
MORE COST EFFECTIVE ENVIRONMENTAL REGULATION WITH LESS RED TAPE

WOODWARD, JOE¹

¹ Deputy Director General, Environment and Regulation Division, Department of Environment and Climate Change, New South Wales, Australia, joe.woodward@environment.nsw.gov.au.

SUMMARY

Governments in Australia and internationally have raised concerns about the impact of increased environmental regulation on productivity. Reviews have suggested that the amount and methods of regulation impose unnecessary burdens on industry and governments. On the other hand, surveys have shown that the public wants to increase environmental regulation because they are witnessing continuous environmental degradation.

Both of these views are correct. We do have to increase our effort to solve outstanding environmental problems and we need to do that more cost effectively than we have in the past.

This paper focuses on experience in New South Wales (NSW), Australia where our approach to environmental regulation and compliance has evolved over several decades and now provides an effective mix of strategies aimed at achieving the environmental outcomes in the most cost effective way. Further, examples of the most successful regulatory and compliance initiatives currently used in NSW are evaluated.

Important messages include (1) focusing on the desired outcomes; (2) acknowledging the need to reduce unnecessary red tape; (3) understanding the communities' concerns and priorities; and (4) choosing the most cost effective approach to solve each problem.

1 INTRODUCTION

There has been global concern regarding the burden of regulation on society, coupled with suggestions that it stifles the economy. Environmental regulation has been one of the targets of this concern. A report by Philip Hampton for the HM Treasury in the UK entitled *Reducing Administrative Burdens – Effective Inspections and Enforcement* (Hampton 2005) concluded that the whole regulatory system is complicated with overlaps in activities resulting in too many forms, requests for information, and multiple inspections. Similar reviews have been conducted in Australia; for example, the Australian Government recently established the Taskforce on Reducing Regulatory Burdens on Business, which made 178

recommendations to reduce red tape and resulted in the establishment of the Office of Better Regulation to oversee the implementation of the recommendations. Similarly, at a state level, NSW has commissioned red tape reviews including *Investigating the Burden of Regulation in NSW and Improving Regulatory Efficiency* (IPART 2006) and has also set up a Better Regulation Office to review existing and new regulations.

The need for regulatory reform to minimize red tape in environmental regulation is just as evident in developing countries as it is in developed ones. In developing countries environmental regulation is sometimes seen as a barrier to economic development. Therefore, it is important to ensure environmental regulation focuses on the important problems and is cost effective, increasing the likelihood of such protection being accepted by governments and the community.

This paper explains why and when environmental regulation is important and provides examples of successful environmental regulation and compliance initiatives in NSW Australia, based on experience that has evolved over several decades.

2 WHY DO WE NEED ENVIRONMENTAL REGULATION?

Regulation, and more broadly government policy intervention, is particularly important in cases of market failure – where private costs and benefits differ from social costs and benefits. When market failures occur, regulation by government can lead to more efficient outcomes and can provide incentives to maximise the net benefit to society. This is true across society – from traffic management to health standards and pollution control.

Examples of market failure in NSW Australia include: (1) loss of biodiversity with the extinction of more than 80 species of native animals and plants and threatened extinction of a further 900 species since European settlement commenced 200 years ago; (2) land degradation estimated to cost \$AU1.15 billion per annum; and (3) air pollution in Sydney causing up to 400 premature deaths a year and health costs between one and 4.1 billion Australian Dollars (DEC State of Environment Report 2006, DEC Air Pollution Economics 2005).

The Heads of the European Environment Protection agencies responded to this with a report titled *The Contribution of Good Environmental Regulation to Competitiveness* (Network of Heads of EPAs 2005). This report stated that “Effective environmental regulation is integral to successful markets, an essential ingredient of a vibrant, modern economy. Unregulated markets would be chaotic, unfair and unlikely to deliver what people want – safe, reliable products and a clean environment in which to live and work.” Further, a review that looked at national competition in Australia concluded “Regulation is an important tool for delivering governments’ social and economic goals, including ensuring Australia’s safety and security, guarding freedom of choice, protecting the environment and setting standards for corporate governance” (Productivity Commission 2003).

