E/C.18/2020/CRP. 54

Distr.: General 18
5 October 2020

Original: English

Committee of Experts on
International Cooperation in Tax
Matters Twentieth session
Online meeting of 20-30 October 2020
Item 3(e) of the provisional agenda
Update of the Handbook on Selected Issues for Taxation of the Extractive Industries by Developing Countries
Chapter XX: The tax treatment of decommissioning

Note by the Secretariat

Summary

This chapter covers the tax treatment of rehabilitation/decommissioning[1] costs for mining and oil & gas projects. Such decommissioning may be required under a wide range of domestic laws, international agreements and voluntary guidelines.

In order to consider the tax treatment of decommissioning costs, it is necessary to understand the environment in which those costs will be accrued and incurred. This chapter therefore first addresses the broad principles behind a government's regime for decommissioning and considers the actual work that needs to be done to achieve local, national and international requirements. It then discusses methods by which responsibilities to carry out such work are assigned, and the different contractual and legal frameworks which govern the relationship between the host state/resource owner and the contractor involved with the extractive activity.

This text is update of the previous same chapter in the previous version and presented to the Committee at the 12st Session for review and DISCUSSION. The draft is in track mode for easy reference.

CHAPTER XX: THE TAX TREATMENT OF DECOMMISSIONING

Table of Contents

Executive summary

This chapter covers the tax treatment of rehabilitation/decommissioning[1] costs for mining and oil &~~and~~ gas projects. Such decommissioning may be required under a wide range of domestic laws, international agreements and voluntary guidelines. Decommissioning requirements may be mandated by law or by the agreement under which the extraction activity has taken place, and may be intended to meet a number of goals.

In order to consider the tax treatment of decommissioning costs, it is necessary to understand the environment in which those costs will be accrued and incurred. This chapter therefore first addresses the broad principles behind a government's regime for decommissioning and considers the actual work that needs to be done to achieve local, national and international requirements. It then discusses methods by which responsibilities to carry out such work are assigned, and the different contractual and legal frameworks which govern the relationship between the host state/resource owner and the contractor involved with the extractive activity.

Building on this legal and commercial background, the chapter then examines different models for funding decommissioning work, and the methods by which costs can be estimated. It examines three key models and the direct tax treatment of each such model. The models represent choices that can be made by a country in designing its tax regime for the extractive sector, and each model could potentially distort the decisions made in relation to decommissioning. These potential distortions are identified and methods to address adverse distortions under each model are discussed.

Introduction

The two main extractive industries are mining and oil &~~and~~ gas; within each of these categories, there is a range of technology requirements depending on the resource to be extracted, its location (e.g. onshore or offshore) and the facilities needed to process the extracted resource. Such facilities may require large multi-year capital investments in infrastructure or access to additional inputs for processing the output of natural resource projects. As the mines and the oil and gas fields~~facilities~~ become depleted, the~~y~~ associated facilities require decommissioning and remediation.

Decommissioning is a complex multi-disciplined process with an overall timescale normally lasting several years, requiring the management of diverse issues and involving international and government agencies, mining or oil &~~and~~ gas producing companies, third party contractors, local communities, and non-governmental organizations.

There are many thousands of mines and oil &~~and~~ gas fields in operation worldwide which will need to be decommissioned, including 8,000 offshore oil and gas installations. The Oil and Gas Authority in the UK has indicated the decommissioning cost on the United Kingdom continental shelf at about £~~59.7~~49 billion.[2] The very high costs to decommission such facilities will reduce the net profits of the private sector. Governments will correspondingly collect less income and/or profit taxes as a result of decommissioning obligations.

Decommissioning is part of the life cycle of an installation. Within that life cycle, the financial and technical planning of decommissioning and remediation phases often receive insufficient consideration during the planning, design and operation phase of these facilities. This has led to

[1] Hereafter referred to as "decommissioning costs" for ease of reference.

[2] The UKCS Decommissioning 201~~9~~7 Cost Estimate Report, available at ~~https~~https://www.ogauthority.co.uk/media/5906/decommissioning-estimate-cost-report-2019.pdf~~://www.ogauthority.co.uk/news-publications/publications/2017/ukcs-decommissioning-2017-cost-estimate-report/.~~

many unforeseen issues and challenges, as mines and oil &and gas fields facilities reach the end of their economic life.

There is also a legacy of mines and oil &and gas fields that have already been closed and decommissioned in the last century and which today are creating environmental and risk issues, as there are no clearly responsible parties and/or no funds reserved to address the decommissioning and closure issues. Furthermore, these issues can foster a negative opinion and reputation of the industry and cause communities to oppose plans for new extractive industry operations.

The closure phase must comply with sector law and regulations and/or the closure, decommissioning and remediation terms in the lease or contract. Typical steps to comply with these requirements are:

Clarification of the sector and national law, regulation and guidelines applicable to the closure of the mine;

The removal or conversion of infrastructure and rehabilitation of land;

In the case of mining, the stabilization of open pit or underground workings (foundations, mine shafts, buried pipelines, etc.);

Removal and/or rehabilitation of tailings, rock stock piles, etc. from the mines, and drill cuttings, shell mounds, wells etc. from the oil &and gas operations;

Management of surface and groundwater and air quality;

Post-closure monitoring to ensure that potential environmental issues are effectively managed;

Transfer of liability, for example on reversion of ownership to the state; and

Recognition of residual liabilities.

Key drivers in determining decommissioning principles

The key drivers which affect the decommissioning of mines and oil &and gas facilities are:

1. Politics, public concern and reputation;
2. National and international legal requirements;
3. Contractual obligations assumed by the investor/licence holder;
4. Cost and economics;
5. Taxation framework;
6. Technical feasibility;
7. Health, risk, safety and security;
8. Environmental impact; and
9. Other users of the land and the sea.

The above listed elements are not ranked in order of importance, and policymakers should decide the weight to be given to each element based on the economic conditions and policy priorities of their own country for an overall decommissioning regime. Further, within that national approach, it is recommended that the ranking of each facility in the country against these criteria should be carried out on a case-by case basis.

The political and community impacts of the closure of major facilities in a community make decommissioning more difficult. There are often profound economic consequences on local communities or host nations in association with mine shutdown and the decommissioning of oil &and gas facilities. Environment, sustainability, health and security (ESHS) issues may be especially complex in the social context and provisions may have to be made for retraining workforce, development of sustainable economic alternatives to mining and oil &and gas activities, or the management of reduced-scale and downsized facilities. This also triggers intense and

detailed scrutiny of the decommissioning and closure process by the affected communities and the local and national government.

Mining operations tend to impact significant areas of land and hence the decommissioning work needed can be extensive, particularly in open pit mines.[3] For example, once mining finishes, the following activities might be undertaken:

Waste dumps flattened to further stabilize them against erosion;

The mine covered with a layer of clay to prevent access of rain and oxygen from the air, which can oxidize the sulphides to produce sulphuric acid;

Landfills covered with topsoil, and vegetation planted;

Dumps fenced off to prevent livestock denuding them of vegetation;

The open pit surrounded with a fence, to prevent access, and filled up with groundwater; and

Tailings dams left to evaporate, then covered with waste rock, clay and soil, to stabilize them.

The nature of the above activities can, depending on the nature of the mine, require that these activities be undertaken at the end of the useful life of the mine, rather than in stages as the mine is depleting.

Oil &~~and~~ gas operations tend to have less impact on areas of land and offshore zones than mining, but nevertheless proper assessment and decommissioning needs to be executed.

The nature of traditional onshore and offshore upstream exploration and production ("E&P") i.e. oil &~~and~~ gas operations, results in a smaller footprint than that of most mining operations. Hence, the scale of land rehabilitation, re-vegetation and other reclamation activities associated with mining does not typically apply to upstream hydrocarbon operations. Furthermore, part of the decommissioning can be undertaken in stages, rather than waiting for the end of life of the field. Notwithstanding these generalisations, it should be noted that some unconventional oil &~~and~~ gas projects have characteristics which bear closer resemblance to mining projects in terms of their economic profile and, in some cases, arguably, the environmental footprint (e.g. oil sands).

Closure phases of mines and oil &~~and~~ gas fields comprise numerous complex and costly activities such as:

Clarification of the sector and national law, regulation and guidelines applicable to the decommissioning and remediation of oil &~~and~~ gas facilities (onshore or offshore);

Interpretation of law and regulations to produce environmental, safety and technical "Rules for Decommissioning";

Development of the case-specific decommissioning and remediation option, evaluation and selection process;

Execution of a public and government review of the decommissioning option selection process and outcomes, where not already provided for under statute;

Preparation of decommissioning engineering, permitting, project execution and dismantling, and removal of structures used during resource exploitation;

Implementation of remedial measures to manage ESHS issues remaining from operations or resulting from cessation of operations and decommissioning activities;

Restoration of the site to an agreed-upon use and quality in line with the expectations of government authorities, relevant stakeholders, and nearby communities;

Final survey and verification;

Achieving project signoff by government; and

[3] For underground mines, decommissioning work may be significantly less due to lower volumes of waste rock and tailings. Furthermore, the removal of plant and infrastructure is not always part of a rehabilitation programme, as many old mine plants have cultural heritage and value.

Assessment of any future liability.

As many of the existing mines are nearing depletion or the economic limits of extractability and ~~oil and gas~~oil & gas fields are in decline, closure, decommissioning and rehabilitation activities are expected to increase. This closure process will result in a complex sustainability issue which is part of the natural life cycle of a mine or an ~~oil and gas~~oil & gas field.

Planning for the closure process should begin during the early phases of the project life cycle, incorporating environmental concerns as well as health and safety issues and the socioeconomic needs of the nearby population. Starting the planning requires clarity over who will be responsible for what. In the best cases, there are laws, regulations and contracts available that clarify this; however, this is not always the case. Engaging bilaterally to agree on these issues as early on as possible will help improve clarity and support a clear environment for investment decisions.

Approach to a tax policy framework for decommissioning

This chapter recommends that policy makers utilize the following approach in determining decommissioning policy:

1. Establish principles of decommissioning from a governmental perspective;
2. Design the regimes for delivering decommissioning principles;
3. Understand and manage the risks from the interaction between the tax regime and decommissioning; and
4. Consider the recommendations made in this chapter on mechanisms to resolve tax issues.

Contract structures and fiscal regime design

There are many different legal frameworks which govern the relationship between the host state/resource owner and the contractor tasked with developing the natural resource. These include concession agreements/licensing regimes, production sharing contract (PSC) type regimes and service contracts.

Conceptually these frameworks can each offer a variety of different fiscal 'levers' which can operate to share the risks and rewards of projects between the parties. These levers include, but are by no means limited to:

Signature bonuses~~Buy-in/auction payments~~;

Production bonuses;

Royalties;

Profit based taxes; and

Profit sharing with cost recovery mechanisms.

