

## NEW SOUTH WALES SUBMISSION TO THE PRODUCTIVITY COMMISSION INQUIRY INTO THE IMPLEMENTATION OF ECOLOGICALLY SUSTAINABLE DEVELOPMENT

One of the major challenges facing governments at the present time is ensuring an appropriate balance between environmental protection and economic progress. The approach of the New South Wales Government to this challenge has been through a demonstrated commitment to the concept of sustainable development by integrating economic and environmental goals.

The objective of such an approach is to maximise environmental quality and economic growth by ensuring that the environment in which we live and work is protected and enhanced, while ensuring that continued economic growth creates jobs and wealth for the benefit of the whole community.

Put in the simplest terms, Ecologically Sustainable Development (ESD) aims to ensure that development occurs in such a way that the ecological processes on which life depends are maintained. The most commonly used description of ESD principles in NSW legislation is contained in a recent amendment to the Protection of the Environment Administration Act 1991, intended to be commenced later in 1999:

*ESD requires the effective integration of economic and environmental considerations in decision-making processes. ESD can be achieved through the implementation of the following principles and programs:*

- a) The precautionary principle namely, that if 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.*
- b) Inter-generational equity namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.*
- c) Conservation of biological diversity and ecological integrity.*
- d) Improved valuation, pricing and incentive mechanisms.*

The following submission will provide selected examples of how NSW has given effect to ESD in three key areas of government, industry, and the community.

### GOVERNMENT AND SUSTAINABILITY

The New South Wales Government clearly recognises its role in setting the strategic and policy framework for the effective implementation of ESD. This section will demonstrate how ESD principles and objectives are taken into consideration in relevant decision making processes, policy formulation and program delivery.

New South Wales has a flexible approach to the implementation of environmental policy—encompassing regulation incentives and voluntary action. The following examples will highlight the Government's activities in the areas of:

- innovative regulatory schemes;
- institutional reform,
- full cost valuing and pricing of environmental resources; and
- the conservation of biological diversity.

There are a number of examples of legislative reform that demonstrate the incorporation of the principles of ESD by Government. For example, the State's Local Government Act now contains a definition of ecologically sustainable development and the principles of ESD are incorporated throughout all of the key aspects of the legislation.

Each council's charter includes a duty to properly manage, protect, restore, enhance and conserve the environment in a manner consistent with the principles of ESD. Many councils have responded constructively to their new responsibilities by adopting integrated long-term strategies that highlight the principles of ESD. Councils have also recognised the interdependence of environmental issues and are working in conjunction with regional organisations and catchment based committees.

ESD principles have been incorporated in the Forest Agreements process. Substantial efforts have been made to develop and implement **Ecologically Sustainable Forest Management (ESFM)** for the delivery of ecologically sustainable forests. ESFM aims to manage all forests so that they are sustained in perpetuity for the benefit of society, by ensuring that the values of forests are not lost or degraded for current and future generations. In this framework, all forests are assessed and managed at a regional scale for the extent to which they contribute to ESFM.

The aims of ESFM are to manage for and maintain the following criteria:

- biodiversity;
- the productive capacity and sustainability of forest ecosystems;
- forest ecosystem health and vitality;
- soil and water quality;
- positive contribution of forests to global geochemical cycles;
- long-term social and economic benefits; and
- natural and cultural heritage values.

Indicators and targets are being developed for each of these criteria and these will be used as performance measures. Monitoring will be undertaken for each of the indicators and targets and the results will be used to inform adaptive management.

The ecologically sustainable management of forests and long lasting end-uses for forest products are high priority areas for the NSW Government. In 1996 the National Parks and Wildlife Service (NPWS) and State Forests NSW (SFNSW) jointly developed a set of conservation protocols for timber harvesting in the States' forests which balances the management of threatened species, old growth rainforest and rare non-commercial forest types and the harvesting of timber. As part of the CRA process, the Conservation Protocols have been revised to take into account new information including extensive survey data gathered over two years. The improved Conservation Protocols will ensure the implementation of threatened species conservation management on State forests. It is expected that the Conservation Protocols will be jointly agreed by the Director General, NPWS and the Chief Executive SFNSW during December 1998.

The Department of Mineral Resources (DMR) has created a specialist Environment Unit to oversee and regulate mine site environmental management, with particular emphasis on

rehabilitation of mining and exploration sites. The aim is to work towards ensuring that environmental impacts of mining are controlled and limited to those impacts acceptable to the community, and that a high standard of rehabilitation is required. This minimises any economic externalities resulting from mining, and aims to ensure that no environmental costs are transmitted to future generations.

