Dear Sirs

Re: Exposure Draft (ED) on the Valuation of Forests

We are responding to your invitation to comment on the above exposure draft on behalf of PricewaterhouseCoopers.

Following consultation with several partners from firms which are members of the PricewaterhouseCoopers network of firms, this response summarises their views. "PricewaterhouseCoopers" refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.

PricewaterhouseCoopers appreciates the International Valuation Standards Board’s (Board) efforts in the process and welcomes the opportunity to provide comments on the ED that sets out the Board’s proposals for a future Technical Information Paper (TIP) on this topic. We have in this letter outlined our general comments and then, as requested in the ED, responded to the specific questions for comment in Appendix A.

We agree that there is a need to have guidance to reduce the diversity of practice by identifying commonly accepted processes and procedures, which will assist both valuation professionals and users alike; however, we believe that the TIP, as drafted, requires refinement so that it might be well placed to accomplish the goals it sets out. Our key comments are set out below:

- If the intention is to promote consistency and professionalism globally, then a key aspect of the Board’s role should be to engage in the difficult process of providing further guidance on the knowledge and skills required for the valuation of forests. Forestry valuation is unique in that it requires a distinctive and interdisciplinary knowledge base from forest valuation professionals (e.g., finance, accounting, statistics, biology, hydrology, climatology, among other disciplines). A valuation professional must possess a combination of knowledge and skills in order to perform a valuation of forests given the relatively complicated nature of the asset class and we believe that the TIP should play a role in defining the nature and required skills of the valuation professional.

- While the indicated scope of the proposed TIP is confined to the valuation of forests held for the commercial production of timber and other forest products, there is an opportunity to add some clarity to the TIP in respect of the scope exclusions. This could be achieved by simply re-titling the proposed TIP to be the “Valuation of Commercial Forests”, which is more aligned with certain other jurisdictional guidance and standards.

- Notwithstanding the above, we believe the Board should consider the opportunity to expand the scope of the proposed TIP to address the potential benefit streams beyond the commercial production of timber and other forest products. Forests are multi-functional and important habitats in terms of the biological...
diversity they contain and in terms of the ecological functions they serve. As such, forests often have
direct use and indirect use value beyond their intended commercial purposes (e.g., non-timber forest
products, carbon storage and sequestration, watershed protection, land conversion, and
recreation/tourism, among other items). The addition of an appendix to the proposed TIP in relation to
the valuation of forest estates that supply unpriced or non-market goods and services may be worth
considering.

- The proposed TIP should clearly state whether it is applicable to independent or non-independent (e.g.
in-house) valuation professionals. In our view this is a key requirement particularly as the Board aims to
represent the valuations profession as a whole.

- We believe the Board should consider Stochastic Discounted Cash Flow (DCF) modelling as an alternative
method potentially applicable to the valuation of forests.

We would be happy to participate in any round-table discussions that the Board may decide to hold to discuss the
comments received on the Exposure Draft.

If you have any questions on the content of this letter, please do not hesitate to contact John Glynn, PwC Global
Valuations Leader (+1 646 471 8420) or Romil Radia, UK Valuations Partner (+44 20 7804 7899).

Yours faithfully,

PricewaterhouseCoopers LLP
Appendix A

1. The scope of this TIP is confined to the valuation forests held for the commercial production of timber and other forest products. It is intended to be applicable to valuations for a range of commercial and regulatory purposes but excludes valuations that are subject to national laws (e.g., taxation) or private contract (e.g., insurance).

*Do you consider that the principles discussed in this TIP could have wider application beyond the indicated scope? If so, please indicate the additional purposes to which the TIP could be applied.*

While the indicated scope of the TIP is confined to the valuation of forests held for the commercial production of timber and other forest products, there is an opportunity to add some clarity to the TIP, as follows:

- Other jurisdictional standards and codes of practice issued in relation to the valuation of commercial forests more clearly state the scope and exclusions. As one simple example, it may provide more clarity to have the TIP labelled as the “Valuation of Commercial Forests” if that is the intention of the Board;

- Paragraphs 1 and 3 of the TIP include scope limitations. It may add more clarity to combine these scope limitations and exclusions into one overriding exclusionary paragraph; and

- The TIP is silent on potential non-timber benefit streams, such as carbon forestry. The TIP should be more specific as to the scope exclusions if that is the intention.