International, national and local experience is compelling – good environmental management does not impede economic development. In fact, it is driving investment and innovation in process and product improvement. There is an expectation that the government undertakes this stewardship role, as no other body can.

The challenge is therefore to provide a mix of policy tools that deliver the most cost effective environmental outcomes – minimising compliance costs and maximising the public benefits.

3 HISTORICAL TRENDS IN ENVIRONMENTAL REGULATION IN NEW SOUTH WALES

Environmental regulation has evolved in NSW over the last half century in response to changes in social, economic, and environmental conditions. Environmental regulation in NSW has been at the leading edge of global trends in environmental policy from the “end of pipe” focus of the 1970s to current cleaner production programs and market based mechanisms. The following summarises the shift in focus of environmental policy as ongoing reforms have resulted in more responsive, flexible, efficient and effective regulation.

1970s: Initial efforts to address environmental issues focused on concentrated point sources of pollution that were relatively easy to identify, particularly heavy industry and sewerage. Prescriptive technologies involving “end of pipe” measures to reduce pollution from industrial facilities were also prevalent.

1980s: There was more focus on improving economic efficiency of environmental requirements. Shift from “end of pipe” to process improvements were factored into product and process design. Cleaner production initiatives were promoted, and the introduction of economic instruments – taxes and charges, deposit refund schemes – occurred.

1990s: Greater focus on improving cost effectiveness of environmental regulation, rather than just cost efficiencies, and an increased use of policy tools and education occurred in the 1990s. There was also an intensified focus on diffuse sources and developing markets for clean green products. Linking command and control instruments with economic and voluntary approaches occurred, including price differentials for cleaner fuels, load based charges for pollution, pollution trading schemes, and “bubble” licensing.

2000s: Strategic planning and regulation of cumulative impacts across airsheds and biosystems, aiming to maximise benefit across the community and achieve economy wide efficiencies have expanded in the 2000s. More flexible risk based approaches, including offsets schemes for air pollution, biodiversity and nutrient water pollution, have evolved.

4 NSW CURRENT ENVIRONMENTAL REGULATION AND COMPLIANCE

The Department of Environment and Climate Change now administers over 50 Acts and manages over 40,000 licenses. The Department has responsibility for air, water, noise, waste pollution, chemical contamination, radiation, wildlife including threatened species and native vegetation protection, and protection of indigenous cultural heritage.

NSW developed a framework for environmental protection – a modern, efficient, effective, flexible, and comprehensive approach that includes a mix of policy tools from regulation to voluntary programs and market based measures. All new environmental regulations undergo rigorous cost benefit analyses in NSW to ensure that key principles of good regulation are met. In addition, an ongoing program of regulatory reform ensures that legislation remains relevant, effective and efficient.

The following section summarises the best approaches from experience gained by NSW in environmental regulation and compliance.

5 UNDERSTANDING COMMUNITY EXPECTATIONS

The NSW Environment Protection Authority did an initial community survey on the community's attitudes, knowledge, skills and behaviour towards the environment in 1994. It provided such an excellent insight into the community's thinking that it has been repeated every three years since, and we can now follow trends in community thinking. These surveys assist our policy and regulatory development, and inform Government and the business sector of the community's views. The latest survey is available at www.environment.nsw.gov.au/whocares/whocares2006.htm.

The most recent survey (DEC Who Cares 2006) showed that NSW people care about the health of the environment and want both strong regulation and incentives to do the right thing. For example:

- 87 percent of survey respondents were very concerned about environmental problems and most think the government should do more to protect the environment.
- Approximately 40 percent of people think that environmental regulation is too lax compared to just 15 percent thinking it is too strict in NSW.
- 78 percent rejected the idea of lessening regulation in NSW.
- 68 percent do not believe that environmental regulation restricts the economy, compared to only 23 percent who think it does.

5.1 Cost Benefit Analyses

NSW has found it very valuable to conduct rigorous and published cost-benefit assessments for proposed new environmental requirements, which ensure the benefits outweigh the costs or that they deliver the desired outcomes at least cost. This process includes close consultation with stakeholders. Effective cost benefit analyses provide government and business with solid evidence of the benefit of proposed new regulations.

