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EDITORIAL

CPA Australia who has maintained a steadfast contribution for more than ten years, September 2007, again supports the APCEA Journal. The editors express their thanks to *CPA Australia* and the various Divisions for assistance over the years – including Tasmania, Newcastle, the ACT, and South Australia.

Margaret McKerchar (*University of New South Wales*) and Ann Hansford (*Bristol Business School*) wrote the first feature article. The paper considers the relative merits of various types of environmental taxation. After briefly reviewing where it fits in with the other environmental policy options, the paper then looks in detail as to what can be learnt from the contrasting approaches to environmental taxation that have been taken by Australia and the United Kingdom.

Roger Burritt of the University of South Australia wrote the second feature article. The Australian aquaculture industry provides an example of where environmental management accounting and reporting could be used to help management and stakeholders address social, environmental and economic issues. This article identifies the main ecologically sustainable development issues in Australian aquaculture are identified.

Environmental Extra!—the journal's regular column.

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ENVIRONMENTAL TAX POLICIES IN AUSTRALIA AND THE UK: CAN IT ONLY BE A CARROT OR STICK APPROACH?

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Abstract

This paper considers the relative merits of various types of environmental taxation. After briefly reviewing where it fits in with the other environmental policy options, the paper then looks in detail as to what can be learnt from the contrasting approaches to environmental taxation that have been taken by Australia and the United Kingdom.

Australia has tended to adopt an enabling (or carrot) approach by rewarding and encouraging positive environmental policies through tax allowances in the Australian federal income tax system. The UK by the introduced the *Climate Change Levy* (CCL) in 2001, with increases recently introduced in 2007 and further rises in 2008 planned, has taken a more 'stick' approach. The CCL is an indirect taxation on business energy costs. It is claimed to have the advantage of administrative simplicity whilst giving a clear message to businesses, and it is an important part of the UK's environmental policy.

The paper concludes with a review of the different approaches to: design and administration, competitiveness, revenue neutrality, the 'polluter pays' principle, tax allowances, tax bases, base line issues, federal/state responsibilities, the latest technologies and the political aspects.

Introduction

In many jurisdictions taxation measures have long been considered to be an important means to deliver environmental policies. Some of these measures impose a cost or a disincentive, whereas others in contrast allow for incentives and rewards. Undoubtedly these measures will influence the behaviour of taxpayers and therefore need to be carefully considered if the desired policy outcomes are to be achieved. The purpose of the paper is to consider the relative merits of the contrasting approaches adopted by a number of jurisdictions, with a particular emphasis on Australia's 'enabling' approach to environmental policy as opposed to the United Kingdom's (UK) 'stick' approach. These two countries, which are normally staunch allies, adopted conflicting positions to the Kyoto Protocol and on this basis were chosen for the purposes of this analysis. The paper concludes by identifying the issues raised by these different approaches and considers their likely impact on the development of environmental tax policies in the future.

Environmental tax policy options

Researchers have acknowledged the importance of the design and administration of environmental tax as being the key to

effective implementation (OECD, 1996). Voluntary agreements, tradable permits, regulation and taxation have all been used to address pollution, with any single measure unlikely to prove entirely effective in isolation (Hansford et al, 2004). However, before embarking on the design, implementation and administration phases of environmental tax reform, there needs to be clear directions from policymakers that will guide and underpin the process. Basically, policymakers are faced with the choice of direct taxation, indirect measures or a combination of both. Direct taxation measures (i.e. users pay, or the 'stick' approach) has considerable support as a cost effective, non-regulatory-dependent method of changing business behaviour (ESRC, 1998). Further support for taxation comes from the *Advisory Committee on Business and the Environment* who suggest that 'Voluntary agreements and regulations may be insufficient to meet the Government's targets ... [an] ... economic instrument in the form of a tax may be necessary' (ENDS, 1998, p.27). The imposition of a direct tax is claimed to be a superior mechanism for pollution abatement because of its administrative simplicity and its avoidance of regulatory failure (O'Riordan, 1997).

Alternatives to the imposition of direct taxes or penalties on environmental polluters/users include voluntary agreements, regulation and tradable permits (i.e. the 'carrot' approach). Voluntary agreements lack certainty and, without legally binding obligations, an industry is not compelled to make significant change. For the past two decades regulation has been another popular method of addressing pollution (Barde, 1997), and it has been particularly useful in dealing with large point sources of pollution and industrial effluents, which may have dangerous local effects (Hewett, 1999). Tindale and Holtham (1996) argue that there is also the likelihood that businesses will

only undertake minimal changes to comply with regulation. For those who do more there is no reward.

Tradable permits have been popular in the USA for air, water and waste pollutants and the *Institute for Fiscal Studies* believes them to be a particularly useful tool in fighting pollution (IFS, 1999). They are flexible and there is the benefit for government that they can control and identify the levels of pollution entering the environment (Farber, 1998) but a tradable permit does little to encourage innovation to reduce harmful emissions and it could be considered to be a license to cause pollution.

In support of the argument in favor of direct environmental taxation, and energy taxes in particular, positive experiences within Northern Europe (e.g. Scandinavia) are cited to indicate that they can be introduced and uncompetitive effects successfully avoided. Where taxes are introduced or increased on a national scale only, there is a risk that particular industries will suffer. The UK has made progress with the introduction of the CCL on business energy consumption as part of a larger program aimed at reducing greenhouse gas emissions. In 2002 the UK *Confederation of British Industry* (CBI) with the *Engineering Employers Federation* (EEF) calculated that the UK CCL has resulted in manufacturing industries being the worst affected and that in the year since the introduction of CCL the sector has faced a '£328m increase in energy bills and a net £143m rise in costs' (CBI, 2002).

However, others have dismissed such concerns and consider that industry has nothing to lose and everything to gain from environmental taxation. They maintain that arguments such as taxation being opposed to the goals of economic expansion are based on the self-interests of a few. Tindale and Holtham (1996) suggest there are powerful interests, such as the fossil fuel and chemical

industries, who oppose any change in the pattern of economic behaviour and whose lobbying operations are well-resourced, well-organized and not overly-principled. Tindale and Holtham argue that environmental measures can spur firms to develop more resource-efficient methods of production and reduce costs. Cox (2000) also endorsed this argument and suggested that the CCL would push energy efficiency up the agenda of many industries by providing a clear financial message and encouraging the use of exempt energy sources.

We now investigate these theoretical positions by reviewing the approaches taken by Australia and the UK as they have adopted contrasting positions. The UK's agreement to the *Kyoto Protocol* was in accordance with the majority view and certainly that of its European neighbours. Australia instead chose to side with the United States, though it has been described as 'being backed into a corner', rather than taking a position based on a sound policy rationale (Saddler et al, 2006). The current Australian position has been stated as to encourage cleaner industries by using and spreading the latest technologies to limit emissions. This is in contrast to the UK position of imposing economic restrictions or penalties on polluters.

Environmental taxation — the Australian approach

Historically, Australia has tended to adopt an enabling (or carrot) approach by rewarding and encouraging positive environmental policies through tax allowances in the Australian federal income tax system. However, such allowances have primarily been directed towards the conservation of land and water, rehabilitation of mining sites and investment in research and development, rather than towards the reduction of energy usage or

greenhouse gas emissions. Further, the benefits of such allowances are effectively tied to the marginal tax rate of taxpayers, and their effectiveness (in terms of providing an incentive) is questionable given the volatility of farm incomes (especially in periods of drought) and the incomes of start-up, high-tech businesses.

Traditionally, the power to raise income tax has been the domain of the Australian Government whilst responsibility for the environment has rested with the various State and Territory Governments (and local governments to a lesser extent). The financial burden of this responsibility is reflected in the breakdown of environmental expenditure for 2002-03, with the States and Territories accounting for 47% of the national public sector total, local governments incurring 37%, and the Australian Government expending the balance of 16% (Beeton, 2006). Given the limited taxation powers of the States and Territories (and even more limited taxing powers of local governments), the Australian Government is still very much in the driver's seat when it come to environmental tax policy and control of the purse strings.

The Australian Government has favoured the carrot approach including tax deductions for donations to environmental or heritage organisations, capital gains tax exemptions for gifts of property left in a will to eligible organizations, and income taxation concessions for landowners entering conservation covenants with eligible organizations (this includes States, Territories, some local governments and some non-government organizations). Other national initiatives include legislative change (for example, the *Environment Protection and Diversity Conservation Act 1999*), the *National Climate Change Strategy*, the development of a *National Water Initiative* in 2004 and the formation of

the *Asia Pacific Partnership on Clean Development and Climate* (as an alternate position to signing the *Kyoto Protocol*).

