environmental defender's office new south wales

Submission on the NSW Coal & Gas Strategy **15 April 2011**

The EDO Mission Statement:

To empower the community to protect the environment through law, recognising:

- *the importance of public participation in environmental decision making in achieving environmental protection*
- *the importance of fostering close links with the community*
- *the fundamental role of early engagement in achieving good environmental outcomes*
- *the importance of indigenous involvement in protection of the environment*
- *the importance of providing equitable access to EDO services around NSW*

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Introduction

The Environmental Defender's Office of NSW (EDO) welcomes the opportunity to comment on the NSW Coal & Gas Strategy.[1] The EDO is a community legal centre with over 20 years experience specialising in public interest environmental and planning law. The EDO has been extensively involved in law reform and litigation over a number of years in attempt to reform the currently inadequate regulatory framework for coal and gas mining in NSW. We therefore appreciate the opportunity for early engagement on the development of this extremely important strategy.

This submission is divided into three parts:

- **Part 1** draws on the scoping paper and Ministerial Terms of Reference to note some of the major environmental impacts and community concerns that arise as a result of coal and gas mining in NSW.
- **Part 2** provides comment on the 4 Key Initiatives that the Strategy will address as set out in the Scoping Paper, and sets out the key actions that need to be undertaken to ensure mining is done in accordance with the principles Ecologically Sustainable Development.
- **Part 3** summarises recommendations for reform, recognising that a NSW Strategy for coal and coal seam gas must be developed in conjunction with a package of legislative amendments. The Strategy should aim to provide guidance and detail on the implementation of the necessary regulatory reforms.

Part 1 – Environmental and community concerns

Both the Scoping Paper and the Terms of Reference for the Ministerial Subcommittee (TOR) identify some of the major environmental, social, economic and health issues associated with coal and gas mining in NSW. To begin with the Scoping Paper notes that the coal industry in NSW is comprised of "a large and mature mining industry and a small but emerging coal seam gas (CSG) industry."[2] As such, extensive areas of NSW have been exposed to a range of impacts that accompany the introduction of traditional coal mining activities into an area, and now many areas of NSW are being exposed to the impacts known and unknown of coal seam gas exploration and eventual production.

The Scoping Paper raises concerns about the following issues:

- fundamental issues about the use of coal and impacts on climate change;
- concerns of cumulative impacts;
- competing land use issues (mining and food/thoroughbred horse industry/ vineyards);
- concerns of scaling up of mining operations;
- subsidence impacts on natural water systems and subsequently on water supply;

[1] Available at http://www.planning.nsw.gov.au/StrategicPlanning/CoalandGasStrategy/tabid/495/language/en-AU/Default.aspx, accessed 14/4/11.
[2] Pg 3, NSW Coal & Gas Strategy – Scoping Paper.

- coal seam gas operations and the potential impact in relation to aquifers, waste water and chemical additives; and
- concerns over industry compliance with conditions on planning approvals, environmental protection licences and mining leases.

The EDO believes whilst this represents a preliminary list of issues arising from traditional coal mining (from exploration to mine closure), there are many more impacts that should be considered in a comprehensive strategy and regulatory reform package, including impacts on biodiversity, water quality and air quality.

The impacts associated with coal seam gas exploration and extraction, due to its "small but emerging"[3] nature, are less clear. Some specific impacts have been identified, such as impacts on water resources, and these are discussed further under Key Initiative 1 below. The coal seam gas extraction industry is rapidly expanding, both domestically (particularly in Queensland) and on an international level. Prior to this expansion occurring in NSW, the EDO believes there needs to be a full triple bottom line assessment undertaken to identify a more comprehensive range of direct, indirect and cumulative impacts.

