

Carbon Pollution Reduction Scheme Reforestation Paper Submission
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24th September 2008

SUBMISSION ON CARBON POLLUTION REDUCTION SCHEME
REFORESTATION PAPER

SUMMARY

A3P welcomes the opportunity to engage with the Government on detailed design issues relating to coverage of reforestation in the Carbon Pollution Reduction Scheme. The following is a summary of the key points of our submission:

- It is important to acknowledge that the design of the rules and detailed treatment of reforestation in the emissions trading scheme will essentially determine the level of investment in new plantations. If the rules do not create an attractive investment environment, it is questionable whether many private investors would consider the risk-based return sufficient to justify opting into the scheme. If reforestation is to provide real, cost-effective abatement it must be empowered to do so by the rules.
- The detail for inclusion of reforestation should consider existing and likely future business models. While A3P does not propose that the emissions trading scheme should be designed to *fit* existing business models (indeed the desired outcome is for new business models to be designed to adjust to the new carbon market), the carbon footprint of a business should be the only factor that determines whether participation in the scheme is favourable to a business, not the rules.
- A significant area of plantation established on Kyoto-compliant land prior to 2008 was motivated primarily by carbon storage. A3P exhorts Government to consider these forests as distinct from forests established primarily for wood production purposes.
- A3P seeks a flexible model that will enable participation of reforestation projects in a variety of forms, including:
 1. Carbon Investment
 2. Farm Forestry
 3. Carbon Sink Plantations
 4. Managed Investment Schemes
 5. Plantation Expansion
- Designing a flexible participation model for reforestation requires rules that meet the following criteria:
 - Simple - to enable low transaction costs for small growers and those with simple ownership structures.



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- Flexible – to enable participation by a range of ownership structures including those that exist in managed investment schemes and carbon investments.
 - Consistent – so that managers of existing plantation estates (pre- and post-1990) do not face perverse incentives.
 - Stable – so investments can be made with confidence on the future treatment of storage and emissions.
- When defining who is the eligible party to participate in the emissions trading scheme, a key test is whether it allows participation by more complex structures such as *managed investment schemes* and *carbon investments* while also allowing low transaction costs for *farm forestry*.
 - There are several different ownership models involving multiple parties which own, and have rights to, the land, the trees on the land, and forestry rights (both timber and carbon). However the eligible participant in the scheme should, in all cases, be the owner of the *carbon sequestration right* (or its equivalent in relevant state/territory legislation).
 - The two crediting methodologies proposed will potentially have different opportunities and risks for different growers. Growers should be allowed to make assessments based on the nature of their estate, their views about the future price of carbon, and their attitude to risk, in deciding whether they wish to report under an annual stock change or a long-term average approach.
 - Under either option, the Government proposes that permits will only be issued for increases in carbon storage after 2010. However the Government is able to account for all carbon stored in these forests from 2008. Given the long term nature of the investment and the expectation that carbon storage would be saleable during the life of a plantation, it would be consistent with the remainder of the Government's treatment (consistency with Kyoto accounting) to allow permits to be issued for storage from 2008.
 - The accounting treatment of mid-rotation plantations must leave owners of these plantations no worse off than someone establishing a new plantation by applying the method outlined in Attachment B to this paper.
 - Finally, the Reforestation Paper raises the possibility that the base year in future may change from 2008. It would be inequitable policy if the base year that applied to a plantation changed after it had opted in to the scheme. Such a possibility, having been raised, must now be clearly ruled out.

These issues are discussed in detail below.

BACKGROUND AND INTRODUCTION

This submission on the *Carbon Pollution Reduction Scheme: Reforestation Paper* is made on behalf of the plantation products and paper industry by A3P. A3P welcomes the opportunity to make a submission and congratulates the Government and its officials on the quality of the design produced this far and the open manner in which the process is being conducted.

A3P is the national representative body for the Australian plantation products and paper industry. A3P's 30 member companies have sales revenues of more than \$4 billion per annum and directly employ 13,500 people predominantly in rural and regional Australia in centres such as Mt Gambier, Morwell, Tumut, Albury, Oberon and Gympie.

A3P agrees with many of the issues, and proposed approaches, outlined in the Reforestation Paper. It presents a robust starting point for further development of the Carbon Pollution Reduction Scheme.

A3P is a signatory to the joint Forestry, Wood and Paper Industry position on the Green Paper – *Capturing Carbon Reduction Opportunities* – at Attachment A. The detail in this submission is consistent with that joint statement. A3P has had detailed discussions with other associations and we understand that their submissions, while dealing with detail specific to their members, are also broadly consistent with the joint Forest, Wood and Paper Industry position on the Green Paper.



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OBJECTIVES OF INCLUDING REFORESTATION

The design details for reforestation must be developed with the objectives of the scheme in mind (pages 85-86 of the Green Paper) and the justification for including reforestation in the scheme (page 127). From this it can be concluded that the design details for reforestation should be trying to achieve the following outcomes:

- Ensure that abatement of greenhouse gas emissions can occur through reforestation in response to a carbon price.
- Create incentives for rational changes in forest management in response to a carbon price.
- Include as much as possible of the reforestation sector.
- Enable flexibility in land use in response to a carbon price.
- Minimise distortions and perverse incentives from a carbon price.
- Minimise the transaction costs of responding to a carbon price.
- Be accessible to a range of current and future business models and not create distortions solely as result of business structure.

A significant proportion of reforestation motivated by the scheme will be in the form of commercial plantations which will be managed for a range of products including wood and carbon. The design details for reforestation must also consider at least a rudimentary understanding of commercial plantations and Australia's current plantation estate including the "Kyoto-compliant" plantations.

COMMERCIAL PLANTATIONS

Commercial plantation management involves a significant initial investment to establish the trees followed by lesser investments to tend and maintain the growing crop. Returns are received at the time of harvesting. The most significant return is when the plantation is clearfelled (final harvest) but smaller returns may also be received from earlier thinning operations.

The cash-flow of a plantation investment therefore consists of a large initial investment, followed by a sequence of smaller investments before a significant return in the final year. Plantations are, in general, long term, stable, investments with modest returns.

The ability to create permits may change the cash-flow profile of traditional commercial plantations. Income may be generated earlier in the plantation life, as carbon is stored. The magnitude of the final returns would likewise be reduced by an actual, or contingent, liability.

AUSTRALIA'S PLANTATION ESTATE

Australia currently has approximately 1.8 million hectares of plantations. The plantation estate can be further categorised on the basis of:

- o Date of establishment – year of first plantation establishment, year of current crop establishment;
- o Ownership – public, private, farm forestry, managed investment schemes;
- o Species – broadly grouped as either hardwood or softwood;
- o Management – rotation length and products generated (sawlogs, pulplogs).

In (overly) simple terms the older (pre-1990) section of Australia's plantation estate is dominated by publicly owned, long rotation softwood plantations producing a mixture of sawlogs and pulplogs. The younger (post-1989) plantation estate is dominated by managed investment schemes, short rotation, hardwood plantations producing pulplogs.

This simple description masks some significant exceptions that have particular significance in the context of the Carbon Pollution Reduction Scheme including:

- o Post-1989 investment by international companies in commercial plantations seeking carbon credits;
- o Investment in carbon sink plantations
- o Post-1989 managed investment schemes based on long rotation softwood plantations;
- o Private pre-1990 plantation investment; and
- o Pre-1990 public plantations that have subsequently been privatised.