The *Australian Greenhouse Office* administers the Australian Government's \$1.8 billion climate change strategy which is centered on five key areas – emissions management; international engagement; strategic policy support; impacts and adaptation; and science and measurement which involve a variety of programs. Within the jurisdiction of the individual states, there are further climate change programs such as the *NSW Department of Environment and Conservation Hunter River salinity trading scheme* (emissions trading) and *Load-Based Licensing*.

The *National Water Initiative* (NWI) is an intergovernmental agreement by all States, Territories and the Australian Government and encompasses commitment to water access entitlements, water markets and trading, and best practice water pricing. For Australia, it represents a critical environmental and economic development given that 67% of water usage by industry nationally is attributed to irrigated agriculture. The initiative, to which the Australian Government allocated \$2 billion, is an attempt to balance the needs of all current and future users with the need to protect the ecosystem and water as a scarce resource. In addition to the NWI, New South Wales, Victoria, South Australia, the Australian Capital Territory and the Australian Government have a water agreement in respect of the Murray-Darling Basin setting out the arrangements for investing \$500 million over five years commencing in 2004-05, principally to reduce the level of water over-allocation.

The policy position that has evolved is that the Australian government should take the lead on matters of national significance (such as Kyoto) and national coordination,

while pulling back from direct command and control of matters which have been traditionally been regulated at State level. As a result, standards have varied from State to State and the ability to manage the environment on a national level remains hampered in spite of some progress being made in respect of water management. Critics have claimed that the Australian government still has only limited national powers to address issues such as greenhouse gas emissions, forest protection and land clearing (Smith, 1999).

In July 2005 Australia, along with the United States, China, India, Japan and South Korea, announced the formation of the *Asia Pacific Partnership on Clean Development and Climate*. The Australian Government described the partnership as aiming to develop, deploy and transfer existing and emerging clean energy, meet increased energy needs and explore ways to reduce the greenhouse intensity of member economies, build human and institutional capacity to strengthen cooperative efforts and to seek ways to engage the private sector in reducing emissions. The message sent is that the activities that lead to GHG emissions should not be unduly constrained or taxed. However, this approach may well see Australia locked out of the emerging carbon markets and limiting foreign investment in Australian clean technologies (Saddler et al, 2006).

Overall, the current Australian position has been to encourage cleaner industries and more effective management of natural resources by using and spreading the latest technologies, it has not been the 'stick' approach. This position also embodies the need for a more collaborative approach by governments at different levels, with greater national directive. The politics of the relative power of governments (both in terms of taxation and responsibility) and the current fiscal imbalance have hampered

collaboration to date. However, some progress, at least in respect of water management, has been made. Australians already believe they have a very complex tax system, thus it is unlikely that the impost of further taxes and their inherent compliance costs would be well received.

Environmental taxation – The UK approach

The use of indirect, input taxation on the purchase of energy is a market pressure to reduce consumption. This form of indirect taxation has the advantage of administrative simplicity, as no expensive monitoring of pollution outputs is required, and it is one of the options adopted by the UK government at present (HM Treasury, 2006). Research has shown that the costs fall disproportionately on small to medium sized enterprises (SMEs). However, for larger businesses the additional costs can be absorbed more easily and has been considered by some in large businesses to be a catalyst for a change in behaviour resulting in moving to more environmentally friendly processes and procedures (Hansford et al 2004).

This section focuses on the *UK Climate Change Levy* (CCL) which was introduced in the 2000 Finance Act by the UK Government as part of its wider climate change programme. It was regarded as the ‘UK’s most significant green tax to date’ (Andrew, 2000). CCL is calculated on the quantity of fuel supplied, with different rates for various types of fuel. The rates were raised by FA 2006, giving a clear message that CCL is here to stay within the armoury of the UK Chancellor’s environmental tax measures. The rates that applied from April 2001 – March 2007 are as follows with rates in (brackets) from April 2007 and [brackets] from April 2008:

Electricity–0.43p per Kwh (0.441p)
[0.456p]

Natural gas – 0.15p per Kwh (0.154p)
[0.159p]

Solid fuel (coal) – 1.17 p per kg (1.20p)
[1.242p]

Liquid petroleum gas for heating – 0.96p per Kg (0.985p) [1.01p]

The 2007 and 2008 rates are rises in line with inflation. CCL is imposed at the time of supply to industrial, commercial and public sector users, and it covers qualifying primary and secondary fuel for lighting, heating, motive power and power for appliances derived from nuclear and fossil fuel sources. It is added to the energy bill before VAT is calculated and cannot be reclaimed.

At its introduction the Government appeared to be attempting to take account of Lord Marshall’s recommendations that any tax needs to be designed in a way that would protect the competitiveness of UK firms (Marshall, 1998) whilst nonetheless attempting to ensure that businesses no longer ignored environmental concerns. From the outset there were a number of important allowances and exemptions to CCL.

The UK government announced that the revenue generated by CCL would be recycled back to businesses through a reduction of 0.3% in *National Insurance Contributions* (NIC) and thus should prove to be revenue neutral and non-damaging to UK businesses. This arrangement provides the ‘double dividend’ of encouraging more efficient use of energy resources as well as reducing employment costs (Oates, 2002). The winners would be those with low energy costs that are labor rather than plant-intensive. Even in those businesses that were overall winners, there was a realization that the allocation of costs to processes would be likely to include the higher costs of production caused by CCL but not all, if any, of the lower costs of NIC (Hansford &

Woodward, 2003). Pocklington (2001, p. 222) considered it to be ‘a quick and dirty solution [that] is ineffective and inefficient’ due to significant inequalities in the redistribution of revenues that are detrimental to manufacturing and engineering businesses. A further anomaly is that employee intensive businesses receive a rebate – irrespective of any commitment to energy efficiency.

The government introduced a system of 100% enhanced capital allowances for approved items of energy efficient equipment including motors, good quality combined heating and power (CHP) plants, boilers, lighting systems, variable speed drives, refrigeration, pipe work insulation and thermal screens. However it would appear that not all in industry were convinced that these allowances had longevity and there was disquiet that the revenues generated by CCL would be channeled into other government schemes (Hansford & Woodward, 2003). From the introduction of CCL the opportunity to avoid it through the use of ‘good quality’ CHP has been possible. This source of power is energy efficient in operation, providing significant fuel savings, with both cost and environmental efficiency gains through reducing carbon dioxide emissions in comparison to other forms of electricity generation and heat supply. CHP status is approved on individual power plants and is dependent on certification from the *Department for the Environment, Farming and Rural Affairs* (DEFRA). Approval depends on whether the standards of production come within its quality assurance specifications.

It was recognised that energy intensive users would be particularly disadvantaged by CCL when it was added to their energy costs and so they required special consideration. *Climate Change Agreements* (CCA) or *Negotiated Agreements* were introduced but

restricted to ‘energy intensive’ processes as originally set out in the *Finance Act 2000* and *SI 2000/1973*. Whether businesses qualify as intensive users depends on the limited requirements of whether they fulfil the *Integrated Pollution Prevention and Control* (IPPC) criteria. In order to compute the energy reduction targets, consumption of a recent year - the ‘base year’ - was used in order to calculate these annual energy usage reductions. A base year in which there was a high energy use meant that the target reductions over the coming 10 years would be easier to achieve than targets based on a low base year figures. A significant 80% reduction in CCL is available for businesses that qualify as an IPPC process and that comply with the agreed reductions in energy consumption.

Due to these additional administrative demands on businesses, larger organisations lead in the implementation of these agreements. Many SMEs do not have the resources to divert the time nor have the financial commitment required to establish and maintain these agreements (EEF/CBI, 2002). CCAs can be considered to be useful in the setting of targets and monitoring them, although this inevitably leads to highly complex and costly systems. These costs to both industry and regulators are considered to be a significant drawback and result in SMEs being less likely to participate (Pocklington, 2001). The time frame to complete agreements can be lengthy (up to five years in some cases) but some which were concluded quickly are considered to be environmentally weak (Shaw, 2001).

There has been some ‘fine-tuning’ to the CCA requirements, including the 90/10 rule and additional allowances for non-IPPC processes that are directly linked with a qualifying process. In cases where over 90% of the energy usage does qualify then the entire site is eligible for cover by a CCA

(90/10 rule). There are some processes where not all the consumption of energy relates to activities that qualify for IPPC allowances but are directly associated with operations that do qualify. In both these cases they have to be agreed with DEFRA.

An important part of CCAs is to set targets for reductions in energy use and together with an emission-trading scheme, they are a form of risk management. Emissions trading can result in selling emissions permits gained as a result of over performance in reducing energy consumption and purchasing emissions permits when a business has under performed. By adjusting the emissions permitted then the allowance can be maintained and so the 80% reduction in CCL can apply.

Green energy (wind, hydro, solar and wave energy) does not attract CCL and, although the cost per unit is slightly higher than conventionally produced energy, as it does not attract CCL the total unit cost compares favourably.

