

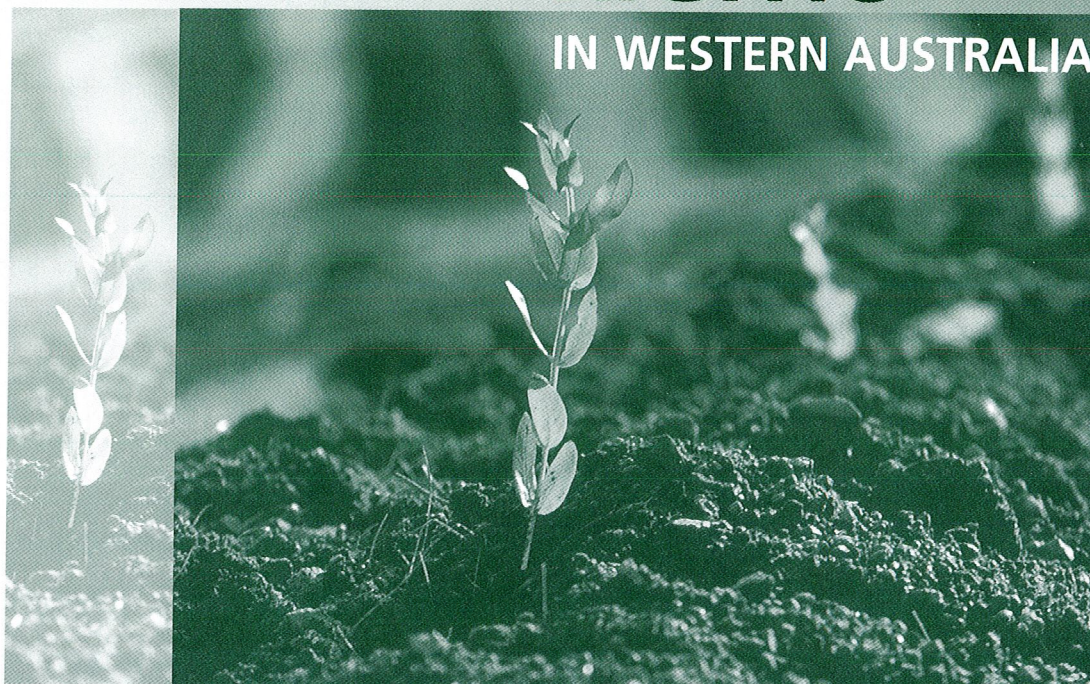
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CARBON RIGHTS

IN WESTERN AUSTRALIA



International efforts to reduce Greenhouse gas emissions, and therefore their impact on our climate, have created a new product: carbon.

Carbon dioxide occurs naturally, but its concentration in the atmosphere has increased because of human activities, especially burning fossil fuels.

Plants convert carbon dioxide and water into simple sugars through photosynthesis—growing more trees, revegetating cleared areas and improving the vigour of degraded vegetation will take carbon dioxide out of the atmosphere. This is known as carbon sequestration, and it creates carbon sinks.

Establishing new forests and other vegetation will also help fight salinity, protect biodiversity and facilitate new rural industries.

It is important to clarify several issues: who has the rights to the carbon stored in plants, how can these rights be protected, and how can they be transferred?

This discussion paper, prepared by Western Australia's Carbon Rights Taskforce, outlines the main features of proposed carbon rights legislation, for public comment (see back page).



Protecting carbon rights

The Western Australian Government is developing legislation to provide statutory recognition of carbon rights. This legislation will provide for:

- statutory recognition of rights arising from the benefit of carbon sequestration, or storing carbon, in forests, vegetation or soils resulting from changes in how land is managed;
- registering those rights through the land titles system;
- administrative procedures for accounting for carbon sequestration; and
- accrediting auditors to verify carbon accounting methods and carbon sequestration measurements and projections.

By supporting revegetation and other land management activities, carbon rights will:

- contribute to reducing Greenhouse gas emissions;
- rehabilitate degraded land;
- protect biodiversity; and
- generate new rural activities and opportunities.

These benefits will combine to support new regional industries, helping our rural communities to become more sustainable.

