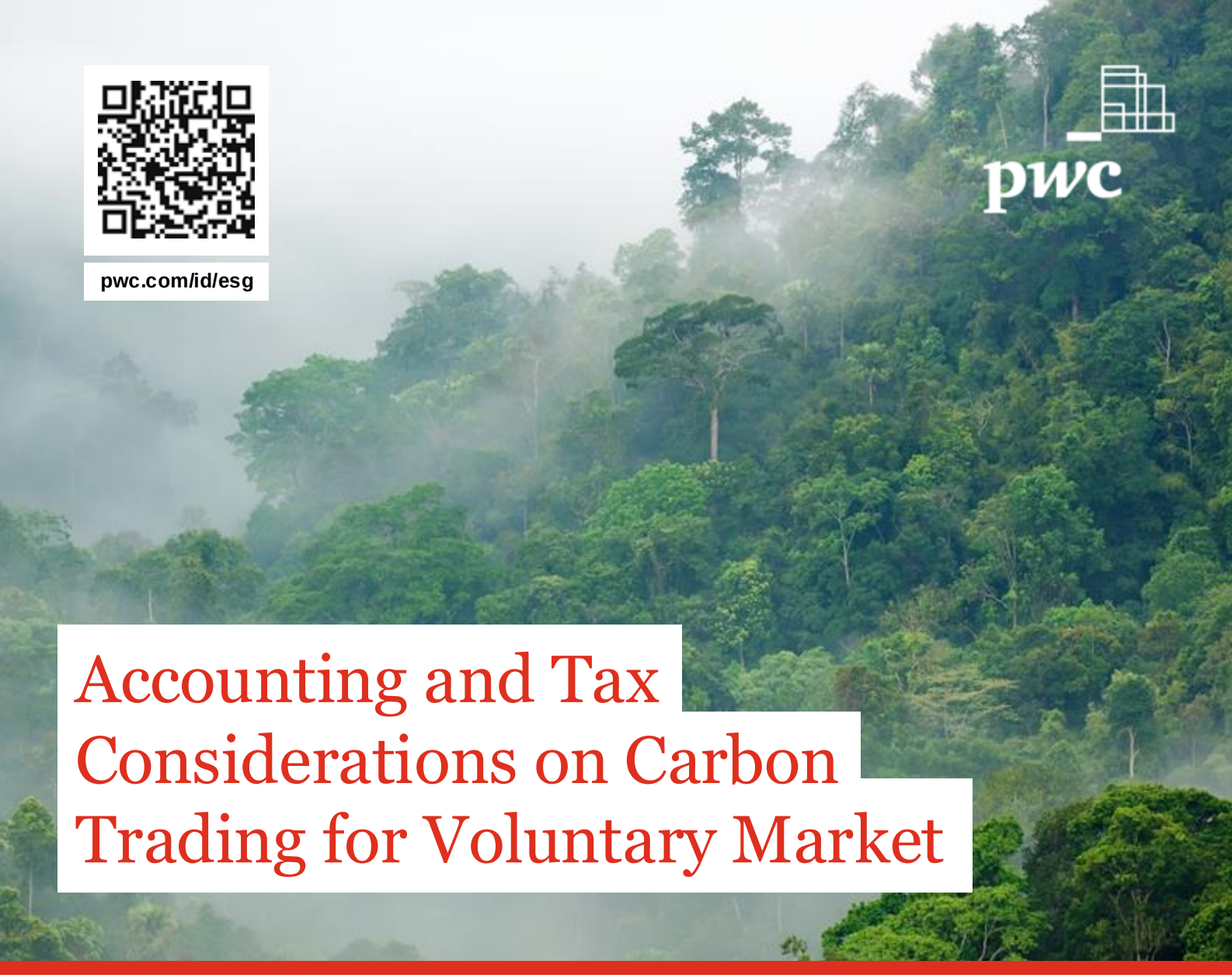

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Accounting and Tax Considerations on Carbon Trading for Voluntary Market

With the growing focus on climate change and carbon emissions, companies are increasingly taking steps to reduce or offset their carbon emissions. This has led to a rise in demand for carbon trading, which allows entities to offset all or part of the emissions generated by their operations or value chain.