Institutional reform is also taking place in the context of the water reform package announced in September 1995. Community-based river management committees will prepare river management plans which balance the environmental social and economic needs of local communities. To better deliver useful and relevant information to the committees, a special unit has been established in the Department of Land and Water Conservation's (DLWC) Integrated Policy and Planning Division. Known as the SocioEconomic Services Unit, the group will ensure better natural resource decision making through a range of practical and credible community based assessments of the social and economic impacts of water reforms.

Also part of the agreed national framework for water reform is the structural separation of water management and service delivery from the higher level resource stewardship and policy function. DLWC has corporatised a number of irrigation areas and districts and has established a separate water business within DLWC. These alterations will improve efficiency and increase community influence on service delivery decisions.

As part of its **water reforms**, the Government has established a two stage process for setting environmental objectives for water quality and flows of all NSW rivers. The Environment Protection Authority (EPA) is coordinating stage 1, which involves proposing interim objectives for all NSW rivers. A Healthy Rivers Commissioner has been appointed to direct stage 2 of the process. This involves detailed inquiries into issues affecting water quality and river flows in order to guide the setting of longer term environmental objectives. The program aims to establish clear objectives to respond to current water flow and water quality problems, thereby improving the health of NSW rivers and providing greater security to water users.

The **Healthy Rivers Commission** has completed an inquiry into the Williams River and the Government is progressing a range of actions to implement its recommendations. The Commission, has also completed an inquiry into the Hawkesbury-Nepean River and is now undertaking inquiries regarding the Shoalhaven, Clarence, Woronora and Bega catchments.

A practical application of full cost valuing of environmental resources is being undertaken by the Independent Pricing and Regulatory Tribunal (IPART). The **Tribunal sets prices for government monopoly** services including electricity, urban public transport and both metropolitan and bulk rural water supplies. Under its Act, IPART is required to have regard to a range of matters including the protection of the environment by appropriate pricing policies. The Tribunal has, for instance, promoted greater reliance on volume related charges for water, rather than fixed charges, to better reflect the cost of water supply and to encourage water conservation.

The National Parks and Wildlife Service (NPWS) has an ongoing program of research into the economic and social benefits of biodiversity protection. This work aims to ensure that economic and ecological considerations are incorporated into decision making affecting the natural environment. It is intended that this work will enable NPWS to contribute to

ecologically sustainable rural and regional development through implementing plans and programs for the protection and conservation of natural and cultural resources, which also provide social and economic benefits to local economies and communities.

The Government can also put a direct value on environmental resources through the security deposit obligations of all mining lease holders in NSW. Security deposits act as a surety against non-fulfilment of rehabilitation and environmental lease conditions. Security deposits are in place for all current titles and the levels are subject to periodic review. By fully costing the value of environmental resources, the cost of rehabilitating environmental disturbance caused by mining and exploration can be borne by the mining/exploration company and not the people of New South Wales.

The preparation of a NSW Biodiversity Strategy demonstrates the Government's commitment to not only the National Strategy for the Conservation of Australia's Biological Diversity but also the National Strategy for Ecologically Sustainable Development. The NSW Strategy provides mechanisms to protect and maintain ecological life support systems, provides opportunities for the sustainable use of biological resources, and will, in the longer term reduce the consequences of ecological degradation. Regional biodiversity studies have been undertaken in western Sydney, Georges River Catchment and Newcastle region which will form the basis for Local and Regional Environmental Plans to protect and enhance biodiversity.

The Government has also formulated a new **Coastal Policy** as a major initiative in its ongoing commitment to the effective planning and management of the State's coast. The main challenge for the Government and the community in the coastal zone is to provide for population growth and economic development without putting the natural cultural and heritage values of the coastal environment at risk. The policy articulates how ESD should apply in the coastal zone when making planning and management decisions. The Policy will be supported by ESD Planning Guidelines and a coastal conservation inventory to provide information for sustainable decision making at the project and strategic planning level

## SUSTAINABLE INDUSTRY

Industry has a major role to play in the achievement of sustainable development. Through improving its own practices industry will contribute substantially to sustainable development. This approach involves a careful consideration of each challenge or market failure and the matching of the appropriate solution to the specific problem. This section will demonstrate how the Government is encouraging industry to engage effectively in the sustainable development agenda.