The Greenhouse challenge

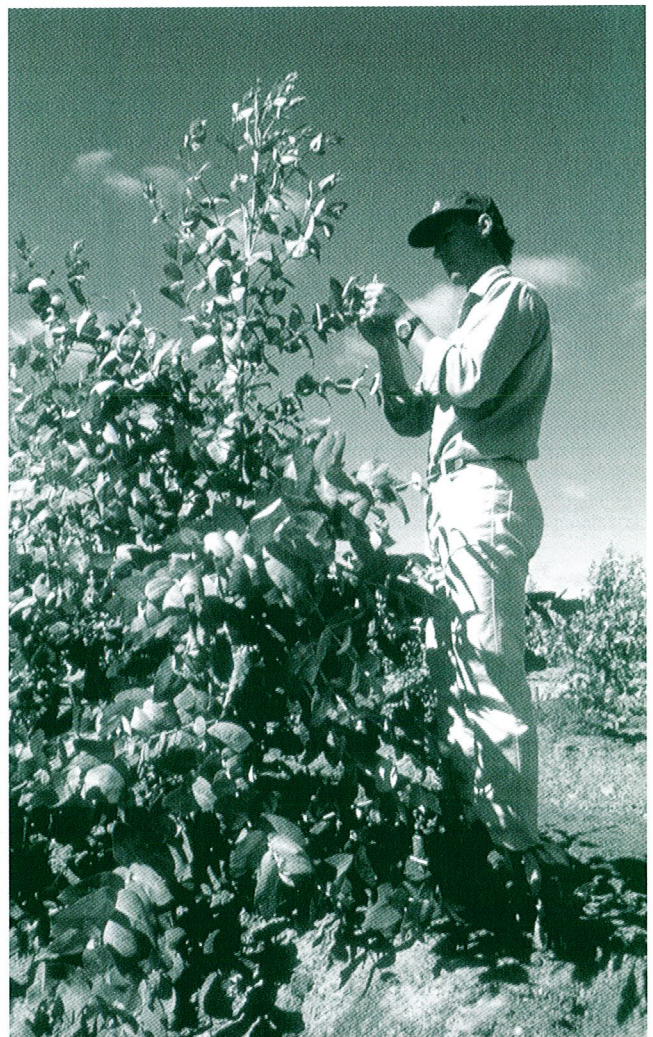
The Greenhouse Effect is generating a global challenge. Developed nations are challenged to limit their net Greenhouse gas emissions while maintaining acceptable standards of living. Developing nations are challenged to raise the living standards of their citizens in ways that do not generate excessive levels of Greenhouse gas emissions.

All parts of the world are increasingly challenged by emerging and projected changes to global and regional climate and weather patterns, and rising sea levels.

Recent reports about Greenhouse impacts on Australia¹ and Western Australia have highlighted some of the impacts we are likely to face:

- temperature increases up to six degrees Celcius within 70 years;
- reduced winter and spring rainfall in the south-west;
- increased storm and tropical cyclone intensity;
- coastal flooding.

These impacts will directly affect our biodiversity, primary industries, infrastructure, communities and health. We will also be indirectly impacted by climate changes in other parts of the world.



¹ Climate Change in Australia, CSIRO, 2001.

The Kyoto Protocol

The international agreement known as the Kyoto Protocol requires developed nations to reduce their net Greenhouse gas emissions. It also commits us to working with developing nations to limit their net Greenhouse gas emissions, often through projects involving carbon sequestration. The Kyoto Protocol recognises that developed nations emit the majority of global Greenhouse gas emissions and that they emit far more Greenhouse gases per capita than developing nations.

Under the Kyoto Protocol developed nations agreed to reduce their collective greenhouse gas emissions by at least five per cent of their 1990 levels during the first commitment period (2008-2012). Each developed nation agreed to a specific target reflecting its particular national circumstances.

Australia's target under the Kyoto Protocol requires it to limit the growth of its emissions to eight per cent above 1990 levels by 2008-2012. This recognises that Australia's exports are energy intensive, its population is increasing, its cities are widely separated and its land use patterns are still undergoing significant change. The National Greenhouse Strategy (1998) provides the strategic framework for advancing Australia's domestic greenhouse response.

There are no State targets for Greenhouse gas emission levels. However, Western Australia must play its part in addressing this global issue and in Australia meeting its commitments.

Australia's Greenhouse gas emissions increased by 17 per cent between 1990 and 1999, not including emissions from land clearing. Western Australia's emissions increased 16 per cent between 1990 and 1995.

We clearly face a major challenge to meet our international commitments. Carbon sequestration

offers one way by which Australia and Western Australia can reduce net Greenhouse gas emissions.