In this chapter, references to 'tax' and 'taxation' should be taken as references to all forms of payments received by the host state/owner of the resource in return for the development of its natural resources, including production sharing, and references to the "fiscal regime" are to the legal and economic framework which determines the taxes and other forms of government share~~take~~ due. However, since taxes under non-income-based mechanisms do not commonly respond to costs, this chapter necessarily focusses on the way decommissioning expenditure is reflected (i.e., deducted) in the calculation of profit-based taxes/profit sharing and cost recovery calculations.

The broad decommissioning regime

This chapter sets out the principles behind a government's regime for the funding of decommissioning into which the taxation rules will need to fit. These are included since the taxation rules that are best for adoption will depend critically on the mechanism by which governments choose to fund decommissioning.

Decommissioning principles

The following guiding principles are used within this chapter when considering the precise design of the tax regime—i.e., that the tax regime should not undermine any of the principles below.

1. Governments should recognize the decommissioning liabilities of a resource project, which should be explicit and visible at the start of project life cycle, the corresponding decommissioning plan and cost estimates should be updated during the project life. These include both discrete liabilities and residual liabilities.

The reason why this is important is that the costs (and risks of uncertainty) relating to the decommissioning liability will be factored into the decision-making of the investor(s)~~private sector entity~~ and hence the government will have lost value unnecessarily if the liabilities it ultimately imposes are significantly ~~less~~different than the prudent assumptions of the investor. Investors may be expected to seek reassurances from governments in this regard. In the UK for example this is done in the form of a Decommissioning Relief Deed, which is a contract between the government and companies operating in the UK and UK Continental Shelf, to provide certainty on the tax relief they will receive when decommissioning assets. This is further discussed under Model 1 below.

2. Where liability lies should be the choice of the government of the resource state—government should not unwittingly be left with the liability to perform decommissioning. Roles and responsibilities for decommissioning should be clearly defined at the inception phase of extractive projects, i.e. at the time the lease or contract is originally awar~~e~~ded. These should include:

a. Responsibility for execution;

b. Responsibility for costs;

c. Stewardship of decommissioning; and

d. Rules for transfer of liabilities on transfer of ownership of projects or assets.

This will allow all parties to understand their roles and to plan accordingly.

3. Rules should have enough flexibility to enable a range of technology choices and be responsive to project needs, recognising that technology choices can change over time. The overall decommissioning regime should not constrain the opportunity to take advantage of improvements in technology. Rules that lock participants into technologies early are likely to result in a sub-optimal choice of decommissioning outcomes once the decommissioning starts.

4. Governments should develop decommissioning policy bearing in mind national socio-economic, environmental, finance and governance impacts. Management of the regime should encourage a "whole of government app-roach" (which should include the national oil company where present)—the agreement of regulators on the policy approach is essential for efficient oversight and management of the decommissioning process. Government and national ~~oil and gas~~oil & gas companies should also have a clear strategy for managing conflicts in priorities (e.g. between costs of full removal versus alternative solutions).

The choices on decommissioning will have a wide range of impacts so it is important that the decisions are coordinated across the relevant government departments.

As an associated point, developing countries, regional and international organisations should strive to build capacity on decommissioning matters and share knowledge among countries.

Choosing who is responsible and who should pay

There are two key decisions that are needed in determining the decommissioning regime and these will critically impact the tax rules applicable to decommissioning expenses. These are:

Who has responsibility for decommissioning, such as:

1. The government;
2. The investor~~licence holder~~; or
3. Shared between the licence holder and the government.

Who pays for the decommissioning, such as:

1. The government pays for it all;
2. The licence holder pays an agreed amount;
3. The licence holder pays an agreed fraction; and
4. The licence holder pays for it all.

Typically, the licence holder or holders will pay for the decommissioning. However, a secondary effect can arise in two circumstances. First, where the profits from the licence activities are subject to a profit-based tax, the costs of decommissioning, as expenses of the business, will reduce the overall taxable profit, and taxes paid, as compared to a case where such costs are not required to be incurred. Second, in the case of a PSC, if as is commonly the case decommissioning costs are recoverable costs under the PSC, in the form of "cost oil", for example, then the licence holder will be reimbursed for such costs.

Funding decommissioning

The next question arising is how the decommissioning is going to be funded. For an investor ~~company~~'s share, in essence, there are three key options:

1. Without any security;
2. With security, in the form of:

Assets pledged (including cash);

A parent company guarantee; or

A letter of credit from a bank.

3. With contribution into a fund:

Owned by the government:

Funds earmarked for decommissioning activity (i.e. ring-fenced from the general budget); or

Funds not earmarked (become part of the general budget).

Independent fund per project; or

Independent fund per investor~~company~~:

Held outside the ~~company~~investor (e.g. in escrow);

Within the ~~company~~investor (not ring-fenced).

These options can combine with the options set out in this chapter to create a complex environment, such that the options chosen by two countries can differ significantly. They raise a number of operational challenges. In relation to funds, the following questions arise:

How much should be contributed into the fund?

What is the mechanism for withdrawals from the fund?

On what basis should the obligation to fund be imposed?

When should companies pay into the fund?

What companies should pay into the fund (is this just the licence holder?)

What can be contributed into the fund (e.g. profit oil rather than just cash)?

What happens in the event of a:

1. Funding shortfall; or
2. Funding surplus; and

What currency is the fund?

Similar questions arise in relation to accounting and tax provisions.

Given the above, the fiscal regime will need to consider:

Whether contributions to the fund are tax deductible when made, or at some other time (e.g., when the fund spends the moneys);

Whether tax is imposed on drawings from the fund and/or any return of surplus and release; and

How earnings on the fund itself are taxed (or exempt from tax).

These and other tax issues are discussed in the next section.

The government will also need to consider how it would fund its share of those liabilities which could arise through state participation in decommissioning and/or national oil company participation in the investment. In addition, and as noted earlier, even without direct participation, income-based taxes to the government will be reduced given higher costs, and lower or no production, during periods of decommissioning. In many cases, losses will be incurred during such periods, and thus refunds of prior taxes paid may be due, triggered by the carrying back of losses from the decommissioning. Broadly, this may be met out of current period tax receipts or reserves which the government may hypothecate or commit into a specially designed fund.

Basic tax choices: an overview of the common models

The basic choices for providing a tax deduction for decommissioning costs are as follows:

Provide a tax deduction when cash is expended on decommissioning;

Provide a tax deduction when decommissioning is accrued; or

Provide a tax deduction when decommissioning is pre-funded.

These options are considered in more detail below. They are all seen in practice, as shown by the examples in the chart below. Sometimes the choice of Model 1 or 3 may be at the option of the taxpayer, as seen below.

Table VI.1:
Examples of countries adopting models 1 to 3

Tax treatment/model	**Deduction upon:**	**Example countries**
1	Expenditure	~~*Oil and gas*~~*Oil & gas:* Australia, Denmark, Norway, the United Kingdom and Zambia. *Mining:* Australia, Canada, Chile, Peru, South Africa, USA
2	Accrual	~~*Oil and gas*~~*Oil & gas:* Netherlands and Spain (by election). *Mining:* United States and Spain (both by election)
3	Contribution to fund	~~*Oil and gas*~~*Oil & gas:* Ghana, India and Mozambique, South Africa and Zambia. *Mining:* Canada.

Additional tax questions arise in relation to payments for security (e.g. letters of credit) such as how/when to:

Provide a tax deduction for costs of obtaining security; or

Provide a tax deduction if security is used (requiring the security issuer to obtain reimbursement from the taxpayer).

Again, the answers to these questions are likely to vary depending on the type of security.

In addition to the questions of the timing of deductions for decommissioning costs, there is also the valuation of the costs of decommissioning. The relevance of this will again depend on the model used, since estimates of costs will of course be harder to establish than costs that have actually been incurred.

In considering any of the options, the following assumption has been made: that if the tax treatment is understood by all parties upon entering into the licence/contractual agreement, then the overall "government tax share ~~take~~" (i.e. the overall amount of tax and other amounts payable to the state) will adjust to offset differences in tax treatment. **Hence the key concern should be to ensure that any regime that is chosen does not create incentives that run counter to the decommissioning principles**. Choices that merely change the timing of tax deductibility for decommissioning costs do not need to affect the overall amount of government take. On the contrary, as noted above, a well-designed fiscal and decommissioning regime should optimise the level of government share~~take~~ in the context of the appropriate sharing of risks for the exploration and development (including decommissioning) of a particular resource between the state and a company.

Model 1—Providing a tax deduction upon expenditure

Under this system, a tax deduction is only provided on a cash basis, leaving no tax incentive for the taxpayer to pre-fund its decommissioning. This means that there will be a greater need for government to ensure that funds are available at the time of decommissioning. This therefore encourages the use of security.

This is the simplest mechanism as the expenditure incurred on decommissioning can be verified against an agreed decommissioning plan or where such a programme has not been prepared and/or agreed (i.e. due to the decommissioning works being undertaken *mid-life*, at which point it may not be customary to have a fully developed decommissioning plan in place), potentially by reference to some other form of government test, condition or established process. There will be other questions that need to be addressed, such as whether costs are general expenditure rather than decommissioning costs and to which project the particular element of decommissioning expenditure relates (which is particularly important if the projects are taxed at different tax rates).

This also provides a cash flow advantage to the government since it will receive all taxes/receipts from the extraction of the resources but will only permit tax deductibility for costs at (or near) the end of life of the project.[4] ~~[NOTE this commentary could be alternatively included within page 305 onwards under "*Application to Model 1*" – commentary placement should follow UN preference]~~ One important direct consequence of providing tax deductibility at the end of project life is that investors in ~~oil and gas~~oil & gas projects may apply some level of risk premium to their investment opportunities due to the potential for a territory to adversely change the investor's decommissioning tax relief terms late in a project's life cycle when decommissioning activity more relevant. Naturally this perceived risk may impact some territories more than others and will to a degree depend upon how confident investors are in a territory's likelihood of honouring its fiscal

[4] Of course, the cash flow impact on the taxpayer will be the opposite.

terms. In the UK for example, the maturing of the United Kingdom continental shelf elevated this investor risk regarding, inter alia, certainty around decommissioning tax relief levels. The result was that the UK Government introduced a legal instrument (*the Decommissioning Relief Deed*[5]) which could be entered into between the investor and the UK Treasury in order to provide more investor certainty versus protection under general UK tax statute.

The choice of timing can also be linked to the choice of tax regime more generally—if the rest of the regime is effectively a cash flow tax (e.g. providing immediate relief for capital expenditure) then allowing relief only on a cash flow basis is consistent.

From a tax perspective, this means that the project will be paying tax once the project has repaid investment and will carry on doing so through to the end of project life. At that point (or slightly beforehand) the taxpayer will incur decommissioning costs which will crystallise a large loss once the project has entered the decommissioning phase.