The recognition of ESD as a key parameter for planning resource management and development in NSW has been achieved by amending the Environmental Planning and Assessment (EP&A) Regulations to require all proponents of developments requiring an Environmental Impact Statement to justify the proposal in terms of principles. The objectives of the EP&A Act were amended in 1997 so that all planning or development approval actions must now consider ESD principles

*The Planning Strategy for the Greater Metropolitan Region of Sydney, Newcastle, Wollongong and the Central Coast - Shaping Our Cities* adopts ESD principles in its

framework for planning priorities for the region. It aims to enhance the environment for healthy living, recreation and a sustainable ecology and to provide attractive, safe and affordable neighbourhoods and foster a robust economy that can provide employment and a high quality of life. These neighbourhoods will be serviced by viable transport systems and urban structures with equitable access to jobs, services and leisure. *Shaping our Cities* is a peak document in a series that sets strategic policy directions for the whole region. Other sub-regional strategies in the series, for Western Sydney, Georges River, City South, Parramatta, Central Coast, Illawarra and the Hawkesbury Nepean, focus on initiatives and actions that relate directly to the land use and transport planning in their specific sub-regions.

*An Upper Hunter Cumulative Impact Study* was undertaken to determine if existing and proposed mining and industrial developments were sustainable. The Study resulted in 34 actions to improve the social and biophysical environment of the region. One of the actions included development of sustainability indicators with input from the community and is currently underway. Another important action has been the undertaking of an additional cumulative impact study of four proposed new coalmines in the Muswellbrook area. This study is to be completed shortly and is providing an important mechanism for cumulative social impacts to be identified and addressed in consultation with the community.

*The Steel River Eco-Industrial Project* provides a strategic approach to rehabilitation and use of 100 ha of contaminated industrial land. Through an examination of the cumulative impacts of industrial development of the site, sustainable performance criteria have been established for key environmental factors such as air, water, transport, waste and visual amenity. The resultant 'environmental envelope' will provide the basis for streamlining the approval process for industries which conform with the performance criteria. The environmental envelope will be reviewed regularly with annual monitoring reports and ongoing community consultation.

As the largest purchaser of capital works in NSW, the Government has a key role in setting the environmental standards for the construction industry. Accordingly, the Government is encouraging the construction industry to proactively manage environmental issues through its integrated development framework for the construction industry entitled 'Construct New South Wales'.

Strategy 16 in the policy calls on the Government's inter-departmental Construction Policy Steering Committee's (CPSC), in conjunction with the EPA, to work with industry organisations to further develop the principles of ESD as they relate to the construction industry.

There are a number of actions in support of the Strategy including:

- establishing environmental best practice on government projects— the CPSC will assess environmental practices on Olympics 2000 projects with a view to developing guidelines to assist construction agencies to introduce appropriate initiatives across the NSW Government's capital works program. Selected projects will be used to showcase best practice in environmental innovation and management.
- requiring Environmental Management System (EMS) accreditation of contractors on government projects—contractors and other service providers will require EMS
- accreditation as a prerequisite for tendering for government projects. Guidelines will be issued by the CPSC outlining the NSW Government's EMS requirements and tender

thresholds. The Committee will also provide advice on where assistance can be obtained for the development and implementation of an EMS.

- auditing Environmental Management Plans (EMP) on government projects— contractors and consultants on Government construction projects will be required to prepare an EMP before starting work. Actual performance will be audited against the EMP and included in the Contractor Performance reporting system.
- requiring reporting on environmental performance on government projects— contractors, consultants and other service providers will be required to report on their environmental performance. Reporting will be based on environmental performance indicators, which are quantitative, and linked to targets involving a continuous improvement process. The NSW Government will publish guidelines outlining reporting requirements in the near future.
- waste minimisation strategies for government construction projects—the Government has published its Construction and Demolition Waste Action Plan covering waste minimisation strategies to help the construction and demolition industry contribute to the Government's 60% waste reduction target. Key aspects include:
  - incorporating waste prevention measures in all stages of project development including design, documentation and construction supervision;
  - incorporating recycled-content materials in new construction;
  - promoting maintenance in preference to demolition and new construction; and
  - incorporating waste reduction education and training programs as essential elements in existing training programs.

As part of the Government's waste reforms, the Waste Minimisation and Management Act 1995 requires industry to assume greater responsibility for waste avoidance. The Act provides for the preparation of Industry Waste Reduction Plans (IWRP) which:

- set waste reduction targets for the industry;
- indicate levels of financial contribution by industry members to support recycling collection services;
- identify opportunities in the areas of product design, production and packaging for reducing waste; and
- establish a public monitoring and reporting program.