For example, a regulatory impact analysis in NSW for a proposed regulation relating to prevention of leakages of underground storage tanks concluded that the average cost of the proposed preventative measures would be \$AU5,400 per tank compared to the average cost of clean up and remediation costing \$AU110,000 per tank. (DEC Underground Petroleum 2005). Additionally, the benefits of the proposed NSW Clean Air Regulation are four times greater than the costs (DEC Clean Air Regulation 2003), and the benefits of the National Environment Protection Measure on Ambient Air Quality 1998 are seven times greater than the costs (NEPC 1997). More broadly, several cost benefit analyses done for proposed regulations in NSW and internationally have concluded that for every \$AU1 spent on air pollution control there is a corresponding saving on health benefits of between 4 and 9 times (BDA, 2005).

5.2 Institutional Integration and Efficiencies

Australia, like many other countries, has three levels of government and all have some responsibility for environmental regulation. The Australian government has responsibility for international and nationally significant environmental issues. National environmental standards, *e.g.* air and water quality standards, are established by the National Environment Protection and Heritage Council that consists of the Environment Ministers of each State and the National Government. The states have the primary responsibility for environmental regulation and compliance although some responsibility is delegated to local councils.

NSW has gained efficiencies in environmental regulation by combining separate environmental agencies into the one department, Department of Environment and Climate Change, with responsibility for all pollution, biodiversity, radiation, and cultural heritage protection.

In the past there was often duplication and even conflict between the role of the state government and local government when dealing with pollution issues. To overcome this, legislation was passed to introduce the concept of “appropriate regulatory authority” that clarifies whether the State government or the local council has responsibility for enforcing environmental compliance for any environmental issue. This has improved clarity for business and the community, has reduced red tape, and successfully prevented minor issues from being escalated to the State agency.

5.3 The Most Cost Effective Approaches for Compliance and Enforcement in NSW

Experience in NSW has shown that the best approach to environmental protection is a mix of policy tools linking regulation with economic instruments and voluntary approaches. Indeed, research into environmental regulation consistently demonstrates that flexible approaches and complementary policy measures assist in ensuring efficient and effective outcomes. However, it is important to note that these are complementary measures and are not a replacement for regulation.

5.4 Risk Based Regulation and Compliance

All environmental regulators adopt some form of risk-based approach to their work. This can apply not only to the development of regulations but also to how compliance and enforcement of the regulations is carried out.

In the past, NSW has tended to implement the regulations uniformly and this has partly been in response to calls from industry and others for consistency in approach. However, we have found that more cost effective outcomes can be achieved by adopting a transparent risk based approach that can permit a greater level of flexibility without compromising public confidence in the agency.

NSW has developed a good mix of regulatory tools and our objective is to use the most cost effective tool to achieve compliance with the environmental objectives. This has been influenced by Malcolm Sparrow who, in his book *The Regulatory Craft* (Sparrow 2000), recommends that environmental regulatory agencies should rearrange how they operate and focus their approach to “pick important problems and solve them.” Although simple in principle this is quite difficult to achieve. Some of the most successful cost effective “tools” NSW utilizes include:

5.4.1 Environmental audits

Industry can do “voluntary audits” that are protected from disclosure. Where a breach is suspected, industry can be required to conduct “mandatory audits” and we can use the information gained in court proceedings. NSW also does a smaller number of environmental audits which are important as a deterrent to industry and for public confidence.

5.4.2 Public reporting

NSW requires exception reporting, meaning that industry must immediately report all serious license breaches, and then annually report all other breaches. The CEO must certify the completeness and accuracy of the information, including the reasons for any breaches and measures they have undertaken to prevent a recurrence. NSW then publishes the information on its website. We can also fine the industry, including the CEO, for any false information they provide to us.