A variety of arrangements in producing the carbon unit and its trading have emerged, and understanding their terms and conditions and the associated rights and obligations of the parties involved may create complexities and challenges for accounting and taxation.

Neither the Indonesian Financial Accounting Standards (IFAS) nor the International Financial Reporting Standards (IFRS) literature specifies an accounting standard that directly addresses the accounting for carbon credits and related projects. Recently, IAI Financial Accounting Standard Board (DSAK IAI) published *Buletin Implementasi Volume 4* which discusses carbon unit accounting, based on the existing IFAS relevant to the transaction (e.g. inventory, intangible assets, etc.), and some of the challenges and issues associated with it.

On the other hand, the tax regulatory framework is yet to stipulate specific tax treatment on the carbon trading and carbon project development. The tax regulation relevant to carbon emission currently only deals with the imposition of Carbon Tax (for which the settlement of Carbon Tax (if due) has not effectively occurred at the time of writing).

Therefore, when dealing with accounting and tax implications related to voluntary market, entities (depending whether they act as buyers i.e., companies that purchase carbon credits for their own use or for resale, or project developers i.e., companies that produce credits through projects reducing greenhouse gas emissions or improving carbon sequestration activities) need to think about the following key questions and considerations.

A. Accounting Considerations

A.1 Buyer perspective

Key questions	Accounting rules/standards	Considerations
A.1.1 Does the carbon unit meet the definition of an asset?	An asset represents an economic resource controlled by an entity that has the potential to produce economic benefits. Under IFAS, an asset is recognised only if the entity has probable economic benefits that could be generated by using or consuming the asset. One of the most obvious economic benefits is the ability of an entity to produce cash inflows, or avoid cash outflows, in supporting its business operations. A carbon credit is therefore considered an asset if: (i) it can be sold or transferred to a third party, enabling the entity to receive cash or other economic resources from the sale of the carbon credit; or (ii) the carbon credit can be used to help the entity fulfill its emission obligations; or (iii) the carbon credit is used to help an entity achieve its overall emissions targets, which in turns enhances the value of the entity's overall business in the future.	Carbon credits without probable future economic benefits should be expensed once purchased.
A.1.2 How should a carbon credit asset be classified on balance sheet? Understanding the main purpose and intention of buying the carbon credit matters.	Understanding an entity's purpose and intention in buying a carbon credit is crucial in determining the proper classification of the asset on balance sheet, including the appropriate selection of the relevant accounting standard (standard scoping). Based on the principles of statement of financial accounting standards (PSAK) 202 on Inventories, a carbon credit can be classified as an inventory if an entity purchases it for either: (i) sale in the ordinary course of business; or (ii) consumption in the entity's production process or rendering of services. An entity that purchases carbon credits solely for investment purposes, with the expectation of value appreciation, should not classify the purchased credits as inventory on its balance sheet. Carbon credits that are not classified as inventories are generally recorded as part of an entity's intangible assets**,** using the principles of PSAK 238 on Intangible Assets.	Carbon credits purchased by an entity to achieve the entity's overall emissions targets are classified as intangible assets on the balance sheet. The consumption of inventories, or of an intangible asset, does not have to be immediate. The consumption pattern of an asset depends on when and for what purpose the purchased credits are used. For example, an entity may use purchased credits to produce carbon-neutral products for sale in the ordinary course of its business. In such cases, the purchased credits will likely be transformed from one type of inventory to another. In another instance, an entity may purchase a carbon credit at one time, with the intention of fulfilling its emissions targets in the future. In such cases, the purchased carbon credit is initially capitalised as an intangible asset and then amortised as the entity realises the benefits of the credit.