In most tax systems, tax losses are carried forward to the next tax year and allowed as a deduction in that year. However, the use of a loss carry-back will be needed as a way to provide an effective tax deduction for such costs unless there are other ways to offset the loss. A special provision can be made in the corporate income tax law to allow loss carry-backs in the case of a terminal loss arising from the closure of mining or ~~oil and gas~~oil & gas operations. In turn, this may involve reviewing the income taxes paid for previous years and will typically result in refunds of taxes paid for such years.

Policymakers will need to be conscious of the government budgetary implications and availability of funds for refunds. Investors may be expected to seek reassurance that any refunds due will actually be made. Further, consideration will need to be given to the administration of the carry-back.

Assuming the budgetary and administrative issues can be resolved, the use of loss carry-backs can be an effective means of providing a tax deduction for such costs. This is particularly true when ring-fencing applies; also, it allows for accurate deduction of the actual costs incurred, and avoids the issues of recapture of excess deductions taken or allowance of further costs inherent in other mechanisms.

Rules are needed to cover how that loss is deducted, such as allowing offset against profits made earlier in the project life. If this is achieved through a carry-back of the loss against the most recent periods first (i.e. on a last-in-first-out or "LIFO" basis) then the effective tax rate will be the rate that applied near the end of the project life rather than at the start of project life. Where the tax rate has varied in line with the profitability of the project, this may be considerably less than the peak tax rate on the project or indeed the average rate. Significant uncertainty may arise due to the risk of law changes and this is exacerbated by the long period before effective tax deductibility is obtained.

Model 2—providing a tax deduction upon accrual

Under this model, a tax deduction is taken as the decommissioning expense is charged to the profit and loss account. Where the expenditure has not yet been incurred, this will create a provision for future expenditure. The taxpayer will get the tax deduction earlier in the life of the project than under Model 1.

The provision method enables the taxpayer to most efficiently deploy its capital. It may be argued that, without the obligation of an actual cash outlay, tax-deductible provisioning can increase the

[5] Example of UK's *Decommissioning Relief Deed (DRD)* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/255650/Decommissioning_Relief_Deed.DOC

expected rate of return from the project since it provides improved cash flows over Models 1 and 3. It thus could also result in greater returns to the state given the different discount rates used.

On the other hand, policymakers should be conscious that an unfunded provision requires appropriate and robust controls and monitoring processes to ensure that excessive amounts are not being provided for.[6] In some countries, the decommissioningabandonment provision accrued in the year will only be tax deductible when it corresponds to a decommissioningn abandonment plan formulated by the taxpayer and expressly accepted by the relevant authoritytax administration. Further, it may be prudent to ensure that, while a provision is being made, there is some corporate backing provided by the operator, in the form of one or more financial guarantees (discussed at section above) that the operatorinvestor will perform its decommissioning obligations.

Finally, it will also be necessary to develop rules to deal with excess or inadequate provisions made. Where excess sums have been provided for, there should be explicit provision in the tax law to recapture the excess. A further consideration here is whether the recapture should be at the tax rate of the excess provision year(s) or the year in which recapture takes place, and whether interest should be charged. Again, policymakers will have to consider the trade-offs in view of their need to attract additional investment to the extractive sector, their revenue goals and need to have a simple, practical and clear decommissioning regime.

This model has the following characteristics which need particular attention:

Estimate of costs: The estimate will be based on the decommissioning plan or equivalent documentation, where the associated costs will have to be estimated and agreed with the relevant sector ministry in advance.

Accruing the costs: It will be necessary to have detailed rules on how the provision should be calculated and how much is allowed to be provided for each year. The operator may also be given a choice of different methods of accruing the provision, e.g. provide for the estimated cost over the life of the field, or based on each unit of production (i.e. a certain fixed amount is provided for against each ton of ore or barrel of oil produced). The government could also determine a specific provision schedule as part of the negotiations with the operatorinvestor(s) in relation to the concession.

It will also be necessary to take into account the tax treatment of foreign exchange gains and losses relevant to the accumulated provision. Typically, the deductions will be allowed in the currency in which the operator submits the accounts, which in most cases will be in an internationally recognized currency (e.g. US dollar) and/or the national currency. However, the actual decommissioning costs will typically have to be paid in other currencies, and the conversion rate of such costs to the national currency may be different than when such costs were accrued. Therefore, in making interim or final adjustments to the provision, it will be necessary to consider currency movements. If amounts are accrued and deducted based on local currency, devaluation of the currency will mean that additional contribution will need to be made to the accumulated provision. Hence a current year deduction could consist of the accrual for that year plus an additional accrual for prior year amounts that have appreciated or depreciated in value.

Model 3—providing A tax deduction upon pre-funding

Some governments require or allow companies to contribute to a decommissioning fund out of which the decommissioning liability is settled.

This model provides a tax deduction for contributions made to a dedicated and protected decommissioning fund. Typically, contributions would be made by an investor licencee who is liable for a share of decommissioning costs under the extractive contract or a share of such costs

[6] The use of the accounting provision for decommissioning costs can operate as a constraint on over-accruals.

in the event more than one investor constitute the contract group, whose relationship would be governed by a joint operating agreement. Decommissioning expenditure met directly or indirectly by the fund would not receive further tax deductibility. The fund would be outside of the sole control of the company or the government and, once committed, funds could only be released to pay for decommissioning expenditure.

The fund would be "insolvency remote", such that it could not be accessed by, for example, a liquidator should a licencee be put into liquidation. Once contributed, funds could only be used for legitimate decommissioning expenditure (whether before or after cessation of production) or refunded if the fund was in surplus once all decommissioning has been carried out.

Under this approach the taxpayer obtains a tax deduction for the costs before cessation of production and there is a shorter period during which the taxpayer is exposed to the risk of law change.

The use of decommissioning funds raises the following questions:

Timing of deduction: The timing of a tax deduction will have cash flow implications for the government. The options include providing relief:

Upon contribution of the cash to the fund: Tax deductibility can take place on an "as-funded" basis—i.e. when an actual payment is made into a decommissioning fund or trust fund established for this purpose. This is established practice in a few countries, including India, Mozambique, Zambia and South Africa. Examples of the rules applicable in the last two countries are provided in Annexes A and B to this Chapter.

These contributions are made during the development and/or operations phases of the project. It is important to clarify when to start the contributions to the fund. The fund (or other holding mechanism) is then used for project decommissioning costs at the end of useful life. Under this approach, the deduction is allowed well in advance of the date that the decommissioning expenditure is actually incurred, but at the time the operator makes a cash payment to the fund and loses control of that cash. The project operator's deduction occurs when it is earning income from mining or ~~oil and gas~~oil & gas operations against which the deduction can be offset. The financial and tax treatment, and therefore budgetary impact for the government, is settled at the time of contribution to the fund—rather than the implications only becoming apparent later, when the provision is used for decommissioning.

The ability to take the tax deduction upon contribution mitigates the timing disadvantage to the ~~operator~~investor of contributing to the fund, but ~~is~~may be less attractive to the ~~operator~~investor as compared with Models 1 and 2. It does provide greater visibility and assurance to the government concerned that funds will be available at the end of project life than Model 1 or 2, unless some additional security is provided under those Models.

Upon accrual of the expenditure by the fund: For funds that remain close to the control of the taxpayer, deduction may only be given once it is clear that the funds will be spent on tax-deductible decommissioning activity. Hence, deductions could be delayed until the fund contracts for such activity. Given the difficulties in verifying the contractual relationships, this option should be used with caution.

Upon expenditure by the fund: This provides the same tax effect as Model 1 above, but has a far more onerous commercial implication since the ~~operator~~investor is required to provide the funds early but is entitled to the tax deduction only at the later date of actual expenditure on decommissioning costs.

Note that the independent fund per company model could in some cases give the company the possibility to deduct a surplus from other fields or activities. This will depend on the specific agreement/legal framework.

Treatment of surplus: The treatment of the surplus will determine the attractiveness to the taxpayer of contributing to a fund. In almost all cases, if contributions are tax deductible on the

way in then, to the extent the surplus is repaid to the company, it should be taxable at that time of repayment.

Taxation of deficit funding: The tax system can be used to provide an incentive for the taxpayer to finance the decommissioning fund, for example, by allowing a lower rate of deduction on any contributions that are made towards the end of project life. However, this will complicate the tax system and, hence, may not be the most efficient way in which to provide the incentive.

Taxation within the fund: The taxation of the fund (i.e. whether the income of the fund can roll up free of tax, or exemption from any wealth/capital taxes) will materially affect the quantum of the funds available for decommissioning. However, this can be considered in determining the levels of contribution required.

Table VI.2:
Types of decommissioning fund and tax Treatment

	At contribution	**Upon amortisation**	**When spent**
Government	Deduction can be justified at this time, since the funds are out of the control of the tax payer.	N/A	N/A
Independent per field	Deduction can be justified at this time, since the funds are out of the control of the tax payer.	N/A	N/A
Independent per company	Since the fund relates only to one company and it might receive a refund of any surplus, caution should be taken in relation to deduction.	Once the fund has contracted for the decommissioning, deduction could be provided to the taxpayer.	N/A
Company	This is equivalent to an accrual. No deduction since there has been no setting aside of funds.	Deduction should be given on the same basis as if there was no fund. May be a stronger case for accrual relief.	

General questions: measuring the costs of decommissioning

A fundamental question in relation to providing deductions for decommissioning costs is what costs are properly considered to be decommissioning costs. This involves both the determination of what qualifies as such, and also the mechanism for estimating the costs that will be incurred in the future.

Measuring the costs of decommissioning

Specific decommissioning plans are generally set out in regulations that have their basis in national legislation. The determination as to which of the associated costs should be included in the decommissioning cost estimate should be governed by the legal, contractual and administrative framework that defines the scope of decommissioning under the relevant regulatory scheme. However, specification in the national law and regulations varies among the countries, from clearly defined to countries where these issues are hardly included in the legislation.

It is recommended that the costs recognised for tax purposes are reconciled with those available~~drawn from~~ elsewhere in government, such as the authority that approves the decommissioning plan, so that there is no opportunity for disparity in the numbers. See Annex G in relation to the current mechanisms by which decommissioning costs are estimated for non-tax purposes.

It is recommended that, where costs are deductible, there is clarity in the rules as to:

1. Which expenditure is allowable and which costs are disallowable; and
2. At what rate those costs are deductible (as countries may apply different tax rates to different streams of income).

In addition, there should be certainty that effective tax relief for allowable costs will be available.

Estimating the costs of decommissioning

In addition to agreeing the actual costs, Model 2 (and potentially Model 3, depending on how payments made into or out of the fund and income earned by the fund are taxed) will provide a tax deduction based upon the estimation of the costs of future decommissioning. Determination of the estimated costs of decommissioning is a technical matter, for which the best expertise is likely to reside within the investor and/or appropriate resource ministry (mining or ~~oil and gas~~oil & gas). It is recommended that the tax deductibility be conditional upon approval of the estimated costs by the resource ministry and the notification by it to the tax administration. Governments may choose to address this matter through regulation.

