

The environment management services industry

Author:

Paul J Perkins AM, Adjunct Professor, Australian National University and Chairman of the Barton Group.

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The need for cross-cutting analysis of the extent of engagement and contribution of the business sector in addressing environmental problems is apparent in reviewing progress against environmental indicators across seven of the themes adopted in Australia's State of the Environment reporting system.

This paper discusses the emergence of the new environmental management services industry in Australia, the mainstreaming of sustainability principles and practices in old industry sector classifications and, largely due to market information failure, warns of the slow uptake and integration of new environmental solutions and technologies in strategic planning and investment decisions.

The new industry

The emergence of the sunrise environment management services industry is well documented but many definitional issues remain unresolved and contribute to a continuing lack of certainty in measurement and statistical analysis. A number of countries, including USA, Canada and France, and various Australian state initiatives, have applied the OECD-Eurostat definition. Most statistical classifications (OECD 1999) limit the industry to:

“activities which produce goods and services to measure ...or correct environmental damage to air, water and soil as well as problems related to waste, noise and ecosystems. This includes cleaner technologies, products and services that reduce environmental risk and minimise pollution and resource use.”

The Environment Industry Action Agenda (EIAA)(DITR 2001) adopts a somewhat wider view including activities encompassing water and waste water management, river system and coastal zone management, land management, rehabilitation and remediation, air quality monitoring and control, energy efficiency and renewable energy, waste minimisation, resource recycling, waste treatment and waste disposal, cleaner production technologies, monitoring and instrumentation, research, analysis and technology and systems development.

This wider definition reflects the EIAA vision to “add value to all Australian business by enabling competitive outcomes, and in the process build environment industry annual turnover of more than \$40 billion by 2012 measured in GDP terms” (DITR 2001).

Australian Bureau of Statistics (ABS) information used in the development of the EIAA was based on a narrower classification indicating a 1996-97 base of \$8.6 billion, as below:

Domestic Environment Protection Expenditure 1996-97 (A\$ million)

Consumption	Government	Industry	Households	Total
Waste Management	383	1 467	617	2 467
Waste-water & Water Protection	316	945	1 750	3 010
Air & Climate	49	291	100	440
Biodiversity & Landscape	1 172	172	169	1 513
Soil & Groundwater	203	141	< 0.5	344
Subsidies	12			12
Other	430	416	1	848
Total	2 564	3 432	2 638	8 634

Source: Adapted from Australian Bureau of Statistics 1999, cat 4603.0 Environment Protection Expenditure Australia 1995-96 and 1996-97 A later study, “National Capability Statement on Australia’s Environment Industry”(Environment Australia 2001) indicated support for the wider definition and indicated significant growth from the earlier survey.

Table 1 ESTIMATED distribution of Australian environment industry activities, 1999-2000 (\$m)

	<i>Production of equipment & materials</i>	<i>Provision of services</i>	<i>Construction & installation of facilities</i>	<i>Total</i>
Pollution Management Group	3,157	8,168	2,896	14,221
Air pollution control	20	51	18	89
Water & Wastewater management ^(a)	1,462	3,783	1,341	6,587
Solid waste management	724	1,874	664	3,262
Remediation/Clean-up of soil & water	220	568	201	989
Other services	288	745	264	1,297
Other (Biodiversity & Landscape)	443	1,147	407	1,997
Cleaner & More Efficient Technologies & Products Group	1,163	0	297	1,461
Resource Management Group^(b)	719	97	208	1,024
TOTAL	5,039	8,264	3,402	16,705

Notes: Based on growth from 1995-96 to 1996-97. (a) Combined water supply and wastewater management. (b) Includes renewable energy industry only.
Source: Compiled from ABS 4603.0 and other sources. CSES analysis.

A more recent (unpublished) assessment by the Barton Group (the national group of Chief Executive Officers responsible for oversight of the implementation of the EIAA), indicates a figure between \$16 billion and \$20 billion in 2004-5 with major growth areas including water and wastewater, land management, remediation and rehabilitation, renewable energy and building energy efficiency and state reported export improvements.

