mining operation.
 - The income tax paid in respect of the taxable income for the tax year.
 - The negative cash flow amount for the previous year uplifted by the legislatively mandated rate of return. For example, if the previous year's negative cash flow is \$100 and the legislated rate of return is 20%, the amount of the subtraction is \$120.
- 115 If a licensee has a loss under CIT for a tax year, the net cash flow position is computed by decreasing the amount of the loss by the add back amounts specified above, and increasing the amount of the loss by the subtraction amounts specified above.
- 116 The legislation should provide that, if the net cash flow of a licensee for a tax year is positive, the net cash flow amount at the start of the following year is zero.

E OTHER TAXES AND LEVIES

Import Duties

- 117 Import duties can also have implications for the DSM sector. Many countries continue to impose import duties, although these are decreasing in significance due to trade liberalisation. The most significant impact for the sector will be duties on imported capital goods. Resource companies that seek to make a substantial investment in a country, are likely to seek import duty exemptions for these capital goods. Such exemptions can also be sought as a way to minimise dealings with customs officials, where foreign companies with substantial import needs can be a target for corrupt behaviour. The practice of some countries to deal with this issue is to exempt specialised equipment, such as equipment exclusively for exploration and mining from import duties. If this is to apply, then the preferred approach is to limit the exemption to capital goods not available in the domestic market and further restrict it by requiring the equipment be re-exported after its use (assuming the equipment is still usable). Project or time limitations could also apply.
- 118 For DSM operations, the main capital goods that will be imported into the country's jurisdiction are likely to be the mining vessels, and the technology for mining (e.g. remotely operated vehicles) and onboard processing (e.g. de-watering pump systems). These items may be brought into the country's ocean space, and transported out of it, without landing onshore. There may also be barge ships that will travel between the mining vessel and the onshore processing and refinery centre (which is likely to be based in a country other than a Pacific-ACP State, where there are existing processing facilities and sufficient energy and water supply). These items may be leased by the DSM company, rather than owned.

Value-Added Tax

- 119 Value-added tax (VAT), also known as 'goods and services tax' (GST) in some jurisdictions, is a type of consumption tax, placed on a product whenever value is added at a stage of production, and also at final sale. VAT is not a significant revenue-raising instrument for extractive industries and, in fact, mining companies will often be in an excess input tax credit position, during all phases of mining operations.
- 120 A mining company conducting exploration operations is considered to be carrying on an enterprise and, therefore, should be entitled to be registered for VAT. As the company is not making any taxable supplies during the exploration phase, the company will be in an excess input tax credit position, during the exploration phase. When production commences, most, if not all, of the output (the extracted resources) will be exported and, therefore, zero-rated for the purposes of VAT, i.e. no VAT is imposed on the supply of the goods or services and a credit is given for VAT on inputs. Consequently, the effect of zero-rating will see a mining company in an excess input tax credit position, during the extraction phase. This is likely to be the case with DSM as it is expected that all minerals will be immediately shipped to other countries. This means that mining companies will be entitled to ongoing refunds for tax credits for inputs and investment goods, during all phases of operations. The level of refunds can be significant for mining companies due to their very large investment needs.
- 121 Some countries, especially developing countries, find it difficult to pay refund excess input tax credits in a timely fashion, and instead provide VAT exemptions for imported capital goods, sometimes all imported goods and services, for sole and exclusive use in a mining project. The VAT exemptions tend to follow import duty exemptions discussed above. While this approach is not considered good tax policy and is prone to a number of problems, it is a practical response. An alternative is to have a deferred payment scheme for VAT on large capital imports, where the payment of VAT on import is delayed until the relevant company files its next VAT return. At this point, the potential VAT on the imported equipment can be off-set against the credit, simplifying the VAT debit and credit process somewhat, whilst also protecting the tax system against abuse.

F PRODUCTION SHARING AND STATE EQUITY PARTICIPATION IN DSM

Production Sharing

- 122 Under a production sharing arrangement, ownership of the resource remains with the State and the mining company is contracted to extract and develop the resource in return for a share of the extracted resource. Instead of paying the mining company a fee for this service, while the government bears the risk, cost and expense, the parties agree that the mining company will meet the exploration and development costs in return for a share of any production that may result. For example, a production sharing contract will usually specify a portion of total production that can be retained by the mining company to recover costs, with any remaining production divided between the government and the contractor, according to a formula set out in the contract. Production sharing contracts are more common for oil and gas projects than for mining projects. This seems to be due to a number of factors: industry practice over many years; the generally very high profitability of oil and gas projects; and the potential for the government to take its share of oil or gas 'in kind' for use in the domestic market.