EXPANSION OF AUSTRALIA'S PLANTATION ESTATE

Governments and industry share a vision to expand Australia's plantation estate - *Plantations for Australia: the 2020 Vision*. Under this vision, the parties work jointly to remove impediments to plantation investment with a vision of achieving 3 million hectares of plantations by 2020, from the current estate of 1.8 million hectares. The Vision is market-driven and is not prescriptive with respect to the species, location, ownership or management of plantations.

Achieving the Vision would require the establishment of approximately 100 000 hectares of plantation each year from now, along with re-establishment of harvested plantations. However there is no requirement on any party, individually or collectively to achieve this planting rate. The average expansion rate in recent years has been approximately two-thirds of this level.

In the absence of a carbon price, it is likely that establishment rates would continue at current levels at best, and may decline as more re-investment is required in second and subsequent rotation plantations. A carbon price may boost establishment rates at the margin but the change would be minimal - in the order of tens of thousands, rather than hundreds of thousands, of hectares per annum. The detailed design rules will be crucial in determining the magnitude of the response, as well as the durability of the carbon store in existing plantations. If the rules do not create an attractive investment environment it is questionable whether many private investors would consider the risk-based return sufficient to justify opting into the scheme, in which case reforestation would not produce the scale of real, cost-effective abatement that it is capable of.



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INCLUDING REFORESTATION

It was noted earlier that one of the objectives of including reforestation should be to enable a range of business models to participate and avoid incentives or distortions that result solely from the business model.

Just as the method for inclusion of other sectors of the economy considered business structures – for example, upstream acquittal for transport fuels – the detail for inclusion of reforestation should consider the existing and likely future business models. That is not to say that the emissions trading scheme should be designed to *fit* existing business models, but it should be designed not to create barriers to participation by valid business structures or unduly favour or disadvantage business structures for reasons other than their carbon footprint.

A3P proposes five business models to be considered in the development of the reforestation rules. These business models should be used as scenarios to explore the implications of proposed rules or as a screen to determine where certain rules may be sub-optimal. The business models are:

1. Carbon Investment

In this model an organisation not usually involved in the forest industry invests in plantations to create permits that may be used to meet liabilities elsewhere, to sell permits into the Australian scheme, or to sell a mixture of carbon and timber. The plantations may be managed by an independent party with expertise. Examples include TEPCO Forests Australia (TEFA), ST Microelectronics and other investors in the NSW GGAS.

Relevant features include

- o Carbon is a key motivating factor for investment;
- o The investor may be interested in both carbon and timber revenues;
- o The investor may have carbon liabilities elsewhere in the world.

2. Farm Forestry

In this model a landowner invests in trees on their own property as part of an integrated farming enterprise.

Relevant features include

- o Smaller scale of tree planting;
- o Carbon is one of a range of benefits being sought;
- o Higher, per unit, transaction costs;
- o Less developed information systems.

3. Carbon Sink Plantations

This model involves investment in a crop of trees where there is no intention to harvest the crop. Carbon is the sole, or primary, objective of plantation management.

Relevant features include

- o Carbon is the sole motivation for investment;
- o Plantations may be integrated into farming enterprises;
- o The plantations will not be harvested.

4. Managed Investment Schemes

In this model, individual investors fund the establishment and management of a crop of trees for wood production. The plantation is managed by a responsible entity (RE) and may be established on land owned by a third



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party. The investment is for the current tree crop and the responsible entity is obliged to manage that investment for its best interest which may limit the extent of carbon pooling. Examples include Willmott Forests and Forest Enterprises Australia.

Relevant features include

- o Investment in a single rotation of the crop at any point in time;
- o Limited ability to pool carbon stocks across planting years;
- o Separate ownership of the land, trees and project management.

5. *Plantation Expansion by substantial existing forest industry participant.*

This model involves incremental expansion of an existing plantation estate managed for wood production. Relevant features include

- o Existing pre-1990 forest resource;
- o Well developed inventory and modelling systems;
- o Likely ongoing wood supply commitments.
- o High likelihood of reinvestment in future plantation crops



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While each of these business models may be involved in other activities such as re-establishment of pre-1990 plantations, the discussion in this paper is limited to reforestation that is Kyoto-compliant.

This paper will also include consideration of the treatment of existing Kyoto-compliant plantations, that is, plantations established on cleared land after 1990 up to 2008.

THE EXISTING POST-1989 PLANTATION ESTATE

Australia's plantation estate has expanded by approximately 800 000 hectares since 1990. Of this, a large proportion is "Kyoto-compliant". In the Green Paper and the Reforestation Paper the Government has indicated its intention to limit access to the scheme "to forests that meet the definition of 'reforestation' for the first commitment period of the Kyoto protocol. Further, permits would only be issued for increase in sequestration after 2010, which counts towards Australia's Kyoto commitments." The latter part of this statement creates significant uncertainty, even for a new plantation established once the scheme commences, however it has greatest implications for existing plantations.

Included in this area are plantations established solely for wood production purposes. However it also includes plantations where the storage of carbon was the primary aim of the investment (e.g. TEPCO Forests Australia) and a large area of plantation where carbon storage, and the potential income from it, was one of a range of objectives.

While the Government has noted that it can only bring to account increases in forest carbon over the period 2008-2012, Australia has been reporting the storage of carbon in all Kyoto-compliant forests and they have contributed to Australia's path towards our Kyoto target.

The "harvest sub rule" is critical in the national accounting of Kyoto-compliant forests. As reported in the Reforestation Paper the harvest sub rule states that emissions from these forests in the first Kyoto commitment period "cannot be negative but are instead reported as 'zero'" but "It is not yet certain whether this rule will be agreed as part of the post-2012 climate change framework."

The Government's sole focus at present seems to be to match the rules of the Carbon Pollution Reduction Scheme as close as possible with Australia's national obligations in the first Kyoto commitment period. However most of the existing plantations will exist beyond the first commitment period and, more importantly, are likely to be storing carbon during the first commitment period that will be released after the first commitment period.

The uncertainty over rules beyond the first commitment period creates a dilemma for forest owners and Government. Owners of existing post-1989 plantations will respond to the uncertainty by not entering the scheme. At the time of harvesting, there will be an incentive to abandon the current sites (where permits in a subsequent rotation will only be created once the stocks exceed 2008 levels) and establish plantations on new sites where permits can be created immediately. Furthermore, if it doesn't make sense to opt in a site now, the legacy of the 'stocks at 2008' baseline will ensure that it is never attractive enough to opt that site in.

The Australian Government does not have the option of excluding these plantations from the national accounts and is at the mercy of the harvest sub rule or its successor.

If the dilemma is viewed from the perspective of the atmosphere it is simpler to resolve. The post-1989 plantations are a store of carbon that would be released to the atmosphere if harvested and not re-established. In this respect, the re-establishment of a plantation on a post-1989 site is comparable to the establishment of a new plantation. From this flows a principle that should be the basis of Australia's position for post-2012 treatment of reforestation in the international framework and within the Carbon Pollution Reduction Scheme:

the post-2012 re-establishment of a plantation on Kyoto-compliant land should be no worse off than the establishment of a new plantation on Kyoto-compliant land.