Discussion

UK and Australia, with different theoretical perspectives, can inform the environmental tax debate. It has been maintained that achieving comprehensive tax reform is regarded as being one of the most politically difficult tasks a government can undertake in a democratic context (Eccleston, 2004). Australia's position and 'carrot' approach has been criticised for not being based on a sound policy rationale. The UK's stance, the 'stick' approach, was in accordance with the majority view of the EU. The UK has indicated its commitment to CCL with an increase in the rates from April 2007 and a further rise planned from April 2008.

We now summarise some of the tensions and issues that have arisen from our review:

Design and administration

Stakeholders need to be convinced that there is an environmental problem requiring action, and that the advocated policy can contribute efficiently to its solution. Irrespective of whether taxation takes the form of a charge upon outputs or inputs, it is vital that the design is effective and is driven by sound policy and commitment by stakeholders.

Competitiveness

There are concerns that UK business is suffering serious loss of competitiveness. CCL at 2001 levels have applied at the same rate to business energy costs from 2001–2007 and the increases in line with inflation in April 2007, with a further increase planned for April 2008 indicate that it here to stay. In addition, as a result of rising fuel prices and the pace of liberalisation in European energy markets remaining slow, the UK will continue to be competitively disadvantaged. Competitiveness was a driver in Australia's decision not to sign the *Kyoto Protocol*, on the basis that there would be a loss of industry to Asia. Striking the balance between international competitiveness and the need for greater co-operation will continue to be a challenge, particularly where countries face scarce resources, different needs, ability to adopt new technologies and rates of growth in both their population and economy. Greater co-operation will be needed to be established by policymakers.

Revenue neutral

There is a strong case to introduce measures in (appropriate) revenue neutral ways and this has been contravened by both countries in their current approaches. Issues of the resulting double dividend, of reduced energy consumption and employment costs on the introduction of environmental taxes as part of a revenue-neutral tax package, needs careful thought. Where distortions already exist, then the introduction of pollution taxes

can further exacerbate these distortions. In the case of the UK, the link between CCL to NIC wasn't operational in most cases – nor believed to be, which is possibly more important. From 2003 CCL was part of general taxation and the ring fencing, to reduce employment costs and so support the double dividend, was lost. From the perspective of Australia, the various incentives and subsidies offered have been to encourage investment – but given that they are linked to the tax system with its marginal and progressive tax rates, they offer greater reward to wealthier taxpayers. This can distort investment behaviour and provides little if any incentive to those on low levels of income (for example, primary producers).

'Polluter pays' principle and tax allowances

Tax allowances on certain business costs have limitations, including the abuse of tax expenditures and the impact on technological developments (Ashiabor, 2002). In focusing on a 'polluter pays' approach then removing tax concessions ensures a more rigorous application of this principle. However, the 'stick' approach may deter undesirable pollutant behaviour, it will not necessarily provide encouragement for business to invest in research and development for the future. There will be different preferences within industries and within businesses and it may be that a mix of strategies can offer wider appeal. A more general OECD model involving a tax mix of market based instruments and carbon taxes may be more successful in achieving reform to limit environmental damage within a global setting.

Tax base

Comparing the Australian and UK approaches raises interesting tax base issues and in particular, the view that the tax base, wherever possible, should be the polluting

activity itself – not some related activity. In the UK, CCL is charged on fuel, irrespective of the emissions resulting. Some water companies, who pay the full CCL with no CCA 80% allowance as they don't fulfil the IPCC criteria, have state-of-the-art machinery that minimises pollution and they feel they are treated unfairly. In Australia the direct link between polluter and the tax base doesn't exist. There may be grounds for arguing that it should, at least to provide a deterrence effect.

Base line issues

Issues of both the environmental costs associated with pollution and the way in which the tax measures interact with the rest of the revenue system need to be considered in order to set the environmental tax rate (Oates, 2002). Activities to amend or reduce pollution depend on a base line and so it is necessary to define a baseline (Smith, 2002). In the UK, the CCL base year issue distorts the level of reductions and researchers have shown that some companies had high base year emissions and so they had 'easy wins' in the first few years of CCAs (Hansford et al, 2004). Clearly, similar arguments could be mounted in the Australian context. There may need to be consideration of the needs of business based on industry type and stage of development. Consultation and collaboration with industry can help inform policy and encourage greater commitment to the environmental tax agenda.

Federal/state responsibilities

Australia appears to be still struggling to address the complexities of its federal/state relationships, or perhaps this is simply an excuse for not having an effective national environmental policy in place. The Prime Minister's arguments for not signing the *Kyoto Protocol* reinforce the view that the decision was driven by economic considerations rather than genuine commitment to the global environment.

Whilst the environment is a national matter, there were no related tax measures announced in the 2006 Federal Budget. However, given that Australia does arguably have one of the most complex tax systems in the world, there may be a reluctance to use tax policy as the primary mechanism to reduce greenhouse gas emissions. Whilst the UK does not have these same issues, its position within the EU can also give rise to similar tensions.

Latest technologies

As to progress in terms of Australia's stated position of encouraging cleaner industries by using and spreading the latest technologies to limit emissions where most needed, it is difficult to find evidence of progress made to date. In fact the counter argument exists that by insulating the Australian economy from a carbon price, the development of new clean industries may be retarded and the future dependence on imported technology and expertise may increase. The UK does not appear to have a clear policy on encouraging latest technology and this is consistent with its preference for the 'stick' approach.

Political aspects

The current UK government appears to be warming to the idea of the benefits, both environmentally and politically, of being seen to be 'green' with the Conservatives, under the leadership of David Cameron, majoring on environmental issues and environmental responsibilities. Cynics may attribute this to the realisation that this could be a 'let-out' from further unpopular environmental taxation.

With the effects of current Australian approach under scrutiny, with some viewing apparent environmental incentives as little more than a political tool, there will undoubtedly be a place for tax policy within the armoury of governments in order to

address one of the most important issues facing the global community.

Conclusion

This research, to date, has highlighted the contrasting approaches taken by Australia and the UK. The analysis indicates that neither Australia nor the UK has consistently adopted either a 'carrot' or a 'stick' approach. The policy perspectives of both countries lack commitment, are unconvincing to business, and may have serious implications for their environmental achievements in the longer term. It may well be that both the 'carrot' and the 'stick' can be successful instruments, provided they are appropriate given the underlying policy objectives. Developments in the future are likely to involve blurring of the boundaries between tax policy and encouraging 'good' environmental practice. In the post-Kyoto era there will continue to be calls for developments in green technology that improves both sustainability and profits. However, this will need to be supported by much more direct environmental intervention.

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ENVIRONMENTAL MANAGEMENT ACCOUNTING AND AQUACULTURE IN SOUTH AUSTRALIA

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Abstract

Environmental management accounting and reporting are growing in importance. The Australian aquaculture industry provides an example of where environmental management accounting and reporting could be used to help management and stakeholders address social, environmental and economic issues. In this article, following a brief introduction, the main ecologically sustainable development issues in Australian aquaculture are identified. The notion of whether environmental management accounting has the potential to bring together the information needs of government departments and corporations involved in the aquaculture industry is then explored. It is concluded that guidance provided by the accountancy profession tends to focus on the regular provision of information for decision making, whereas guidance provided by government appears to concentrate on ad hoc information for investment appraisal. The two need to be integrated if systematic movement towards ecologically sustainable development in the industry is to be encouraged.

Introduction

The concept of environmental management accounting has emerged over a number of years. In 2001, the *United Nations Division for Sustainable Development* published a

document entitled *Environmental Management Accounting Procedures and Principles* to help establish a culture of pollution prevention and waste minimization within industry (UN 2001). A number of academics engaged with Environmental Management Accounting (EMA) framework development in decision making contexts (Burritt, Hahn, & Schaltegger 2002) and risk management (Burritt, 2005). Promotion of EMA was taken up for the accountancy profession by the International Federation of Accountants (IFAC) through the production of a similar framework published in an *International Guidance Document* in 2005 (International Federation of Accountants 2005). The expectation of IFAC is that companies, through their accountants, will perceive the self-evident value of EMA and introduce it into their organizations in order to help the environment and society as well as corporate financial bottom lines on the way towards sustainability. The organizations to which the Guidance is addressed include government bodies, as well as companies.

In this paper the possible contribution of EMA is considered in the context of ecologically sustainable development (ESD) of the Australian aquaculture industry. The paper briefly provides a background to the aquaculture industry in Section II, while Section III highlights the main issues facing ecologically sustainable development in aquaculture. In Section IV the challenges for environmental management accounting and

reporting in aquaculture are explained, with concluding comments being made in Section V, suggesting issues to be addressed. The Australian aquaculture industry is introduced in the following section.