State Equity

- 123 A government may participate more directly by electing to take an equity share (i.e. a share of ownership) in a DSM project.
- 124 There are three broad types of equity participation:
- Full equity: the government takes full ownership, usually through a state-owned enterprise, such as a national resource company.
 - Carried equity: the private investor (mining company) 'carries' the state in the early stages of the project with some financial obligation for the state to compensate the private investor (at a later stage).
 - Free equity: the state obtains an equity interest without financial obligation.

Box 4: Papua New Guinea's equity participation in DSM

This approach has been taken by the Government of Papua New Guinea in relation to the Solwara 1 DSM mining project, where the Government elected to exercise a right provided under the national mining laws that entitles the State to hold up to a 30% share of the equity.

For more information, see: http://gsd.spc.int/dsm/images/pdf_files/dsm_brochures/DSM_Brochure14.pdf

- 125 Taking such a participating interest in a mining project is mainly motivated by a desire for the state to share in any upside of a project. But state participation can also reflect non-economic reasons, perhaps deriving from nationalistic sentiment; or with a view to facilitating transfer of technology and know-how, or providing more direct control over project development.
- 126 The disadvantages of state equity participation are that it can be costly and may give rise to conflicts of interest. Equity participation may require cash to be contributed by each party to the joint venture, which can cause cash flow problems for a government. Alternatively, the government may be given 'free' equity but be required to reduce or forgo some other taxes. Conflicts of interest could also arise for the government, as its role as regulator overseeing the environmental or social impact of a project may differ from its objectives as a shareholder. In many instances, the government may be better off by focusing on taxing and regulating a project rather than being directly involved as an equity participant. The other option is the government establishes an independent state owned enterprise to manage its interests, including equities in mining and other natural resource projects (See Box 5).

Box 5: Establishment of a State-Owned Enterprise to Manage the State's Assets in the Minerals and Petroleum Sectors in Papua New Guinea

Recognising the potential conflict of interest in its role as the regulator of mining projects in the country, the Government of Papua New Guinea has established a state-owned enterprise, Petromin PNG Holdings Ltd, to manage the State's assets and to maximise indigenous ownership and revenue gains in the minerals and petroleum sectors. It is empowered as the vehicle to better leverage the State's equity holdings, and encourage more production and downstream processing of oil, gas and minerals in PNG, through proactive investment strategies that are either wholly or in partnership with resource developers.

For more information, see: www.petrominpng.com.pg

G REGIONAL COORDINATION AND COOPERATION

- 127 Greater benefits from the DSM sector may be secured nationally for Pacific-ACP States, by working cooperatively in the region. There is already a degree of collaboration and harmonisation in relation to Pacific-ACP Governments' management of DSM, via the implementation of the SPC-EU DSM Project (2011-2016).
- 128 The Pacific Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation (the 'RLRF')²⁷ has been developed by SPC through the SPC-EU DSM Project, and endorsed by all 15 Pacific-ACP States. The RLRF is currently being used across the region to develop national DSM policy and law, and should assist in achieving a degree of harmonisation across individual Pacific-ACP State's national DSM regulatory regimes.

Box 6: Pacific Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation

By 2015, the Pacific Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation ('RLRF') had been used as the basis for drafting the:

- **Cook Islands:** National Seabed Minerals Policy 2013
- **Fiji:** International Seabed Mineral Management Decree 2013
- **Niue:** Seabed Minerals Bill 2015
- **Federated States of Micronesia:** Seabed Resources Bill 2015
- **Marshall Islands:** National Seabed Management Bill 2015
- **Tonga:** Seabed Minerals Act 2014
- **Tuvalu:** Seabed Minerals Act 2014
- **Vanuatu:** National Deep Sea Minerals Policy 2015
- **Nauru:** International Seabed Minerals Act 2015

- 129 There have been increasing calls over the life of the SPC-EU DSM Project for more formalised regional coordination for a number of compelling reasons²⁸, including those highlighted below that are relevant for DSM fiscal issues.
- Regional agreement provides an opportunity to set and uphold minimum standards across the region (operational, environmental and/or financial).

