SUBMISSION ON GREEN OFFSETS FOR SUSTAINABLE DEVELOPMENT CONCEPT PAPER

Peak Environment Non-Government Organisations, July 2002

Contents

1. Introduction

The NSW Government agrees that "..the concept of Ecologically Sustainable Development should be used by all levels of government in the assessment of natural resources, land use decisions and approval processes" (Inter-Governmental Agreement on the Environment 1992). The title of the introductory paragraph to the Concept Paper (EPA 2002), which places the Pollution Offset Scheme within the larger context, should therefore be strengthened to "The NSW Government **requires** sustainable development", rather than 'encourages'. This then provides the philosophical underpinning for the following proposal and its outcomes.

The principles of Ecologically Sustainable Development (ESD), as defined in the Protection of the Environment Administration Act 1991, provide the tools against which to benchmark any new or existing planning schemes, and should be incorporated into the ideas for the proposed pollution offset scheme.

a) Precautionary Principle – "lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation"

b) Intergenerational Equity – "the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations"

c) Conservation - "Conservation of biological diversity and ecological integrity should be a fundamental consideration"

d) Improved valuation pricing and incentive mechanisms – "environmental factors should be included in the valuation of assets and services"

2. Opposition to Offset Schemes

Environmental offset schemes could include those for water, air and land pollution, land degradation and ecosystem destruction. Damage to particular ecosystems, such as wetlands, has been offset through informal mitigation or compensation in NSW under the Environmental Planning and Assessment Act, the Native Vegetation Conservation Act, the National Parks and Wildlife Act, the Fisheries Management Act and State Environmental Planning Policy 14 – Coastal Wetlands.

The Peak Environment Non-Government Organisations have previously expressed their opposition to the use of offset schemes, in their submission on the first draft of the Sydney Drinking Water Catchment Regional Plan. In addition, the Nature Conservation Council (NCC) provided a submission to the Department of Land and Water Conservation's discussion paper on Offsets, Salinity and Native Vegetation (NCC 2001). In their submission, the NCC argues that the proposed scheme does not promote sustainable agriculture, changes in behaviour and resource use, or the avoidance of clearing. It does not prevent inappropriate clearing or result in reversing the long-term decline in Australia's native vegetation, as required under the Commonwealth/New South Wales Partnership Agreement under the Natural Heritage Trust of Australia Act 1997 (Commonwealth of Australia 1997). The scheme was found by NCC to be inconsistent with the principles of ESD and was not able to be monitored sufficiently within the present levels of scientific knowledge, data availability or government resourcing.

The Peak Environment Non-Government Organisations' (PENGOs) are opposed to the introduction of offset schemes. Reasons for our opposition include:

2.1 Scheme is driven by environmental damage

The schemes use habitat destruction or pollution of the environment as a 'driver' for environmental conservation and improvement (NCC 2000). The PENGOs do not accept that this will lead to positive environmental protection and the reversal of environmental degradation. We believe that a more positive approach to development control is needed which is driven by the needs of environmental protection, along with the development of alternative economic activities which recognise that conservation is an '*investment in natural capital, which underwrites material wealth*' (Natural Resource Management Ministerial Council 2001).

Market incentives are needed which encourage the use of 'best practice' management, research and development of innovative methods which will prevent environmental damage and pollution at the early stages of planning.

2.2 A public responsibility

The schemes attempt to transfer responsibility for environmental protection and improvement from the public to the private sectors. The principle of Intergenerational Equity applies to the environmental debt inherited by the present generation of Australians from previous generations. The Australian public, as a whole, continues to reap economic and social benefit from past management practices and the unsustainable use of our natural resource capital. Therefore it is primarily a public responsibility to pay off the existing

environmental debt. However, we also recognise that a partnership approach is essential, between government, community, landowners and industry.

2.3 On-going support

High levels of ongoing, long-term political and administrative commitment are needed for the scheme's regulation, coordination, management and monitoring. Without this guaranteed political commitment and capability, the schemes' implementation cannot be secure.