Part 2 – Comments on the 4 Key Initiatives of the Strategy

Having briefly touched on some of the major concerns that exist in relation to coal and gas mining in Part 1, Part 2 analyses the major initiatives that are needed to ensure that mining activities are undertaken in a more sustainable manner. Page 8 to 11 of the Scoping Paper set out some of the "Key Initiatives of the Strategy", which have been summarised into the following four points:

1. "Facilitate sustainable development of the coal mining and coal seam gas industry and associated infrastructure;
2. Identify and minimise any adverse health, environmental, and land use impacts associated with the development of the industry;
3. Ensure the industry is regulated efficiently and effectively; and
4. Strengthen communication between Government, industry and the community on coal mining and gas production matters."[4]

The EDO broadly supports the four suggested initiatives of the Strategy, with some clarifications. We do however submit that the Strategy needs to go beyond merely identifying and expressing an intention to "minimise" the environmental, social, economic and health impacts; and should put in place a clear plan through which to specifically *address* these issues. There is therefore a need to better identify the practical steps to be taken to ensure these "Key Initiatives of the Strategy" are implemented and evaluated. We recommend that in conjunction with strategy development, that the relevant legislation be amended ensure that the Key Initiatives are implemented.

[3] Pg 3, NSW Coal & Gas Strategy – Scoping Paper.
[4] Pg 8, NSW Coal & Gas Strategy – Scoping Paper.

Key Initiative 1: Facilitate sustainable development of the coal mining and coal seam gas industry and associated infrastructure

At the outset, we note that "sustainable development" of the industry needs to be clearly defined, as developing a sustainable industry (for example in economic terms) is different to developing a regulatory scheme/strategy for ensuring development by an industry is ecologically sustainable. A number of changes are needed if the Strategy is to comprehensively introduce sustainability requirements to the current mining framework.[5]

First, the EDO submits that any mining operations or associated infrastructure within NSW be developed in accordance with the principle of Ecologically Sustainable Development (ESD). This would include operationalising in legislative provisions:

- the precautionary principle;[6]
- the principle of inter- and intra-generational equity;
- conservation of biological diversity and ecological integrity;
- internalisation of environmental costs; and
- the polluter pays principle.[7]

The EDO submits that requiring that each of these principles be adhered to in any current, new, or expanded, mining operation in NSW would substantially reduce the negative environmental and social impacts of coal and gas mining operations.

Second, in order for the coal and gas industry to proceed more sustainably, there is a significant need for a review of the assessment of environmental impacts that accompany mining applications that currently exist in legislation. This would include undertaking the following:

- Establish a specific process for strategic state wide land-use planning for mining projects in NSW to identify competing land-use (see 2B below).
- Prescribe a clear process for assessing potential cumulative impacts, identifying appropriate land use management options for local areas based on a range of criteria, and implementing triple bottom line decision-making so that the relevant strategic plan takes into account social and environmental impacts as well as economic considerations (see 2C below).
- As a result of the strategic planning process, establish areas of NSW where mining operations are prohibited based on assessment of environmental, water supply and agricultural value criteria (see 2C below).
- Conduct a comprehensive review into the impacts of mining on water resources and water use in NSW. The review should make recommendations to amend the regulatory and policy framework in NSW to address the following issues (see 2A below):

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[5] The ability to bring about "sustainability" to the coal and gas industry is difficult to resolve in itself, due to the finite nature of these resources.

[6] Defined in Principle 15 of the *Rio Declaration (1992)*: where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

[7] ESD is referred to in numerous pieces of legislation in NSW, and the accepted definition can be found in the *Protection of the Environment Administration Act 1991,* s 6(2).

    - require mining operations to obtain specific water licences and approvals under the *Water Management Act 2000*;
    - establish strategic planning processes that identify all competing water uses in an area proposed for new mining operations, and conduct an audit of water use of current operations, before approving new or expanded mining operations;
    - implement a precautionary approach to assessing underground mining impacts on water issues;
    - identify baseline data gaps, particularly around aquifer water systems and how the quality and quantity of water in these systems is impacted by factors such as subsidence resulting from underground mining/CSG operations;
    - identify impacts of mining/CSG operations on flooding;
    - identify impacts of mining/CSG operations on the surface water regime;
    - introduce regulatory reforms to improve management of chemical releases (acid mine drainage), fraccing and drilling fluids and produced water;
    - introduce regulatory reforms to improve management of heavy metal contamination (for example, arsenic, cobalt, copper, cadmium, lead, silver and zinc) that is often released during the mineral extraction process;
- Establish mandatory buffer zones to exclude mining activities for 1km adjacent to rivers, wetlands, and water courses.
- Reintegrate mandatory concurrence approvals with other legislation, in particular, the *Threatened Species Conservation Act 1995*, the *Water Management Act 2000* and the *Native Vegetation Act 2003* (see 2B below).
- Ensure that decisions are informed by the best possible science and full consideration of alternatives. For example, for significant mining proposals, the Minister must consider a report and recommendations from an independent scientific commission.
- Include a clear legislative requirement that greenhouse gas emissions and climate change are relevant considerations in decision-making pertaining to mining activities.
- Impose a moratorium on CSG extraction and exploration while a strategic plan for CSM extraction in NSW is developed with full community and independent scientific input. The strategic plan should identify no-go areas for CSM activities, such as in Sydney's drinking water catchment and in state conservation areas (see 2C below).
- Clarify regulatory obligations to provide better management of abandoned and decommissioned mines and introduce mandatory Environmental Bonds (see Key Initiative 3 below).