Key questions	Accounting rules/standards	Considerations
A.1.3 How should carbon credits be measured on the balance sheet? The historical cost of purchase presumption.	Purchased carbon credits, whether classified as inventories or as part of intangible assets, are generally measured at the lower of their cost of purchase or net realisable value. Fair value measurement can be applied in cases where: (i) an entity acts as a broker-trader, routinely trading carbon credits as commodities. Such a broker-trader may elect to measure the tradeable credits at fair value less costs to sell, with changes in fair value recognised in the entity's profit or loss; or (ii) an entity's accounting policy is to measure intangible assets using the revaluation model.	
A.1.4 Does an active market for carbon credits exist? A case for the fair value measurement alternative.	A fair value measurement alternative can only be adopted where an active market for the carbon credits exists and is accessible to the entity. For reliable measurement, the entity also needs to have access to observable market prices, produced by sufficient frequency and volume of trading of similar carbon credits.	The likelihood of active markets developing is made more complicated by the specific characteristics of different carbon credits. An assessment of the volume and frequency of trading is necessary to determine whether a carbon trading market is considered active. An active market, as defined in PSAK 113 on Fair Value Measurement, is one "in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis". The standard does not define explicit thresholds for frequency or volume; therefore, market participants will need to judge whether they have sufficient trading data to support the existence of an active market for carbon credits in Indonesia.
A.1.5 Does the entity need to recognise a liability for the carbon emissions?	For a liability to exist, an entity must have an obligation to transfer an economic resource due to past events. A very crucial component of this equation is the existence of an obligation for the entity. This obligation may come from government regulations, contractual commitments, or constructive promises made by the entity to transfer economic resources in the future.	A key starting point is to understand whether the buyer operates in a regulated market where its carbon emission allowances are controlled by the government. A cap set for the maximum allowable emission level will likely lead to liability recognition. However, the absence of regulations doesn't necessarily exempt the entity from any obligation. For instance, an entity might have committed to a specific carbon emission target, pledging to incur costs to offset any excess emissions by a certain date. It's important to carefully consider the nature and extent of an entity's climate initiatives before concluding when and how much liability (if any) needs to be recognised.

A.2 Project developer perspective

Key questions	Accounting rules/standards	Considerations
A.2.1 What is the nature of the assets that are used to produce the carbon credits?	Understanding the underlying assets used by an entity to produce carbon credits is crucial for determining the appropriate accounting implications. Where an entity specifically undertakes a carbon offset or sequestration project to produce marketable carbon credits, the underlying assets used in such projects generally fall into one of the following categories: a) biological assets, as defined under PSAK 241, Agriculture; b) bearer plants or assets not related to agricultural activity, as outlined under PSAK 216 on Fixed Assets; or c) intangible assets, under PSAK 238 (i.e., development expenditure); depending on the nature of the assets, each standard has its own recognition requirements that must be fulfilled.	An entity can also produce carbon credits as a byproduct of its operations, which can then be sold for carbon offsets. For example, a renewable energy power producer may sell its carbon credits as offsets. In this case, the underlying assets that are used to generate the credits are the same as the ones used in renewable energy production itself.
A.2.2 Can all costs incurred be capitalised?	Project developers may incur significant costs developing the appropriate technologies and building assets that will enable carbon offsets to take place and credits to be produced. For example, under PSAK 238, the process of generating an intangible asset is generally divided into a research phase and development phase. Expenditure during the research phase should be recognised as an expense as incurred; while expenditure during the development phase may be recognised as an asset, provided certain criteria are satisfied.	
A.2.3 Is the generated carbon unit accounted for separately on the balance sheet?	This is a question about asset unit of accounting. When the credits are generated from carbon offset or sequestration efforts outside an entity's principal activities, it may be appropriate to account for the produced credits as a separate asset unit on the balance sheet. Otherwise, the entity should consider whether the produced credits should form an integral part of its productive assets (e.g., biological assets or bearer plants).	
A.2.4 When should an entity recognise revenue from the sale of carbon credits?	Revenue recognition for the sale of carbon credits should follow the general principles of PSAK 115 on Revenue from Contracts with Customers. An entity recognises revenue only after satisfying all the performance obligations promised in the contract. Therefore, a careful analysis of the different types of performance obligations is crucial.	For example, an entity that sells carbon credits based on historical offsetting activities will be able to recognise revenue at a point in time, namely when the credits are sold for cash or other financial assets. Conversely, if in the future, an entity produces credits based on its promise to continuously sequester carbon (for example, a commitment to plant trees to capture a specified amount of carbon over a period), that entity may have to recognise revenue as the performance obligations are fulfilled over time.

B. Taxation Considerations

In a similar fashion to the accounting considerations above, the relevant tax considerations are as follows.