²⁷ Copy here: <http://gsd.spc.int/dsm/public/files/2014/RLRF2014.pdf>

²⁸ As identified by a working group at the SPC-EU DSM Project's 4th Technical Training Workshop (Nadi, December 2013). A copy of the outcome report is available, here:

<http://gsd.spc.int/dsm/public/files/meetings/SPREP.SPC.WORKING.GROUP.6.REGIONAL.COOPERATION.OUTCOMES.pdf>

- A harmonised policy and legal framework across the region presents a stable 'common front' that could increase the attractiveness of Pacific-ACP jurisdictions as an operating and investment environment.
- DSM of commercial interest may be located in trans-boundary deposits, or jointly managed seabed areas.
- Harmonised rules across the region will facilitate cross-border voyages, which could incentivise exploration across neighbouring jurisdictions.
- International information sharing in tax administration (See Box 7).

Box 7: Convention on Mutual Administrative Assistance in Tax Matters

When administering taxation of foreign investors, it is advantageous for governments to sign the Convention on Mutual Administrative Assistance in Tax Matters, developed in 1988 as a joint initiative of the OECD and the Council of Europe.

The Convention is the most comprehensive multilateral instrument available for all forms of tax cooperation to tackle tax evasion and avoidance; a top priority for all countries. It was amended in 2009 to align it to the international standard on exchange of information on request, and to open it to all countries, in particular to ensure that developing countries could benefit from the new more transparent environment. The amended Convention was opened for signature on 1st June 2011. Currently, over 60 countries have signed the Convention, and it has been extended to over 10 jurisdictions, including a number of developing countries.

The convention covers inter-state exchange of information, participation in tax examinations abroad, assistance in the recovery of unpaid tax, measures to conserve funds, and assistance in the service of documents.

- A regional approach enables learning, and information-sharing, from country to country.
- Open communication may avoid countries being pitched against each other (which could lead to individual governments being rushed into mining, intimidated into a bad commercial deal, or giving too many concessions).
- Pooling expertise on a regional level enables full-time specialist staff to be retained and accessible when needed, as expert advisors to Pacific-ACP State Governments.
- Regional agencies are impartial and work in the countries' best interests.
- Implementation of common standards can be monitored and reviewed on a regional basis, which could lead to more comprehensive, consistent and cost-effective regulation.
- DSM is not a standalone issue. Having a centralised body for the region will assist DSM work to feed into wider policy issues that are regionally addressed.
- Regional cooperation could assist in case of disputes with companies.
- A common platform can bolster the region's influence on the international stage.

130 Various options for different DSM regional coordination arrangements have been proposed, varying from more informal working groups and information-sharing mechanisms to a regional treaty, setting minimum standards for DSM practices across the region, or a regional 'services-provided', to whom Pacific-ACP States could sub-contract DSM-related functions that require specialist expertise and/or equipment.

Box 8: Regional Cooperation in Tax Administration

The Pacific Island Tax Administrators Association (PITAA) has been in operation since 2008, and is one example of a forum whereby officials from around the region can share information and discuss areas of mutual interest.

PITAA has the following objectives:

- provide a forum where the tax administration and policy issues most relevant to PICs can be discussed, and where experiences can be shared;
- promote closer cooperation and coordination of information sharing in tax administration and policy formulation in PICs;
- help promote international standards and best tax administration practices, suitable to the characteristics of the PICs;
- encourage taxation institutions to design and adopt strategies to modernise and enhance their effectiveness and efficiency; and
- enhance administrative skills and encourage the development of high professional standards by facilitating training and the dissemination of resource materials.

For more information about PITAA, see: <http://pitaa.pftac.org/>

- 131 It is clear that DSM is a highly technical and new industry, which will present challenges not only for fiscal administration and revenue management, but also for environmental management, monitoring and enforcement. It is recommended to approach these issues with inter-Pacific-ACP State collaboration – learning from each other's practices, and setting common standards.