The range of purposes denoted in the TIP does not appear to be incomplete; however, it is noteworthy that the range includes ‘reporting to tax authorities’ but the TIP explicitly denotes that “it does not examine specific statutory or regulatory requirements that may apply to the valuation of forests for particular purposes in different jurisdictions eg. for taxation.” (TIP paragraph 3)

2. In para 15 it is indicated that discussion of techniques for the measurement and sampling of the tree crop (forest inventory) are outside the scope of this TIP but that there may be standards or guidance applicable in specific markets. The Board wishes to know if there is a predominant measurement and sampling approach that IVSC could reference as an example in this TIP, while recognising that variations may be applicable in certain jurisdictions or for certain species.

i) *Please indicate your experience of different standards or techniques that are applied in preparing forest inventory, and the markets in which these are applied.*

In some developing markets it is still commonplace for forest inventory parameters to be obtained by inspections, terrestrial surveys and extrapolating from previous inventories. While these ‘older’ methods are not always economical or sufficiently precise, aerial photography and satellite imagery may not be appropriate for various reasons. To the extent that airborne laser scanner imagery, or other sophisticated techniques are used, the size of a forest stand may make it economically punitive to rely on these methods for large tracts of land.

As collecting and/or sampling inventory data can be a costly exercise, many valuation professionals simply rely on the client’s inventory records and perform no independent sampling. It might be helpful to explain the importance of the standing inventory as a starting point and depending on the intended use that sampling should be considered
ii) Do you believe that it would reduce diversity of valuation practice if the IVSC gave more information on common sampling and measurement techniques?

The choice of sampling and measurement technique used for the purpose of a forest valuation should be left to the client and the valuation professional to determine, as the choice may vary depending on the ultimate use of the valuation. Nevertheless, the IVSC could set out guidance in relation to a required level of disclosure by the valuation professional as to the nature and extent of the sampling and measurement techniques used for purposes of the forest valuation.

3. The proposed guidance indicates at para 28 that all three approaches described in the IVS Framework are applicable to the valuation of forests. The discussion that follows indicates some of the strengths and weaknesses of methods under each approach in the context of valuing forestry interests.

Please indicate which of the methods discussed you most commonly encounter in the valuation of forestry interests. If you encounter more than one on a regular basis please indicate whether there is clear tendency to use different methods under different circumstances, eg:

i) the stage of maturity of the tree crop

ii) whether the valuation is of a single stand or multiple stands

Reliable market-based prices for standing timber are rare, and even where there are active markets, prices must be imputed from transaction prices which would normally also include the value of bare land. Consequently, net present value arrived at used the income approach (DCF) is, by far, the most common method in forest valuations.

It is not uncommon for forest valuations prepared in the context of market transactions, to be based on multiple stands. In some cases, although the next rotations are assumed to occur, their economic contribution is determined to be nil. This is based on the expectation that forest owners will endeavour to ensure that subsequent rotations earn their required hurdle rate (i.e. the internal rate of return matches the discount rate employed) so that the contribution from the second rotation to a current present value is by definition zero.

4. The draft discusses the use of the market approach, income approach, and cost approach.

Are there any other valuation approaches or methods used for valuing interests in forestry with which you are familiar? If so, please describe the method and the circumstances under which it is applied.

The stochastic DCF method, where the risks of the cash flows are not incorporated in the discount rate, but rather in the probability distributions of the cash flow projections (i.e. a 'Monte Carlo' simulation) may be a suitable approach in forest valuation. This is due to the probabilistic nature of a forest's future as there are a number of external variables that influence the growth and survivability of the biological asset. For example, the potential risk to a forest from fire, pestilence, or catastrophic weather conditions.
5. The Board is aware of some significant diversity in the length of the explicit forecast period that is used when using a discounted cash flow model to value a forestry interest. The proposed guidance has avoided giving specific guidance on the length of the period.

i) In your experience what is a typical range of forecast period for valuing forestry interests, and what criteria are used to determine how long this should be on a case by case basis?