This can be implemented through applying the method outlined in Attachment B for mid-rotation plantations, in place of the harvest sub rule. In summary it proposes that: at the time of harvest, the initial emissions should be offset against the initial un-credited storage – *the first emissions are offset against the first storage*. This would not credit carbon storage that occurred prior to 2008 but it would ensure that plantation established between 1990 and 2008 are not worse off than those established after 2008.

Plantations established on non-forest land since 1990 are contributing to Australia's abatement effort. Those who invested in the plantations have some right to expect a carbon benefit given the inevitability that a carbon price would exist during the life of the plantation. At the very minimum, those investors deserve to be no worse off than someone who did not invest. The Australian Government and the plantation industry have a shared interest in ensuring that both the international treatment and the rules within the Carbon Pollution Reduction Scheme do not unfairly punish those investments or present them with incentives to pursue illogical and disruptive land use change decisions.



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THE ETS MODEL

A number of themes recur in our response to the specific questions raised in the Reforestation Paper (below). In summary A3P is seeking a flexible participation model that will enable participation of reforestation projects in a variety of forms including the five outlined earlier:

1. Carbon Investment
2. Farm Forestry
3. Carbon Sink Plantations
4. Managed Investment Schemes
5. Plantation Expansion

This requires a set of rules that meets the following criteria:

- o Simple - to enable low transaction costs for small growers and those with simple ownership structures.
- o Flexible – to enable participation by a range of ownership structures including those that exist in managed investment schemes and carbon investments.
- o Consistent – so that managers of existing plantation estates (pre- and post-1990) do not face perverse incentives.
- o Stable – so investments can be made with confidence on the future treatment of storage and emissions.

The remaining sections of this submission address the specific questions raised in the Reforestation Paper, using the information above as context.

ELIGIBLE KYOTO FORESTS

The process described above in section 2.1.1 of the Reforestation Paper is how large areas can be confirmed as being Kyoto eligible or not. However there are two spatial issues with this approach that are worth noting: positional accuracy and resolution.

Relying on the Landsat satellite imagery alone will penalise eligible forest owners in relation to the size of the Kyoto eligible areas. Other forest data (areas planted, vegetation reserved, road locations etc) is commonly referenced to either the higher-resolution imagery or GPS data. It makes sense to adjust the forest mask so that it corresponds with the data of higher spatial accuracy rather than perversely warping higher-accuracy forest data to match the lower-accuracy landsat-derived mask. We recommend that the applicant should be able to adjust the Forest mask to more closely match any other higher-resolution data that is available (such as imagery or GPS data).

In relation to the resolution of the Forest mask: The resolution of the landsat-derived forest mask may obscure areas of variable groundcover type to the extent that cleared land may be falsely identified as forest areas and vice versa. This can be the result of fine-scale variation in the groundcover that the landsat data is too coarse to resolve. Both these false positives and false negatives can penalise eligible forest owners in relation to the size of the Kyoto eligible areas within a site.

We recommend that in cases where the 1990 status of vegetation is in doubt as a result of vagaries of the landsat data, that other higher-resolution imagery such as aerial photos from the relevant period will be accepted as proof of the status of Kyoto-eligibility of the cleared land.



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The same arguments and recommendations made above also apply to the correct use of the masks to accurately identify the location and size of ineligible areas of remnant forest within an otherwise eligible site. In relation to the resolution of the Forest mask: as noted the resolution of the landsat-derived forest mask may result in the exclusion from the national accounts of vegetation that may meet Kyoto forest criteria but which cannot be confirmed as resulting from direct human activity at the resolution of the mask.

We recommend that in this case either new imagery or planting records such as paper maps of the relevant area with appropriate annotations, be accepted as proof.

Finally, the Government should consider an adjustment to the method to allow single row belts of trees to be included. This is likely to be a plausible business model for integrating tree into farms in drier areas and should be an option that the Carbon Pollution Reduction Scheme is 'open' to.

ELIGIBLE FOREST OWNERS

The Reforestation Paper proposes two options for defining the forest owners who would be eligible to opt in. The first option uses the "legal capacity to establish a forest" as the basis, while the second allows "only landowners and holders of long term leases".

A key test of method for defining eligible forest owners is that it would allow participation by more complex structures such as *managed investment schemes* and *carbon investments* but also allow low transaction costs for *farm forestry*.

Assessment against the five business models proposed earlier in this submission shows that the second option would create substantial difficulties for both *managed investment schemes* and *carbon investments*, despite both being valid (prevalent) business models for reforestation and carbon storage.

The first option is clearly the preferable of the two presented but there may be potential for an even more flexible option that caters for separate ownership of the land and trees.

There are several different ownership models involving multiple parties which own, and have rights to, the land, the trees on the land, and forestry rights (both timber and carbon). These rights are not treated consistently across Australia; for example in some states the "forestry right" (timber) is separable from the carbon property/sequestration right. In A3P's view only the owner of the *carbon sequestration right* (whatever name or form it might take under state legislation) should be eligible to participate in the scheme. This party may not be the manager of the forest or the landowner in all cases. However, where the carbon sequestration right has been sold to a party outside the ownership structure, this would be a commercial decision and the degree of control by the various parties over the fate of the carbon would be decided by market forces. This will no doubt also be influenced by the rules determining who is eligible to opt in to the scheme.



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ENFORCEMENT AND SUCCESSIVE OWNERS

Sections 3.2, 3.3, 3.4 and 3.5 of the Reforestation Paper consider issues of scheme enforcement and transfer of ownership. A3P again stresses the importance of developing rules that allow flexible approaches and minimise transaction costs. The following specific comments are made:

- Of the two options for dealing with outstanding obligations at the time of transferring ownership, Option B – allowing the contracting parties to agree on treatment of scheme liabilities - is preferred as it would still allow the seller to settle any scheme obligations (Option A) if they chose to, but would not force a seller to buy back permits at an inopportune time.
- Maintaining a register of forests in the scheme would allow transparent knowledge of future obligations to prospective buyers without imposing the transaction costs and implications for land value that may arise by registering a notice on the land title register.
- The technical challenges of enforcing scheme compliance on forestry appear to be amplified beyond the actual situation in Section 3.5. If the forest area is small the exposure is low and if it large there is a significant amount of internal buffering and ability to enforce through other parcels of land. “Imposing and maintaining a financial asset test for eligible forest owners or requiring a bond or guarantee” would be a debilitating approach that would rule out all but the most enthusiastic potential entrants.
- There would appear to be a compelling case for a consistent approach to carbon property rights across Australia. A3P is aware that there are issues regarding the extent that the Commonwealth can intervene in these areas but, as a minimum, there should be some attempt across Government’s to achieve consistency that will minimise compliance costs.

CREDITING OPTIONS

The Reforestation Paper presents two options for crediting and debiting forest carbon storage – full accounting and average accounting. Neither method is superior in all respects.

Full accounting provides:

- A close match with actual carbon flows;
- No pre-judgement of future management options;
- Crediting without reliance on modeling future growth; and
- A stronger signal to the grower from changing carbon prices.

Average accounting provides:

- Lower risk to growers from fluctuating carbon prices;
- Simpler participation by small- and medium-sized forest growers
- Less impact on future wood supply from forests included in the scheme; and
- Greater ability to account for unplanned events (e.g., fire).