III PUBLIC FINANCIAL MANAGEMENT AND THE FISCAL POLICY FRAMEWORK

A PUBLIC FINANCIAL MANAGEMENT

- 132 Effective implementation of the DSM fiscal regime and use of revenues collected from DSM mining will require Pacific-ACP State Governments to put in place appropriate PFM arrangements. Access to relevant information and adequate capacity to handle the particular complexities of the DSM sector will be essential factors.
- 133 Capacity constraints and bottlenecks in an economy can obstruct efficient transformation of DSM revenue into productive investments and lasting benefits. This is particularly the case in economies where:
- the inflow of natural resource revenue is a very significant share of gross domestic product (GDP);
 - the need for development is urgent;
 - expectations are high; and
 - the national economy's absorptive capacity is limited.
- 134 In many developing countries:
- public institutions and capacity are weak;
 - mismanagement, waste of resources and/or corruption are prevalent;
 - there are inadequate legal frameworks to ensure effective revenue collection and budget management;
 - procurement processes are inefficient and not transparent;
 - the ability to appraise, implement and monitor investment projects is limited; and
 - government may focus more on spending new revenue, and less on managing it sustainably for longer-term economic growth and macroeconomic health.
- 135 Pacific-ACP States have an opportunity to learn from this, and to take proactive steps now to build government capacity, before the DSM industry commences. Key elements of sound DSM revenue management include the following strategies.
- **Promoting consensus** among key stakeholders²⁹ on the objectives and principles for how DSM revenue is managed is a prerequisite for sustainability. Investment of DSM funds (e.g. in the international financial market) requires a long-term investment horizon to be successful. Frequent changes in investment policy or beliefs can result in financial losses, and distrust and further instability in the DSM revenue management framework.
 - **Ensuring transparency** in all parts of the value chain, from when DSM revenues are received until disbursement, is paramount. Competitive procurement procedures, independent audits of financial accounts, and public disclosure of these reports are important to enable society at large to hold government accountable. Public reports on a national DSM fund should be part of government's regular annual budget documentation.

²⁹ Key stakeholders may vary from country to country although, for decisions relating to natural resource wealth (generally deemed to be the common heritage of the nation and its people – present and future), it is advised to consider society at large as an interested party. In some Pacific-ACP States there may also be certain rules for distribution of DSM revenue between central government and other recipients, and this must be taken into account in administering revenue management systems. For example, the Constitution of the Federated States of Micronesia provides that 'net revenue derived from ocean floor mineral resources exploited [...] shall be shared equally between the national government and the appropriate state government'. If DSM Mining takes place in the jurisdictional area known as the extended Continental Shelf, then the provisions of the UNCLOS will apply, which require the state to make payments from the proceeds of mining on the extended Continental Shelf to the ISA. Some extended Continental Shelf sites may also be in areas that are jointly-claimed and managed by neighbouring Pacific-ACP States, in which case any mining proceeds will also need to be shared (in accordance with any joint management zone agreement).

Joining the Extractive Industries Transparency Initiative (EITI) has been an important path for many resource-rich countries to ensure disclosure and dissemination of information and to involve civil society organisations. It is also important to put in place the relevant institutional and legal framework to ensure extensive transparency and public disclosure of DSM revenues. Emphasis may also be placed on the training of cabinet members and parliamentarians on their proper role in financial management and scrutiny: PFM is not just a technical issue. Appropriate time and information flow should also be factored in for:

- integration between financial management and public policy objectives;
- long-term planning; and
- external scrutiny.

Box 9: Extractive Industries Transparency Initiative (EITI)

EITI is a global standard that promotes revenue transparency by using an agreed methodology for monitoring and reconciling company payments and government revenue from extractive industries. Companies publish what they pay, governments disclose what they receive, and a multi-stakeholder working group engages independent auditors to reconcile the two. EITI reports must be comprehensible, actively promoted, publicly accessible, and should contribute to public debate. Implementing EITI has been an important factor in many countries to provide more transparency and dialogue between the government, operators and civil society, but it takes time and requires resources, commitment and close cooperation between the various stakeholders to become an EITI compliant country.

Timor-Leste was the first Pacific-ACP State to be EITI-compliant. This was an important step as over 95% of Timorese government revenue comes from oil exports. Timor-Leste's EITI compliance has improved the sustainable management of oil revenue, and made the jurisdiction a more attractive environment for investors.

Solomon Islands and Papua New Guinea are now also EITI-candidate countries.

For more information, please see www.eiti.org.