Meeting the Greenhouse challenge

Global action is required to limit net Greenhouse gas emissions.

Western Australia generates a very small part of the world's total Greenhouse gas emissions. But because of our lifestyle, huge land mass and energy intensive industry base, we have very high Greenhouse gas emissions per capita.

As a major energy producing region in a developed nation, Western Australia has a particularly complex challenge. We need to use our energy resources in a way which is efficient in the global context, but does not contravene our commitment to the Kyoto Protocol.

These Greenhouse gas emissions can be countered to some extent by increasing the carbon sequestered in plants in Western Australia, in forests, farmlands and rangelands. In this way we can gain the environmental benefits of revegetation while limiting our contribution to the Greenhouse Effect.



Carbon sequestration and the Kyoto Protocol

The Kyoto Protocol explicitly recognises the capacity for carbon sequestration to limit the growth of Greenhouse gas emissions below levels that would otherwise occur.

Article 3.3 of the Protocol provides that carbon sequestered as a result of certain forestry developments can be credited against a nation's Greenhouse gas emissions. Article 3.4 provides that carbon sequestered by other land management activities, such as revegetation or changed agricultural practices, might also be credited.

While there is broad international agreement that carbon sequestration is a legitimate means for a nation to reduce its net Greenhouse gas emissions, there is ongoing debate about some aspects of how this is to occur. This is one of the major issues that upcoming meetings about the Kyoto Protocol will address.

However, even before international agreement is achieved, a scientifically credible statutory property regime would help attract investment in carbon storage to Western Australia.

Measuring carbon sequestration

Carbon sequestration may be a temporary means of reducing net Greenhouse gas emissions. For instance, a single plantation may sequester carbon for only 10, 20 or 30 years, after which it is harvested, the produce is used and some of the carbon released.

Even temporary sequestration is valuable because it reduces Greenhouse gas concentrations and any resulting global warming that the sequestered carbon dioxide might otherwise have caused. This gives us time to develop and implement other options for reducing atmospheric Greenhouse gas emissions.

However, an ongoing plantation program or other land management activity that involves continual vegetation growth will produce sustainable carbon sequestration. This type of activity offers a "once off" carbon sequestration benefit which endures as long as harvesting is balanced by replanting and growth.

In addition, some of the carbon stored in plants will not be released on harvesting. Some carbon would be stored in products such as paper, furniture or buildings, and roots and other material will remain in the soil after harvesting.

There are also benefits where the harvested timber is used instead of materials that require energy to produce, such as steel and other metals. Where plantation materials are used to generate electricity as substitutes for fossil fuels there are further reductions in the Greenhouse gas emissions that would otherwise occur.



Carbon rights legislation in Western Australia

Carbon rights legislation will provide investors with greater security over the carbon value of their investment and plantation managers and land owners with a legal framework for allocating or sharing financial benefits from carbon sinks.

Objective

To encourage land use, land use change and forestry activities which sequester carbon as anticipated by Articles 3.3, 3.4, 7 and 8 of the Kyoto Protocol and so contribute to meeting Australia's Greenhouse obligations under the United Nations Framework Convention on Climate Change.

Purposes

- to provide for rights to the benefit of carbon sequestered by land use, land use change and forestry activities;
- to provide for registration of rights and covenants;
- to provide a power to develop administrative procedures for carbon accounting; and
- to provide for the accreditation of auditors to verify carbon accounting methods and carbon sequestration measurements and projections.

Trading carbon rights

Domestic trading in carbon rights will be possible under contract between parties, and ownership of the rights can be registered against the title of the land on which they are located. Once the international and Commonwealth systems are established, carbon rights may be linked to carbon credits and Australia's assigned emission limit.

Certification and verification

The legislation will enable Government to establish a framework for certifying and verifying carbon sequestration, for establishing covenants to ensure that the sequestered carbon is available at some time in the future, and for establishing comprehensive accounting rules.

Liability issues

Liability arising from carbon sequestration activities and trade in carbon rights will be between the parties concerned.



Reasons for carbon rights legislation

Why create carbon rights?

Carbon rights legislation in Western Australia is being established to encourage carbon storage without incurring financial or cost liabilities for Government.

What is the difference between carbon rights and carbon credits?

Carbon rights are the rights arising from the storage of carbon in plants or soils as a result of changes to land management practices. Carbon rights could be converted to carbon credits once an international agreement were ratified by the Australian Government, and a Commonwealth Greenhouse emission permit system and an international trading regime were established.