5.4.3 Campaigns

NSW often concentrates on short term campaigns to alleviate widespread problems, such as illegal waste dumping. These involve mobilising our own staff often from different areas, multiple inspections, working with other agencies (*e.g.*, the police), involving any industry associations, and using the media to publish the campaign and the results. We also provide education material and advice to industry. Once a campaign is completed, NSW concentrates on tackling the next big problem.

5.4.4 Prosecutions

NSW has three tiers of prosecutions. Tier three involves penalty infringement notices (on the spot fines), tier two is for prosecutions in court, and tier one can involve higher fines and/or jail sentences for deliberate serious breaches. Court penalties are extensive and can include financial penalties, restoration orders, or other community service orders. As an alternative to court prosecutions, we can permit industries with minor breaches to enter into a court enforceable undertaking to do agreed compensatory works. This avoids a conviction being recorded against the company, but provides a transparent outcome for the community.

5.4.5 Environmental amenity issues

For less serious environmental amenity issues, for example odor, noise, or nuisance dust emissions, NSW encourages industry to manage these issues with their local communities. As an additional incentive, we are charging fees for inspections and directions if we need to respond to public complaints.

5.4.6 Remediation directions

NSW uses stop-work orders and remediation directions effectively; for example, with the illegal clearing of vegetation. Remediation directions can be issued immediately and prevent the person from gaining a commercial benefit from the clearing works.

5.4.7 Risk based licensing

NSW divides up our 3,000 pollution licenses into high and low risk activities, with only 25 percent in the high risk category. We manage the high risk activities proactively with investigations and improvement programs and we manage the low risk ones reactively, mainly responding to public complaints or obvious issues. We expect the low risk licensees to manage their activities responsibly and we take firm action if we find breaches.

5.4.8 Pollution Reduction Programs

NSW uses Pollution Reduction Programs as a license condition to require improvements within specified time frames. Such conditions are generally agreed upon with the licensees, but can be imposed if necessary. For larger industries with multiple problems, we prioritise the issues and work over longer time frames. For example, we required five year Pollution Reduction Programs, over a 25 year time frame, on an older steel industry to complete all the retrofit work needed to transform this large plant into a high-quality, modern steelworks. All Pollution Reduction Programs are on a public register on the Department of Environment and Climate Change website.

5.4.9 Polluter liability

NSW ensures its legislation places the onus on the polluter, holding directors and managers culpable for breaches, along with the corporate entity. For example, our waste legislation places liability on those who generate, transport, or dispose of waste. Also, our contaminated land legislation places the liability on the original polluter and moves through a hierarchy to the current land owner or mortgagor. Government assistance is provided if the original polluter(s) no longer exist and the land owner has no financial means to clean up the contamination. This approach has saved the NSW Government hundreds of millions of dollars where past polluters have been required to clean up contaminated sites.

5.4.10 Voluntary approaches

In addition to voluntary pollution audits, NSW legislation permits voluntary remediation agreements for contaminated sites. In practice we often permit voluntary environmental improvements for minor issues where we have the confidence they will be completed, rather than use our regulatory powers to require them.

5.5 Economic Instruments and Market Based Measures

NSW has been developing and using innovative economic instruments for over twenty years and these are used in conjunction with other compliance measures. Economic tools drive either prices or quantities of regulated activities to provide economic incentives for companies to further reduce waste and emissions beyond minimum compliance. They can better influence action on cumulative impacts that traditional regulation has not been able to solve. Examples of successful economic instruments include:

5.5.1 Load Based Licensing

Load Based Licensing was introduced in the early 1990s to set license fees proportional to the degree of environmental impact. Load reduction agreements

provide an additional incentive by allowing licensees to commit to future works and avoid the increased fees while those measures are being implemented. They have to repay the fee savings if they fail to meet their commitment.

5.5.2 Tradable Emissions

NSW has been developing cap and trade emission schemes since the early 1990s. For example, the Hunter River Salinity Scheme sets a total allowable emission level for the river, and allows companies to trade emission entitlements to minimise corporate costs. Trading now occurs across the internet with minimal administrative burden on Department of Environment and Climate Change or industry, resulting in acceptable salinity level in the Hunter River that was difficult to achieve in the past when we relied on command and control approach with individual companies.