- **Clear rules** should be set by law for the operation of the DSM revenue framework. An understanding of expected achievements and long-term support for the policy will assist in developing the predictable environment necessary for pursuing sound DSM revenue management. Laws should determine the type of revenue captured by the management framework, including rules and procedures for transfers and withdrawals to/from any accounts or funds, the fiscal rule for transfers to the national budget, and the objectives, risk-profile and investment policy for a DSM SWF.
- **Definition of roles and duties** of the different institutions involved is key. In most countries:
 - **the Parliament** adopts the legal framework, and also plays an important oversight role and monitors the government's management of the revenues;
 - **the Government** (usually the Minister of Finance) is responsible for revenue management and acts as the overall owner of the SWF, making decisions on the investment policy and the risk-appetite; and
 - **The Central Bank** or an independent investment agency is the operational manager of the SWF, with day-to-day operations conducted independently of the government without any risk of political interference.

136 If DSM revenue administration (i.e. the collection of DSM revenue) is weak, the country is likely to either fail to collect the revenues it should be gaining, or make it difficult for DSM companies to comply with their payment obligations, potentially jeopardising their interest in continuing operations. There are particular challenges associated with the DSM sector.

Table 1: Addressing PFM challenges Associated with DSM	
Challenge	Suggested Approach
Monitoring and auditing production when mining and processing is physically offshore.	Stationing revenue officials on-board mining vessels; unannounced audits and inspections.
Determining the value of production for tax purposes.	Monitoring and using international benchmark prices.
DSM operations managed by foreign companies.	Requiring DSM licensees by law to hold records (onshore) within the jurisdiction, and giving the revenue authorities legal power to obtain or require disclosure of key information.
Cross-border DSM projects, or involvement of multinational companies or complex corporate group structures.	Cooperating well with relevant foreign Multinational Conventions on Mutual Administrative Assistance in Tax Matters (see box 7).
Administrative complexity e.g. due to project ring-fencing, or due to different government departments, collecting different types of DSM revenue.	Keeping fiscal instruments as simple as possible. Cooperating well across government departments. Preferably having one government department collect the revenues. Applying high standards of transparency in government, and requiring transparent practices from DSM licensees.

137 If DSM revenue management (i.e. expenditure and savings) is weak, wealth may be squandered and corruption may flourish. The adequacy of PFM systems can be broadly evaluated, using a Public Expenditure and Financial Accountability (PEFA) assessment, covering:

- budget credibility;
- accountability and external scrutiny;
- comprehensiveness;
- transparency;
- policy-based budgeting;
- predictability and control in budget execution; and
- accounting, recording and reporting.

138 Policy-based budgeting should be taken very seriously and should include:

- organisational functionality, without artificial separation between planning and budgeting;
- document integration;
- adequate time for budget preparation and consultation, with early engagement of Cabinet to integrate priorities for public services with a realistic revenue envelope;
- extending the annual budgetary focus from immediate term to include medium- and long-term; and
- reducing the number of non-emergency supplemental budgets and requiring fiscal notes from finance ministers for any proposal outside of the regular budget process.

B THE FISCAL POLICY FRAMEWORK

139 Revenues deriving from DSM mining, if managed well, could potentially provide lasting benefits for Pacific-ACP States, and contribute to sustained and broad-based economic growth and social development. DSM tax revenues can be used for public investment in human and physical capital and improvement of public services, further increasing the economy's growth potential. DSM revenues can also be used to build up economic buffers to weather external shocks and save for future generations.

140 Poor management of DSM revenue can lead to great damage. Historically, it has been seen how mineral wealth can be a curse rather than a blessing, resulting in conflict and corruption rather than prosperity and economic growth. It is challenging to translate abundance of natural

resources into long-lasting benefits, particularly if there is a lack of sound and transparent governance. A well-designed fiscal regime supports macroeconomic stability by providing predictable and stable tax revenue flows. Revenues from mineral extraction are highly volatile. Natural resource abundant countries are more vulnerable to external economic shocks than other countries, and even more so with developing countries, where economies are less diversified. External shocks may arise from changes in both prices and/or production levels, and may have significant repercussions on the domestic economy. These shocks are normally transmitted to the domestic economy through the balance of payments and the government budget.