How can permanent carbon storage be guaranteed?

"Carbon covenants" will enable a purchaser of carbon rights to make a binding agreement with a land owner to ensure that the use and management of the land on which the carbon is stored does not result in the loss of the stored carbon. In this way, land owners who sell carbon rights may be restricted thereafter from using their land in certain ways.

How can we be sure about the amount of carbon that has been stored?

There will always be some level of uncertainty about the amount of carbon stored on a parcel of land. Carbon trading schemes will take account of this uncertainty by discounting the value of highly uncertain carbon storage situations. However, clearly specified accounting rules which scientifically define how the carbon located on a parcel of land is to be measured can improve the certainty of carbon storage to the benefit of carbon sellers and buyers as well as the community more broadly. By using the accounting rules to determine the baseline carbon storage, that is the carbon stored on the land before forest planting or land use change, and the carbon stored after land management actions have

occurred, both buyer and seller can gain confidence about the amount of carbon that is available for trading.

The accounting rules will also establish that the carbon stored is additional to natural processes or attributable to human action, and the carbon stored in one location has not merely resulted from increased emissions in other areas. The rules will be verified by the Western Australian Government, but measurements will be the responsibilities of the parties concerned.

Why create carbon rights now?

Several other States have already created carbon rights legislation covering forests. As investors desire to minimise the unnecessary risks they face, Western Australia is already at a competitive disadvantage in terms of forestry investment. This legislation will overcome that disadvantage and position Western Australia to attract investment in schemes that will help reduce the State's Greenhouse gas emissions and help overcome land degradation and protect biodiversity.



Carbon sequestration and rights as a global trend

Australia is a world leader in recognising the values of carbon sequestration in reducing net Greenhouse gas emissions.

In 1999, Western Australia established a pilot study with British Petroleum (BP) to explore the feasibility and management of tree plantations for carbon sequestration as well as landcare and biodiversity. The plantations are being established on farmlands in partnership with farmers.

This project builds on Western Australia's Tree Crops on Farms program, established in 1986, under which 170,000 hectares of tree crops have been established by Government and the private sector. These tree crops could sequester up to one billion tonnes of carbon dioxide emissions over the coming 30 to 40 years.

Afforestation and reforestation carbon offsets could be more cost effective for Western Australia than international carbon trading.

New South Wales and Victoria have already enacted legislation which provides statutory recognition of rights to sequestered carbon.

The New South Wales legislation, which was enacted in 1998, provides for a carbon sequestration right apart from the existing forestry right to the harvesting of trees. The State Forestry agency of New South Wales has contracted with Tokyo Electric Power Company to sequester carbon in a "planted forest estate" amounting to between 10,000 and 40,000 hectares over the life of the agreement.

While much forestry legislation declares broad benefits of afforestation or reforestation, including environmental protection, biodiversity maintenance, and water quality protection, there are few other examples of statutory regimes specifically established to recognise rights arising from carbon sequestration. However, several places have recognised carbon sequestration rights through contracts or other means.

For instance, Costa Rica has signed Greenhouse bilateral agreements with the USA, Norway, Switzerland, Finland, the Netherlands, and Mexico in which a tradable security, known variously as a Greenhouse Gas Mitigation Certificate or a Certifiable Tradable Offset (CTO) is granted to forestry project supporters. The CTO is independently verifiable and meets international technical and procedural requirements. Similarly, Oregon's Forest Resource Trust has received \$1.5 million from the Klamath Co-generation Project, a natural gas-fired electricity and steam generation plant, to improve the productivity of 970 hectares of under producing non-industrial private forests. This project will accrue 1.16 million metric tons of carbon dioxide emission offsets over a 100-year period.

Conclusion

Carbon sequestration will enable Western Australia to reduce its Greenhouse gas emissions significantly over the coming 20 to 30 years. During this time, the State has an opportunity to establish and implement a strategy to limit our emissions through other means, including energy conservation and alternative fuel use.

The land use, land use change and forestry activities which will deliver carbon sequestration will significantly help our efforts to overcome rural land degradation and protect our biodiversity. They will also help develop alternative rural industries. All of these benefits will improve the sustainability of our rural communities.

Carbon rights legislation is an essential basis for promoting carbon sequestration. This legislation will lead Australia in its application to a broad range of land management activities.

This discussion paper has been produced by the
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