IWRPs will encourage industry to adopt measures to reduce waste and promote its reuse, recycling and reprocessing. IWRPs have been prepared for the dairy and tyre industries. A plan for the beer and soft drink industry is in progress, and initiatives are being developed with the mobile phone, computer and whitegoods industries

The State's core environment protection legislation has recently been consolidated, simplified and modernised through the Protection of the Environment Operations Act 1997. The maintenance of ESD is one of the key objectives of the new Act. The Act is designed to deliver stronger environmental protection without imposing unnecessary regulation on industry. In conjunction with new integrated development approval processes, it will ensure that environmental outcomes are considered at the 'front end' of a development proposal.

Another practical application of the Government's commitment to improved environmental quality at a lower cost is the EPA's new **Load Based Licensing scheme** (LBL). Under the scheme, licence fees will be directly related to the mass of pollutants emitted from licensed premises. Licence limits will apply to emissions from the whole of the licensed premise rather

than from each separate point of emission to air or water. The scheme provides a financial incentive for industry to reduce total emissions and develop lower cost environment protection techniques. It also includes public disclosure of emission data which is a proven incentive for ongoing improvement in environmental performance.

In 1996, the NSW Government, through the EPA, allocated \$290,000 to enable 12 local government councils to undertake an environmental review and education program across a range of small business sectors. The '**Solutions to Pollution—Small Business**' program aims to:

- develop partnerships with industry associations;
- encourage small business to recognise the economic and competitive advantages of cleaner production; and
- achieve better integration of environmental management with business management.

Small businesses that were targeted include: auto dismantlers; mechanics, smash repairers and panel beaters; marinas; retail food outlets and printers. Ten environmental information books for different small business sectors were published and released in November this year as a result of the program. Business and industry has strongly supported the initiative.

NSW Agriculture has been involved in a range of partnerships with local communities to help **achieve ecologically sustainable agriculture**. These programs have focussed on managing natural resources, in particular to prevent and reverse land degradation processes. Major programs include:

- *Farming for the Future*, a joint agency and community program which facilitates an holistic approach to property management planning, goal setting and managing risk from sources such as market and climatic variability.
- *Policy for Sustainable Agriculture in NSW*, which facilitates a coordinated approach to achieving an ecologically and economically sustainable agricultural sector in NSW. The Policy provides an agreed goal for sustainable agriculture in NSW and common objectives and strategies that guide stockholders to this goal. It also provides a framework within which individual agencies and interest groups can develop specific position statements and action plans.
- *Acid Soil Action Program*, exemplifies NSW Agriculture's commitment to managing the acid soil problem on the coast, tablelands and central and southern slopes of NSW. The program involves:
  - landholder and industry education, training, investigations and demonstrations;
  - research to improve diagnosis, management and rehabilitation of affected soil;
  - incentives for sustainable management of acid sulfate soil, and
  - community participation and communication

A number of initiatives have been undertaken to improve the sustainability performance of the **housing industry**. Landcom has developed an ESD strategy which incorporates community participatory life cycle costing, adoption of the precautionary principle and environmental monitoring of key indicators (eg, noise, biodiversity, water quality, asset deterioration, air quality).

A number of initiatives have been undertaken to improve the sustainability performance of the **housing industry**. Landcom has developed an ESD strategy which incorporates community participation, life cycle costing, adoption of the precautionary principle and environmental monitoring of key indicators such as noise, biodiversity, water quality, asset deterioration and air quality. The Department of Urban Affairs and Planning has published *Better Urban Living: Guidelines for Sustainable Urban Housing* in NSW to assist developers and councils in the delivery of more livable environments. Initiatives such as Stringybark Grove provide important model developments to demonstrate the benefits of sustainable residential development. The Department has also developed principles for **adaptable housing** which is specifically designed to be easily modified to cater for an occupant who may become disabled and frail. The Department has commissioned a study to identify options for increasing private sector provision of adaptable housing which is consistent with ESD principles of equity.

## COMMUNITY AWARENESS

The achievement of sustainability depends on sound knowledge and understanding by all stakeholders of the status of our environment. The NSW Government is increasingly recognised for its pivotal role in providing environmental information to communities. Examples of activities of this kind encompass:

- the development of environmental information databases on which to base decision making;
- mechanisms to monitor and assess environmental and socio-economic impacts;
- environmental awareness;
- communication; and
- education

Under a recent amendment to the Protection of the Environment Administration Act 1991, intended to be commenced later in 1999, the EPA is required to **report on the state of the environment** every three years. The report must include:

- an assessment of the condition of major environmental resources of NSW;
- an examination of environmental trends and the implications for the environment and human health;
- an examination of the costs and benefits of environmental protection;
- a review of programs and activities of the public and private sectors related to environmental protection; and
- any appropriate recommendations for future legislative or other action.