The *farm forestry* business model is more likely to opt in to the scheme under average accounting, while larger forest growers may be more attracted to full accounting.

Both methods are an unbiased and accurate reflection of carbon flows (albeit over different timeframes). There appears to be no reason why growers should not be



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given the option of crediting methodology when they enter the scheme. Appropriate constraints would need to be applied to changing crediting methodology for a given parcel of land to prevent gaming – for example, no change allowed, or change only allowed by buying back to one’s long-term average position.

The two crediting methodologies will potentially raise different issues for different growers, and what suits one grower may well be seen as a risk or a hindrance to another. Growers should be allowed to make assessments based on the nature of their estate, their views about the future price of carbon, and their attitude to risk, in deciding whether they wish to report under an annual stock change or a long-term average approach. In addition, the crediting methodology chosen will have an effect on growers’ obligations if/when they may wish to exit the scheme after opting in.

Under either option, the Government proposes that permits will only be issued for increases in carbon storage after 2010. However the Government is able to account for all carbon stored in these forests from 2008. Given the long term nature of the investment and the expectation that carbon storage would be saleable during the life of a plantation, it would be consistent with the remainder of the Government’s treatment (consistency with Kyoto accounting) to allow permits to be issued for storage from 2008. This is particularly relevant to investment where carbon, and obligations within the first Kyoto commitment period, were a clear and explicit motivating factor in the investment.

Finally, as noted earlier, the treatment of mid-rotation plantations must leave owners of these plantations no worse off than someone establishing a new plantation by applying the method outlined in Attachment B.

The Government should also carefully consider its future path in treatment of soil carbon. This issue is linked to the treatment of agriculture more broadly and the approach should be based on a rigorous understanding of soil carbon dynamics.

HARVEST SUB-RULE/CERTAINTY OF BASELINE

Section 4.2 of the Reforestation Paper discusses the application of the harvest sub rule to national accounting of emissions from reforestation. The application of the rule means that in the first commitment period emissions from these stands “cannot be negative but are reported as ‘zero’”. The paper goes on to discuss the application of the same rule within the Carbon Pollution Reduction Scheme.

For the same reasons that it would be perverse for a country to incur an emission liability for harvesting a plantation that was greater than the storage credited, it would also be perverse for a forest owner in Australia to be in the same position.

Furthermore, if the Government wishes to see reforestation projects opt in to the scheme it must provide some certainty, from scheme commencement, that the principle underpinning the harvest sub rule, if not the rule itself, will be retained. That is, a reforestation project should not face liabilities in excess of what it has able to sell.

Section 4.3 of the Reforestation Paper raises the possibility that the base year in future may change from 2008. It would be maladroit policy if the Government changed the base year that applied to a plantation, after that plantation had opted in



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to the scheme. Such a possibility, having been raised, must now be clearly ruled out.

REPORTING PERIOD

Flexibility, minimal cost and the availability of timely information to the market should be the key motivating factors in determining the reporting period as outlined in Section 5.1 of the Reforestation Paper. The options of annual and periodic (longer than annual) reporting are canvassed.

A3P suggests that periodic reporting (at up to five year intervals) should be an option available to growers. Some limiting caveats may need to be applied to this such as timely reporting of major changes (harvesting events, fire, etc) and reporting at the end of commitment periods.

TREATMENT OF FIRE/UNPLANNED EVENTS

There is an interaction between the method of crediting adopted (full accounting or average accounting) and the treatment of unplanned disturbance events.

An unplanned disturbance event will do little to change the long-term average carbon stocks on a reforestation site. It would be relatively straightforward to ensure the site is replanted and permits are not issued until the current carbon stocks exceed previously issued permits (and less than the long term average).

While a similar approach can be taken with full accounting – a requirement to replant and not issue permits until carbon stocks have recovered – the strong link between full accounting and actual carbon flows would be lost. An alternative would be to expose the grower to the liability for the emissions. This would tend to lead growers to insure the carbon value of those plantations (either self-insure or through under-writers).

On this issue, the implementation of an average accounting model will enable a more straightforward treatment of unplanned events – a requirement to re-establish the plantation or buy-back the credits issued.

NCAS AND NCAT

The Reforestation Paper contains an invitation to comment on the process for incorporating external forest growth data into the National Carbon Accounting System (NCAS). The Reforestation Paper suggests that “Permits would therefore have to be issued in accordance with approaches used by NCAS”. A3P contests that there *must* be a link between issuing permits under the scheme and national accounting approaches. Nevertheless NCAS and the entity-level accounting within the National Carbon Accounting Toolbox (NCAT) are viewed as important systems and tools.

The Reforestation Paper is unclear on what is meant by “in accordance with approaches used by NCAS”. In this context is NCAS the specific software, the method, the approach, the growth models, etc?. Most large plantation growers have highly specialised and refined inventory, growth and information systems. These have been built to manage information on wood volumes, which is directly correlated with carbon storage. The systems are capable of providing more accurate



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measurements and estimates of carbon storage and fluxes for those specific estates than could ever be expected from a generic system such as NCAS that must handle a much wider range of species, environments and lack of data.

The interests of accurate tracking of carbon storage and emissions within the Carbon Pollution Reduction Scheme, and rigorous national accounting, will all be served by constructing effective 'bridges' between existing inventory, growth and modeling systems and NCAS. This will be best done by specifying methods, standards, processes and formats for data transfer to NCAS rather than forcing forest owners to run a specific system for tracking carbon that (inaccurately) duplicates information already held.

A3P would welcome the opportunity to assist in constructing the 'bridges' between NCAS and commercial plantation resource information systems. A3P acknowledges and agrees that NCAT may provide an effective tool for small forest growers that do not have their own models and data. There should be further consideration of simple, standard 'look-up' tables based on NCAT to enable participation with minimal transaction costs.

GREEN PAPER ISSUES

In addition to the issues raised in the Reforestation Paper, A3P would like to note some brief comments on the content of the Green Paper as it relates to reforestation:

- We agree with the suggestion that design and implementation of the Carbon Pollution Reduction Scheme should focus on greenhouse gas mitigation outcomes. Issues relating to water, biodiversity and other matters will, we expect, be adequately dealt with through other policy processes.
- We agree with the proposed treatment of deforestation as outlined in the Green Paper and note that deforestation is largely an issue for the agricultural sector not the forest industry.

Conversely, we urge the Government to change its limitation on the sale of Australian permits to overseas markets. A3P acknowledges the concern regarding the impact of an unfettered link such as this on the carbon price in Australia and the likelihood of achieving Australia's Kyoto target. However a number of investments have been undertaken, and further potential exists, based solely on the ability to repatriate credits back to another country with an emissions trading scheme. This is investment that would not otherwise occur in Australia and hence is not abatement being made unavailable to Australian entities.

A3P requests that the Government consider mechanisms that would allow specific investments of this type to occur (and the credits sold back to the country where the investment originated) without broadly exposing the CPRS to overseas carbon prices. Such a mechanism may include a restriction of international sale of credits to certain projects or certain types (e.g., reforestation).



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Thank you for the opportunity of providing comment on the Green Paper. A3P would appreciate the opportunity to participate in processes that develop further detail. If you have any questions please contact Marion Niederkofler on 02 6273 8111 or marion.niederkofler@a3p.asn.au.