The Australian aquaculture industry

Pillay and Kutty (2005, p. 3) suggest that the word aquaculture has been used in recent decades to denote all forms of culture of aquatic animals and plants (e.g., fish, shellfish, crustacea, aquatic plants, etc.) in fresh, brackish and marine environments. For example, in Australia the five main aquaculture industries include prawn farming, Southern Blue fin tuna farming, marine salmon farming (Atlantic Salmon and Rainbow Trout), pearl oyster farming and edible oyster farming. These represent over 94% of the total value of aquaculture production in Australia (Australian Government 2004, p. iii). Australia is said to possess a number of advantages in aquaculture associated with proven culture technologies, favourable production efficiencies, commercial viability and favourable marketing attributes (Nel 2006).

Government and business are both closely involved in ESD in the Australian aquaculture industry.¹ Australian Government legislation has provided a major impetus towards the implementation of ecologically sustainable development in aquaculture, in part through s.516 of the *Environmental Protection and Biodiversity Act 1999* (the EPBC Act), which requires government bodies, such as Departments, to report on their ecologically sustainable development performance. In addition, the EPBC Act requires Government Departments to carry out strategic

¹ The Commonwealth of Australia has a federal system of government which includes the Australian Government, State and Territory governments and local government within each State or Territory.

environmental assessments for Commonwealth managed fisheries and so an assessment and reporting framework has been developed, claimed to be the first in the world, that addresses all perceived ESD issues - environmental, social and economic - in aquaculture (Australian Government 2004, p. v).

South Australia considers itself to be the State within Australia that is leading other States in relation to the pursuit of sustainable aquaculture. It produces about 40% of Australian aquaculture product (Government of South Australia 2007). South Australia operates in accordance with Australian Government laws, such as the EPBC Act, but has its own constitution and has separate legislation and has introduced a voluntary code of behaviour for the aquaculture industry in the State, implemented through Primary Industry and Resources SA (Government of South Australia 2001). The State also has other sustainability supporting endeavours which have an impact on aquaculture. First, a Strategic Plan which includes a priority to make South Australia world-renowned for being clean, green and sustainable (Chesson, Whitworth and Smith 2000, pp.100). Second, an Office of Sustainability which is charged to develop an integrated approach to decision-making and tools and techniques for measuring progress towards ESD as reported in triple bottom line accounts. These accounts can be criticized for not actually addressing the issue of integration (Office of sustainability 2005). Third, legislation in the form of its *Aquaculture Act 2001*, as administered by EPA South Australia, is designed to regulate and facilitate the development of the South Australian aquaculture industry in an ecologically sustainable manner (Government of South Australia 2004). In South Australia, the role of local government in sustainability planning and

services has been recognized in the provisions of the *Local Government Act 1999*. This was partly motivated by Local Agenda 21 which originated at the United Nations Conference on Environment and Development held in June 1992 and which later developed following the introduction of Local Action 21 at the World Summit on Sustainable Development held in Johannesburg, South Africa in September 2002. In an evolving relationship South Australia has an Office for State/ Local Government relations, located within Primary Industries and Resources SA, and responsible for promoting shared strategic directions and effective working relationships between State and Local Government.

Companies operating in the aquaculture industry include *Australian Hiramasa Pty Ltd*, *Australian Southern Seafood Group*, *Clean Seas*, *Coorong Cockles Pty Ltd*, *Ferguson Australia Pty Ltd*, *Marmion Group* and *Soladome Aquaculture*. These companies provide a further layer of parties with an interest in environmental management of aquaculture and, in particular, with the main ESD issues which are examined next.

Main ESD issues

While fish populations in the wild are diminishing, cultured fish populations are increasing, but to a level which can border on the unacceptable for several reasons (Bartas 1997). First, although many of the fish species cultivated are schooling species and can live in close concentrations, *over-concentration* is one of the issues which animal rights protagonists strongly object to because fish can damage themselves by rubbing against their cages and each other and can become sick and die. Second, raising aquaculture species in concentrated areas can cause *overloading*, which is the presence of too much carbon and nitrogen in

the water from fish waste products and fertilizer. These elements lead to a reduction in the dissolved oxygen essential to survival of aquatic plants and animals. Third, when cultured species mix with native species, for example where cultured animals escape into the wild and breed with non-farmed animals, they may transfer diseases to the wild. Fourth, aquaculture development has been associated with the destruction of mangrove forests in some areas, and the accompanying livelihoods of people. Fifth, the inclusion of chemicals in food for specific species of fish and for fish treatment involves drug manufacturers and distributors as well as medicated feed manufacturers in the supply chain. The drugs should be provided at the listed dosages, and when certain disease conditions are present, however *over-provision* of chemicals can occur. Finally, where extensive farming is replaced with intensive aquaculture, the self-sufficiency of local farmers is reduced as they lose their occupations and self-controlled food supplies. These and other social and environmental problems have accompanied growth in the industry which, in turn, has been looking towards information that will help lead to and indicate changes in the direction of ecologically sustainable development performance.

In addition to these social and environmental issues, economic issues are important to the industry. On the positive side: (i) the substitution of farmed for wild fish, the signing by the Australian Government of a free trade agreement with the United States and the lifting of tariffs by the European Union, mean that improved market access and growing market demand for aquaculture products seem assured (Nightingale 2006); (ii) Australia has lower aquaculture production levels in relation to coastal area than other countries in the region. In 1990 Australia produced 0.01 kg of aquaculture production per 1,000 ha of coastal land

compared with 1.29 kg for the same area in New Zealand and 33.75 kg in Japan. This low level of production and comparatively low level of coastal water pollution permits a very high health standard of aquaculture products (CSIRO 2005, p. 1) which provides a competitive advantage. However, the industry does face economic problems (Australian Government, 2005), including: (i) increasing energy costs; (ii) lower-cost aquaculture production from Asia; (iii) increasing demand from Asia for low value seafood supplied in bulk; (iv) increasing power of Australian supermarkets to cut margins on aquaculture products; (v) skilled labour shortages; (vi) the need for product labeling to indicate country of origin; (vii) rising community expectations to have a say in use and management of natural resources and the role of seafood in their health.

In the light of these perceived issues the aquaculture industry is expected to face five strategic sustainability challenges in the next 20 years.

Strategic challenges and environmental management accounting and reporting

The five sustainability challenges referred to above are:

1. Natural resources sustainability – the challenge is to maintain and improve the management and use of aquatic resources to ensure their sustainability. This implies periodic monitoring of management and resource use in physical terms.
2. Resource access and resource allocation – the challenge is to optimize resource access, resource allocation and opportunities for each sector of the fishing industry, within a rights-based framework. This implies the periodic monitoring of resource stocks and flows in physical terms as well as resource distribution between parties with a right to harvest.
3. Profitable response to rising demand –

the challenge is to respond to, and take advantage of, increased demand for seafood and for recreational and customary fishing experiences while enhancing the profitability of the aquaculture industry. This implies periodic monitoring of the physical and monetary flows relating to the demand for aquaculture resources by customers and the ad hoc provision of information in relation to investment decisions as demand is expected to fluctuate.

4. People development – the challenge is to develop people who will help the fishing industry to meet its future needs. This implies ad hoc physical and monetary information is required about the programs to be developed and periodic information about the level of development achieved.

5. Community and consumer support – the challenge is to increase community and consumer support for the benefits of the industry. This implies periodic information is required about the programs to be developed and continuous information about the level of support achieved.

If the sustainability challenges are to be met, and to be shown to be met, companies will need to gather appropriate information and pass it to the government in order to see if policies orientated towards achieving sustainability are achieved, both government and companies in the industry will need to gather and report the appropriate information.

A mapping between EMA components, as represented by the framework developed in Burritt et al. (2002) (see Table II) and Burritt (2005), has the potential to highlight gaps in the information requirements of agencies and companies in terms of ecologically sustainable development. In addition, it could provide a systematic and pragmatic basis for the ESD-control process in aquaculture (Commonwealth of Australia 1992).

The policy framework introduced by *Primary Industries and Resources SA* (Primary Industries and Resources SA 2004) recognises the need for clearly defined sustainability objectives, indicators and performance measures (Fletcher et al 2003, p. 48) (Schaltegger, Burritt and Petersen 2003). These are set in context in Figure 1 which shows the flow of relationships between activities towards sustainability as represented in the Standing Committee for Fisheries and Aquaculture's (SCFA's) mapping. Implicit in the Figure is the management decision process, based on appropriate EMA and other information at government agency management levels. This is founded on and framed by *periodic* and *ad hoc* reporting requirements to government, the community, applications for obtaining and maintaining export permits, for regional marine plans, etc.