B.1 Buyer perspective

Key questions	Tax rules	Considerations
B.1.1 What Corporate Income Tax ("CIT") rules and possible outcomes should be considered for the purchase of carbon credit/unit? Classification of spending for purchase of carbon unit.	Tax should generally follow accounting treatment, unless specifically stipulated otherwise. The possible general CIT treatments on the purchase of carbon unit is contingent upon the accounting treatment, in particular regarding whether the carbon unit: a) is considered an expense – it should be deductible provided it is incurred to obtain, collect and maintain taxable income (the "3M principle"); b) is considered as inventory – it should be deductible following accounting treatment. Any fair valuation of the inventory maybe subject to a fiscal correction; or c) is considered an intangible asset – it should be deductible via amortisation.	The tax regulations are silent on the characteristics of spending related to carbon credit/unit. Therefore, the accounting treatment should be followed. The accounting position is critical and hence should be firmed up and supportable. Tax implications should be assessed once the accounting position is determined (see below). Depending on the accounting treatment of the carbon unit purchased (see opposite), buyers should consider the following tax considerations: a) whether carbon unit fulfils the 3M principle and whether sufficient commercial justifications and/or supporting documents are available (as deduction); b) understand the valuation method and determine whether any fiscal correction is required (as inventory); and c) determine the tax amortisation method and useful life (as intangible assets).
Possible variance of CIT treatments.	Similarly for liability recognition (if any), the tax treatment generally follows accounting.	Overall, any differences between accounting and tax treatments should be properly monitored/identified, as fiscal corrections may need to be made. Proper assessment is needed as to whether the obligation associated with liability is allowed to be deductible.
B.1.2 What Value Added Tax ("VAT") rules and possible outcomes should be considered for the purchase of carbon credit/unit?	Below are some general VAT requirements for crediting Input VAT (not exhaustive) related to the purchase of carbon unit: a) The buyer should be registered as a VAT-able entrepreneur and deliver non-exempted VAT-able goods and/or services; b) Input VAT is related to the procurement of goods and/or services which directly relates to the buyer's business activities (e.g. production, management and distribution, marketing); and	The opposite tax consideration is valid only with assumption that the VAT is indeed charged by the Project Developer (see below Project Developer analysis). If VAT is charged, the buyer should be aware that creditability of input VAT is contingent on certain conditions (see opposite). including whether the associated purchase of carbon unit is directly related to the business. This is not a straightforward analysis. For example: carbon unit purchased/consumed as part of production versus those used for commitment/disclosure purposes may have different implications.

Key questions	Tax rules	Considerations
	c) the relevant VAT invoice should meet formal requirements.	If VAT is not creditable, it would be deductible and claimed either directly or over time – subject to the classification of expenses (see our explanation on CIT aspect above).

B.2. Project Developer perspective

Key questions	Tax rules	Considerations
B.2.1 What CIT rules and possible outcomes should be considered when developing carbon projects? Pre-production/ development stage	Below are some general CIT rules relevant to the Project Developer at the pre-production/development stage (not exhaustive): a) tax should generally follow accounting classification for spending related to the development of carbon projects, unless specifically stipulated otherwise; b) similar to accounting, generally expenditure with a useful life of more than one year should be depreciated (for tangible assets) or amortised (for intangible assets) for tax purposes; and c) tax grouping of assets should follow specific tax depreciation or amortisation rules. Tangible assets in the forestry sector (i.e. trees) are generally treated as having useful lives of 20 years (Group 4). Costs for site preparation, planting and growing the trees, except manpower costs, should be capitalised. The useful lives of other fixed assets (equipment, buildings, etc) and intangibles should follow the tax grouping based on types of assets.	The Project Developer should consider the following tax consequences at the pre-production/development stage (not exhaustive): a) decision to expense out or capitalise should generally follow accounting standards (please bear in mind, taxation does not recognise immateriality levels for direct expenses, as may usually be adopted for accounting for practical reasons); b) tax grouping and depreciation or amortisation approach should follow tax rules. This includes timing to start depreciation or amortisation; c) for the Nature Based Solution project, it should be assessed whether the specific tax depreciation rules for forestry can be adopted; d) taxpayers are still entitled to deduction via depreciation or amortisation, irrespective of whether the accounting treats the project assets as financial assets e.g. under lease or concession accounting; and e) if carbon unit is considered to be a "byproduct" (e.g. for renewable power generator, etc), it should be assessed how to allocate depreciation expenses of the same production assets (for producing energy and carbon unit as complementary).
Commerciality stage	Whilst when entering commerciality, there are some general CIT rules relevant to the Project Developer (not exhaustive): a) CIT is imposed at 22% of the economic gain/taxable profit i.e. revenue less allowable deductions (including via depreciation and amortisation); b) b) tax loss can be carried forward up to five years;	The tax consideration at the commerciality stage may include the timing difference when revenue is recognised for accounting (e.g. possible upon sales or post-sales if future obligation exists) vs tax (typically upon sales). If a timing difference exists, it should lead to fiscal adjustment.