- 141 Government revenues from mineral extraction have a different impact on the domestic economy than other tax revenues. Ordinary tax revenues reduce households' disposable income, thus the purchasing power of the private sector. Whereas, spending DSM revenue will have an expansionary impact on the economy, as mineral extraction revenue will be an injection of new revenue into the economy, without reducing the purchasing power of other sectors. Thus, wise spending of DSM revenue will require that the domestic economy is able to absorb the additional spending without causing price and cost pressure that affects other sectors of the economy in a negative way.
- 142 The adverse impact of extractive industry revenue on employment, activity, and competitiveness in other business sectors is known as the 'Dutch disease', reflecting the impact that North Sea oil and gas revenues had on the Netherlands economy in the 1960s. The Dutch disease arises when income from mining is spent domestically, driving up prices of local goods and services, as well as the wages in those sectors. Such rising prices tend to spill over into higher goods, services and labour costs in the export and import competing sectors, undermining their competitiveness and causing production and employment in these sectors to decline. This results in the economy becoming increasingly – or even wholly – dependent on the mineral revenue.
- 143 To minimize the potentially adverse effects of DSM revenues, the government should adopt a medium-term fiscal policy framework or fiscal rule to guide savings/spending decisions. The framework should be established with the purpose of securing long-term sustainability, e.g. through applying the Permanent Income Hypothesis (PIH).³⁰ In addition to securing long-term sustainability, the framework should uncouple the path of government spending (including investment) from the path of revenues, which may be volatile. Other conditions should also be taken into account, such as:
- the social and economic return on domestic investments versus the return on financial investments in the international financial market;
 - the national economy's absorptive capacity; and
 - the government's ability to wisely spend additional mineral revenues. The specific design of the fiscal rule varies among countries subject to the local context.
- 144 Uncoupling the path of public expenditure from DSM revenue receipts requires establishing or adapting well-planned stabilisation and savings fund(s) – such as a DSM SWF. The fund should be placed overseas in the international financial market to avoid the so-called 'Dutch' disease. Retaining the mineral revenues in foreign currencies until they are transferred to the budget for domestic spending insulates the economy from these effects.
- 145 The fiscal policy strategy should also take into account the country's debt management strategy. SWFs are normally established as a result of budget surpluses. If the country has accumulated significant foreign debt, it would make economic sense to pay down foreign debt before savings take place in a SWF, as the interest on foreign debt, in most cases, would be higher than the financial return on the investments. What counts is the country's net financial position.

³⁰ The implication of the Permanent Income Hypothesis (PIH) is that the consumption level over time is smooth, even if the flow of income is not.

- 146 The use of DSM revenues should be fully integrated into the national budget process. Any domestic development expenditure from DSM revenue should be addressed through the budget process to enable sound macroeconomic and fiscal planning in the broader national context.

Box 10: Fiscal Rules for Resource-Rich Countries

A fiscal rule imposes a long-lasting constraint on fiscal policy through numerical limits on budgetary aggregates, and is an important tool to contain pressures to overspend, particularly when resource revenues are high. Timor-Leste was the first Pacific-ACP State to be EITI-compliant. This was an important step as over 95% of Timorese government revenue comes from oil exports. Timor-Leste's EITI compliance has improved the sustainable management of oil revenue, and made the jurisdiction a more attractive environment for investors.

A fiscal rule can be designed in various ways and should be guided by long-term sustainability considerations. The four most common fiscal rules for resource-rich countries are as follows.

- **Balanced budget rule:** constrains the size of the budget deficit. In resource-rich countries, a balanced budget rule should be linked to the non-resource primary balance in order to insulate fiscal policy from the volatility of resource revenues. The numerical target should be determined upon long-term sustainability considerations.
- **Expenditure growth rule:** limits the growth of government spending in nominal or real terms or in per cent of non-resource GDP. Such a rule is often used to gradually scale up expenditures, taking into account constraints in the absorptive capacity.
- **Revenue rule:** may cap the resource revenues that can be spent annually through the government's budget. This can be done by using a resource price rule, e.g. by determining a benchmark price, based on a moving price average of past prices, or on a combination of past spot and future prices.
- **Debt rule:** sets a ceiling for public debt in per cent of GDP.

In some countries, a combination of rules is applied. This is particularly the case for the revenue rule and the debt rule.