In the absence of clear and comprehensive regulatory requirements, approvals such as that given to the 110 gas wells in the Gloucester Basin by the NSW State Government will continue to occur on an ad hoc, inconsistent and incomplete basis. In that process, the Director General's Requirements did not require the proponent to consult with Gloucester Shire Council about the impacts on Gloucester's water supply. Therefore, this potentially devastating impact was not addressed in the in the environmental assessment The EDO believes that introducing the amendments listed above would substantially reduce the negative environmental and social impacts that often accompany coal and gas mining operations in NSW.

Key Initiative 2: Identify and minimise any adverse health, environmental, and land use impacts associated with the development of the industry

In relation to this initiative, there are three critical areas that must be addressed comprehensively in the Strategy and accompanying legislative reform package:

a) Dealing with uncertainty: the need for baseline data
b) Triple Bottom Line Assessment and Land Use Conflicts
c) Cumulative Impacts and the need for Strategic Planning at a Regional Level

a) Dealing with uncertainty: the need for baseline data

Due to the infancy of the coal seam gas industry in NSW,[8] there is a great deal of uncertainty surrounding the specific short and long term impacts that may arise from the mining the resource. Despite the uncertainty, some key potential impacts have been identified.

For example, the National Water Commission (NWC) identified the following potential risks to sustainable water management in their Coal Seam Gas Position Statement:[9]

- Extracting large volumes of low-quality water will impact on connected surface and groundwater systems, some of which may already be fully or overallocated, including the Great Artesian Basin and Murray-Darling Basin.
- Impacts on other water users and the environment may occur due to the dramatic depressurisation of the coal seam, including:
    - changes in pressures of adjacent aquifers with consequential changes in water availability
    - reductions in surface water flows in connected systems
    - land subsidence over large areas, affecting surface water systems, ecosystems, irrigation and grazing lands.
- The production of large volumes of treated waste water, if released to surface water systems, could alter natural flow patterns and have significant impacts on water quality, and river and wetland health. There is an associated risk that, if the water is overly treated, 'clean water' pollution of naturally turbid systems may occur.
- The practice of hydraulic fracturing, or fraccing, to increase gas output, has the potential to induce connection and cross-contamination between aquifers, with impacts on groundwater quality.
- The reinjection of treated waste water into other aquifers has the potential to change the beneficial use characteristics of those aquifers.

In addition to these water management risks, CSG development could also cause significant social impacts by disrupting current land-use practices and the local environment through infrastructure construction and access.

The related recommendations of the NWC for addressing these issues are outlined below in Part 3.

[8] Pg 3, NSW Coal & Gas Strategy – Scoping Paper.
[9] Available at: http://www.nwc.gov.au/www/html/2959-coal-seam-gas.asp?intSiteID=1.

Similarly, a recent report for the Department of Sustainability, Environment, Water, Population and Communities also highlights concerns around coal seam gas extraction and its potential interference with hydrological systems. The report recommends:

> "Given the resulting levels of uncertainty in relation to… a number of CSG developments, a precautionary approach should be taken in relation to approving proposed and potential CSG developments, recognising the fundamental principle that excessive rates of groundwater extraction will have impacts on groundwater and connected surface water systems"[10]

Due to the uncertainty, the EDO stresses the need for the development of baseline data to provide a benchmark for ongoing monitoring of environmental systems. The hydrological implications alone provide sufficient reason to obtain such information, however when combined with the myriad of other potential impacts that arise from CSG extraction, the need for this information is clear. Without sufficient baseline data on environmental systems (such as sub-artesian water flows and locations) it is impossible to accurately ascertain the true impact of processes associated with coal and gas extraction. This data collection is a crucial part of undertaking a comprehensive triple bottom line assessment, as proposed in the Scoping Paper, to ensure that all potential environmental and social impacts are also identified.

b) Triple Bottom Line Assessment and Land Use Conflicts

In attempting to identify all impacts associated with coal and gas mining, it is important that a triple bottom line analysis is conducted to ensure that all environmental, social and economic impacts are taken into account in the decision making process.