It is also important for policy makers to recognize that the decommissioning costs estimate is an estimate only. The actual decommissioning costs at the end of the project life may be quite different due to a wide range of factors, including changes in technology, increases or decreases in labour or material costs, currency valuation changes, and the development of more innovative solutions and different environmental standards at the end of project life compared to the start. There needs to be a degree of flexibility built into the cost estimation process and in the consequent deductibility of such costs for adjustment of the estimate over the life of the project, and at the end of the decommissioning process.

Implications of security

In addition to the taxation treatment of the decommissioning, a common factor in many regimes will be the requirement to provide security. Furthermore, given that requiring the setting up of funds can lead to capital being left idle and unavailable for investment, some governments have instead sought to address the risk by merely making sure that the funds are available to be called upon if needed. This results in the taxpayer obtaining security from:

A bank, through a letter of credit;

The parent company or an affiliated company, through a guarantee; or

A charge over assets.

Since the costs of obtaining these securities are effectively costs of decommissioning, these costs should be tax deductible in the same manner as costs for decommissioning or current costs, whichever is most appropriate. If tax relief is available on either a cash or an accrual basis, fees charged by the banks for letters of credit will be deductible as they are incurred.

In the case of a parent or affiliate guarantee, where a fee is involved, it may or may not be deductible depending on the law of the country.

If the security is called upon and the bank then calls on the resources of the taxpayer, the calling by the bank should be treated in the same way as if the expenditure had been made by the taxpayer. If the security is called, care needs to be taken to avoid tax deductibility being given twice, i.e. once to the company and once to the bank.

Tax policy legislative design

In common with other areas of tax treatment of the extractive sector, an initial issue to be decided is the location of the income tax provisions for the sector. There are various options, including:

A separate omnibus law that is applicable to extractive industries which covers both tax and non-tax subjects;

A chapter (or part) in the corporate income tax legislation that covers the extractive sector, and includes decommissioning related provisions;

The sector legislation, meaning that the mining law and/or the ~~oil and gas~~oil & gas law, as appropriate, would have a tax chapter; or

A contractual obligation between the government and the licencee.

The key consideration in the location of any legislation is that duplication should be avoided and definitions harmonized to the largest extent possible. This will particularly be the case where the country chooses to place the tax rules in the tax legislation, and the general decommissioning requirements in the sector legislation. Care needs to be taken to ensure that the tax law follows the definitions and tests used in the sector legislation, and does not seek to duplicate or create alternative tests for tax purposes, whether by statute or by regulations.

Potential impacts of various tax issues on decommissioning

The tax regime can have the following behavioural impacts:

1. By taxing the profits from extraction, there is the natural consequence that a tax deduction is provided against the income for the costs incurred in earning that income, including those of decommissioning. Given that the decommissioning costs may only be payable late in the project life, there is a risk that governments may not plan appropriately or adequately recognise these costs.

Further, tax rules may:

2. Influence or even impede the choice of who actually does the decommissioning;
3. Prevent "time being your friend"—i.e. prevent future developments (such as technological breakthroughs) positively influencing decommissioning outcomes;
4. Encourage the removal of more equipment due to the future application of the precautionary principle ultimately requiring removal of equipment by the investor;
5. Promote premature decommissioning, e.g., through:

a Restrictions on loss carry-backs;

b. Entity segregation for tax purposes, thus, restricting loss transfers; or

c. Restrictions of transfer of the resource asset to late life developers.

6. Promote only a standard decommissioning approach rather than a specifically designed approach;
7. Have an effect on the selection of the method of developing resource projects, thus, influencing the ultimate decommissioning method and approach;
8. Influence the premature shutdown of the infrastructure which will result in premature decommissioning of assets and potential lost value;
9. Stop alternative uses of resource fields and therefore promote premature closure or delay decommissioning; and
10. Advantage multi-field investors over single field investors, which will reduce the investor pool.

In case of Joint Development Areas (JDAs), different tax rules in the partner jurisdictions will add to the risk that incentives and obligations are misaligned, e.g. that costs are split disproportionately among the countries involved.

This section considers the incentives that the tax system can create. These are considered for the three models.

Application to Model 1

As noted above, for many mining projects, particularly open pit mines, it can be very difficult to start decommissioning except at the end of the mine's life. This means that the vast majority of decommissioning costs will occur after the mine has stopped producing income. The position is similar for ~~oil and gas~~oil & gas projects, although some elements of decommissioning can be undertaken during project life.

Consequently, the impact of Model 1 is the creation of a large tax loss once the mine or ~~oil and gas~~oil & gas field has stopped producing taxable income. At the most fundamental, the costs of decommissioning may not receive an effective tax deduction, even if the project has been profitable and the intention of the government has been that the project would be taxable on its overall profits (i.e., after all costs including decommissioning). Most tax systems will seek to mitigate this through allowing the decommissioning loss to be set off against profits elsewhere in the group or against the profits of a certain number of years before cessation. However, this is not wholly effective, as follows:

The ability to offset the decommissioning costs against profits elsewhere in the group can reduce the impact for those groups with additional mining or ~~oil and gas~~oil & gas facilities that are profit making at the time of decommissioning. For these groups, the issue remains important, but generally only for the last asset. However, this option is not available for those companies with only one asset;

The ability to carry decommissioning tax losses back against the taxable profits of the previous few years can reduce the impact, but this requires that there are sufficient profits in the years prior to cessation of production that are covered by the loss carry-back provisions. Ignoring any tax incentive, it can be expected that the last few years of ownership would be generating far less profit than earlier in the project and hence may not be sufficient to absorb the whole of the decommission costs.

~~[Potential alternative insertion location for the UK DRD mitigation commentary re investor risk premium]~~

As well as potentially meaning that the method is frustrating the government's intention to provide relief, this can also create the following key risks:

Constraining the sale of late life assets:

The use of loss carry-back as the mechanism for relieving decommissioning costs requires the taxpayer to have a tax history of profits. This means that the sale of an asset to a new entrant could be impeded, as the new entrant would not inherit the profit history and might not generate sufficient profits in the remaining period of ownership to offset the decommissioning costs. In practice, an incumbent owner might be willing to pay a new entrant to relieve it of the asset, but the potential denial or reduction of a tax deduction for decommissioning costs would impede such a transaction. During 2019 and after several years of constructive discussion with UK investors, the UK introduced "Transferable Tax History (TTH)"[7] legislation to address the concern that the lack of access to tax history of profits by potential United Kingdom continental shelf asset buyers (particularly new entrants) was creating a fiscal barrier to promoting United Kingdom continental shelf asset trading, an essential component required to support the extension of asset lives and the longevity of the associated United Kingdom continental shelf infra-structure whilst helping to reduce the risk of United Kingdom continental shelf assets being prematurely decommissioned.

To some extent, this can be overcome by selling the company that operates the project, rather than the asset itself. However, this may be difficult to achieve commercially since this involves the purchaser taking on the risks inherent in the past, rather than just the asset. Furthermore, this can

[7] https://www.gov.uk/government/publications/an-outline-of-transferrable-tax-history

be constrained by legal restrictions on the sale of such companies and the involvement of minority shareholders.

A further example of this could be where a taxpayer transfers the asset but retains the obligation for decommissioning. In that case, the ability to carry-back losses may be lost or may give rise to an odd result. For example, if the decommissioning is carried out by the seller and the losses offset against profits far earlier in the ownership history (due to the recent history being in the hands of the buyer) the tax rate applicable to the deduction for decommissioning costs could be considerably higher or lower than that applied to the profit when earned.

Promoting premature decommissioning:

If the period over which the loss can be carried back is not long enough, the taxpayer can be incentivised to decommission early—i.e. before the historic profits become insufficient to absorb the decommissioning costs or the tax rate applicable to the deduction reduces.

Disadvantaging single mine/field investors:

The ability for multi-field investors to offset decommissioning costs incurred on one field against profits arising in other fields will provide an inherent disadvantage for single mine/field investors.

Restricting change of use:

If the project is sold to a third party to use the mine or field for a different use (e.g. carbon capture and storage) then the new party may not have sufficient taxable profits to absorb the decommissioning costs. Furthermore, the new use may be taxed at a different (lower) tax rate to the extraction activity and hence the decommissioning costs will be deductible at a rate lower than the extraction profits were taxes. Whilst the tax deductibility would be deferred, this would also defer the decommissioning costs and therefore could provide a cash flow benefit.

Furthermore, as the majority of mines or fields in a particular jurisdiction reach end of life, a concern will arise in the operator community that the tax provisions may be changed to restrict the carrying back of losses. Since no tax deduction has yet been provided, the amount of tax to be repaid may be considerable. In this environment, it will be important that it is generally accepted that the current government will honour the commitments of the government that provided the licence. If that is not accepted, then licence holders may be incentivised, for example, to decommission early so that those decommission activities are undertaken before any change of law. This will generally lead to a poor outcome for the country and hence care is needed to reinforce the certainty that the law will not be changed and the intentions of the original government frustrated.

The extent to which these concerns need to be addressed depends critically on the facts and circumstances of the jurisdiction. Options for addressing these concerns include:

Longer periods for loss carry-back

Some countries will provide a longer period for carrying back of decommissioning losses than elsewhere in the tax system. This will help to address the concerns that a single mine/field investor~~operator~~ would otherwise not be able to obtain appropriate deductibility for decommissioning costs and, thus, risking premature decommissioning, as it ensures that more of the mine/field's profits are available to offset the losses. However, this does not in itself address the constraint on sale of late life assets and may not address the restriction in change of use.

Loss histories that follow the asset:

Some of the taxes operating in ~~oil and gas~~oil & gas apply on a field basis, rather than a company basis, such that the losses incurred will result in the repayment of tax to whomever was the owner at the time. In this case, contractual arrangements can be entered between buyers and sellers to ensure that repayments are suitably allocated. It can be possible to deliver the same result in relation to taxes that are not on a field basis.

The precise options that are relevant depend critically on the nature of the tax regime and require specific consideration. Care will need to be taken to ensure that this does not result in the jurisdiction refunding more tax than has been paid on the field.

Application to Model 2

The provision of a tax deduction on an accruals basis should address many of the risks inherent in Model 1, in that it provides effective deductibility to single mine/field ~~operators~~investors, allows for transfer of the field since the tax effect to date will already have been provided, and reduces the change of law risk as there is less tax to be repaid at the end of life.

However, the following risks arise:

Securing that decommissioning will occur and be funded:

Providing deductibility before the decommissioning has been undertaken creates the risk that the government will ultimately have provided a deduction for decommissioning that is not undertaken. This, however, is not a tax issue and should be addressed within the wider consideration of security over decommissioning obligations.