IV DSM WEALTH MANAGEMENT

- 147 Sovereign wealth funds (SWFs) have become common world-wide as vehicles for governments with significant and volatile or exhaustible sources of revenues to manage this wealth in a manner that supports sound macroeconomic policy formulation and implementation. It is estimated that assets of a value of around USD 3-5 trillion are under management globally by SWFs.³¹
- 148 SWFs can be generally defined as a state-owned pool of money created for macroeconomic purposes. Revenues saved in a SWF typically derive from a country's budgetary surplus, other fiscal sources (e.g. privatisation of public corporations) or excessive foreign reserves. In most cases, SWFs are invested in the international financial market, and SWFs play an important role in global financial stability. A well-funded and well-managed SWF savings fund can provide an indefinite source of national income, contributing to national economic development long after the finite mineral resources are depleted.
- 149 SWFs hold, invest and manage national assets in line with predetermined investment strategies, in order to achieve agreed financial objectives. They are a means of separating DSM revenues from public expenditures, which (i) enables stable macroeconomic development and avoids subjecting the national economy to volatile international mineral prices and production, and (ii) allows for sustainable management of the revenues by saving a share of the revenues for the benefit of future generations.
- 150 A SWF may be one single fund that addresses both the objective of stabilisation and long-term savings (as done in Norway, Timor-Leste, Azerbaijan, Botswana, Angola and Mongolia), or by setting up two separate funds, one as a stabilisation fund and the other as a long-term savings vehicle (the approach used in Chile, Ghana and Russia).
- 151 The principles and procedures for a SWF are not sector-specific, and there are a number of useful examples elsewhere and reference resources upon which Pacific-ACP States setting up a DSM SWF can draw (see Annex 1). In managing their DSM revenue, Pacific-ACP State Governments are recommended to adopt and adhere to the **2008 Santiago Principles**:³² a generally accepted framework of principles and practices that reflect sound governance and accountability arrangements, and prudent investment practices for SWFs. Four particularly important (and inter-linked) aspects of SWF management are highlighted below.
- 152 It is crucial to set clear fund **objectives** that are widely known and understood.
- A common objective for many SWFs is to stabilise the economy in the short and medium term by parking excessive revenues in the SWF and drawing down on these funds when revenues underperform. This insulates the economy from volatility in prices and production, and enables smooth and predictable public expenditure.
 - A SWF can also be used as an instrument for long-term savings, ensuring future generations can benefit from previous DSM exploitation.
 - Holding a SWF overseas may also contribute to sterilising the in-flow of revenues in order to mitigate real appreciation of the currency and the Dutch disease.
 - In some countries, the SWF has socio-economic development ambitions, e.g. it is invested in the domestic market, with an objective to improve infrastructure and other public investments.

³¹ IMF Working Paper WP/13/231 (2014).

³² Adopted by then International Working Group on Sovereign Wealth Funds (now replaced by the International Forum of Sovereign Wealth Funds) in 2008: www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf

- 153 Revenue drawn from the SWF should only be used as a source of revenue for a consolidated fund in line with the regular annual budget process. There should be no other direct expenditure from the SWF for special purposes, as this could undermine the budgetary process, macroeconomic policy management, and effective parliamentary oversight of government spending.
- 154 The SWF **institutional framework** and governance structure should be regulated by law. SWF legislation should describe the division of duties and responsibilities between different entities, including the parliament, the government, the central bank or other operational management agencies (see Box 11 below).

Box 11: Timor-Leste Petroleum Fund

In Timor Leste, the Central Bank (the operational manager of the Petroleum Fund) reports on a quarterly basis to the Minister of Finance (the owner of the Petroleum Fund). These reports entail information about revenue receipts, transfers and withdrawals, investment performance and degree of compliance with the investment policy. These reports are made publicly available. The Central Bank also issues monthly investment performance reports of the Petroleum Fund. The Ministry of Finance submits an annual report to the parliament, with audited financial statements, a revenue receipt report and all advice provided by the Investment Advisory Board to the Minister throughout the year. These measures have made Timor-Leste Petroleum Fund one of the most transparent SWFs in the world, (comprising some \$16.6 billion, as at June 2014 -- http://www.bancocentral.tl/Download/Publications/Press-Release36_en.pdf).