Reporting has three framing parts to guide management: (i) component trees; (ii) risk assessment and prioritization; and (iii) performance assessment. Component trees identify the issues specific to each component of sustainable development. At the general government agency level these components are ecological wellbeing and human wellbeing, the latter being expressed in social and economic terms. More specific is the management of environmental impacts of and on fishing; contribution to community wellbeing; and ensuring that ecologically sustainable development principles are underpinned by appropriate legal, institutional and economic policy frameworks. Risk assessment and prioritization is a process which determines which of these components are sufficiently significant to warrant management actions and, hence, a report on performance with justification for assigning low priority or low risk (Burritt 2005). Finally, pragmatic performance assessment is made at the lowest level of components providing

information about the following: operational objective; indicator; performance measure; data requirements; data availability; evaluation; robustness of the indicator; management response – current and future; actions taken where a gap exists between performance and expectations; and verification.

A start has been made by the South Australian government to address the issue of environmental management accounting and sustainability information at the level of *ad hoc* project proposals. This is based on the notion of sustainability assessment which consists of a suite of tools, including integrated impact assessment, to enable front end policy integration in decision-making processes of government relating to policy, plans and projects (Office of Sustainability 2005). The tools include means to assess the scope of the impacts of a project proposal, the net efficiency gains from the impacts, and the equity impacts – who gains and loses. Criteria suggested include: environment (energy, waste management, water, biodiversity, and landscape), economy (business climate, jobs and investment) and society (health, safety, regional development, community engagement, cultural heritage, access to public services and equity), all rated as to positive, negative or neutral with high, medium and low scales. In addition a level of confidence on a five point scale allows for relative riskiness of assessment levels to be made apparent. The foundation for developing one form of EMA - *ad hoc* sustainable investment appraisal - for aquaculture is now available.

In contrast is the guidance provided by IFAC (2005) for organisations as the foundation for provision of periodic information about ESD impacts. Such regular periodic guidance raises the issue of whether the two can be brought together to provide information that will promote ESD

in South Australian aquaculture (see the possibilities in Table II).

Discussion

Based on the framework available to Australian aquaculture the periodic risk based EMA approach appears to fall short for a number of reasons which need to be addressed in a systematic approach to sustainability accounting and reporting: (i) it is critical to recognize the broader social as well as the environmental and economic dimension built into decision making processes associated with the concept of ecologically sustainable development, in order that the total quality of life can be increased (IFAC 2005, p. 17). Current interpretations of IFAC based EMA include social considerations as less tangible costs (Schaltegger and Burritt 2000, p. 254), but these are unlikely to be reported by companies on a voluntary basis and so encouragement from industry associations or the government would be required; (ii) the growing importance of non-financial aspects of an organisation's activities, including risks associated with poor social performance and inattention to the equity of relationships between parties, means that environmental management accounting information may at present provide a too narrow efficiency based representation for organisations moving towards ecologically sustainable development; (iii) the cost of obtaining relevant, high quality information still needs to be compared with the expected benefits for it to be justified by company management, whereas government is in the position to mandate its reporting provisions for accountability purposes; (iv) the lack of integration between different aspects of any organisation's movements towards sustainability means that piecemeal actions remain likely to dominate decision processes with sustainability remaining illusive, unless a systematic framework for sustainability accounting and reporting is adopted

(Schaltegger and Burritt 2005, Schaltegger, Bennett and Burritt 2006). The implication is that based on these pragmatic considerations development of a comprehensive foundation for movement from environmental management accounting towards sustainability accounting and reporting in the South Australian aquaculture industry much work remains to be completed.

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TABLE 1: FIVE SUSTAINABILITY CHALLENGES IN AUSTRALIAN AQUACULTURE

- 1 Natural Resources Sustainability
- 2 Resource Access And Resource Allocation
- 3 Profitable Response To Rising Demand
- 4 People Development
- 5 Community And Consumer Support

TABLE II: ENVIRONMENTAL MANAGEMENT ACCOUNTING INFORMATION

Environmental Management Accounting (EMA)					
		Monetary EMA (MEMA)		Physical EMA (PEMA)	
		Short Term Focus	Long Term Focus	Short Term Focus	Long Term Focus
Past Oriented	Routinely generated information	e.g. environmental cost accounting 1	e.g. environmental induced capital expenditure and revenues 2	e.g. material and energy flow accounting 9	e.g. natural capital impact accounting 10
	Ad hoc information	e.g. ex post assessment of environmental costing decisions 3	e.g. environmental life cycle (and target) costing 4	e.g. ex post assessment of short term environmental impacts 11	e.g. life cycle inventories 12
Future Oriented	Routinely generated information	e.g. monetary environmental operational and capital budgeting 5	e.g. environmental long term financial planning 6	e.g. physical environmental budgeting 13	e.g. long term physical environmental planning 14
	Ad hoc information	e.g. environmental job costing, environmental pricing 7	e.g. monetary environmental investment appraisal 8	e.g. short run environmental impacts 15	e.g. life cycle analysis of specific project 16

FIGURE 1: ROLE OF SCFA PROCESS IN RELATION TO OTHER ACTIVITIES

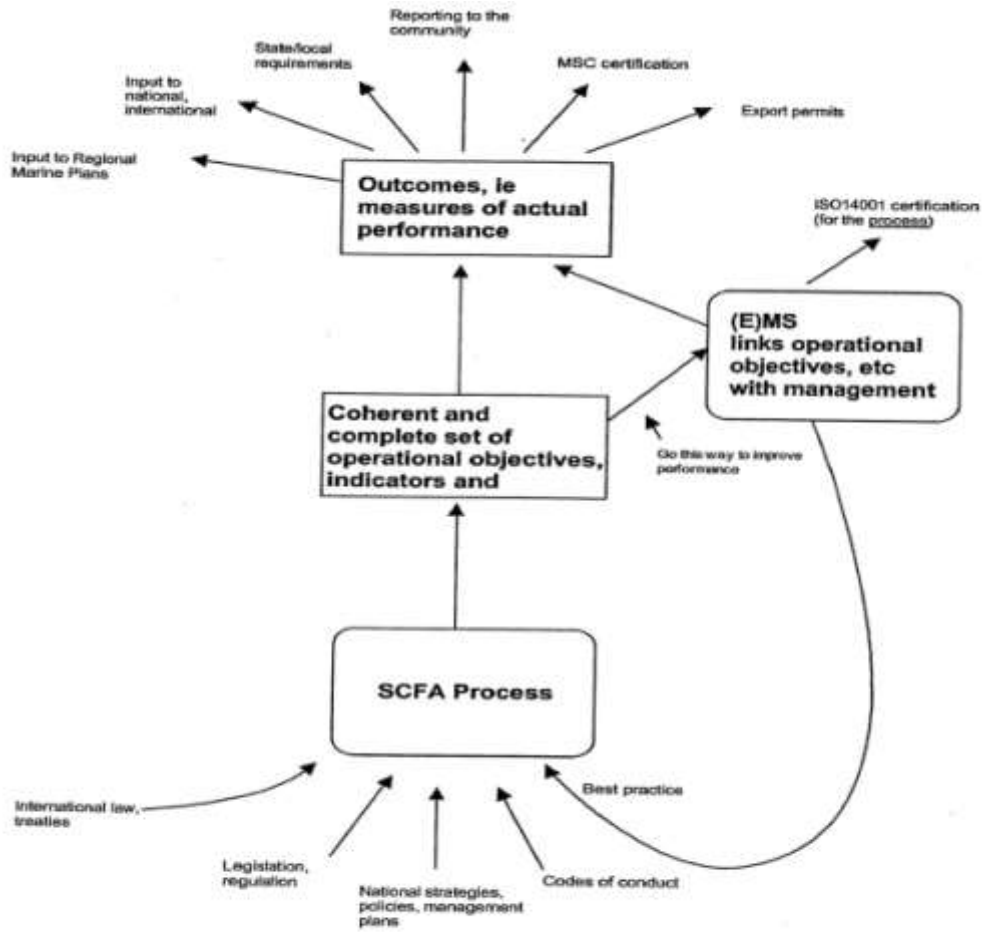


Figure 1. Role of SCFA process in relationship to other activities.

ENVIRONMENT EXTRA!

THE EVOLUTION OF CORPORATE RESPONSIBILITY

GLOBE-Net, 11 July 2007

The gathering of corporate leaders at the [United Nations Global Compact Summit](#) last week provided a wealth of research and declarations reinforcing a private sector commitment to environmental and social issues. Executives spoke strongly on issues relating to climate change, clean water and poverty reduction, and cited studies showing positive links between sustainability and profitability. Despite such progress, enormous challenges remain as the business community strives to address these issues, and there are questions on whether bold words will be supported by actions. Yet it is clear that corporate responsibility has moved into the mainstream to become a matter of strategic importance for leading firms, an evolution that should not be discounted.

Founded in 2000 by then UN Secretary General Kofi Annan, the [Global Compact](#) was envisioned as part a new wave of corporate responsibility, based on voluntary commitment by the world's leading businesses to ten universal principles in the areas of human rights, labour, the environment and anti-corruption. Seven years later, its membership boasts nearly 4000 companies and stakeholders in 116 countries.