Yours sincerely



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Capturing Carbon Reduction Opportunities

In Australia's Forestry, Wood and Paper Industry

The signatories to this document, representing Australia's forestry, wood and paper industry, welcome the Carbon Pollution Reduction Scheme (CPRS) Green Paper, and its proposals to include Australia's forestry, wood and paper industries in the design of the scheme. The organisations' response to the major issues covered in the Green Paper are summarised below.

The Green Paper articulates the significant opportunities for Australia's forestry, wood and paper industry to contribute to carbon storage. In particular, we are pleased with the Green Paper's guiding principles that acknowledge the carbon abatement potential that can be provided by Australia's paper and wood products and the use of wood waste as a source of bioenergy. We welcome recognition that our native forest and plantation industries are Australia's only carbon positive industries and that policy measures need to provide a framework for the expansion of that role. In our view, those opportunities can be increased and enhanced by a more comprehensive inclusion of forestry, wood and paper products from the scheme's inception.

Importantly, more complete inclusion will not only ensure ongoing use of a renewable resource, thus expanding carbon emission management opportunities, but also significant flow-on benefits to the social and economic wellbeing of workers and communities in rural and regional Australia.

Just as the CPRS aims to provide the appropriate economic signals for emitting sectors to reduce their emissions, it should also provide appropriate signals for sectors to increase carbon abatement activities. For the forest industries this means providing appropriate rules to allow increases in the carbon stocks in our existing sustainably managed native forests and plantations, recognising the significant carbon stored in the wood and paper products produced from these forests, and also expanding the total area of our forests through plantation development.

In developing rules for emitting sectors, particularly EITE, the forest industry asks for the Government to carefully consider the impact on Australia's pulp and paper sector. This sector of the industry faces strong competition from overseas producers. Rules that do not recognise the characteristics of this sector and its important links to other parts of the forest industry could result in a significant reduction in competitiveness for the sector, leading to local job losses in paper manufacturing, forest contracting and forest management. This will also make Australia more reliant on imports of paper products sourced from forests that may not be sustainably managed, and will significantly impact on our \$2 billion trade deficit in forest products. In short, our industry's potential contribution to the economic, social and environmental future of Australia will be significantly devalued.

However, provided with the appropriate economic signals through the CPRS and complementary policies, that recognise the unique carbon positive characteristics and the interrelated nature of the forest industry, it is estimated that the forest industry could contribute significantly to the Government's climate change and economic policy objectives and play a greater role in Australia's future including, according to some estimates:

- providing over 81 million tonnes a year or 20 percent of Australia's carbon abatement target by 2020

- generating over \$19 billion of new investment in plantation forests and manufacturing investment across Australia
- creating over 16,000 additional jobs in rural and regional Australia, associated with new investment
- reducing Australia's \$2 billion trade deficit in forest products.

The forest industry recognises the importance of linking Australia's CPRS with international schemes. We applaud the Government's intentions to continue its leadership in international negotiations on rules for the inclusion of forestry activities and carbon in harvested wood products in a post-Kyoto international emissions trading framework and through cooperation with other countries to capture the benefits of sustainable forest management as a major means of avoiding deforestation in developing countries.

While our industry will provide greater detail on these issues through the Green Paper's formal submission process, our areas of interest include the following.

Carbon in wood products – The amount of carbon stored in wood products has been estimated at around 5 Mt Co_{2e} a year. The industry continues to hold a strong position that carbon storage in harvested wood products should be recognised and included from scheme inception.

- The industry acknowledges the Australian Government's intention, as stated in the Green Paper, to influence international rules on carbon in wood products. However, there is an opportunity for Australia to show leadership in including carbon in wood products from scheme inception through the use of existing robust accounting methodology.

Emissions Intensive and Trade Exposed (EITE) – The industry, particularly the pulp and paper sector, has significant concerns with the proposed approach to EITE industries. The approach to emissions-intensive, trade-exposed industries outlined in the Green Paper would have a significant, negative affect on the competitiveness of Australia's pulp and paper manufacturing industry, the 19,000 people employed in the sector, and the communities that are sustained by it.

Reduced competitiveness of Australian pulp and paper manufacturing will result in significant carbon leakage, additional imports, and the prospect of:

- reduced domestic markets for Australia's sustainably derived forest resources resulting in their export with further carbon leakage associated with transportation;
- a reduction in the overall value of the industry and a change in its relative cost structures; and
- decreased direct investment and employment in the pulp and paper sector with decreases in regional and rural economic conditions.

The Industry firmly asserts that to avoid unintended impacts, the structure for EITE funding should be adjusted to:

- alter the proposed emissions-intensity denominator from 'revenue' to a more appropriate and equitable measure such as 'value added'. This would recognise that industries like pulp and paper manufacturing operate on relatively high revenues per tonne of emissions but on very low margins because they are at the end of the value chain; and

- address trade exposure by incorporating at least two levels of trade exposure (trade exposed and highly trade-exposed) to acknowledge the differing levels of threat and ability to pass on increased costs.

Article 3.3 forests (post 1990 reforestation) – These forests already make a considerable contribution (around 20 Mt CO₂e a year) to Australia meeting its Kyoto target. Provided with the appropriate rules, Article 3.3 forests could increase their contribution to Australia’s carbon pollution reduction task significantly. The industry endorses the Green Paper’s position on the inclusion of reforestation from scheme inception with participation on an ‘opt in’ basis.

Addressing the following issues will provide the appropriate signal for the area of Article 3.3 forests to sustainably grow, without perverse outcomes on the industry, other landuses, regional communities or the broader economy:

- recognition of the carbon created by these forests since 1990 to allow transitioning into the CPRS;
- appropriate treatment of future carbon flows in existing post-1989 plantations to ensure that perverse incentives are not created;
- a clear pathway for existing plantation funding models to adapt so they can participate in the scheme;
- efficient carbon accounting methodologies that send appropriate market signals and are adoptable across varying resource scales;
- the ability to incorporate or roll over property rights generated in other schemes such as NSW GGAS;
- option to sell credits generated from forests into overseas markets;
- capping carbon credit obligations at the levels of carbon credits issued for a specific forest; and
- eligibility of measureable carbon sequestered in root mass of coppiced (lignotuberous) tree crops.

The industry recognises the Government’s efforts to increase the practicality of Article 3.3 in the development of a post Kyoto policy framework.

Article 3.4 forests (pre 1990 forests) – Over nine million hectares of Australia’s native forests and over one million hectares of plantation forests could be classified as Article 3.4 forests. These forests presently provide the bulk of wood and wood fibre to Australia’s forest products industry and for export. Government research estimates that these forests are also increasing in carbon stock at over 20 Mt CO₂e a year.

The industry maintains its stated position that Article 3.4 forests (native forests and pre-1990 plantations) should be included from scheme inception, but treated initially as net neutral until finalisation of carbon accounting methodology.

- The development of rules for Article 3.4 forests and the recognition of specific forest management activities within this category should occur as part of the post-Kyoto negotiation process under the UNFCCC.
- The further development of NCAS will also be critical in providing robust carbon accounting and low compliance costs for forest growers.