The range of the forecast period for valuing forest interests will depend on the rotation length which is influenced by factors including; species, geographic location, age, growth rates, silviculture strategies, and the harvest plan.

ii) Do you consider that it would be helpful for the IVSC to provide specific guidance on the length of the forecast period?

The length of the forecast period should be determined by the valuation professional on a case by case basis giving consideration to the various influencing factors. Forestry valuation is unique in that it requires a distinctive and interdisciplinary knowledge base from the forest valuation professional (e.g., finance, accounting, statistics, biology, hydrology, climatology, among other disciplines). It would be too prescriptive to provide guidance on the length of the forecast period.

6. The discount rate to be used in a discounted cash flow is discussed in paras 45-49. This supplements the more detailed discussion of the DCF method in TIP 1. The Board has received evidence that in some parts of the world inappropriate reliance is being based on models such as the Capital Asset Pricing Model or the Weighted Average Cost of Capital where there is insufficient data to provide reliable evidence of either the risk premium or cost of equity that would be typical for a market participant. In order to address this issue the proposed guidance emphasises the need to give greatest weight to market based inputs.

Do you agree with this guidance? If you have experience of how appropriate discount rates can be derived for use in a DCF of a forestry interest please indicate if this differs from the proposed guidance.

Circumstances vary from region to region, so while market based inputs are important, they are not always readily available or are not reliable.

In practice, pre-tax discount rates are often employed in DCF analyses involved forestry valuations and there is no easy way to convert a post-tax discount rate (derived from the WACC approach) to an equivalent pre-tax discount rate. This is because the equivalent pre-tax discount rate will depend on the specific cash flow features of the forest. Guidance in relation to the applicability of pre-tax real and post-tax nominal discount rates may be appropriate.

7. The proposed guidance in para 52 is that the cost approach is mostly applicable to recently planted forests because the physical and possible economic changes that occur as a forest matures mean that other methods become more reliable. The Board is aware that some argue that the cost approach cannot be applied to commercial forests under any circumstances and others argue that it can be reliably applied to mature forests.

Please indicate if you agree with the proposed guidance on the applicability of the cost approach. If not please explain why by reference to practice in the markets with which you are familiar.
We agree that the cost approach may be used as the primary valuation approach for relatively young forest crops or newly planted forests, as it is likely the best indicator of value. The cost approach might also be used if the forest has recently been acquired and it has undergone minimal changes, so the price paid is the best indicator of value. In addition, there are occasions when historical cost is applied as a primary approach to value where there are no known reliable parameters, such as lack of known prices, growth rates or physical volumes. It may also be appropriate as a cross check and in certain circumstances.

8. It has been reported to the Board that some valuations of forestry are being presented in financial statements prepared for statutory purposes that show significant changes from those previously submitted solely due to the adopted valuation method changing. The Board considers that this is contrary to the IVSs, in particular the definition and conceptual framework for market value, or where prepared under IAS 41, the requirements of IFRS 13 Fair Value Measurements. The method adopted should be that appropriate to achieve the required basis of value, it should not dictate or change the basis of value. The draft ED recommends in paras 55 – 58 the need to consider the use of more than one approach and the reconciliation of the results as means of avoiding a misrepresentation of the value by over reliance on a single approach, and the appearance that value can change simply because a different method is used.

i) Please indicate if you have encountered a similar problem to that described and, if so, any reason or justification given for the change in value?

A valuation professional should consider multiple valuation approaches; however, the ultimate selection of the approach adopted is a matter of judgement. Changes in methodology from one period to the period should be reasonably justified. Movements in value from one period to the next should be adequately explained.

ii) Do you consider that the guidance provided on the need to consider an alternative method in the Exposure Draft addresses this issue?

Yes. The use of valuation cross checks is considered to be a best practice.