There is a dearth of official statistics with the latest national or economy wide data originating from an Environment Protection Expenditure (EPE) survey undertaken by the Australian Bureau of Statistics (ABS) in respect of 1996-97. Since that time, the ABS has undertaken sector-specific surveys such as EPE by local governments in 2000-01. However, state studies (South Australia Government 2001 and Queensland Government 2005) and sectoral industry statistics (WSAA 2003 and ABS 2003b) support the Barton Group's broader definition and aggregate estimates for the environmental management services industry. The inclusion of water, climate change and state conservation initiatives appear to increase the government share of activity to about 50 per cent. The inclusion of renewable energy and energy efficiency marginally increases the industry share and the households share is considered smaller.

For example, new product lines have arisen in water harvesting and recycling by domestic and commercial sectors. Spurred on by drought and state regulation (eg the Building Sustainability Index (BASIX) (NSW Government 2004), sales of rainwater tanks, automatic diversion equipment, new roofing materials and surface sealants as well as waste treatment units and irrigation components have resulted in several new manufacturing facilities and distribution activities (eg companies such as Bluescope and Vinidex). To date supplies of these materials and local installation and maintenance services are only partially meeting the emerging demand which will increase markedly as several states intend that the regulations become mandatory.

Mainstreaming sustainability in old industries

The main factors driving demand for improved standards of environmental management in old industries (mining, manufacturing, building, transport, water and energy, and agriculture) in recent years include:

- stricter environmental regulation, and enforcement through a mix of government incentives and economic instruments
- consumer and community pressure, reflecting new awareness and lifestyle aspirations, demanding coastal and urban pollution reduction
- changing business attitudes to environmental compliance and competitiveness
- public policy and investment focus on, and Public Private Partnerships (PPPs) for, population growth, climate change, water security and infrastructure
- large scale infrastructure renewals in urban areas at new standards

- technological developments.

There has been overall economic growth in Australia since the first independent SoE report in 1996 however there is evidence that over this same period the first stage of micro-economic reform has perversely led to a diminution of state and local government investment and operational expenditure in some environmental management areas including land management and compliance monitoring with offsets by cost shifting through self-regulation, public-private partnerships (PPPs), and consumer regulations such as BASIX, NSW. The assessment of the environmental impact of these innovations requires more research in future years.

On the other hand, significant progress has been made in the urban built environment through a mix of regulation and a new engagement by developers, architects and engineers. The resulting de-materialisation and energy efficiency designs have caused new opportunities for manufacturers (Bluescope, Visy, etc) and environmental management service providers such as Coffey Geosciences, Theiss, Ecowise Environmental with domestic take-up through Do It Yourself retailers' new product offerings for more resource-efficient products and services..

Whilst state and industry surveys clearly identify growth in both the number and sales volumes of small environment industry specialist firms, there has also been significant and increasing activity by government and private operators in old industries.

Sometimes, defensively, they have been engaging in cleaner production and eco-efficiency investments but often using embedded resources and traditional preferred suppliers. This procurement methodology masks the real increase in activity as many such external providers are diversified and do not record such expenditure as "environmental".

The impact of these higher activity levels on the state of our environment is still marginal in real terms, with good but not widespread examples of effective pollution reduction, reduced non-renewable resource use and increasing innovative responses to climate change, water, energy and other natural resource depletion challenges.

Government engagement

In all areas, government activity and engagement is prominent, as reported throughout the themes of the 2006 SoE Report. Government's roles include: providing policy and leadership, as a researcher, a regulator, and a funder of environmental improvement, whilst at the same time being heavily engaged in operational matters on large spatial and environmental impact scales.

These different roles have resulted in some very positive impacts in early stage development of innovative solutions eg developing Sydney Olympic Park: building materials and energy efficiency design, waste and wastewater recycling, and contaminated soil remediation but national take-up through replication and commoditisation of most such innovations has been slow and is arguably being compounded by government fund rationing, institutional

complexity and inter-agency competition (*Financial Review* 19 October 2006 and Barton Group 2005).

Nevertheless, the growth and reach of the environmental management services industry and the resulting potential to reduce environmental impact is promising, with demonstrated success in reducing pollution and reducing resource use to sustainable levels evident in successful initiatives in water, energy and land management areas.

Future challenges

The challenge is to better integrate the efforts of government, private sector providers, industry and consumers for more investment in pollution reduction and eco-efficiency. Recent industry-based government initiatives which seek to better engage the sectors in research and objective benchmark reviews, assessment and partnered funding of improvement planning (energy, water waste) are practical steps forward as are the many innovative public private partnership investments in water security and renewable energy. So too are the several examples of innovative regulation, combining non-compliance penalties with incentives for improvement.

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