The initiative is voluntary, with organizations required to communicate progress in implementing the 10 principles. The Compact relies on public accountability, transparency, and the 'enlightened self-interest of companies' to ensure compliance. Sometimes criticized for its lack of power and the potential hypocrisy of members that adhered to the principles only in public

declaration, the Compact has, in fact, delisted more than 500 members over the past year for repeated failures to communicate on progress in sustainability areas, lending more weight to membership.

Last week, an international audience of more than 1000 chief executive officers, government ministers, and the heads of civil society and labour organizations gathered in Geneva to discuss the group's progress. Accompanying bold declarations of new actions to promote environmental and social sustainability were reports that nearly all participants had improved action in these areas, and that those firms which had done so were rewarded with higher shareholder value.

Increasing engagement, outperforming the market

The Compact released its first Annual Review, a survey monitoring the extent to which companies have implemented the ten principles, revealing that most companies involved in the program have taken action related to human rights, labour conditions, the environment and anti-corruption.

Three-quarters of respondents have engaged in cross-sector partnerships with one or more of the following sectors: non-governmental organizations, business, academia, the UN, and other multi-lateral organizations. Almost two-thirds (63 percent) of respondents said they participate in the Global Compact to increase trust in the company.

Another survey prepared by [McKinsey & Company](#) showed that despite such actions, there are important 'performance gaps' in implementation. While 72 per cent of CEOs surveyed said that corporate responsibility

should be embedded fully into strategy and operations, only 50 per cent think their firms actually do so; 59 per cent of CEOs said corporate responsibility should be embedded into global supply chains, but only 27 per cent think they are doing so.

Progress is being made however, as more than 90 per cent of CEOs are doing more than they did 5 years ago to incorporate environmental, social and governance (ESG) issues into strategy and operations.

Another report revealed some potential motivation for increased consideration of ESG issues, along with reputation enhancement: increased profitability. Presented by investment industry leader, *Goldman Sachs*, the study showed that among six sectors covered – energy, mining, steel, food, beverages, and media–companies that are considered leaders in implementing environmental, social and governance policies have outperformed the general stock market by 25 per cent since August 2005.

In addition, 72 per cent of these companies have outperformed their peers over the same period. The report analyzed companies in three areas: ESG performance; how well they are positioned in relation to long-term industry trends; and the strength of their underlying financial returns.

Calls for action

The *Global Compact Summit* was also highlighted by a number of calls for action and declarations on ESG issues. Two notable statements focused on two of the most pressing environmental and business concerns today: climate change and clean water. The chief executives of 153 companies worldwide endorsed a statement entitled *Caring for climate: The business leadership platform*, which calls for increased government and corporate action to establish market-based mechanisms to

reduce greenhouse gas emissions, including a stable price for carbon.

Signatories to the statement, including 30 from the *Fortune Global 500*, committed their companies to ‘taking practical actions to increase the efficiency of energy usage and to reduce the carbon burden of products, services and processes, to set voluntary targets for doing so, and to report publicly on the achievement of those targets annually.’ The leaders also pledged to deal with the climate issue strategically and build relevant capacity; to work with other enterprises and on a sector basis and along their global supply chains; and to promote recognized standards and joint initiatives to reduce climate risks.

Also at the Summit, the CEOs of six corporations – The Coca-Cola Company, Levi Strauss & Co, Läckeby Water Group, Nestlé SA, SABMiller, and Suez – launched *The CEO Water Mandate*, a project designed to help companies better manage water use in their direct operations and throughout their supply chains.

The project asks companies to make progress in six areas: direct operations, supply chain and watershed management, collective action, public policy, community engagement, and transparency. Specifically, endorsers of mandate pledge to set water-use targets, assist suppliers with water-efficiency practices and partner with governments, policy makers and community groups to address water shortages and sanitation.

Other Summit activities included: a call for business schools and academic associations to do their part to advance corporate responsibility worldwide; and a new tool to help companies improve implementation of the Compact's principles, particularly in emerging markets; and a discussion of the urgency to address the challenges brought

by climate change as a main development priority for China.

The role of business in society

At the close of the Geneva Summit, participants endorsed the 21-point Geneva Declaration, pledging to adhere to the Compact's principles and underlining the positive role of business in society.

The declaration says, 'Business, as a key agent of globalization, can be an enormous force for good.' The declaration also says that companies can create and deliver value in the widest possible terms by committing themselves to corporate citizenship. Further, poverty, income inequality, lack of work opportunities, and protectionism are identified as serious threats to world peace and markets.

Summit participants noted that responsible business practices contribute to social and economic inclusion, and encouraged the development of partnerships with governments, civil society and labor. In countries afflicted by conflict or weak governance, investors and companies can play a more helpful role by engaging rather than divesting, the statement adds.

The statement also acknowledges the increasing consideration of ESG issues by the worldwide private sector, asserting that 'it is unprecedented in history to have the objectives of the international community and the global business community so aligned.' While the corporate executives and leaders of non-governmental organizations present acknowledged that there is a tremendous amount of progress yet to be made, it would appear that participants were right to consider the current wave of corporate responsibility initiatives as groundbreaking.

Business objectives still centre on profitability and shareholder value, and necessarily always will, but the key to recent

transformations is that environmental and social performance have been demonstrated to be intrinsically tied to the bottom line. As the world's most progressive companies recognized years ago, improved ESG performance can make a business more successful, and that thinking spread to many giants of the global business community.

The result is that many in the Fortune 500, as well as small businesses, have made public commitments to reduce greenhouse gas emissions, conserve fresh water, address human rights concerns, and improve overall social and environmental performance - and have followed through in many cases. In the past, mere lip service was paid to issues that are now attracting billions of investment and catching the eye of the executive suite.

There is now a business imperative to integrate ESG considerations into strategy, and firms that ignore these aspects do so at their peril: the global public and the financial community are unwilling to ignore any such abuses, and laggards are at risk of eroding market share, government pressures, and a lack of access to capital.

Leading firms are currently demonstrating the positive impact business can have on society, as they create wealth and encourage prosperity while preserving natural resources and promoting social inclusion. Accordingly, many firms, some of which were previously targeted by protests, are shedding their adversarial relationship with local communities and NGOs to create partnerships with multiple benefits. The business 'community' is now more than ever deserving of the name, contributing positively in many ways beyond the boundaries of the firm.

The *UN Global Compact* is just another indicator of these changes, as a global expression of the evolution of corporate responsibility. No doubt some members will excel in implementing its principles while

others will struggle, but their collective efforts, whether successful or not, will continue to push in the right direction. Bolstering these efforts with support from government and society will help to provide a 21st century that is peaceful, inclusive, environmentally sustainable, and increasingly stable for all.

The question is will corporate social responsibility reporting reflect these changes as time passes, who is monitoring such changes, will accountability improve and will any tangible benefit to society emerge?

SUSTAINABILITY REPORTING COULD BOOST AUSTRALIAN ECONOMY BY \$1.2BN

Major companies could increase profits 2-3% and boost the Australian economy by \$1.2 billion a year simply by reporting on sustainability risks such as climate change, according to a report commissioned by the Financial Services Institute of Australia (Finsia). The benefits stem in the main from lower corporate borrowing costs for those who report and reduce all risks. The study, [Tip of the Iceberg](#), conducted by economic consultant Econtech – believed to be the first of its kind in Australia – examines the costs and benefits of Sustainability Risk Reporting (SRR) to business and the overall economy.

It models the effects of a rise in the number of companies reporting on SRR, from the current 23% of the ASX 300 to 60% within three to five years. At present levels and even with this conservative forecast, Australia lags significantly behind other countries' reporting levels, notably Japan (80%) and the UK (71%).

Finsia CEO Stephen Harrison said the finance sector should review its approach to sustainability risk reporting in the light of the net benefits to business and the economy.

‘These benefits arise because companies with sustainability risk reporting benefit from lower corporate borrowing costs due to reduced risk, and higher labour productivity and sales from the boost to their reputation with employees and customers,’ he said.

It found that SRR provides benefits through channels such as a reduction in the risk premium of around 30 basis points, a lasting gain in labour productivity of around 0.8% and a brand-based price premium of around 2%.

The 40-page report noted the first two channels were likely to provide benefits both to individual companies and the economy generally while the third may provide companies that use SRR with an advantage over other companies in the same industry.

Workplace productivity gains were found due to more effective performance management, including enhanced resource allocation and application of technology, and a greater sense of corporate identity for workers and managers leading to efficiency gains.

Finsia also said while reporting requirements would vary across different jurisdictions and different industries, Australia must work towards establishing some minimum standards for reporting.

It added it is less concerned about the specific form of the reporting than the need to build momentum towards a ‘common and respected’ SRR framework, backed by a ‘respected and appropriate’ body.