In order to ensure that liquidity is available to undertake the decommissioning of the mines or ~~/~~ fields at the time of decommissioning~~abandonment~~, some countries include~~s~~ a~~n interesting~~ tax incentive in their regulations - a so--called "depletion factor" consisting of an additional reduction of the taxable base ~~of the Corporation Tax~~ during the life of the mines or ~~/~~ fields, due to the fact that mineral or hydrocarbon resources are consumed when exploited, with the burden of maintaining said reserves and reinvesting the reduced amount in mining or oil activities that meet certain conditions, such as the activity of decommissioning. In this way, taxpayers would have the necessary liquidity to accommodate the decommissioning~~abandonment~~ of the assets since they will have created their own internal reserves with the benefits generated by the mine/field activities ~~of the~~ that have benefited from the depletion factor.

Constraint on the use of funds:

In determining the use of the funds that have been reserved, it will be important that the decommissioning techniques available at the time of decommissioning govern, to avoid undermining any advances in technology. Hence, when the funds are utilised, the tax effects for any expenses previously accrued for decommissioning that are not required should be "recaptured."

These risks can be addressed, depending on the nature of the tax system. Some systems[8] also provide for the increase in the funds arising through interest. Where the interest is not taxed, the costs covered by such amounts are not deductible. This effectively addresses the concern, in part, that tax deductibility is provided early.

Application to Model 3

Again, the provision of a tax deduction upon contribution to the fund addresses many of the concerns highlighted in Model 1. The issues in relation to payments into and out of the fund, and the taxation of the fund itself have already been addressed. It will be important that the fund suffers no tax on expenditure that is incurred in relation to the decommissioning for which the fund has been set up.

[8] For example, the United States mining regime under section 468 of the Code on Closure and Restoration (reclamation).

As with Model 2, it will be important that the qualifying decommissioning costs are those determined when the decommissioning is undertaken, not at the time the fund was financed. Otherwise, the creation of the fund may require decommissioning techniques that are outdated.

Annex A

TAX TREATMENT OF DECOMMISSIONING EXPENSES IN ZAMBIA

A.1 Introduction

This Annex provides insights on the tax treatment of environmental restoration and rehabilitation costs in Zambia. It also provides an historical background to the current legislation.

A.2 Type of mining in Zambia

The mining industry is an economic and social backbone of Zambia. The major minerals produced include copper, cobalt, nickel, manganese, coal, emeralds, amethyst, beryl, lime stone, talc and uranium (though uranium is currently being stockpiled only). The major by-products from copper extraction are gold, platinum, palladium, selenium and silver.

The main mining methods include open pit, underground, solvent extraction and electrowinning.

A.3 Case study— environmental restoration costs

Mining companies in Zambia, as in most countries, are required[9] to undertake environmental impact assessment studies and make binding commitments through an environmental management plan to conserve and protect natural resources during and after cessation of mining activities.

Whilst this legislation had been in place under the Mines and Minerals Act since 1995, Zambia had until April 2006 no specific provisions in the Income Tax Act (ITA) that dealt with the environmental restoration and rehabilitation costs. Nonetheless the ITA had two general provisions that dealt with Environmental restoration expenses, namely:

1- General Deduction Provision

Section 29(1)(a) of the ITA is the general deduction provision and provides that:

in ascertaining business gains or profits in any charge year, there shall be deducted the losses and expenditure, other than of a capital nature incurred in that year wholly and exclusively for the purposes of the business.

The above provision requires that the environmental restoration and rehabilitation costs:

(a) should *not* be of a capital nature; and
(b) should be incurred in the relevant year to qualify for tax deduction.

Whilst the decision whether the outgoing is revenue or capital in nature is a debatable one, under Zambian tax cases, environmental restoration and rehabilitation costs were determined to be of a capital nature and thus not deductible under section 29(1)(a). Accordingly, one had to look to the provisions in the ITA applicable to capital expenditure deductions for mining companies.

2- Capital Expenditure Deduction

Section 33(b) of the ITA is the principal provision for capital expenditure deductions incurred by Mining Companies. This Section provides that:

Capital allowances are deducted in ascertaining the gains or profit of a business and the emoluments of any employment or office for each charge year –

[9] Under the Mines and Minerals Development Act (2015).

(…) (b) for capital expenditure in relation to mining operations, according to the provisions of Parts I to VI inclusive of the Fifth Schedule.

Part VI of the Fifth Schedule (Paragraph 19) defines qualifying capital expenditure as "expenditure, in relation to mining or prospecting operations (…) on buildings, works, railway lines or equipment (…)".

The ITA does not have a definition of "works" and thus taking the ordinary meaning, the term includes environmental restoration and rehabilitation works.

Whilst the above definition of capital expenditure was sufficient, the complication in allowing deductions on environmental costs came in through paragraph 22(1) of the Fifth Schedule which provided that (emphasis added):

a deduction shall be allowed in determining the gains or profits from carrying on of mining operations by any person in a charge year in respect of the capital expenditure incurred by the person on a mine which is in regular production in the charge year.

Therefore, from the foregoing, environmental restoration and rehabilitation costs were deductible as capital expenditure provided that the expenditure had been incurred; and it had been incurred on a mine which was in regular production.

These two conditions were at the heart of concerns from the mining sector as it was not practical to commence environmental restoration and rehabilitation works on a mine that was in regular production. It was therefore contended that the legislation as it stood prior to the Tax Amendment of April 2006, effectively barred the right to deduct environmental restoration and rehabilitation expenditure.

Current Tax Treatment (Tax Deduction Provisions after 1st April 2006)

To address the undesirable effects of the Tax Law, amendments were made effective April 2006. The following is the current law:

A deduction is allowed in ascertaining the gains or profits of a person involved in mining operations in respect of actual costs incurred by way of restoration and rehabilitation works or amounts paid into the Environmental Protection Fund, (this fund is administered and managed by the Environmental Protection Fund Committee that is appointed by the Minister Responsible for Mines). Only actual costs are deductible and therefore provisions are not allowable in determining taxable profits.

Additionally, amounts refunded from the Environmental Protection Fund to any person carrying on mining operations are recognised as income in the year the refund is made and hence qualify to be taxed.

The extracts of relevant provisions under the Income Tax Act are given below.

First Schedule to the Income Tax Act (Further Classification of Income)

Paragraph 9

Amounts refunded to any person carrying on mining operations pursuant to paragraph (a) of subsection eighty-six of the Mines and Minerals Development Act, 2015 shall be deemed to be income in the year that the refund is made.

Fifth Schedule to the Income Tax Act (Mining expenditure deductions)

Paragraph 22(3)

A deduction shall be allowed in ascertaining gains or profits of a person involved in mining operations in respect of actual costs incurred by way of restoration and rehabilitation works or

amounts paid into the Environmental Protection Fund pursuant to section eight-six of the Mines and Mines Minerals Development Act, 2015.

Annex B

TAX TREATMENT OF DECOMMISSIONING EXPENSES IN SOUTH AFRICA

B.1 Income tax rules relating to rehabilitation of the environment

Mining rehabilitation expenditure consists of two components, ongoing environmental rehabilitation expenses and expenses in respect of closure or decommissioning of mining projects. Although both components are required to be expended in terms of National legislation (NEMA[10] and MPRDA[11]) the tax effects are not the same.

In the case of ongoing rehabilitation expenses, a tax deduction is normally allowed under the general deduction formula in the Income Tax Act[12] (IT Act) in the year the expenditure is actually incurred.

Closure and decommissioning costs quantified and provided for in accordance with the requirements of MPRDA and NEMA relate to expenditure to be incurred in future and cannot be claimed for income tax purposes until they have been actually incurred. The IT Act specifically prohibits the deduction of provisioning for future expenses.[13] A further aspect to be noted is that expenditure on decommissioning and environmental rehabilitation incurred after an extractive company ceases with its mining activities may not be deductible for income tax purposes. The reasons are that trading activities may have ceased and the general deduction formula does not allow a deduction if trade is not carried on or the expenditure is not incurred in the production of income. Closer to the end of the life of a mine or ~~oil and gas~~oil & gas field the expenses (including decommissioning and rehabilitation) would exceed income earned and even if expenditure can be deducted the benefit of assessed losses are forfeited. The South African tax system does not allow the carry-back of tax losses by a taxpayer and tax losses cannot be carried forward to future tax years if the company is no longer trading.[14]

Mining and ~~oil and gas~~oil & gas extractive companies have the option of utilising funding vehicles described in section 37A of the IT Act to earmark assets for all or part of the required *financial provision* for rehabilitation, decommissioning and closure and remediation of latent or residual environmental impacts. The use of these funding vehicles enables extractive companies to comply with their *financial provision* obligations under MPRDA and NEMA in a tax efficient manner.

B.2 Closure rehabilitation trusts and companies

To encourage and facilitate preservation of funds for environmental rehabilitation and decommissioning activities, the tax system provides tax benefits in relation to a closure rehabilitation trust or company[15]. A qualifying trust or a company used as a funding vehicle results in tax deductible contributions to the vehicle and a tax exemption of receipts and accruals of the vehicle.[16]

---

[10] National Environmental Management Act (Act 107 of 1998) (NEMA).
[11] Mineral and Petroleum Resources Development Act (Act 28 of 2002) (MPRDA).
[12] Section 11(a) of the Income Tax Act (Act 58 of 1962) allows a deduction from the income derived by a person from carrying on a trade of expenditure and losses actually incurred in the production of the income if the expenditure and losses are not of a capital nature.
[13] Section 23(e) of the Income Tax Act provides that no deduction shall be made of income carried to any reserve fund or capitalized in any way.
[14] Section 20(1) of the Income Tax Act.
[15] Section 37A of the Income Tax Act.
[16] Section 10(1)(c) of the Income Tax Act.

Legislative requirements are set on the type of contribution, the type of funding vehicle, the persons that may make deductible contributions, assets that may be owned, utilisation of assets, excess assets after closure rehabilitation and contravention of legislative provisions.

Type of contribution

Only amounts in cash may be paid to the funding vehicle. Therefore, the transfer of assets such as shares, financial instruments or tangible property is not allowed. This could conceivably still occur but the donor or transferee will not be able to deduct the value of such donation or transfer in terms of section 37A of the IT Act.

Type of funding vehicle

Only a trust[17] or a company may qualify as a funding vehicle. The sole object of the trust or company must be to apply its property solely for rehabilitation upon premature closure, decommissioning and final closure, and post closure coverage of any latent and residual environmental impacts on the area covered in terms of any permit or right in respect of prospecting, exploration, mining or production, or reservation or permission for or right to the use of the surface of land as contemplated in paragraph 9 of Schedule II to the MPRDA to restore one or more areas to their natural or predetermined state, or to a land use which conforms to the generally accepted principle of sustainable development.[18]

Any distributions by the trust or company must be solely for purposes described in its sole object or in certain circumstances to a similar trust or company.[19]

The constitution of the company or the instrument establishing the trust must incorporate the provisions of section 37A.[20]

Persons that may make deductible contributions[21]

Mining and ~~oil and gas~~oil & gas extractive companies that:

hold a permit or right in respect of prospecting, exploration, mining or production, or reservation or permission for or right to the use of the surface of land as contemplated in paragraph 9 of Schedule II to the MPRDA; or

are engaged in prospecting, exploration, mining or production in terms of any permit, right, reservation or permission referred to in the previous bullet.