The Committee on Mitigating Wetlands Losses (2001) and Environmental Defense (1999) have found that the levels of monitoring and the available data were inadequate to ensure the success of mitigation projects.

2.4 Complexity and lack of knowledge

The complexity of implementing and monitoring schemes requires large amounts of resources, information and scientific knowledge, much of which is not yet available (Chapman and Underwood 2000, Committee on Mitigating Wetlands Losses 2001). The PENGOs believe that such resources would be better used for direct conservation and rehabilitation purposes.

Under the Precautionary Principle we are advised to prevent activities which degrade the environment when there is a lack of scientific knowledge or understanding. There is a particular lack of understanding regarding the full range of intrinsic and other values of ecosystems.

2.5 Inadequacy of constructed habitats

Man-made systems do not provide the levels of habitat function, stability and diversity of natural ecosystems (Ambrose 2000, NSW State Wetlands Advisory Committee 2002), and some wetland types cannot be effectively restored with present knowledge (Committee on Mitigating Wetland Losses 2001). It is almost impossible to recreate the geological and hydrological structural conditions of the original site, and existing projects have often not attempted to do so.

Wetland offsetting projects in the USA have shown very poor results in the quantity and quality of mitigation (Environmental Defense 1999, Ambrose 2000, Committee on Mitigating Wetland Losses 2001). Cuperus et al (2001) also state that international compensation projects seldom meet the set objectives. DLWC (2000) state that revegetation projects 'could only be considered to lead to low quality vegetation'.

2.6 High failure rate reported

Reports on overseas schemes show a high failure rate. Follow-up studies on wetland mitigation schemes in the United States of America found that implementation and compliance with conditions fell well short of the requirements (Ambrose 2000). Environmental Defense (1999) found that many of the projects did not carry out the required mitigation, that the overall areas of wetlands to be created fell well short of that required for the projects, the majority of projects had very poor maintenance and monitoring levels, and that very few had long-term management plans. In addition, it was found that '*most towns are not systematically tracking the progress of replication*

projects and determining if they are in compliance with the regulations' (ibid, p7).

2.7 Inaccuracy

There are inherent inaccuracies in comparing predicted pollution rates over the lifetime of a project with the long-term effects of mitigating actions. In some cases it may be possible to predict the long-term rates of production of specific pollutants.

2.8 Potential for misuse

There is great potential for the misuse of trading or banking schemes. This has been demonstrated in the Wollongong 'fair trading' scheme for sensitive lands in the Illawarra Escarpment (Office of the Commissioners of Inquiry 1999).

3. Mitigation of the Effects of Offset Schemes

If the NSW government is intent on pursuing the introduction of offset schemes, the Peak Environment Non-Government Organisations ask that the following be incorporated into any scheme. The ESD principle justifying each item follows in brackets.

3.1 Offsetting as a last resort

The US National Environmental Policy Act regulations defines mitigation as: '*a - avoiding the impact, b – minimising the impact, c – rectifying the impact, d – reducing or eliminating the impact, e – compensating for the impact'* (Ambrose 2000). We believe that, should offset schemes be introduced, they should be seen only as a last resort. The proponent must provide a statement of justification for the environmental damage or pollution which includes a full costing of environmental, social and economic factors of impacts and of the comparative offsets. [**principle a**]

'Social or economic imperatives' (NSW Government 1996) are used as parameters for allowable damage to wetlands in the NSW Wetlands Management Policy. Where social or economic imperatives are used as a threshold for allowable environmental damage, the imperatives must be defined to provide consistency and to avoid changes due to political processes.

3.2 Offsetting to be additional to duty of care

The protection or enhancement of natural areas, through fencing or including in a conservation agreement or conservation reserve, should not be used as an offset for land clearing, but be undertaken separately from damaging activities, otherwise there is a net loss of natural areas. [**principle c**]

Positive vegetation management, or best practice, is an integral part of a landowner's duty of care (Natural Resource Management Ministerial Council 2001) rather than something to be traded for further land degradation. The Queensland Government (2002) describes a landowner's duty of care as including '*sustainable natural resource use'* and '*conservation of biological diversity*'.