- Minimum requirements include voluntarily disclosure on issues including: direct and indirect societal and environmental impacts of businesses activities, including those of their suppliers;
- long-term performance of the business (5-10 years) in addition to conventional

short-term 12 to 24 month reporting horizon; and

- full disclosure of details of executive remuneration and performance management policies and linking them to the longer-term relative performance of the business.

Source: Carlos Martinez WME
Environmental Management News Friday, 3 August 2007

<http://www.environmentalmanagementnews.net/StoryView.asp?StoryID=102924>

COMMISSION LAUNCHES PUBLIC CONSULTATION ON SUSTAINABLE CONSUMPTION

7 August 2007

The European Commission have launched a public consultation on actions the European Union could undertake to meet the challenges of Sustainable Consumption and Production and a Sustainable Industrial Policy.

The aim of the internet-based consultation is to gather input from the public and stakeholders to help the Commission prepare Action Plans to address these challenges. The consultation will last until 23 September.

Putting consumption and production onto a sustainable path is a major global challenge that will require considerable technological innovation. Current patterns of consumption and production are leading to the rapid depletion or exhaustion of certain natural resources, such as oil reserves and fish stocks, as well as causing serious environmental degradation and pollution. The issue is a global one: several studies and assessments suggest that the current consumption and production already significantly exceeds what the planet can support in the long term.

The Commission aims to address these problems and turn environmental challenges into economic opportunities for EU industry, thereby reducing greenhouse gas emissions and improving efficiency in use of energy and natural resources.

By developing robust sustainable consumption and production policies, the EU can make an important contribution to sustainability worldwide since Europe is one of the biggest consumers at global level and products are traded globally. European standards to foster sustainable consumption and production will tend to become global benchmarks.

The public consultation explores actions under five headings: Leveraging Innovation, Better Products, Leaner and Cleaner Production, Smarter Consumption and Global Markets. The Commission intends to focus its action on key environmental issues: climate change and the creation of a low-carbon economy; sustainable and efficient use of natural resources, energy and materials; and hazardous substances.

The actions under consideration have a strong focus on products as recent Commission research confirms that a large proportion of environmental impacts in the EU are caused by consumer products throughout their 'life-cycle', in other words from the extraction of the raw materials used right through to the production, transportation, consumption and final disposal of the product.

The Action Plans would build on several existing EU policies related to products and resources, such as the Industrial Policy as reviewed in July 2007, Integrated Product Policy, the Eco-design of Energy-Using Products, the Sustainable Use of Natural Resources strategy, the Energy Policy for Europe, Cohesion policy and other product legislation and labelling schemes.

Since the Action Plans would cover products, production and consumption, stakeholder engagement is crucial. The purpose of the consultation is to gather opinions on different policy actions and options.

Source: Association of International Accountants, AIA Accountancy E-News 07/08/07

EMISSIONS TRADING SCHEME RAISES REPORTING AND ASSURANCE ISSUES IN AUSTRALIA

CPA Australia warned that, without immediate action, an emissions trading scheme could cause significant financial reporting and assurance issues. With the potential for an emissions trading scheme in Australia as early as 2010, *CPA Australia* has written to the *Australian Accounting Standards Board (AASB)* and the *Auditing and Assurance Standards Board (AUASB)*, urging immediate action.

Key issues highlighted by *CPA Australia* include:

- The risk of divergent financial reporting practices developing.
- The risk of an accounting mismatch of assets and liabilities occurring.
- The lack of an assurance framework for these types of engagements.

CPA Australia Chief Executive Geoff Rankin called on the AASB to commence work immediately on developing new or amended accounting standards to enable organisations to properly account for emissions.

Mr Rankin argued that 'under the current standards, it's not clear how organisations would account for emissions. This uncertainty is a significant issue, as it could pave the way for divergent financial reporting practices developing. For example,

without new or revised standards in place, some organisations will show carbon credits as a net position, while others will show them as a gross position. This means that users of financials such as shareholders and analysts would be comparing apples and oranges, as the financials would not be comparable.'

He said, 'The interaction of an emissions scheme with accounting standards also has the potential to introduce accounting volatility into financial reports – a volatility caused by a mismatch of assets and liabilities that is not consistent with the underlying economic position of the organisation. This occurs when the accounting standards require the emissions permit to be measured at cost and the related liability at market value.'

He also put the case that, 'standard-setters have a limited window of opportunity in which to act. Past experience shows that reviewing or making new standards can be a lengthy process. Failure to act now could result in a scheme coming into place before these issues are adequately resolved. The result would be an unacceptable reduction in the quality of financial reports.'

Calling on the AUASB to develop and implement an assurance framework for emissions engagements, he said, 'Before an emissions trading scheme can become operational in Australia, a workable assurance framework must be established. Given the impending timeline, action must be taken now, as time also has to be allowed for practitioners to be appropriately trained.'

He urged standard-setters to work with their international counterparts, the *International Accounting Standards Board*, and the *International Auditing and Assurance Standards Board*, because the Australian scheme will need international acceptance. He concluded that 'without an appropriate framework and well-trained practitioners,

the reliability of data will be seriously undermined, putting the scheme in jeopardy.'

Source: CPA Australia 17 July 2007
http://www.cpaaustralia.com.au/cps/rde/xchg/SID-3F57FECA-26599BEF/cpa/hs.xsl/1019_23458_ENA_HTML.htm [accessed on 10 August 2007]

PWC RELEASE REPORT ON BUILDING TRUST IN EMISSIONS TRADING

Ms Julia Hoare, leader of *Climate Change Services* at *PricewaterhouseCoopers* in New Zealand, said a new report on emissions trading, released today, would provide 'valuable reading' for many businesses and Government organisations looking towards carbon neutrality or offsetting emissions.

A PricewaterhouseCoopers report, *Building Trust in Emissions Reporting*, highlights the key elements of a successful carbon trading regime. The report presents a new vision for compliance in emissions trading and calls for global action to develop this important area.

Emissions trading schemes are based on emission rights, or other marketable units, linked to emissions. In an increasingly carbon constrained world, they represent an important value driver for both management and investors. Businesses covered by a scheme are required to report on their emissions and the verification of their emissions reporting is often comparable to an audit of financial statements.

The trading of emissions units is increasingly seen as a central part of the response to climate change, but such market mechanisms depend on trust and confidence. Any widespread or systemic failure, as a result of deficient monitoring and reporting, flawed compliance processes or fraud, could undermine confidence in markets and

regulation and jeopardise the crucial policy goals that they are designed to address.

The report tackles an issue addressed by Helen Clarke, the New Zealand Prime Minister, in her opening address to Parliament on Tuesday. She said '[The Government is] also following closely exciting work in the private sector on the development of carbon trading regimes, and will be willing to consider what legislative and regulatory changes might be needed to put them into effect.'

Ms Hoare believes the findings of the PwC report also sounded a warning. She said, 'this report highlights problems arising due to the patchwork of emissions regulations emerging around the world, and sets out the areas that need to be considered.' She also said, 'It rightly stresses the importance of ensuring that any compliance or regulatory framework introduced to New Zealand demonstrates transparency, accountability and integrity.'

The report makes the case for urgent and coordinated action to develop a framework of generally accepted principles and practice that will underpin trust and efficiency in these new markets - in effect, a new *Global Emissions Compliance Language*.

Emphasizing the need for confidence in the way any system worked Ms Hoare said that 'everyone needs to be able to trust that emissions reductions are real and that they can put faith in the value of the underlying credits.'

The report's findings were likely to be of particular interest to the 39 core public service departments that were recently directed to achieve carbon neutrality as part of the government's push for sustainability. Ms Hoare also said, 'Even in the absence of a formal regulatory response, the Government agencies singled out by David Parker and Annette King this week will need

to understand emissions reporting and instruments to correctly report their carbon footprint and assess offset opportunities.’

To download a copy of Building Trust in Emissions Reporting visit www.pwc.com/nz

APEC BUSINESS CODE CRACKS DOWN ON BRIBERY

ABC News, 7 September 2007.

A wide-ranging business code of conduct has been unveiled at an APEC meeting in Sydney, which includes the launch of a drive to eradicate bribery and corruption in business deals.

Using contributions to political parties and charities as a ‘subterfuge’ for bribery is also targeted in the APEC code of business released ahead of a summit at the weekend.

Attorney-General Philip Ruddock said it provides descriptions of various forms of bribery and clear guidance on how to identify corrupt practices.

Anti-corruption programs are to be monitored and reviewed, and employees are encouraged to report suspicious circumstances in their companies.

Mr Ruddock said, ‘Corruption in the APEC region and beyond has serious and widespread consequences it limits economic development, it discourages investment and it keeps people living in poverty.’

According to the *World Bank Institute*, each year more than \$1 trillion is paid in bribes worldwide.

Mr Ruddock said ‘take up of the code by businesses will mean greater prosperity and economic growth across the Asia-Pacific and support further trade liberalisation.’

The code was devised after consultations between APEC governments and businesses.