- 155 Transparency is a prerequisite for government accountability, and **reporting and supervision** mechanisms are key in DSM SWF management.
- All aspects of SWF management should be open to the public. The SWF's investment objective(s), governance structure and investment policy should be a matter of public record.
 - There should be regular public reporting of key information, such as:
 - the amount of revenue received (disaggregated by type of revenue);
 - transfers and withdrawals; and
 - the strategic asset allocation, and the investment performance.
 - Transparency requires clear roles and responsibilities and adequate checks and balances. This includes oversight bodies to monitor government's management of the SWF. The Auditor General normally audits government accounts but, where there is not sufficient capacity to undertake this task properly, independent auditors can be used. 'Advisory Councils' or 'Public Interest and Accountability Committees' may also play important oversight roles.
- 156 **Investment policy** is set by the owner of the SWF, and is articulated through a management mandate to the operational manager. Diversification of the investment portfolio, by investing in a broad range of asset classes and instruments, may be a wise strategy in order to reduce risks. If one asset class or instrument has a poor performance during a period, it can be offset by the performance of other asset classes or instruments in the same period. This can ensure a satisfactory performance of the overall portfolio, despite variations between different parts of it. The risk profile of the SWF is normally expressed by the strategic asset allocation, and is often included in the management mandate to the operational manager. A diversified investment strategy, entailing investments in a variety of asset classes, requires significant management capacity and should be gradually developed. It is wise to take a prudent approach from the outset, starting with a large share of the portfolio allocated to fixed interest instruments, and gradually increasing the allocations to riskier asset classes, such as equities when the risk-bearing capacity has increased and adequate risk management systems are in place. The Santiago Principles emphasise the need for maximising risk-adjusted return based on sound asset management principles.

ANNEX 1

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Websites:

Sovereign Wealth Fund Institute: <http://www.swfinstitute.org>

International Forum on Sovereign Wealth Funds: www.ifswf.org

Natural Resource Governance Institute: <http://www.resourcegovernance.org>

Extractive Industries Transparency Initiative (EITI): <https://eiti.org>

GOXI (sharing in governance of extractive industries): <http://goxi.org>

Extractive Industries Source Book: <http://www.eisourcebook.org>

Transparency International: <http://www.transparency.org>

Timor-Leste

- Ministry of Finance: www.mof.gov.tl/budget-spending/petroleum-fund
- Central Bank: www.bancocentral.tl/PF
- Transparency Portal: <http://www.transparency.gov.tl/english.html>
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Norway

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ANNEX 2

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Glossary

The following words have the following meanings in this document:

Amortisation	The allocation of the cost of an intangible asset or expenditure over the useful life of the asset or expenditure for tax and accounting purposes.
Arm's length	A transaction between truly independent parties, and the conditions (such as price) that would be reasonably expected in such a transaction.
Commercial production	A term used for accounting purposes to describe the point at which a mine has reached a defined level of operating capacity or is deemed ready to sustain ongoing production.
Depreciation	The allocation of the cost of a tangible asset over the useful life of the asset for tax and accounting purposes.
Derivative	A financial instrument based on an agreed-upon underlying financial asset (such as currencies, interest rates, bonds or stocks) used for speculating and hedging purposes.
Economic rent	Profits in excess of a required rate of return.
Equity	Ownership interest (usually in a company).
Expense(d)	Deduct (an item of expenditure) as an expense against taxable income.
The Framework	This document: the Pacific-ACP States Regional Financial Framework for Deep Sea Minerals Exploration and Exploitation.
GDP	Gross Domestic Product.
Hedging	An investment strategy, involving the purchase of derivatives, designed to alleviate investor risk by covering opposite positions in the market.
Intangibles	Non-physical assets, such as mining licences, secret information, intellectual property, franchises, customer lists, patented or unpatented technology, goodwill.
Marginal	Barely generating enough income to cover production costs.
Required rate of return	The minimum financial return that an investor wanted, in order to make the investment in the first place.
Tangibles	Physical assets, such as cash, vessels, plant and machinery.
Tax base	The assessed value of any items (assets, investments, income) that are subject to taxation.
Taxable income	The gross amount of income and gains derived during the year, reduced by the total amount of deductions allowed for the year, as determined according to the tax rules.
Trade liberalisation	Reducing barriers (tariffs, quotas, licensing restrictions, etc.) on the exchange of goods between nations.