The Peak Environment Non-Government Organisations believe that public assistance may be provided in implementing duty of care, but not as a trade-off for damaging activities. The concept of providing trading benefits for good land management assumes that presently accepted, normal land management practices will result in a net loss of natural resource value; that is, that the practices and land use are unsustainable and therefore, unsuitable. Market incentives should apply only to land-holders who carry out management practices above and beyond the duty of care, and disincentives should apply for practices which do not meet the duty of care.

The use of public funds and voluntary community labour, such as in Natural Heritage Bushcare projects, should not be used as an offset against land clearing for private gain.

3.3 Full costing of the development impact

All environmental effects of the activity must be accounted for, including those of all ecosystem values to be lost, biodiversity, habitat isolation and including offsite impacts such as on ground-water, catchment hydrology, salinity, resource use, waste generation and air quality. The period of the impact includes the length of time of the polluting activity, and the permanent effect of habitat destruction.

DLWC (2000) and others advise that the measurement of the full range of biodiversity values is difficult and that we have as yet a poor understanding of complex ecological relationships. Areas of high conservation value must never be damaged, because of the high risk of incorrect valuation, and their increasing value over time due to the present state of decline of natural areas. [**principles a & d**]

3.4 Full costing of the offset

Offsets for the loss of ecosystems must take into account the full, long-term environmental costs of re-creating a similar ecosystem – including propagation of locally-sourced plants, use of locally-sourced materials and long-term maintenance until the system has reached the levels of biodiversity and stability of the original ecosystem. [**principle d**]

3.5 Precautionary ratio

The risk of failure of compensatory actions is high (2.6), therefore a ratio must be used which reflects the degree of risk (NSW State Wetland Advisory Committee 2002). *'The occurrence of impacts that cannot yet be quantified implies a strong need to apply compensation ratios greater than 1'* (Cuperus *et al* 2001). The salinity offset pilot scheme recommended by the Salinity Experts Group (2000) emphasises the need to 'more than offset' the adverse actions.

The default ratio of offset activity to polluting/degrading activity should be set at a minimum, of 10:1, as suggested in DUAP (2000), in order to ensure that '*..real and enduring improvements to water quality are made, and the neutral or beneficial effect requirement of the Sydney Water Catchment Management Act is satisfied'* and that the aim of '*..net catchment improvement..*' is met. In

addition, the minimum 10:1 ratio adds a multiplier to provide security for unknown and unvalued impacts. [**principles a, b and c**]

3.6 Offsets for maximum predicted impact

Where there is to be an expected variation in the production of pollutants over time, any offset should compensate for the maximum predicted rate of pollution. [**principle a**]

3.7 Scientific basis for compensation activity

Many mitigation projects have been found to be poorly designed and implemented and lacking in sound expert advice (Chapman and Underwood 2000, Committee on Mitigating Wetland Losses 2001). Where ecosystem construction or other environmental mitigation measure is to be undertaken, there must be a strong, scientifically-based justification for the design, construction and maintenance components. [**principle a and c**] A suitably qualified, independent expert panel is necessary to assess and approve the scientific case for the offset.

3.8 Sufficient monitoring and compliance capability

The administering body must be provided with sufficient staffing, skills and resources to carry out ongoing, long-term monitoring of the scheme and each individual offset project. [**principles a & d**] The Salinity Experts Group (2000) states that '*inadequate enforcement could undermine the achievability of targets*'. Gibbons *et al* (2002) also emphasise the importance of including a compulsory monitoring component in any offset scheme. The monitoring process must be shown to be independent and transparent.

It is essential that data obtained from monitoring is used, not only to ensure compliance, but also to ensure that the offset scheme is meeting the desired environmental objectives.

3.9 Like-for-like

Any offset must be of the same nature as the pollutant or environmental degradation produced by the development, in order to ensure quantifiable and comparable mitigation of effects. [**principle a**] Where existing pollution licences come up for review, suitable offsets should be incorporated into future licence conditions.