The Scoping Paper notes the value of a triple bottom line cost-benefit analysis in assessing impacts of mining, and of recognising a range of land use values. It states that such an assessment "*could* be carried out in particular regions where coal mining or gas extraction may have the potential to displace or adversely impact other high value existing land uses."[11] The EDO submits that a balanced and comprehensive assessment *must* take place. Assessment must not focus solely on the financial bottom line of the cost-benefit analysis, but be a balanced and comprehensive assessment of a broad range of indirect, direct and cumulative impacts and values.

Similarly the Scoping Paper states that the results of a triple bottom line cost benefit analysis "*could* be used to make decisions about whether coal mining should be allowed to move into new areas or what scale of coal mining activity may be appropriate"[12] in a region. The EDO submits that these results should be made available for community consultation, to further manage the potential land use conflicts that can arise between mining activities and other operations such as agricultural and conservation activities.

Queensland has embarked on a process to develop a land use conflict policy to identify high value areas, such as those of high agricultural value (strategic cropping land), which have the potential to preclude mining operations from operating in an area. The

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[10] Available at**:** www.environment.gov.au/epbc/notices/pubs/gladstone-ga-report.rtf**.**
[11] Pg 9, NSW Coal & Gas Strategy – Scoping Paper (emphasis added).
[12] Pg 9, NSW Coal & Gas Strategy – Scoping Paper (emphasis added).

proposed Queensland policy[13] seeks to ensure that decisions are made within a clear planning framework[14] and according to stated criteria.

For example, the Queensland policy proposes the following criteria to assist in ascertaining whether an area should be considered strategic cropping land:

- impact of the proposed use;
- availability of alternative sites;
- assessment of the public interest benefits of the proposal;
- impacts of the proposal on adjacent rural land uses;
- potential to offset any negative impacts;
- the requirement for proponents to demonstrate the feasibility of the reinstatement of the land.[15]

Other criteria that will be used to define strategic cropping land include ensuring that:

- water availability from rainfall or irrigation is sufficient to match crop requirements;
- infrastructure necessary for transport or processing of primary produce is in place or can be provided; and
- that adequate legal constraints including conservation and vegetation clearing are in place.

The development of a similar detailed policy in NSW may assist in ensuring that appropriate land use options are developed and that areas of high agricultural, environmental or cultural value are recognised. This recognition of other values besides mining opportunities needs to be documented.

The TOR have noted the importance of "identifying the size, area, and location (including surrounding communities, land uses and activities) of the State's coal resources, and those resources that might be mined by open cut methods."[16] Furthermore, the TOR require the assessment of the:

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[13] Queensland, Strategic cropping land: Policy and planning framework, Discussion Paper (2010). Available at: http://www.dip.qld.gov.au/croppingland.

[14] The policy hopes to introduce a new planning framework which consists of four main elements:

1. Mapping of strategic cropping land across the state;
2. Introducing a new planning instrument to ensure local government schemes and regional plans recognise areas of strategic cropping land;
3. Amending resources sector legislation to ensure strategic cropping land is considered in applications related to resource development; and
4. Issuing guidelines and establishing processes and criteria for assessing for development proposals on strategic cropping land.

[15] Furthermore, under the policy an assessment looks at the "soil properties that support sustainable crop production, including soil depth and drainage that does not limit production and/or machinery operation; landscape properties including slopes not exceeding certain parameters and limited erosion potential; and land use has included cropping or the current use does not preclude the land being used for cropping."

[16] Terms of Reference for the NSW Coal & Gas Strategy Ministerial Subcommittee of Cabinet. Available at: http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=eIyq5qKk8nA%3D&tabid=495&language=en-AU.

> "likely growth (including the economic, employment and social considerations) of the industry over the next 25 years, taking into consideration domestic energy requirements and export opportunities."[17]

To ensure a balanced approach, the EDO believes that an analogous assessment should more comprehensively take into account the value of environmental assets and the likely growth of other industries (such as agriculture) operating in the areas marked for the development of mining operations.