After approval by the Commissioner for the South African Revenue Service, the extractive company may pay an amount in cash to the closure trust or company on condition that the payment was not part of any transaction, operation or scheme designed solely or mainly for purposes of shifting the tax deduction from another person to the extractive company making the payment.

Assets that may be owned

The closure trust or company may only own permitted assets. These permitted assets are limited to:

[17] A trust is not a legal person as it is not an independent entity. Any property held in trust is held by the trustee in his/her capacity as trustee. The Income Tax Act specifically includes a trust in the definition of a person.
[18] Section 37A(1)(a) of the Income Tax Act.
[19] Section 37A(1)(c) of the Income Tax Act.
[20] Section 37A(5) of the Income Tax Act.
[21] Section 37A(1)(d) of the Income Tax Act.

financial instruments issued by South African regulated collective investment schemes, long-term insurers, banks and mutual banks;

financial instruments in listed companies,[22] unless the company is making contributions to the closure trust or company or the company is a connected person[23] in relation to the company making contributions to the closure trust or company; and

financial instruments issued by any sphere of government of South Africa.

The tax policy objective is to limit permitted asset to assets that are relatively liquid and easy to value (for the benefit of regulatory oversight).

Utilisation of assets

The closure trust or company must use all of its assets solely for purposes of its sole objective of rehabilitation upon premature closure, decommissioning and final closure, and post closure coverage of any latent and residual environmental impacts on the area covered in terms of any permit or right in respect of prospecting, exploration, mining or production, or reservation or permission for or right to the use of the surface of land as contemplated in paragraph 9 of Schedule II to the MPRDA to restore one or more areas to their natural or predetermined state, or to a land use which conforms to the generally accepted principle of sustainable development of mining rehabilitation upon closure.[24]

Excess assets after closure rehabilitation

When the Minister of Mineral Resources is satisfied that all of the areas relating to any permit, right, reservation or permission of the persons contributing to the closure trust or company have been rehabilitated as set out on the object of the trust or company, the company or trust in respect of those areas must be wound-up or liquidated and its assets remaining after the satisfaction of its liabilities must be transferred to another closure trust or company as approved by the Commissioner for the South African Revenue Service or to an account or trust prescribed by the Minister of Mineral Resources and subject to approval by the Commissioner for the South African Revenue Service.[25]

Excess assets held by closure trusts or companies (i.e. amounts exceeding the anticipated mining rehabilitation liability) can also be transferred to other similar closure trusts or companies before termination if the Minister of Mineral Resources is satisfied that the closure trust or company will be able to satisfy all of its rehabilitation liabilities and it has sufficient assets to rehabilitate and restore all of the areas relating to any permit, right, reservation or permission of the persons contributing to the closure trust or company as set out on the object of the trust or company and the Commissioner for the South African Revenue Service approves the transfer.[26]

Contravention of legislative provisions

If a closure trust or company owns any impermissible assets, an amount of taxable income equal to the market value of the impermissible assets become taxable in the hands of the mining or ~~oil and gas~~oil & gas extractive company contributing to the closure trust or company to the extent that

[22] The definition of listed company in section 1(1) of the Income Tax Act refers to companies listed on the JSE (previously the JSE Securities Exchange and the Johannesburg Stock Exchange) or a recognised offshore exchange.
[23] Connected person is defined in section 1(1) of the Income Tax Act.
[24] Section 37A(1)(b) of the Income Tax Act.
[25] Section 37A(3) of the Income Tax Act.
[26] Section 37A(4) of the Income Tax Act.

the impermissible assets are (directly or indirectly) derived from cash paid by that extractive company.[27]

If a closure trust or company distributes assets for a purpose other than:

(a) rehabilitation upon premature closure;

(b) decommissioning and final closure;

(c) post closure coverage of any latent or residual environmental impacts; or

(d) transfer to another closure trust or company, an amount equal to the market value of assets that was so distributed is deemed to be an amount of taxable income for the closure trust or company.[28]

If the Commissioner for the South African Revenue Service is satisfied that a closure trust or company has contravened any provision of section 37A of the IT Act, the Commissioner may treat an amount equal to twice the market value of all of the assets held in that trust or company on the date of that contravention as taxable income in the hands of the mining or ~~oil and gas~~oil & gas extractive company contributing to the closure trust or company for the tax year during which the contravention occurred to the extent that the assets are (directly or indirectly) derived from cash paid by that extractive company.[29]

B.3 Deduction of expenditure of ~~oil and gas~~oil & gas companies

An ~~oil and gas~~oil & gas company[30] may deduct environmental rehabilitation expenditure incurred in respect of exploration[31] or post-exploration[32] activities against its ~~oil and gas~~oil & gas income.[33] The deduction of exploration or post-exploration expenditure[34] is limited to ~~oil and gas~~oil & gas income derived during the tax year, or future tax years in the case the deductions result in assessed losses. Therefore, environmental rehabilitation and decommissioning expenditure incurred after cessation of production will not be deductible as no ~~oil and gas~~oil & gas income is derived.

[27] Section 37A(6) of the Income Tax Act.
[28] Section 37A(7) of the Income Tax Act.
[29] Section 37A(8) of the Income Tax Act.
[30] An oil and gas company is defined in paragraph 1 to mean any company that holds any specified oil and gas right granted under the MPRDA, or engages in exploration or post-exploration in terms of any oil and gas right.
[31] Exploration is defined in paragraph 1 to mean the acquisition, processing and analysis of geological and geophysical data or the undertaking of activities in verifying the presence or absence of hydrocarbons (up to and including the appraisal phase) conducted for the purpose of determining whether a reservoir is economically feasible to develop.
[32] Post-exploration is defined in paragraph 1 to mean any activity carried out after the completion of the appraisal phase, including:

(a) the separation of oil and gas condensates;

(b) the drying of gas; and

(c) the removal of non-hydrocarbon constituents, to the extent that these processes are preliminary to refining.

[33] Oil and gas income is defined in paragraph 1 to mean the receipts and accruals derived by an oil and gas company from:

(a) exploration in terms of any oil and gas right;

(b) post-exploration in respect of any oil and gas right; or

(c) the leasing or disposal of any oil and gas right.

[34] Paragraph 5 of the Tenth Schedule to the Income Tax Act read with section 26B of that Act.

The benefit of a deduction under paragraph 5 of the Tenth Schedule to the Income Tax Act is that an additional deduction[35] is allowed against ~~oil and gas~~oil & gas income on the basis of:

(a) 100 per cent of all expenditure of a capital nature actually incurred in that year of assessment in respect of exploration in terms of an ~~oil and gas~~oil & gas right; and

(b) 50 per cent of all expenditure of a capital nature actually incurred in that year of assessment in respect of post-exploration in respect of an ~~oil and gas~~oil & gas right.

[35] Paragraph 5(2) of the Tenth Schedule to the Income Tax Act.

Annex C

NATIONAL AND INTERNATIONAL LEGAL REQUIREMENTS

C.1 International ~~oil and gas~~oil & gas legal requirements for decommissioning

Since 1958, international conventions have stated that all offshore platforms must be decommissioned at the end of the field life. As the complexity of the offshore ~~oil and gas~~oil & gas facilities has evolved, the challenge to balance the total removal with environment, safety, technical feasibility, cost etc. has forced an evolution in the decommissioning law and regulations.

The optimal solution may not be total removal of a specific ~~oil and gas~~oil & gas facility, but a carefully balanced compromise within the relevant legal framework. It is important that governments incorporate flexibility in their national legal framework. The present international laws and conventions, listed below, are applicable in most of the countries and have built in such flexibility:

United Nations Convention on the Continental Shelf, 1958[36]

Third United Nations Convention on the Law of the Sea, 1982, UNCLOS III[37]

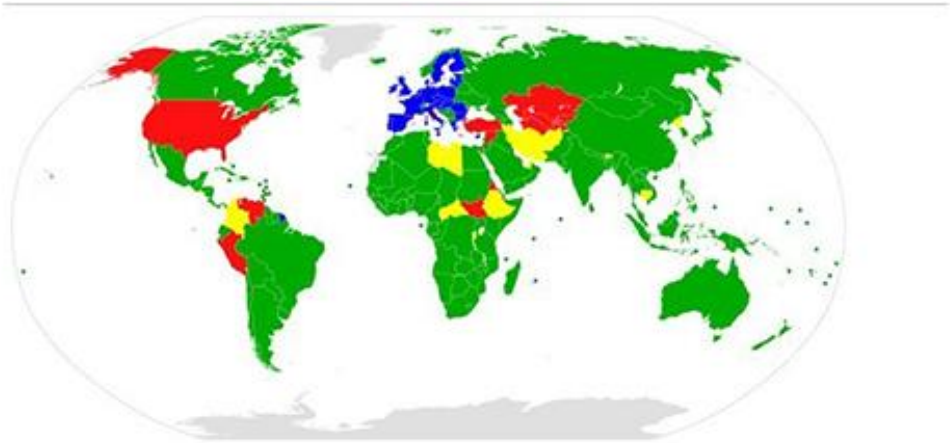
"The International Maritime Organisation Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone", 1989 (a.k.a. IMO Guidelines)[38]

"Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter ", 1972 (a.k.a. London Dumping Convention -LDC).[39]

"1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters" (a.k.a. London Protocol)[40]

[36] Available at https://treaties.un.org/doc/publication/mtdsg/volume%20ii/chapter%20xxi/xxi-4.en.pdf.
[37] Available at www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.
[38] Available at https://cil.nus.edu.sg/wp-content/uploads/formi dable/18/1989-Guidelines-and-Standards-for-the-Removal-of-Offshore-Installations-and-Structures-on-the-Continental-Shelf-and-in-the-Exclusive-Economic-Zone.pdf.
[39] Available at http://www.imo.org/en/OurWork/Environment/LCLP/Documents/LC1972.pdf.
[40] Available at http://www.gc.noaa.gov/documents/gcil_lp.pdf; http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Pages/1996-Protocol-to-the-Convention-on-the-Prevention-of-Marine-Pollution-by-Dumping-of-Wastes-and-Other-Matter,-1972.aspx.

Figure VI.C1:
United Nations Convention on the Law of the Sea



Parties Parties dually represented by the European Union

Signatories Non-parties

Source: UN/DESA.

These international laws and regulations are supplemented by relevant national and state legalisation. The national and state legalisation can impact on decommissioning of ~~oil and gas~~oil & gas facilities, under environmental, safety, waste management, socio-economic and tax and customs laws etc. Furthermore, due to the potential socio-economic impacts, the decommissioning of redundant ~~oil and gas~~oil & gas facilities may often become a regional issue.