3.10 Damage/offset proximity

Any offset must be within the same locality as the pollution or environmental degradation, to ensure that mitigation effects are expressed in the same sub-catchment and localised habitat. *"A green offset is action taken outside a development site (but near to it)..*" (EPA 2002, p3). This also provides a precautionary restraint on damage, based on the limits of the particular sub-catchment or locality, rather than the identified limits within the broader landscape or region. [**principles a & b**]

3.11 Offset completed prior to development

Any offset activity must be completed, and audited as complying, before the polluting or degrading activity begins, in order to ensure that there is no period

of reduced environmental value. Where the pollution occurs before the offset the result is a net loss of environmental value. [**principle c**]

3.12 RAP actions required

Any offsets must not be traded against Sydney drinking water catchment needs as identified within Rectification Action Plans. These RAPs should be prioritised and implemented separately in order to mitigate existing environmental damage (2.2). [**principle b & c**]

3.13 Bottom line restrictions on development

Any offsets must not be used to approve developments which are otherwise restricted through state or local planning instruments. This would result in a net loss of environmental integrity. [**principles b & c**]

4. Secondary Offset Schemes

These include schemes such as pollution credit banking, mitigation banking, conservation banking, contribution funds and third party mitigation banking. High rates of failure of these schemes have been identified in international studies (Environmental Defense 1999).

Monetary compensation alone for environmental damage should not be accepted as it may not reflect the merit of a development but only the ability of a proponent to pay (NSW State Wetland Advisory Committee 2002).

4.1 Justification required

If secondary schemes are to be accepted, guidelines must be developed for the thresholds of social and economic benefit which will apply before they are considered to be justified (Cuperus et al 2001). The proponent must supply full justification for reaching the thresholds.

4.2 Regulation required

Any mitigation banking scheme must be controlled by state-wide policy and legislation, to ensure security and consistency in implementation. An overarching federal policy on the use of these schemes is preferable. Where informal schemes are presently in use, these should be restricted, under the precautionary principle, until there is a formal, state-wide mechanism in place.

4.3 Treated as in-kind compensation schemes

Secondary offsets schemes must be managed under the same conditions as in 3, above.

4.4 Funds to be quarantined

Any funds accepted under a contributions scheme must be clearly targeted and quarantined. They must not be used for core governmental business, public responsibility for rectification actions or activities expected under a landowner's duty of care.

4.5 Bundling to be justified

Mitigation schemes which 'bundle' compensatory ecosystems together must have strong scientific justification for the possible loss of green corridors, site-

specific habitats, loss of ecosystem diversity or representativeness of ecosystems.

4.6 No incentives for poor land management

Any such scheme must ensure that there is no incentive for landowners to allow degradation of the natural values of their land through poor management, in order to claim offset improvements through later protection or restoration.

There should be no incentives for landowners to devalue the environmental value of the land to allow for clearing.

4.7 No incentives for speculative land trading

There should be no incentive for landowners to purchase environmentally sensitive land for the purpose of trading for development approvals in otherwise restricted areas.

5. The Concept Paper (EPA 2002)

5.1 Environmental objectives

The example of the Hunter River Salinity Trading Scheme (p2) is laudable, but does not directly relate to the present proposal, in that there is no pollution offsetting. This scheme does, however, indicate the positive results obtained from setting a maximum pollution capacity for the river catchment and then devising the fairest method of allocating tradeable pollution rights.

The Peak Environment Non-Government Organisations support whole-heartedly the setting of a carrying capacity for land and water as a starting point for future planning decisions. The effectiveness of any market-based methodology, such as offsets, can only be verified through the prior delineation of clear environmental objectives at the local and regional levels (Gibbons *et al* 2002).