In summary, the EDO submits that a full triple bottom line assessment of the regions identified within the Scoping Paper (Hunter Valley, Western coal resource areas, Gunnedah Basin, Illawarra) be undertaken. The data collected from this assessment should be used to develop an evidence based strategic plan for mining operations in NSW on a regional level.

c) Cumulative Impacts and the need for Strategic Planning at a Regional Level

The introduction of strategic regional planning for mining operations in NSW would not only assist in better addressing land use conflicts, but would also assist in addressing one of the major concerns associated with coal and gas mining in NSW – the failure to adequately address cumulative impacts. The EDO believes there is a need to transition away from the ad-hoc process whereby mining projects in NSW are assessed on an individual basis, to a process whereby proposals are considered in the context of environmental impacts of both existing and likely future projects in the area. The EDO notes that the Scoping Paper recognises this issue:

> "Concerns about the cumulative impacts of mining (health and environmental), principally in the Hunter Valley."[18]

As noted, having identified the key impacts, the Scoping Paper states efforts need to be made to "minimise" them. The EDO submits that whilst the attempt to "minimise" these impacts is a positive development, minimisation may not be an adequate approach in all circumstances. It is logical that following a triple bottom line assessment, there will be areas where mining operations should be prohibited due to the environmental/agricultural/cultural values of an area. Therefore the EDO submits that the development of a strategic regional planning approach, that identifies mining exclusion zones, is a necessary development to be included in the Strategy.

Key Initiative 3: Ensure the industry is regulated efficiently and effectively

The scoping paper states that "(W)hile the coal mining industry is one of the most strictly regulated industries in NSW, there is scope to improve the regulatory regime."[19] Whilst the EDO agrees that there is certainly significant scope to improve the regulatory regime, we disagree that historically the coal mining industry is "one of the most strictly regulated industries in NSW." The EDO has previously commented on reforms needed to bring

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[17] Terms of Reference for the NSW Coal & Gas Strategy Ministerial Subcommittee of Cabinet. Available at: http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=eIyq5qKk8nA%3D&tabid=495&language=en-AU.

[18] Pg 4, NSW Coal & Gas Strategy – Scoping Paper.

[19] Pg 4, NSW Coal & Gas Strategy – Scoping Paper.

outdated mining laws into line with modern environmental assessment requirements.[20] While there have been some amendments, there is still a long way to go to ensure the regulatory regime for mining is effective in terms of comprehensive environmental assessment and adequate community consultation, especially for new and emerging industries such as CSG exploration and extraction.[21]

The regulation of CSG exploration wells has recently come under scrutiny in the Northern Rivers. The EDO was informed by members of the community that a number of supposedly abandoned explorations wells around the Casino area were leaking methane and that it was likely that they had been for many months and in some cases possibly years. While the company claims that it has now fixed the leaking wells the situation displayed a number of important matters about regulation. It would appear that there was no monitoring of those wells. The EDO was informed that when a member of the community contacted the Department of Industry and Investment to report one of the leaking wells that person was told that the Department does not have a role to play in this regard and that it is up to the company to monitor its wells. While there is evidence of the leaking wells there has been no compliance action taken on the company for emitting methane without any approval for such.

Recent case law has highlighted significant problems with compliance and enforcement more broadly and it is clear that there is firstly a need to increase monitoring to identify potential breaches of conditions of mining operations, and secondly when breaches are detected, to ensure that appropriate punitive and remediation orders are applied. Cases such as *Minister for Planning v Moolarben Coal Mines Pty Ltd* [22] are representative of a trend by courts to deliver inadequate penalties for breaches of the legislation.[23] As mining operations traditionally provide lucrative profit margins for those organisations involved in the industry, the threat of financial penalties within the legislation may not be the most appropriate way to increase compliance, and instead may be factored in as a cost of business. Therefore, in order to make regulation of the industry more effective, legislative review needs to occur to introduce new provisions such as:

- providing the Minister with the powers to suspend/revoke approvals for breaches of conditions; or
- providing for a process where landowners, as well as regulators, can apply to revoke consents if mining operations breach conditions; and
- the introduction of strict liability offences.