Local government councils also prepare comprehensive and supplementary state of environment reports on conditions in their local area or region. Both State and local government level reports aim to improve decision making on environmental issues by government and industry and alert the public and private sectors to environmental issues.

Greater community access to information and awareness of the environmental health of NSW rivers, estuaries and groundwater systems will be provided by the Department of Land and Water Conservation's State of the Rivers and Estuaries Reporting (SoRER) Program. The program is a major reporting mechanism on the NSW State Rivers and Estuaries Policy and will provide a catchment-based 'state of the environment, report for the rivers and estuaries of NSW. Reports on the Murrumbidgee, Lachlan and mid north coast rivers have



been completed. Reports on the Murray, Gwydir, Namoi, MacIntyre, Hunter, Karuah and Manning Rivers are near completion.

The NPWS is providing information necessary for conservation of the entire Macquarie-Bogan River catchment through its **Water Information System for the Environment** (WISE) project. The project will provide a multi-media resource for managing the catchment including a bibliography of information that is linked to wetlands and the river. It also incorporates videos, photographs and sound files. Key fields are provided for accessing a wide range of information. The software database is interactive with easy navigation.

The Forest Resource and Management System (FRAMES), which started in November 1996, predicts sustainable wood flow under a number of forest management scenarios, using data collected from temporary inventory plots and permanent growth plots throughout NSW. The system incorporates a statewide strategic inventory, a series of tree growth models, a yield simulator and a linear computer program to optimise timber yield over a given area and planning horizon. This assists the implementation of ESFM by allowing State Forests to simulate the effects of a particular forest management strategy over various time periods and geographical areas.

NSW Agriculture has established a '**WaterWise on the Farm**' program directed at raising awareness and facilitating water conservation and water use efficiency by irrigation communities. The Department has commenced a related program to facilitate adjustment by irrigation farmers to water reforms including a government funded incentive scheme to encourage use of water-efficient technologies.

The Acid Sulfate Soils Advisory Management Committee has developed an Acid Sulphate Soils Manual (edited by Department of Urban Affairs and Planning) to improve the quality of assessment and management of these soils. The Manual provides a whole of government approach and is based on the principles of ESD. It provides guidance on drainage and industries such as cane, grazing, tea tree, extractive industry and urban development to minimise acid sulfate soil impacts.

The Department of Education has incorporated ESD principles into the **Environmental** Education Curriculum Statement K-12 and, through its Learnscapes program, has enhanced schoolground environments and used outdoor areas for teaching and learning about ESD. The Board of Studies has also incorporated ESD into Science, Human Society and its Environment and other key learning areas while TAFE has included ESD into relevant courses as well.

The Department of Land and Water Conservation has funded and managed a number of community education and awareness programs including:

- Exploring the Nardoo - a multi award winning multimedia education product;
- Murder under the Microscope - a leading edge technological eco-game played annually in hundreds of schools across Australia;
- Professional challenge 98 - a serious strategy eco-game designed for senior secondary school and undergraduate university students;
- Water bug surveys - community based macroinvertebrate sampling to assist with monitoring of river and catchment health)

- National Water Week - whole of government approach to raise awareness of the value and importance of water as a future natural resource. Provides platform for natural resource agencies to profile their projects and community involvement;
- Phosphorus Action - a community based program managed through the Streamwatch program to address algal blooms and excessive nutrient loads) and
- WaterWise in the Catchment - designed to raise awareness of the need for water conservation and water use efficiency - a program delivered through joint venture partnerships with Local Government.

The EPA has also conducted a number of community education and awareness programs including:

- the 'Don't light tonight unless your heater's right' campaign—designed to reduce brown haze and fine particle pollution associated with the use of solid fuel home heaters)
- Beachwatch and Harbourwatch—aimed at promoting greater community awareness of the condition of NSW beaches and harbours and the causes of ocean and harbour pollution, and
- the State-wide Stormwater Education Initiative—aimed at reducing waterway pollution. This initiative includes a mass media campaign, vocational training courses for the building and construction industry and a community development project with Ethnic Communities Council.

## CONCLUSION

New South Wales recognises that our future depends on the way we manage and conserve our environmental assets. Sustainable development is a simple concept, but its implementation is complex because it affects so many parts of our lives. The challenge for the Government is to turn the concept into decisive actions that will result in a positive contribution to the State of New South Wales.