- Inclusion of these forests would demonstrate Australia’s strong leadership, particularly with developing countries, in comprehensively accounting for emissions and sequestration from all forests.

Bioenergy – The forestry, wood and paper products industry is already a significant generator of renewable energy from harvesting and sawmilling residues and the by-product of pulping processes. It has been estimated that utilisation of wood waste from existing forest harvesting activities could reduce the emissions from fossil fuel based electricity by around 3 Mt CO₂e a year. The industry supports the Green Paper’s proposed treatment of bioenergy and biofuels in the CPRS, particularly given the significant potential for bioenergy production from forest industry residues.

- Maximising this potential will require a consistent national policy and regulatory framework that recognises and allows for the use of all forms of forest residues available for bioenergy.
- We also encourage the Government to make wood-derived bioenergy a priority area for research and deployment of new technology to contribute to energy and fuel security.

Deforestation – The industry endorses the approach contained in the Green paper to exclude deforestation from the CPRS, given Australia’s comprehensive regulatory framework applying to land clearing.

Internationally, deforestation should be viewed as a failure to adequately support and integrate sustainable forest management. In that context, it is important that the CPRS signal to the world that the results of sustainable forest management can be recognised and have value.

Workers and communities – While the Green Paper provides extensive consideration of the potential impacts of the CPRS on various industries, the impacts on the workers and communities which rely on these industries, were not considered. It is imperative to understand the impacts on the industry workforce and related communities if we are to maximise the economic, social and environmental benefits of the CPRS.

The green paper does not adequately recognise that regional and rural communities generally will be less able to adjust to the impacts of the scheme than will urban communities and that a range of more widely applicable measures targeted at regional and rural communities generally are required.

- To address this, the forest industry seeks closer collaboration with the Australian Government to address the potential impacts of the CPRS on specific forestry regions, its workers and communities, as part of the economic modelling inputs into the process.

The industry is keen to ensure that consistent arrangements exist for contractors and businesses operating across the primary production and road transport sectors.

- To this end, the forest industry seeks clarification about the extent of the proposed fuel rebate and how it will apply for forest industry activities such that they are

treated equitably to businesses operating within the fishing and agricultural industries.

Industry is committed to ongoing work with the Government

The Industry remains committed to working with the Government to develop a comprehensive, consistent and minimal risk framework and rule-sets to maximise the carbon benefits from forestry, wood and paper products for Australia domestically and internationally.

We look forward to meeting with you and your officials to discuss these matters further, and welcome any opportunities to provide more information.

Yours sincerely

Signatory Organisations

- Australian Plantation Products and Paper Industry Council (A3P)
- Australian Forest Growers (AFG)
- National Association of Forest Industries (NAFI)
- Treefarm Investment Managers Association (TIMA)
- Timber Communities Australia (TCA)
- Engineered Wood Products Association of Australasia (EWPAA)
- Timber Queensland Ltd (TQ)
- NSW Forest Products Association (NSW FPA)
- Tasmanian Forest Contractors Association (TFCA)

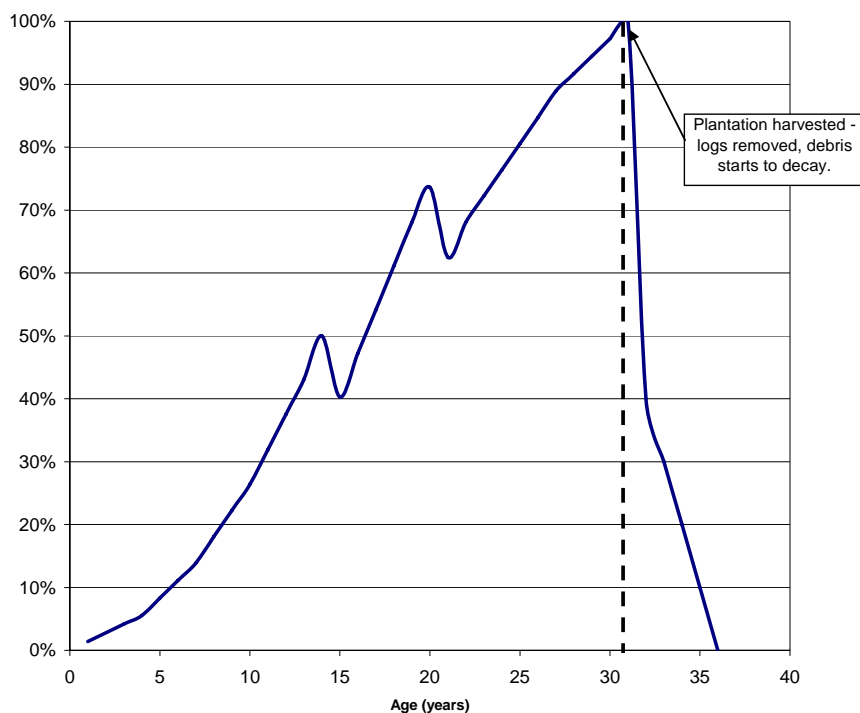
MID-ROTATION PLANTATIONS

This attachment deals with the treatment of plantations that were established after the *eligibility date* but before the *accreditation date* (assuming they are different) – that is, the plantations are already in existence when the scheme commences but are still eligible to participate in the scheme. For ease of reference these will be termed mid-rotation plantations.

BASIC CARBON PROFILE

The basic on-site above-ground carbon profile of a long-rotation production plantation is as shown in Figure 1.