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[20] See EDO: *Discussion Paper: Proposals for Amendment to the Mining Act 1992* 7 September 2005, available at: http://www.edo.org.au/edonsw/site/policy.php#3

[21] For further information about the necessary reforms to improve regulation of mining generally in NSW (particularly in relation to improving comprehensive environmental assessment, strategic land-use planning and improving public participation in mining assessment processes), please refer to the upcoming **EDO *Mining Law Reform Discussion Paper***, due to be published shortly. The Paper will be available at: http://www.edo.org.au/edonsw/site/publications.php.

[22] [2010] NSWLEC 147.

[23] In that case the court noted that the: "sentence of the Court must operate as a powerful factor in preventing the commission of similar offences by persons who might be tempted to do so by the prospect that, if caught, only light punishment will be imposed. This statement of principle has particular resonance in the context of development carried out in contravention of the *EP&A Act*."[23]
Despite such a statement, the Court in that case only issued the a fine of $70,000 to the proponent who had cleared a large portion of an Endangered Ecological Community. It could be argued that such a penalty would be fairly insignificant to "a corporation engaged in a multimillion dollar coalmining project, an activity which in all its aspects had the potential to have a very significant impact upon the environment."

The potential for mining/development consents to be revoked as a result of breaches should provide a greater deterrent than financial mechanisms alone.

The EDO submits that the emphasis of the monitoring and compliance regime should be on ensuring that all legislative requirements and conditions of consent are adhered to. However, should breaches occur, a range of enforcement orders must be immediate and proportionate, given the potentially significant impacts of a breach. Furthermore, measures such as mandatory environmental bonds should be readily accessible for enforcement purposes.

The NSW Government needs to undertake a consultative legislative review to ensure that those undertaking monitoring and enforcement activities are provided the appropriate mechanisms to adequately address any breaches. In addition to legislative reforms, there is a need to ensure that sufficient resources are made available to those agencies responsible for monitoring mining operations throughout the life of the mine, from exploration to mine closure and rehabilitation.

Key Initiative 4: Strengthen communication between Government, industry and the community on coal mining and gas production matters.

In the EDO's experience, having a legislative basis for community consultation and participation is an important means of ensuring local input into decision-making, promoting good governance and maintaining public confidence in the planning system.

The EDO has commented extensively on the need for a review of the legislation to increase communication between Government, industry and the community throughout the mining decision making process. We have contributed many submissions to Government highlighting fundamental importance of public participation, particularly in light of clear trends such as the introduction of Part 3A of the *Environment Planning and Assessment Act 1979*, whereby the opportunity for community consultation and public participation have been greatly reduced.[24]

The limited options and discretionary character of public participation and concurrence under current law and policy are major sources of public disillusionment with the planning system, in relation to mining and more generally. On the other hand, meaningful community consultation and participation is an important part of environmental justice. It is also more likely to generate positive collaboration and mutual benefits for communities, governments and developers.

The Scoping Paper notes at page 11 that the Strategy will develop "a range of potential initiative to improve communication between the Government, industry, the community and other key stakeholders." These include such initiatives as:[25]

- improvements in the consultation between industry and the community,
- stronger links between Government, industry and key stakeholders; and
- improvements in the consultation between industry and the community.

[24] EDO submissions on community consultation and planning are available at: http://www.edo.org.au/edonsw/site/policy.php#4
[25] Pg 11, NSW Coal & Gas Strategy – Scoping Paper.

Whilst the EDO believes these to be important aims, we have concerns that the Scoping Paper does not provide adequate detail on how they will be achieved. The EDO therefore proposes the following actions to assist in achieving those aims.

First, amending legislation needs to be introduced to establish guaranteed rights of community consultation and public participation in the relevant mining and planning legislation for all proposals for exploration and production. The legislation should ensure early notification requirements for landowners adjacent to mining operations and that before any operations take place, the free, prior and informed consent of landholders is obtained. It is also important that any community group or relevant stakeholders (particularly relevant where concerns of cultural heritage arise) are made aware early in the process of mining activities that may impact on their rights. Specifically, relevant legislation should include the following features:

- A requirement that all public submissions be given to an independent decision-maker (as opposed to only a summary of those submissions, for example);
- A requirement that the independent decision-maker must demonstrably take into account public submissions when assessing a mining project application;
- Provide that the decision-making process is undertaken according to clear objective criteria and legislative limits, placing ESD and its principles at the centre;
- Provide for merits appeal rights and judicial review rights for objectors and proponents;
- Allow open standing to apply to the Land and Environment Court for stop work orders, interim protection orders and notices regarding threatened species, heritage and pollution in relation to mining projects.