5.2 'Cost-effectiveness'

Principles of offsets (p4), 1st point - The concept of cost-effectiveness is used throughout the document. It is a rubbery concept which needs definition to ensure that it includes the full measure of environmental, social and economic costs, and not just the costs incurred by the proponent. The definition needs to include an agreed threshold of effectiveness which is based on environmental need and which over-rides political expediency.

5.3 *Principles of offsets* (p4)

The PENGOs agree with the remaining principles provided, but would also add, from DLWC (2000), that an offset policy '*should be consistent with relevant government policies*', should '*not lead to permanent environmental costs due to the delay before offset activities yield environmental benefits*', and '*should only proceed when the offset site is making acceptable progress towards the predicted ecological state and management arrangements are legally secure*.'

5.4 Enforceability of offsets

Offsets must be (p4) includes "enforceable - through development consent conditions". However, consent conditions are not easily enforceable under the present planning system. The PENGOs would hope to see a reliable system of enforcement available before the pollution offset scheme is introduced.

5.5 Why offsets can work better than stricter regulatory controls (p4)

The PENGOs disagree that there is a general rule that the costs will increase dramatically as the environmental impacts are reduced, as stated. This should not be used as a justification for the introduction of an offset scheme, nor for accepting a higher environmental impact. With the development of innovative processes it is possible to reduce impacts, either to zero, or in multiple areas, for example, the use of sewage for irrigation can reduce waterway and ocean pollution as well as water use and fertiliser requirements.

Incentives, including regulation, can work directly to ensure that industry and landowners make real efforts to reduce environmental impacts.

5.6 Detail of assurances required

Offsets as part of the bigger picture (p6) – there are a number of vague promises, such as that offsets will '*help us reduce the total impact on the NSW environment*', the government will '*make sure that different offset programs fit together to achieve the greatest benefits*', '*investigate using offsets .. to ensure development can take place in a way that enhances rather than degrades the environment*' and '*ensure integration with other government programs'*. Any offset proposal that is to be put forward for public comment would need to have greater levels of detail on how these outcomes are to be achieved.

5.7 Accountability and transparency

All offset schemes will be accountable and transparent (p6) – it is important for transparency that there be an opportunity for public input to any scheme at its initiation. It is not clear who will be the scheme manager – whether public or private individuals or organisations. There needs to be a contribution from the developer towards the management and monitoring costs of the scheme.

Sufficient checks and balances must be included to ensure the accountability and transparency promised.

There must be separation between the consent authority and the offset approval and administration process. Whether government or a private entity manages an offset scheme and related funds, there must be environmental NGO representation.

5.8 Environmental improvement on present condition

Using offsets to achieve net environmental improvement (p7) – the stated aim here is ' *to improve the condition of the environment compared to what it would have been in their absence*'. This contradicts and dilutes the aims of the National Framework for the Management and Monitoring of Australia's Native Vegetation (Natural Resource Management Ministerial Council 2001) which is to gain a **net environmental improvement**. Forward projections in the absence of the schemes would show a continual decline in environmental condition, so an improvement on the level of decline may still result in no net environmental improvement.

5.9 Distribution of benefits

Using offsets to achieve net environmental improvement (p7) – any opportunities for better means of avoiding impacts should benefit the environment, and not be diluted by sharing 'between developers and the environment', in recognition of the environmental debt inherited from past generations (2.2).

5.10 Offset proximity to impact

How will funds be managed? 3rd dot point (p9) – the trial scheme programs are to implemented '*where they are most needed*'. However, it is stated earlier that the offset action will take place near the development site, 'in the same area' (p4). There is a need for clarification about the use of secondary offset schemes, which must comply with the same rules as direct offsets.

5.11 Offsets not to replace core business

Cleaning a waterway offset pilot (p10) - suggests actions such as street sweeping as an offset. However, this is core business for local governments through their responsibilities for stormwater and road management. To ensure a net environmental improvement, offset funds must not be used to replace core government business, such as catchment improvement programs or rectification action plans. There must be a clear distinction between dedicated offset funds and activities, and existing or future government programs.