Figure 1 – Carbon profile of single plantation rotation



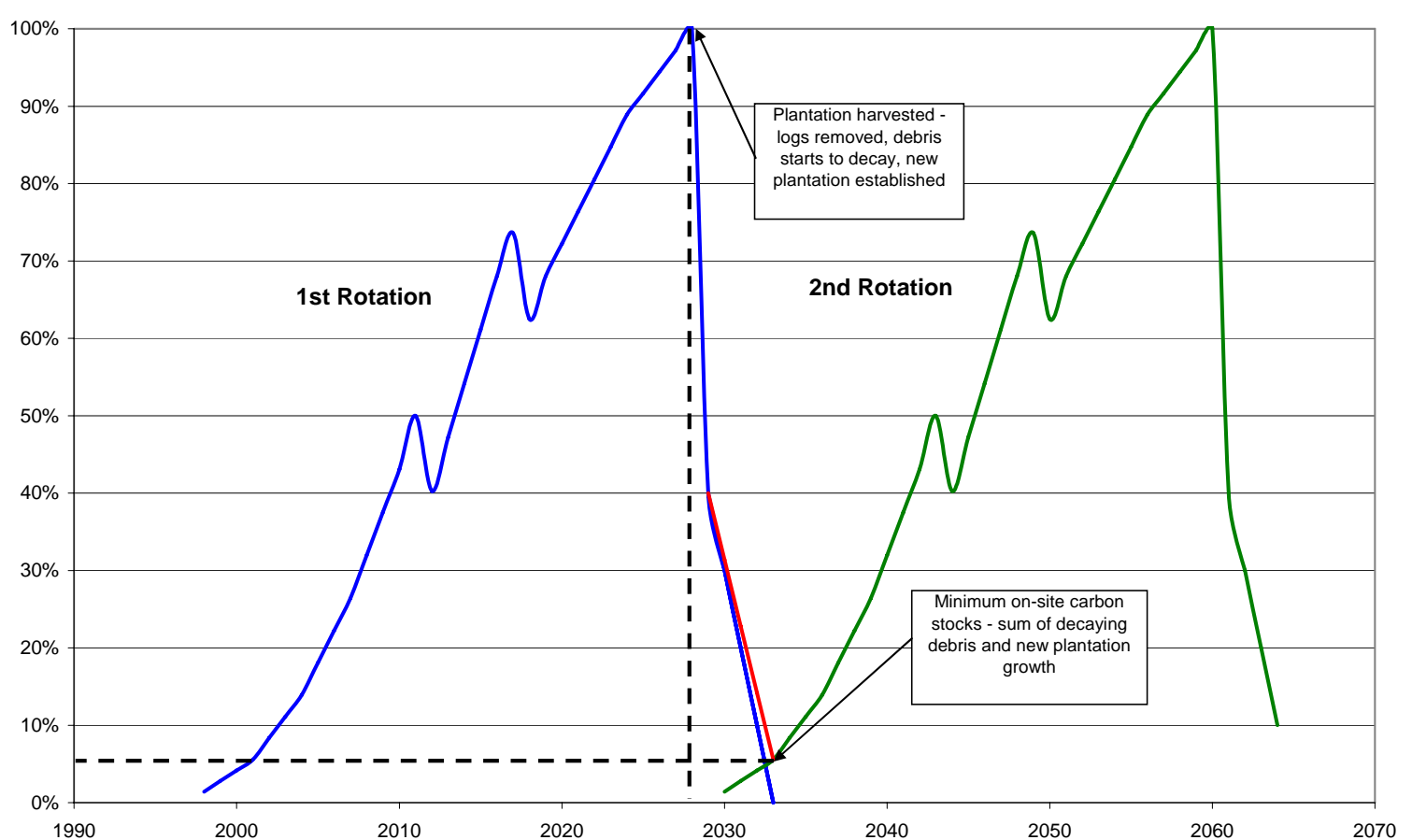
The on-site above-ground carbon storage rises as the plantation grows, declines when thinned, before commencing the final decline at the time of harvest. The decline is not immediate at the time of final harvest. Some carbon is released as the debris decomposes over a number of years.

It is important to note that this profile shows the on-site above-ground carbon stocks. A portion of the decline at each thinning and harvest consists of carbon taken off-site in the form of products (logs that will become paper and timber). This carbon is not a real emission at that time, simply a transfer from 'forest carbon' to 'forest product carbon'. If the carbon that is retained in harvested wood products was taken into account, the stocks would not decline to 0% at the end of the rotation.

CONSECUTIVE PLANTATIONS

In most cases, a harvested plantation is replaced virtually immediately by a new crop. The ability to create permits for carbon in forests greatly increases the incentive for a harvested plantation to be replaced by another crop. This produces a carbon profile of the type shown in Figure 2.

Figure 2 – Carbon profile of consecutive pine plantation rotations



Importantly, in this scenario the on-site carbon stocks do not drop to the pre-forest level. The combination of the logging residue (which decomposes over a number of years) and the new crop (which is growing over the same period) maintain carbon stocks at a level higher than existed prior to the land use change to plantation.

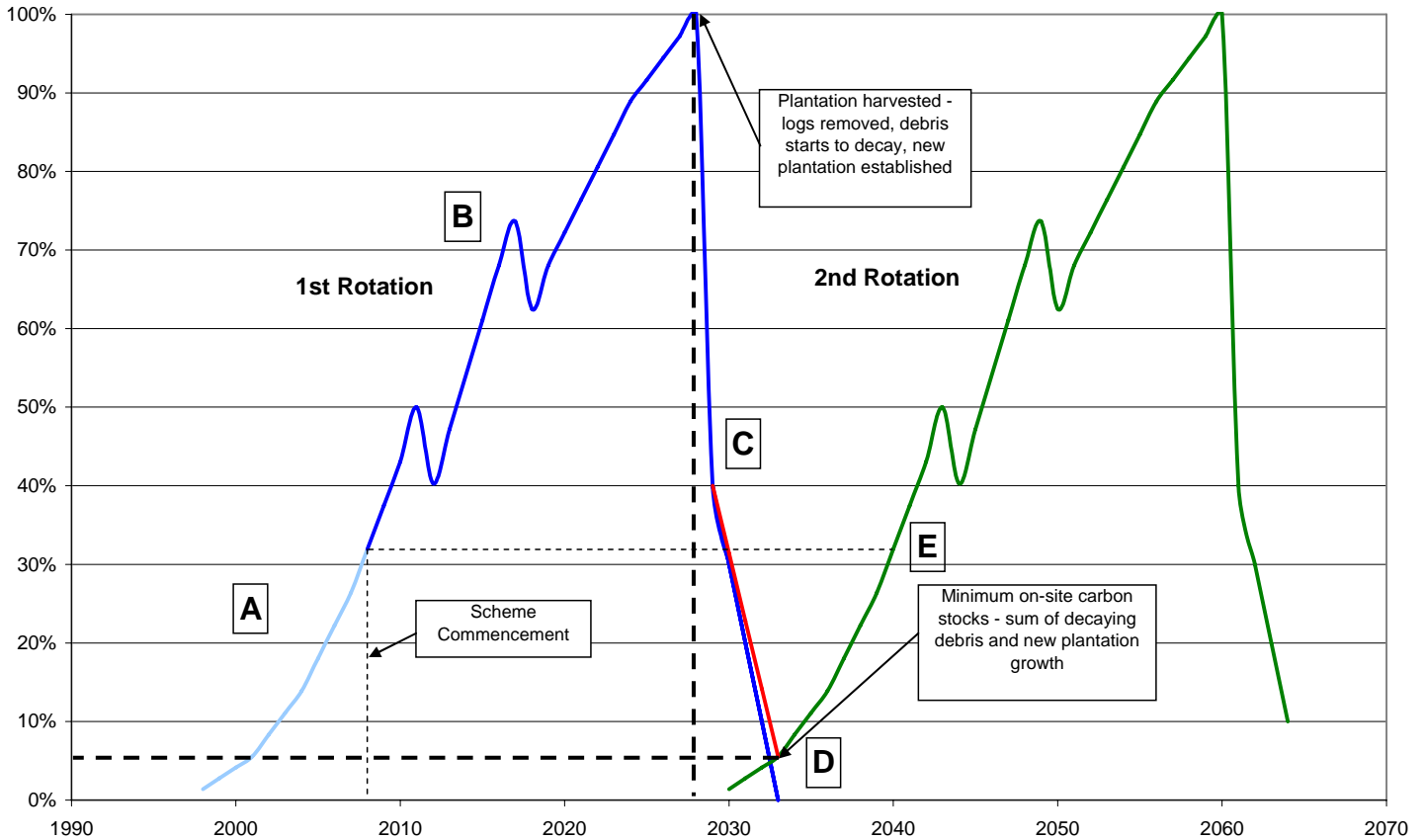
If crops of trees were consistently regrown on the site the carbon stocks would be permanently higher than the pre-forest carbon stocks, even though there would be brief periods where the forest is completely harvested.

The significance of the higher minimum carbon stocks is greatest where the initial plantation is in existence at the time of scheme commencement – a mid rotation plantation.