The decommissioning of pipelines in the ~~oil and gas~~oil & gas industry is not covered in international law and usually this issue is managed in national legalisation. But for pipelines there are two clear principles in international law:[41]

No interference with navigation, fishing and other users of the sea; and

All appropriate measures must be taken for the protection of the living resources of the sea from harmful agents.

These are the guiding principles of the countries national law regimens, which cover pipelines.

For installations located onshore, sectoral, regional and national laws and regulations are applicable.

C.2 International best practices for mine closure

National mine closure policy is usually dictated in its national constitution that mandates a healthy environment for its citizens or by requirements of international treaties and agreements. At the national level, individual national sectoral policies and legislation (other than those for environment and mining), various Executive Decrees and specific Local Government Agreements (often with industry), all must be provided for as part of an overall national programme for acceptable mine closure. These are in addition to specific instruments under Environmental and

[41] *Geneva Conventions on the Law of the Sea* (1958). Available at http://legal.un.org/avl/ha/gclos/gclos.html. *United Nations Convention on the Law of the Sea—UNCLOS* (1982). Available at http://www.un.org/depts/los/convention_agreements/convention_overview_convention.htm; *International Maritime Organization—International Convention on Salvage* (1989). Available at http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-on-Salvage.aspx.

Mining legislation that require putting in place policy and legislation for Environmental Impact Assessments, Social Impact Assessments, Mining Plans, Standard Mining Agreements, bonding procedures and providing for Inter-Ministerial Agreements to achieve comprehensive mine closure and sustainable development.

Many countries do not have provisions for mine closure in their mining laws. Few governments have actual mine closure legislation. Where mine closure legislation is enacted, it is primarily with respect to reclamation and rehabilitation.

Comprehensive mine closure and all that it entails would simply be part of any mining planning and design if the life cycle of a mine was full considered before establishing the mine. However, history and present practices in many countries clearly demonstrates that this is not the case.

Countries which have enacted national mining closure law typically do so by including it directly in the national Mining Law or indirectly within the national Environmental Law but also within their Foreign Investment Laws for comprehensive mine closure. Compliance with these provisions is often a pre-condition of acquiring mining licence rather than a matter of "best practices" which would be a far better approach. In some countries, their legislation contains only general statements with respect to "appropriate" or "reasonable" reclamation and rehabilitation with the specific issues related to mine closure normally being dealt with on an "ad hoc" basis.

In practice, however, rehabilitation, reclamation and mine closure plans vary greatly among and within individual countries, as do the requirements for bonding or other surety instruments to ensure that the plans are carried out.

The level of provision for mine closure within the mining laws and regulations of the developing countries is largely dependent on three factors, i.e.:

The age of the country's mining law and regulations;

The activities of past mining enterprises; and

Related policy and legislation, in particular, environmental policy and legislation.

Many developing countries in Africa, Latin and South America and Asia, each with a long mining history of private sector mineral development, are characterized by having:

A very general policy and legislation for mine closure;

A high degree of state responsibility for both abandoned and some operational mines; and

Few, if any, bonding procedures to ensure comprehensive mine closure and providing for mine closure on a negotiated "mine-by-mine" basis.

However, some developing countries, such as Bolivia, Mali, Namibia and Zambia can be said to have comprehensive policy and legislation that provides for comprehensive mine closure and for post-mining sustainable development.

It is often the case that inadequate and unproven fiscal regimes exist in countries where post-closure sustainable development presents the greatest challenge for the government. One of the key fiscal regimes is a taxation system which facilitates this process.

In summary, the sector law and regulations for decommissioning provide the overall framework within which the taxation rules for decommissioning must be designed.

Annex D

POLITICS, PUBLIC CONCERN AND REPUTATION

As discussed above, the effects resulting from the political and community reaction to the closure of major facilities in a community can heavily influence the decommissioning process. If not properly managed, a destructive distrust can develop between the principal players. If any indication of non-disclosure emerges, this can lead to catastrophic outcomes, such as the Brent Spar incident.

It is advised that the selection of the decommissioning/closure option must be managed in a transparent process with a fully developed public audit trail. The three major components that need to be managed are:

National and local politics;

Public concern; and

Reputation.

The development of proper decommissioning and closure process includes guidance from stakeholder groups representing all national and local interests including representatives from the ~~oil and gas~~oil & gas and fishing industries, environmental non-governmental organisations, as well as government officials in the areas of mining/~~oil and gas~~oil & gas regulation, mining/~~oil and gas~~oil & gas safety, fishing, navigation and all affected users of the land and the sea in the region.

The objectives of a stakeholder policy development process usually are:

To develop:

principles/guidelines to apply to the closure/decommissioning of existing facilities;

principles/guidelines to apply to the design, operation and future closure/decommissioning of new facilities; and

to the extent possible, consensus between stakeholders.

To provide:

regulators (both Designated Authorities, the Department of the Environment and Water Resources and others) with guidance on how applications for closure/decommissioning are to be assessed;

industry with guidance as to what will be expected of them in respect of closure/decommissioning, with the aim of reducing risk and uncertainty; and

opportunity for public comment and involvement in the development of government policy.

Recognition of possible future liabilities and how they could be managed.

Annex E

STAKEHOLDERS

Decommissioning is expected to attract increasing interest from parties both within and outside the industry, particularly regarding issues on environmental, social and economic impact. The industry operates within a regulated legal framework overseen by national regulator(s).

The framework seeks to achieve effective and balanced solutions for decommissioning activities. These solutions need to be consistent with each nation's international obligation (treaties) and have a proper regard for safety, environment, other legitimate users of the land and/or sea, and economic as well as social considerations.

An important part of the decommissioning process is the mapping and issues identification of key stakeholders, and to provide a general advice on future stakeholder engagement. Stakeholders will have a specific and defined interest in the decommissioning activities, either because they could be impacted by the decision, and/or they can have an impact or influence on the planned activity.

Involving or engaging stakeholders can take a range of different forms, including information giving, consultation or dialogue.

The design of a stakeholder engagement plan or guidelines could be a useful tool to demonstrate how engagement is an integral part of achieving a robust, sustainable and acceptable decommissioning programme. The guidelines set out the benefits of good engagement for the operators and stakeholders alike.

Key questions in a stakeholder engagement process are:

Which stakeholders to engage?

How to engage?

When to engage?

Well managed stakeholder engagement can improve decommissioning plans and make the whole process more efficient. Stakeholder engagement can make the outcomes of the decommissioning project more sustainable. It can be cost efficient and reduce the potential for conflict when done properly. The essential characteristic of stakeholder engagement is that it seeks an effective and balanced decommissioning solution.

The key stakeholders are the governments of resource-rich countries, specifically the regulatory authorities, institutions, and ministries responsible for:

administering mineral resource and ~~oil and gas~~oil & gas extraction contracts;

issuing environmental permits for exploration, exploitation, and closure; and

ensuring that legal, financial and technical measures are in place to address temporary shutdowns as well as complete closure and decommissioning at the end of the productive life of ~~oil and gas~~oil & gas and mining operations.

A list of stakeholders would include:

Government/Authorities & Representatives/ Legislators including;

National (Ministries and Agencies);

Regional / District; and

Local (Port Authorities, Local communities);

International and Regional Regulators;

Commercial Interest Groups including:

Decommissioning Supply Industry;

Local Industry;
Investors; and
Unions/Employee Organizations;
Public/the Wider Citizenry, including:
NGO groups;
Environmental; and
Marine Life;
Other Users of the Sea;
Shipping & Navigation;
Fishing Industry;
Tourist Industry; and
Navy;
Media; and
Universities and Research Organizations.

Some of these interests would be less relevant for land based activities such as onshore mining, and other interests and interest groups would be relevant in their place.

Annex F

ENVIRONMENTAL IMPACT

Once closure and decommissioning strategies have been decided upon, it will be necessary to develop an Environmental Impact Assessment for the relevant options, rank the options and to communicate the outcome to various stakeholders. No mine shutdown or decommissioning study would be complete without a proper impact assessment.

The purpose of an impact assessment is to clarify the effects of measures that may have significant consequences for the environment, natural resources, and society. The impact shall ensure that these effects are taken into account when the measure is planned and when decisions are reached regarding whether, and on what conditions, the measure may be carried out.

Examples of environmental drivers are:

Protection of the environment;

Precautionary Principle;

Definition of end state (e.g. how clean is clean);

Grandfathering;

Understanding and managing emission paths;

Characterization and management of waste; and

Decommissioning plan and measurement of impacts.

The inclusion of the correct stakeholder group is essential in the environmental impact assessment. The group can consider the balancing of different policy priorities and set the standard for the assessment that is appropriate to national needs, and in line with national policy priorities. It is important to recognize that there is a trade-off to be achieved, and ultimately sovereign countries must determine the standard to be achieved, while bearing in mind international minimum goals. The more clarity and certainty that can be provided up front on what will be considered and who will be responsible, the better.

Annex G

QUANTIFICATION OF DECOMMISSIONING COSTS

G.1 Framework of quantification

International and regional legal frameworks drive the cost of decommissioning and remediation, assuming that the country has ratified the relevant treaties and agreements. This international legal framework defines what must be removed, when it must be removed, to what degree the sites need to be reclaimed and rehabilitated. But these laws and regulations are very high level and rely on, when available, the more detailed national and state law, regulation and guidelines.

These country specific laws, regulations and guidelines are used to define the decommissioning and rehabilitation specifications in technical and environmental terms. These specifications are the basis of the final engineering and environmental solutions, which generate the decommissioning cost estimates. Accurate decommissioning costs are critical as, if there is a shortfall in accrued provision at the end of the life of the ~~oil and gas~~oil & gas field and mines, the state and the other partners will have to fund this shortfall.

Usually mining and ~~oil and gas~~oil & gas companies generate the decommissioning cost estimates and hence the provision for such decommissioning, since they are operating the facilities.

In a relevant international accounting standard (IAS 37 on Provisions, Contingent Liabilities and Contingent Assets[42]) the annual accounts must have a provision for the liability for the decommissioning of redundant facilities and remediation.

G.2 Costs

General

Decommissioning cost in the ~~oil and gas~~oil & gas industry worldwide is estimated to be in the billions of dollars and the trend is increasing. Planned costs have often been lower than actual costs, especially for the bigger operations.

The costs have risen in recent years due to stricter sectoral, national and international legal frameworks, higher HSE scrutiny, increased focus on well operations and plug and abandonment (P&A) activities, limited experience in complicated operations, final disposal and requirements to recycle more. Decommissioning costs can be reduced by establishment of a more flexible national and international legal framework, new technology, more cost-effective ways to organize the removal process, include decommissioning in the early planning phase of a project—life cycle perspectives, economic of scale and bundling of projects.