5.12 Targeted environmental improvement

Reducing air pollution offset pilot (p13) – does not address the larger picture of changes to the public/private transport ratio. Improved market incentives for public transport use would help address the pollution caused by private motor vehicles.

6. Ecosystem Damage

The concept paper (EPA 2002, p15) provides that our comments here will be used also in discussions regarding the Department of Land and Water Conservation's development of land clearing controls and possible offset schemes (DLWC 2001).

The National Framework for the Management and Monitoring of Australia's Native Vegetation (Natural Resource Management Ministerial Council 2001) aims to reverse the long-term decline in the quality and extent of Australia's native vegetation, conserve and restore native vegetation at local, regional and national levels and

improve the condition of existing native vegetation. It is recognised that native vegetation has intrinsic values in addition to ecological and utilitarian values, and that there is an inextricable link between the conservation of biodiversity and sustainable agriculture.

Economist Ross Gittins (2002) has stated that halting land clearing '*would have only a small opportunity cost*'. The National Framework recognises that '*protecting existing vegetation is the most efficient way of conserving biodiversity*'. The PENGOs agree that there must be no incentives for further clearing of native vegetation or destruction of ecosystems.

Negative impacts to native vegetation systems, wetlands or threatened species are particularly difficult to offset. The clearing of native vegetation or wetlands involves the destruction of complex biological systems and interactions which have developed over long periods of time. The PENGOs make the following comments specifically in relation to damage to native vegetation and wetlands:

6.1 Habitat quality and quantity to be valued

The Natural Resource Management Ministerial Council (2001) states that offset programs should require a 'net environmental improvement' from proposals that impact on native vegetation. This goal must be met through more stringent means than simply offsetting area for area (see 2.4, 2.5, 2.6). In order to compensate for loss of habitat, the quality and quantity of the habitat values must be fully costed. This includes accounting for the intrinsic, ecological and utilitarian values.

Areas of high conservation value must be valued to reflect their irreplaceable nature, and to ensure that offsets for their damage are never economically viable.

6.2 Time factor for habitat development

To fully offset the destruction of these systems requires long-term, careful regeneration of the full range of locally derived species, followed by long-term maintenance, to allow for the replacement of the original habitat and environmental values (Committee on Mitigating Wetland Losses 2001). Any short-term or incomplete regeneration, or regeneration which takes place after the clearing activity, does not take full account of the environmental values and costs (DLWC 2001). The environmental impact of clearing is immediate, whereas the offset effects may take many decades to develop to a comparable level. The impact of clearing is permanent so the offset must be maintained in perpetuity.

6.3 Habitat compensation

The actions listed for offsetting native vegetation clearing (p3) are not quantifiable and comparable. The PENGOs are disappointed that the NSW government does not demonstrate an appreciation of the complexity and time-dependant nature of natural systems.

7. In Brief

7.1 The Peak Environment Non-Government Organisations remain strongly opposed to the use of offset, trading or banking schemes for damage to natural ecosystems, including land clearing and wetland destruction.

7.2 There may be limited opportunities to offset quantifiable pollution, on a single-pollutant basis.

7.3 The principles of Ecologically Sustainable Development should be used to benchmark any proposed pollution offset scheme.

7.4 Offsets must not replace the core business or duty of care of government, landholder or developer.

7.5 Environmental objectives must be set at the local and regional levels prior to the implementation of any offset scheme. Ongoing monitoring and adaptation of the scheme is needed to ensure that the objectives are met.

7.6 All environmental values and costs, including off-site impacts and time factors, must be included in any offset or trading scheme.

7.7 Any offset must be completed and audited prior to the polluting or degrading activity taking place.

7.8 Any offset scheme must be designed with sufficient precautions built in to allow for failure and to ensure a net environmental gain, including:

- minimum 10:1 ratio;
- pollutant-for-pollutant only;
- damage/offset proximity.

7.9 If ecosystem offsets are to be instituted, that at least double the ratio of offset to debit be used (20:1), to build in further precautionary measures to account for the unknown and irreplaceable environmental values of any natural ecosystem.

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