MID ROTATION PLANTATIONS

In Figure 3, it is assumed that the initial plantation was established after the eligibility date (i.e., the plantation is eligible under the scheme) and the scheme accreditation date is 2008 (after plantation establishment). Therefore only the carbon removed by the plantation after 2008 is eligible to create permits. The plantation is a mid-rotation plantation.

Figure 3 – Carbon storage in consecutive pine plantation rotations



The carbon removed and stored at A in the diagram, before accreditation, would not be eligible to create permits. The carbon stored at B in the diagram, after accreditation, would be eligible to create permits. At C in the diagram the plantation is harvested and a liability created for emissions. In almost all instances of a mid-rotation plantation the losses at final harvest (C), consisting of decomposing residues and carbon transferred to forest products, will be greater than the carbon stored after accreditation (at B).

THE PROBLEM

It is proposed initially that the scheme will operate so that no grower could be liable for emissions of carbon that was stored by their forest but not credited by the scheme (A) (i.e., before the scheme commenced and accreditation) – the harvest sub rule. However the continuation of the harvest sub rule is not certain and even with its application, the grower cannot create more permits in the second rotation until the stocks are higher than at the time of accreditation (E).

As a result of the carbon stocks that remain at D not being credited and the inability to create further permits until the stocks exceed the accreditation level (E), a grower would have a perverse incentive to establish a new plantation on a different site in preference to a subsequent plantation on the same site. They would get credit for all the carbon stored in the new crop not just the amount exceeding D (or just the amount exceeding A, depending on the rules).

There is no greenhouse, environmental or economic logic to this perverse outcome.

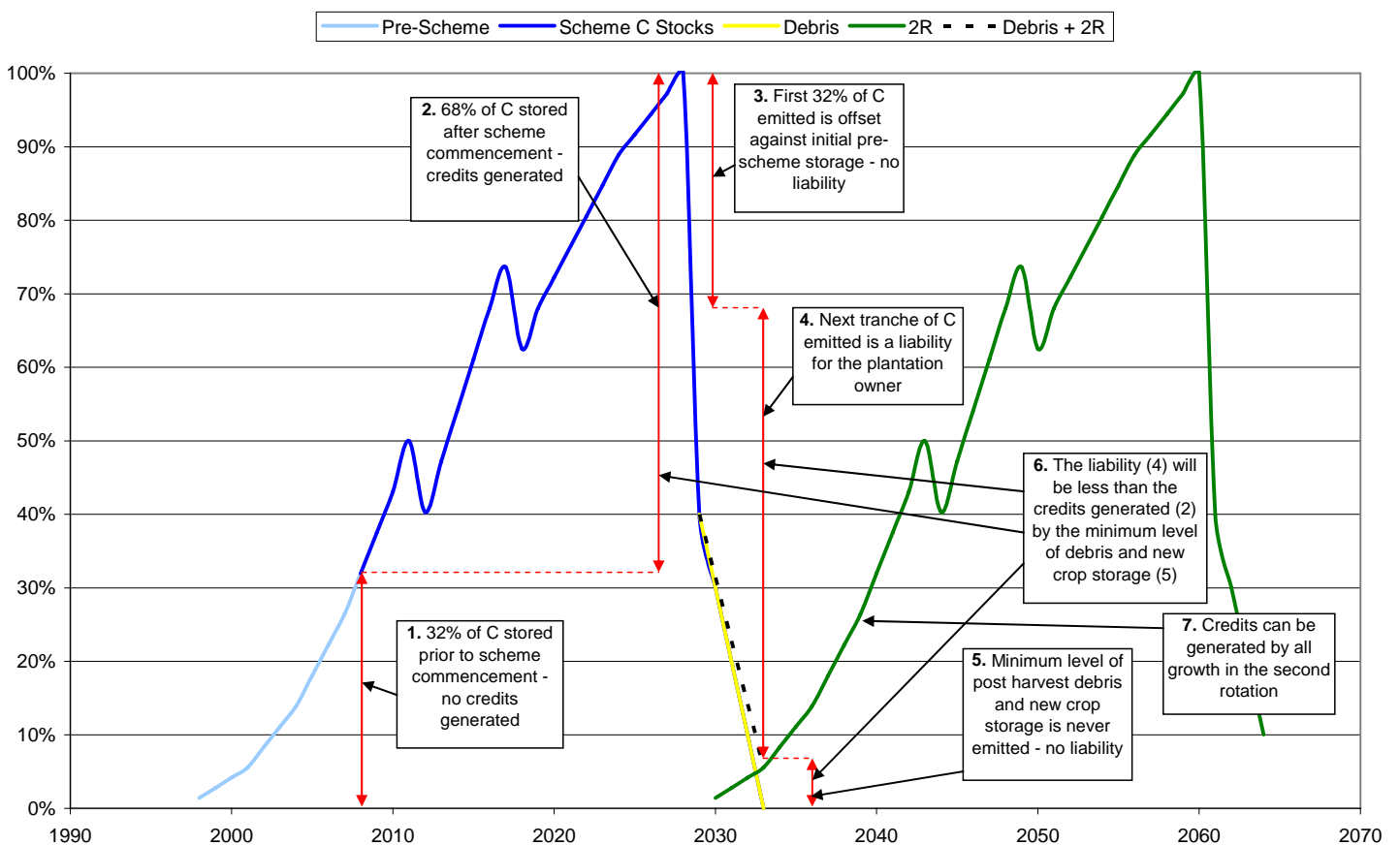
This level of uncredited carbon will be of substantial interest over a larger plantation estate and represents the real long-term increases in carbon stocks arising out of a change from agriculture to production plantations since 1990.

SOLUTION

The solution to this issue is relatively straightforward - at the time of harvest, the initial emissions should be offset against the initial un-credited storage – *the first emissions are offset against the first storage*.

Figure 4 is same carbon profile as Figure 3 with the method explained (the numbers in the explanation below match Figure 4).

Figure 4 – Carbon accounting for consecutive pine plantation rotations



1. The carbon stored prior to accreditation (in this case 32%) does not create permits under the scheme.
2. The carbon stored after accreditation (in this case 68%) can create permits.
3. At the time of final harvest, the first (in this case 32%) emissions are offset against the initial pre-accreditation storage and no liability is generated.
4. The next tranche of emissions are a liability to the forest owner and are analogous to the permits created.
5. The minimum level of 'additional' carbon on-site is never emitted and therefore creates no liability. This minimum level is the lowest point to which the sum of the post harvest debris carbon stocks and the new plantation carbon stock fall.
6. In all cases, the liability (point 4 above) will be less than the permits created (point 2 above) by the minimum on-site carbon stocks (Point 5 above). That is, the grower receives credit for the higher carbon stocks of a plantation in transition from one rotation to the next compared to the pre-existing carbon stocks. In effect, the grower receives a long term benefit only for the long term minimum level of additional carbon compared to the baseline.
7. Permits can then be created for all growth in the second rotation which represents a real increase in carbon storage over the pre-reforestation level.

This long-term benefit encourages the grower to maintain the land as plantation rather than harvest and move to another site (for no net carbon benefit).

This method reflects the actual flow of carbon and provides credit to the grower only for the amount of carbon stored and only for the time it is stored. It does not require any greater level of data or information than normal forest inventory and carbon storage monitoring.