Potential charge of costs incurred for staff utilisation and know-how developed elsewhere should also be considered when assessing specific fields or projects.

Cost estimation in the ~~oil and gas~~oil & gas industry

Sources of data on estimating decommissioning costs in the ~~oil and gas~~oil & gas sector describe the possibilities and limitations of using the various available sources for cost savings estimates.

~~Oil and gas~~Oil & gas operators make periodic assessments on their expected decommissioning costs as a basis for their provision requirements. These are generally calculated for individual platforms using a *quantity x resource x time*-method. The quantity (jacket and top side weight) is calculated once while the rate (price per unit) and time (heavy lift vessels duration in days) are updated on a regular

[42] See, for example, https://www.ifrs.org/issued-standards/list-of-standards/ias-37-provisions-contingent-liabilities-and-contingent-assets/.

basis. Some operators make these calculations in-house with their own cost models that might be based on benchmark data. Other operators use external engineering consultants to make cost estimates. For structures where decommissioning is expected to occur on a medium to long-term basis, these calculations tend to be based on a cost per unit. For structures where the decommissioning date lies closer to the present, the calculations will be more detailed.

There is no agreed standard established by the industry.

Cost estimation in the mining industry

Practice in the mining industry differs considerably. Chilean law[43] requires that mining companies provide financial guarantees for the closure of currently active and future mining operations. The value of the guarantee is to be based on the estimated closure cost for the mine (presented in the closure plan) and the planned operating life of the mine. The responsibility for reviewing and approving both the closure plan and the estimate of closure costs falls to the Chilean government mining and geology agency, called *Servicio Nacional de Geología y Minería* (SERNAGEOMIN).

A national guide for the estimation of closure costs in Chile has been developed. The core of the guide is a cost estimation model that calculates costs based on a breakdown of the mine into a limited number of costing components and takes into account key modifying factors that are used to adjust costs, such as local geography, accessibility, and elevation.

The value of the guarantee is based on the estimated closure cost for the project, including both the execution of closure measures at the end of mine life, and a fund for the execution of post-closure measures after the completion of major closure works.

International practice in the determination of the quantum of financial provision for mine rehabilitation and closure differs.

The practices and methodologies from the selected countries can be categorized as follows:

Area-based, that is the quantum for financial provision is calculated by multiplying the area of the mining operations by a fixed standardised unit rehabilitation cost; and/or

Project-based, where the costs of each component of rehabilitation of the mine site are determined and totalled for the life of the mine.

G.3 Accurate estimation of costs/prudent provision reporting.

Specific decommissioning plans and associated cost estimates are generally set out in regulations that have their basis in national legislation. Which of the associated costs should be included in the decommissioning cost estimate is governed by the legal and administrative framework that defines the scope of decommissioning under the relevant regulatory scheme. However, specification in the national law and regulations varies among countries, from cases where it is clearly defined to cases where these issues are hardly included into the legislation.

The cost estimates are important for ascertaining that necessary funds are available to cover the actual costs of decommissioning the installations.

There is considerable difference in the format, content and practice of cost estimates, which makes it challenging to compare estimates, even for similar types of installations. The reasons are largely differing legal requirements in various countries and established practice.

Owners/licencees are generally responsible for developing cost estimates and funding mechanisms. They are required to submit the estimates to the regulator for review or approval.

[43] Law 20.551 on the Closure of Mines: Available in Spanish at https://www.leychile.cl/Navegar?idNorma=1032158https://www.leychile.cl/Navegar?idNorma=1032158.

The types and extent of assumptions and boundary conditions typically applied in cost estimates have a major effect on the overall costs. Regulators can specify boundary assumptions as a way of ensuring completeness in the coverage of the cost estimates, as well as the quality of the analysis. This could limit cost underestimation and over-provision, given that the regulator has the right knowledge and competence.

Standard definitions of cost items should be established. Development of an international guideline or standard list of items for cost estimation, could establish more consistency and comparability if countries used common or comparable definitions of cost elements and cost groups.

Developing valid cost estimates requires not only good definitions and specific assumptions, but also good data; hence, the accuracy of cost estimates depends both on the methods used and quality of the data.

In some industries, quality control by the regulator is established as an important reference point for validation of cost estimates: regular tracking of costs, benchmarking of actual experience against the cost estimates and requiring full documentation from the operator of how the cost estimate was developed.

The aim should be to develop a standard tool or procedure by which national cost estimates could be mapped for the purpose of comparison primarily nationally, but also internationally. One advantage of such comparison is to create more transparency of cost estimates and build confidence in the estimating basis.

Annex H

APPLIED TAX TREATMENT ISSUES IN DECOMMISSIONING

H.1 Accounting for costs

In accounting for decommissioning costs, it will be necessary to consider the general rules for accounting for costs. It is of course logical that the approach taken by the country in handling project related costs, e.g., in a cost sharing contract, be followed for the sake of consistency.

Further, policymakers should also consider whether decommissioning costs should be deductible on an entity or a project basis, especially where a deductible provision solution is opted for, or in cases where the overall natural resource extraction regime is based on ring-fencing of reserves. The guidance provided on accounting of costs in Chapter 7 of this Handbook (The Government's Fiscal Take) also needs to be borne in mind.

The accounting currency for decommissioning costs may be a specific challenge, as they will typically be in hard currency, while the accounting currency will usually be the national currency of the project country. This will not be significant issue where deduction is available and is made on an ongoing basis, or even in the use of funded mechanisms, especially if the fund is managed in hard currency. However, there may be a significant mismatch where accruals-based provision is made, and policymakers will have to decide, in cases where the actual cost in hard currency exceeds the provision made, whether to allow the excess relief in the year of disbursement or over the life of the project. The same consideration should then apply to all recapture of excess provision made.

It is recommended that any foreign exchange gains and losses on disbursements from a fund set up under a funded deduction mechanism be explicitly kept out of the capital gains tax regime. Any such gains and losses will be reflected in the net balance of the fund, which would be subject to the recapture provisions in cases of excess deduction.

To the extent that a company has set up a decommissioning provision and is expecting to receive tax deductibility at a future date, such as in Model 1, the accounts will recognise a deferred tax asset which represents the tax effect that will arise from the deduction for qualifying decommissioning expenditure that has been accrued.

H.2 Allowability of costs

General principles

In general, deductibility will follow the tax policy approach chosen. However, there needs to be provision for allowance for excess costs over the planned and agreed costs if such costs occur, and for recapture of excess provision allowed.

Complex cases

The tax deductibility of decommissioning costs, and the recapture of excess provisions in accrual provision regimes, will be particularly complex in the case of single block/field operators. In this situation, the operator will have no operating income in the country and will have little incentive to fulfil its obligations, beyond the risk to its general reputation. It may be useful to consider a mix of instruments as a solution, e.g. the availability of loss carry-backs for such operators, subject to approval by the tax authority.

Another possible area of complexity will be deductibility of costs for decommissioning of ancillary and supplementary equipment that is not the operator's property, e.g,. those owned by

subcontractors or partners. It is necessary to take a flexible approach to these issues and to leave scope to permit deductibility on a case by case, where the expense is actually incurred.

A further challenge may come from costs incurred that are strictly speaking not for decommissioning, e.g., for repurposing of fields, something which is not uncommon for the mining sector. It is possible that, in some cases, good planning can lead to continued use of an extractive sector project for some completely different purpose, e.g., the conversion of open pit mines into a lake with fisheries or tourism potential. The technical argument here will be whether such expenditure is of a revenue nature (i.e., for decommissioning) or a capital cost (development of a new facility), especially if the same owner or a related company continues to operate the facility. It is recommended that a flexible approach be taken, and the tax treatment decided in a manner that balances the need to encourage more efficient use of sites with the need to raise revenue.

Multiple operator cases/combined fields.

Another complex area can be that of multiple operators who partner in a single field area. One operator may have other income from the jurisdiction while the other operator may only have one project. The first operator may wish to see ongoing deduction of decommissioning costs, while the latter would probably prefer an accrued provision. Again, a flexible approach, based on the accurate estimation of costs, and controls to ensure that both operators will perform their obligations, can enable policymakers to create a "win-win" situation that will allow both operators to make the most efficient use of their resources.

A related challenge can be multiple operators who manage contiguous fields, but utilize common facilities such as pipelines. The problem can be particularly aggravated if the fields in question have different expected lives, as the operator in the field with the lower expected life have less time to provide for its share of decommissioning costs of common facilities, and more importantly, will probably be absent from the country when the pipeline needs to be decommissioned. In such cases, the decommissioning plan needs to be agreed with both (or multiple) parties and respective shares allocated. A funded mechanism with oversight from both parties is probably the best solution.

H.3 VAT/GST and services tax issues around decommissioning

VAT/GST and other indirect taxes on services will also impact decommissioning. Please refer to Chapter 9 of this Handbook (Value Added Taxation Issues) for further information.

H.4 International tax issues

Tax treatment issues in Joint Development Areas and Contiguous Fields

The tax regimes for Joint Operating Areas and contiguous fields need to be considered by the jurisdictions concerned. There can be a situation where a single field falls in two jurisdictions, which are exploited by a single operator, or two or more operators exploit contiguous offshore fields that fall within two separate jurisdictions, but share facilities. There is a need to design a holistic decommissioning regime wherever possible within the auspices of the joint operating agreement (JOA)/ joint development area (JDA) authority where applicable, or by consultation between the parties, in line with the recommendations of this chapter, and then proceed to estimation of plans and costs. The partner jurisdictions should then consider a consultation between their tax authorities to deal with the tax consequences that arise for the costs that are allocable to their jurisdiction.

Interaction with future tax policy developments

The Inclusive Framework of the OECD has published a Global Anti-Base Erosion proposal that would introduce a minimum level of effective taxation for companies. Overall the proposal assesses the minimum taxation on a yearly basis and likely on a country by country basis. Whereas the OECD has declared in the past that timing differences should not create additional taxation, the

instrument proposed to deal with ensuring that, may not be effective in ensuring that for the extractives business. Because of the materiality and the timing of decommissioning expenditure as well as the long term and uneven spread of revenues, it could be that this and/or similar proposals could result in a taxpayer's local liability falling below the minimum level, with the consequence that, as a result of a top-up of tax to the minimum level, the effective tax relief would be less than originally anticipated by the country's legislators and investors. This would create a problem for investors as such expected, additional taxation would negatively influence the overall allocation of tax take. The problem is compounded for developing resource rich countries as it would influence the investment case for investors whilst the additional taxation would likely not be due to the resource rich country.

H.5 Tax treatment of contractors undertaking decommissioning work

The overall tax treatment of contractors performing decommissioning work should be on the same basis as those providing any other form of technical services in the country. The extension of deemed permanent establishment (PE) treatment to offshore projects under decommissioning should resolve any issues regarding work done on offshore platforms. Such subcontractors should be subject to the normal regime for withholding taxes and value-added tax (VAT)