Key questions	Tax rules	Considerations
	c) tax incentives for the Nature Based Solution projects are currently not available – although there are incentives for renewable power industry i.e. Tax Holiday (for all renewable power plants) and Tax Allowance (for geothermal power plants).	Once tax incentive is granted, it may impact tax treatment described above.
B.2.2 What VAT rules and possible outcomes should be considered when selling carbon credit/unit domestically?	As sale of carbon unit to overseas buyers is currently yet allowed, below are some general rules of VAT and possible relevant regulations impacting the Project Developer (not exhaustive) related to the domestic sale of carbon unit: a) Output VAT – a 11% VAT tariff (which will increase to 12% by 1 January 2025 at the latest) is due on local delivery of services and goods, unless the goods and services are specifically determined as non-VATable or exempted; b) relevant to carbon unit – below are some (possible) references: i. VAT Law No. 8 Year 1983 (as lastly amended by Law No. 7 Year 2021) ("VAT Law") stipulates that securities (i.e. *surat berharga*) are not VATable objects. The VAT Law is however silent on carbon unit or *efek* – see below; ii. Law No. 4 Year 2023 (regarding the development and reinforcement of financial sector) defines *efek* as securities or investment contracts, either in a conventional or digital form or other kind of forms aligned with the technology development which provides the right to its owner to directly/indirectly obtain economic benefit from the issuer or other party based on an agreement, and every derivative of *efek*, which can be transferred and/or traded in the capital market; and iii. Law No. 4 Year 2023 determines carbon unit as *efek*; c) Input VAT – please see our earlier VAT explanation from the buyer's perspective.	For VAT on domestic sale of carbon unit, the relevant considerations are as follows (not exhaustive): a) detailed assessment should be prepared to determine the definition of securities (i.e. *surat berharga*) for VAT purposes (under VAT Law); b) detailed assessment should also be performed to determine whether the term *efek* under Law No. 4 Year 2023 (used to include carbon unit) is identical to the nature of securities under the VAT Law; c) if the *efek* is not considered as securities for VAT purposes, the carbon unit (defined as *efek*) should be a VATable object. Otherwise, it would not be subject to VAT; d) as mentioned above, the treatment of Input VAT incurred by the Project Developer is contingent on the nature of the carbon unit itself (from a VAT perspective), i.e.: i. If the carbon unit is VATable: the Input VAT should generally be creditable (see our VAT explanation in the buyer section); or ii. If the carbon unit is non-VATable: the Input VAT should generally be deductible (see our VAT explanation in the buyer section); and e) practical VAT application should also be considered, as the carbon unit is traded via (currently) IDX. Depending on what the actual meaning of securities (i.e. *surat berharga*) under VAT Law, it would be critical to determine the VAT status of carbon unit. The fact that carbon unit is considered as *efek* under Law No. 4 Year 2023 could also influence the VAT analysis.

Aside from the CIT and VAT considerations above, the Project Developer would also need to consider regional tax and non-tax state revenue aspects relevant to the carbon project.

For further consideration, if the transaction involved is with related parties, it should adhere to the arm's length principle.

As the carbon market matures, more entities will engage in various types of contracts or commitments to acquire carbon credit. Different contractual terms, including payment structures, rights to returns, and settlement structures may lead to different accounting alternatives. It is also foreseeable that a market for derivative products will be developed in the future. Consequently, entities should consider the possibility of applying PSAK 109 on Financial Instruments to account for such derivative products. Various accounting alternatives would also influence/drive the possible tax treatments.

Outlined above are the accounting and tax considerations for the voluntary market. Accounting and taxation consequences for mandatory market may not necessarily be similar to those of voluntary markets. The accounting and tax considerations for the mandatory market will be provided in a separate publication.

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