5.5.3 Waste Levy

This has been a key economic tool since the 1970s for waste reduction in NSW. It is simple to apply, readily understood, and broad in coverage. A levy of \$AU37 per tonne is charged for disposal of waste to landfills in Sydney. This provides incentives to recycle waste and, more importantly, achieve better resource conservation in the first place. Money collected accumulates in an Environmental Trust Fund and is used to fund innovative waste reduction programs and other environmental initiatives.

5.5.4 Biocertification and Biobanking

NSW has lost important natural biodiversity as a result of cumulative land developments. Laws to protect biodiversity have been partially successful in slowing down the loss, but the pressure of individual developments has continued to see further erosion of biodiversity. Recent legislation in NSW to improve and streamline biodiversity protection for new land developments now provides better biodiversity outcomes through biocertification of large land areas, rather than individual developments, and a biobanking scheme. The biobanking scheme allows developers to buy and sell biodiversity credits so that when biodiversity is destroyed in a development, there is an equivalent amount of biodiversity protection achieved.

5.5.5 Environmental Offsets

NSW uses environmental offsets where a better and more cost effective environmental outcome can be achieved than by traditional regulation. For example, it was costing sewage treatment operators approximately \$AU10,000 for each additional kilogram of phosphorus reduction in a river in Sydney, but NSW discovered that phosphorus could be reduced for \$AU500 a kilogram from other cumulative urban sources (*e.g.* runoff from nearby market gardens). NSW licenses

now require additional phosphorus reductions from the sewage treatment plants, and allow this to be achieved through an accredited offset scheme with other landholders. Offsets are best suited to localized impacts and are not suitable for acute or toxic emissions. NSW requires that all practical measures to minimise environmental impacts be first undertaken before permitting offsets.

6 CONCLUSION

NSW has recognised the importance of reducing the unnecessary burden of environmental regulation on industry and government while increasing cost effective regulation to solve the outstanding environmental problems. We have tried many approaches to environmental compliance over 40 years, evolving from traditional command and control regulation to a sophisticated mix of regulatory and economic tools. Over the last decade, the population of NSW has increased by 10 percent and the economy has expanded by 40 percent, while spending on environmental management has increased by only two percent. The environment continued to improve during this period.

Our experience shows that it is important to be flexible and to pick the most cost effective approach to the problem at hand. We seek to continually improve our regulatory compliance approaches through updating our legislation and continuously working to improve environmental compliance and enforcement.

7 BIBLIOGRAPHY

Australasian Compliance Institute, www.compliance.org.au.

Australian Environmental Law Enforcement and Regulators Network, www.aelert.com.au

Department of Environment and Conservation, NSW, 2006, DEC Social Research Series: Who Cares About the Environment in 2006. A survey of environmental knowledge, attitudes and behaviors in the NSW community.

Department of Environment and Climate Change. www.environment.nsw.gov.au.

Gunningham N and Sinclair D, 2002, Leaders and Laggards, Next Generation Environmental Regulation.

Regulatory Institutions Network (RegNet), <http://regnet.anu.edu.au>.

Sparrow, Malcolm K, The Regulatory Craft: Controlling Risks, Solving Problems, and Managing Compliance, Brookings Institution Press 2000, Washington, DC.

Excerpt from the Proceedings of the International Network for Environmental Compliance and Enforcement's (INECE) Eighth International Conference, Linking Concepts to Actions: Successful Strategies for Environmental Compliance and Enforcement, held 5-11 April 2008, in Cape Town, South Africa.

Reproduction of this document in whole or in part and in any form for educational or non-profit purposes may be made without special permission from the INECE Secretariat, provided acknowledgement of the source is included.

The INECE Secretariat would appreciate receiving copies of any materials that use this publication as a source.

Opinions expressed are those of the authors and do not represent the views of their governments or organizations, the INECE Secretariat, or Cameron May.

Please access <http://www.inece.org/conference/8/> for the full Proceedings.

INECE Secretariat
2300 Wisconsin Ave, NW Suite 300B
Washington, DC 20007
inece@inece.org
<http://www.inece.org>