The Strategy should supplement the reform package with guidance for best practice community consultation.

There is a need to introduce legislative reforms to clarify and strengthen the rights of landholders. The EDO submits that the regulatory regime should provide more certainty around the subjects of access arrangements, exploration, acquisition and the approval process. Finally, noting the multiple concerns and impacts outlined in the Scoping Paper and this submission, legislative amendments are needed to address the current situation, whereby compensation for mining activities is limited only to impacts that arise on the surface of the land. This needs to be amended to include underground and broader impacts.

Part 3: Conclusion and recommendations

As is clear, many recommendations outlined throughout this submission and from other bodies such as the NWC (see **Appendix 1**) go beyond what can be covered in a "strategy" and require amendment of relevant legislation. It is therefore essential that the development of a coal and coal seam gas strategy for NSW is done in conjunction with introducing a package of relevant legislative reforms. The Strategy should complement the key legislative reforms and provide the detail on how the reforms will be implemented in relation to the key issues and key areas identified in the Scoping Paper.

For further information about the impacts of coal and CSG extraction and the necessary reforms to improve regulation of mining generally in NSW (particularly in relation to improving comprehensive environmental assessment, strategic land-use planning and improving public participation in mining assessment processes), please refer to the upcoming **EDO *Mining Law Reform Discussion Paper***, due to be published shortly. The Paper will be available at: http://www.edo.org.au/edonsw/site/publications.php.

For further information on this submission, please contact richard.howarth@edo.org.au or 02 92626989.

Appendix 1: National Water Commission Principles for managing CSG and water[26]

- The interception of water by CSG extraction should be licensed to ensure it is integrated into water sharing processes from their inception.
- Project approvals should be transparent, including clear and public articulation of predicted environmental, social and economic risks along with conditions implemented to manage the risks.
- Adequate monitoring, including baseline assessment of surface and groundwater systems, should be undertaken to provide a benchmark for assessing cumulative impacts on other water users and water-dependent ecosystems.
- Jurisdictions should work to achieve consistent approaches to managing the cumulative impacts of CSG extraction. Such arrangements should consider and account for the water impacts of CSG activities in water budgets and manage those impacts under regulatory arrangements that are part of, or consistent with, statutory water plans and the National Water Initiative.
- Potential options to minimise the cumulative impacts of extraction on the water balance should be pursued as a first priority. These options include aquifer reinjection, where water quality impacts are acceptable, and groundwater trading or direct substitution for other water use.
- If discharges to surface waters are unavoidable, discharges should be conditioned so that environmental values and water quality objectives, including water quality to meet public health objectives, are protected. In such circumstances discharges to ephemeral streams should be pulsed to avoid flows in naturally dry periods.
- Jurisdictions should undertake water and land-use change planning and management processes in an integrated way to ensure that water planning implications of projects are addressed prior to final development approval.
- Clear accountabilities should be identified for any short- or long-term cumulative impacts from CSG processes, clarifying which organisations are responsible for managing and rectifying or compensating for any impacts.
- The full costs, including externalities, of any environmental, social and economic water impacts and their management should be borne by the CSG companies. This includes, if not already in place, mechanisms such as bonds and sureties that deal with uncertainty and the timeframes associated with potential impacts. Given that these timeframes may extend for 100 or more years, current systems need to be re-evaluated.
- A precautionary and adaptive approach to managing and planning for CSG activities is essential to enable improved management in response to evolving understanding of current uncertainties. This includes impacts such as long-term reductions in adjacent aquifer pressures and levels, and impacts on environmental assets that are not adequately protected by current 'make good' mechanisms.
- Water produced as a by-product of CSG extraction, that is made fit for purpose for use by other industries or the environment, should be included in NWI-compliant water planning and management processes. This will enable CSG producers to manage this resource in accordance with the principles of the National Water Initiative.

[26] National Water Commission 2010 *Coal Seam Gas and Water Position Statement* Available at: http://www.nwc.gov.au/resources/documents/Coal_Seam_Gas.pdf