9. An interest in a forest can consist of the rights to the land, the tree crop and all other improvements to the land or it can be in only some of these components, eg the land only or the tree crop only. For most valuation purposes the benefits attaching to the subject interest, eg the right to receive certain cash flows can be readily identified. For valuations for financial reporting under the IFRSs a value has to be attributed to the "biological asset", ie the tree crop, regardless of whether the crop and the land are held in the same ownership. This can create difficulties where there is no direct evidence of the value of the tree crop only. The proposed guidance in para 71 refers to the suggested approach in IAS 41 which is that the value of the "raw land" be deducted from the value of the combined asset, with the residual representing the value of the biological asset. However, it is argued by some that this is over simplistic as the value of "raw land" is not the same as the value of land supporting a mature forest and the evidence the price of bare land ready for planting is of limited relevance. Proponents of this view argue that the interdependence of the tree crop and the land mean that the land makes a significant contribution to the value of the tree crop, and therefore deducting only the value of the bare land from the value of the whole forest overstates the value of the biological asset.
Please indicate if you have experience of a separate value being ascribed to the "biological asset" in a forest for financial reporting purposes and, if so, the method or methods that you are most familiar with to arrive at this value.

Yes. The value of raw land and land improvements may be deducted from the value of the combined assets to arrive at the value of ‘biological assets’. An alternate method to the ‘residual approach’ is to deduct a notional market rent charge from the economic benefit stream of the tree crop.

10. Para 71 refers to the guidance in IAS 41 that the value of the biological asset, in the case of forests the living trees, may be derived at by deducting the value of the land from the value of the value of the combined asset. It also points out the difficulty that arises W the land were worth more for an alternative use. The proposed TIP indicates that while this might suggest that the biological asset has a negative or zero value, if the trees will generate income to the entity when it is harvested then the biological asset will have a positive value and should be recognised as an asset regardless of the value of the land. Some disagree and argue that if the trees are preventing a more valuable alternative use then they can have no value.

In the context of the requirement to ascribe a fair value to the biological asset as required by IAS 41, which of these views do you support?

Depending on the circumstances, it may be possible for the biological asset to have nil value recognizing that the costs to remove the tree crop in order to realize the proceeds from the sale of the bare land may be higher than the revenues (given that the tree crop isn't realised over the full rotation).

11. The Illustrative Examples included with this draft are intended to illustrate the application of some of the principles discussed in this draft and in other IVSC pronouncements. They are deliberately simplified and are not designed to be applied to real life situations without modification to reflect the facts and circumstances.

i) Do you consider that these examples will be helpful in reducing diversity in practice?

While illustrative examples can be helpful, their over-simplification could result in valuation professionals misusing the frameworks at the expense of applying professional judgement in consideration of the facts and circumstances.

It may be more appropriate for the proposed guidance to provide a list of evaluation criteria to be considered in preparing a forest valuation as opposed to illustrative examples.

ii) Are there any other subjects that you consider would benefit from an illustrative example?

To the extent illustrative examples are provided, it may be appropriate to provide an example of the reconciliation of value when using multiple approaches.

It may be beneficial to include an illustrative example that addresses the subject of variances in actual harvesting to plan, and the impact these variances may have on forest valuations. For example, in relation to boreal forests such as spruce and pine that have a very long rotation period (up to 100+ years), it is of particular importance when using DCF modelling to pay attention to the harvest plan and the actual over/under harvesting that occurs.
The harvest plan itself depends, in certain circumstances, on the forest owner's expectation as to how they intend to harvest the forest for their own industrial operations. The harvest plan should be developed and tested under an assumption of "highest and best use" without too much focus on what the forest owner would like to do. In most situations, economic circumstances force harvest plans to come close to what is the most realistic economically beneficial way to harvest for commercial purposes. It is important to understand and consider the actual harvesting to plan when preparing forest valuations, particularly for IAS 41 reporting purposes. Significant variances in actual harvesting versus plan without attention being paid to it in a valuation may lead to potential misstatements of value. An illustrative example may serve to highlight the importance of the issue and the factors a valuation professional should consider.

12. The objectives of the TIP are set out at the beginning of the Exposure Draft.

i) Please indicate whether you believe that the draft meets these objectives. If you disagree please indicate why and how the guidance could be improved.

See comments above.

ii) Are there any additional matters that you believe should be addressed? If so please indicate what these are.

See comments above.