Small and medium sized businesses will be assisted by the APEC Anti-Corruption and

Transparency Experts Task Force to adopt and implement the code.

Small and medium sized businesses make up about 99 per cent of enterprises in the regional APEC economy.

They can contribute between 30 and 60 per cent of an economy's gross domestic product but are particularly vulnerable to corruption.

Mr Ruddock said, ‘Businesses, particularly small businesses, need guidance when confronted with bribery.’

The adoption of the anti-corruption code by APEC country members also meant businesses should realise they will have APEC support in fighting corruption.

Mr Ruddock was, ‘confident the code will prove to be a valuable contribution to the fight against corruption, both in our region and ultimately in the global economy.’

Delegates from the 21 country members of APEC account for 40 per cent of the world's population, 43 per cent of world trade. They include amongst others: China, Russia, the USA and Japan. Not included in this group are Europe, Africa, India and much of South America.

PLASTICS/CHEMICALS INDUSTRY LAUNCHES DISCUSSION PAPER ON SUSTAINABILITY LEADERSHIP

Wednesday 19 September 2007

One of Australia's key industries, *The Plastics and Chemicals Industries Association* (PACIA), launched the landmark *Sustainability Leadership Discussion Paper for Industry* at the association's AGM in Melbourne on Wednesday 19 September.

The paper outlines the benefits and challenges for the industry when incorporating sustainable practices into the

industrial environment. It encompasses the use of materials and resources, particularly water and energy, greenhouse emissions, and waste and recycling.

The document will gather important information on sustainability practices within the industry and will help in the development of a Sustainability Framework for the plastics and chemicals industries.

PACIA Chief Executive Michael Catchpole says the paper is the first step in the development of the *Sustainability Leadership Framework*. The paper forms the basis of consultation with PACIA members, employees, and stakeholders including local communities, people who use the industry's products and services, government and peak environmental groups.

Mr Catchpole said, 'Taking leadership on sustainability will position the plastics and chemicals industries at the forefront of opportunities, but it will also increase the expectations and scrutiny of the industry by stakeholders.'

He also said that 'global and national issues such as climate change, security and water shortages are also directly impacting on Australian plastics and chemicals businesses, most obviously through higher costs for energy, raw materials and increasing regulation.' These issues are converging to present major challenges to companies that must respond and adapt, implement change and remain profitable.

Mr Catchpole believes that 'to respond to these challenges, the Plastics and Chemicals industries must transform to maximise the economic, social and environmental value that they deliver to Australians by acting beyond the plant fence, looking creatively at products, technology and materials, multiplying the value created along supply chains and taking a sustainable business approach.'

To gather information, workshops will take place around Australia between September and November of 2007.

The discussion paper is available at www.pacia.org.au

Further details: Honi Walker, Manager, Public Affairs (03) 9426 3809

CALL FOR PAPERS

International workshop on Social Audit, Social Accounting and Accountability

Jointly organised by the *International Research Society for Public Management (IRSPM)* and the *Third Sector Study Group of European Group for Public Administration (EGPA)*

Charles University of Prague, Czech Republic

15–16 May 2008

Paper proposals are invited for this international workshop dedicated to exploring innovative approaches to social audit, social accounting, and accountability.

Proposals are invited from scholars working in the fields of accounting, public management and administration, political science, sociology, social policy, non-profit studies and environmental sustainability and relevant disciplines.

While proposals on all aspects of social audit, social accounting and accountability are invited, they are especially invited on the following topics:

- Models and tools for social audit and social accounting
- Case study analyses of the impact and effectiveness of social audit, social accounting and accountability
- Social audit and social accountability in public services management
- Social audit and social accountability models in the Third Sector
- Changing models of accountability in public services and public management
- Ethics, corruption and accountability in public services
- Changing managerial behaviour in public services through social audit and accounting

- Audit and accounting for sustainable development

Proposals should be a maximum length of two pages and should detail the issue to be addressed in the paper and the approach taken, as well as indicative conclusions or findings.

Proposals should be emailed as a Word attachment to Stephen.osborne@ed.ac.uk

Workshop steering committee

Workshop organisers

Stephen P Osborne, *University of Edinburgh*, Scotland – President of IRSPM

Victor Pestoff, *Mid Sweden University*, Sweden – Director of the *Third Sector Study Group* of EGPA

Workshop host

Pavel Fric, *Charles University* of Prague, Czech Republic

Expert members

Amanda Ball, *University of Canterbury*, New Zealand

Robert Gray, *University of St. Andrews*, Scotland

James Guthrie, *University of Sydney*, Australia

Femida Handy, *York University*, Toronto, Canada

Manila Marcuccio, *Bocconi University*, Milan, Italy

Lucas Meijs, *Erasmus University*, Rotterdam, The Netherlands

Deadline for:

Proposal submission - 10 Oct 2007

Acceptance notification - 30 Nov 2007

Submission of full paper - 31 Mar 2008

Up to twenty five papers will be selected for the workshop, in order to ensure that the

there is sufficient time for detailed discussion of the papers presented.

Discussions are currently underway for publication of the papers presented at the workshop as an edited book on social audit, social accounting and accountability. The best papers may also form a 'roundtable' in the journal *Public Management Review*.

Call for papers Summer academy

Creating a New Future for Business
Berlin, Akademie Schmöckwitz, Germany
19-22 June 2008.

Organised by the *International Research Network on Social and Environmental Aspects in Business and Management* (SEABUS)

Deadline: 4 January 2008

Companies are facing growing environmental and social challenges which increasingly affect corporate decision making, performance and prosperity. Therefore, business and management is confronted with the need to take into account environmental and social developments. Rapid and drastic changes both in the natural and social environment of corporate decision making require innovative approaches and solutions that go beyond conventional business practice.

Research is needed to develop and discuss novel approaches that define the role and purpose of business and management in the light of challenges such as mitigating climate change, alleviating poverty, coping with migration, dealing with resource scarcities, securing social cohesion, etc.

SEABUS Summer Academy invites research papers on innovative responses and strategies for business and management that create new opportunities for future business by contributing to the sustainability of the life-supporting environmental and social

systems. We would like to encourage innovative approaches that explore new perspectives on the active role business could play for achieving a more sustainable future. Contributions should go beyond the current discussion of CSR, business and society, eco-efficiency, environmental management, corporate sustainability and the business case.

We seek innovative papers on a new future for business in the light of immense environmental and social challenges. Papers that offer rigorous research and develop bold thought and new conceptual ideas are particularly welcome. Empirical papers that shed light on the new future for business are also very welcome. Researchers from different theoretical backgrounds and academic disciplines are invited to develop and present their views.

Research questions include but are not limited to:

- How can we better understand and model business responses to future environmental and social challenges?
- What are the actors, technologies and developments that will be pivotal in creating a new future for business?
- What motives drive business to respond proactively to changes in its natural and social environment?
- What are the determinants for corporate decision making vis-à-vis a rapidly and drastically changing natural and social environment?
- What new business models and strategies are likely to emerge due to pressing social and environmental challenges?
- What kind of management and measurement tools are needed to implement sustainable business strategies?

- What is the role of business in maintaining the sustainability of the life-supporting environmental and social systems?
- Does the current paradigmatic foundation of business and management models measure up to the new challenges of a rapidly and drastically changing natural and social environment?

This last topic refers to questions such as:

- Is the principle of profit-maximization compatible with the environmental and social challenges business is facing?
- Are current approaches of business and society like CSR, eco-efficiency, environmental management, corporate sustainability and the business case sufficient to provide solutions for a new future for business?
- What other research traditions and areas could inspire the development of new perspectives and approaches in research on environmental and social aspects in business and management?

This call invites scholars from various fields to present their papers and discuss their research with their peers. The summer academy will provide a platform for in-depth discussion and intensive exchange of research and ideas in an inspiring environment. Discussion will be enhanced and facilitated by a number of distinguished senior faculty who will participate in the summer academy as keynote speakers. We will consider all submissions sent via www.seabus-research.net/summeracademy2008.

Papers will be reviewed and authors will receive feedback. The selection process will consider quality, innovation, and diversity of views. Acceptance of papers will be by 31 Mar 2008. For further details, or to download the call for papers, visit <http://www.seabus-research.net/downloads/iztsummeracademy.pdf>.

Call for papers A-CSEAR 2007, Sydney

2-4 December 2007

Since 2001, the *Australasian Conference on Social and Environmental Accounting Research* (paralleling the annual *Centre for Social and Environmental Accounting Research* (CSEAR) conferences in Scotland) has been organised by Australian Universities. In December 2007 the Australasian Conference will be hosted by the *Discipline of Accounting* at *The University of Sydney*, Australia.

The Conference is an informal gathering of researchers, teachers, students, and practitioners concerned with research, teaching and practice in social and environmental accounting in the very widest sense. Limited to 60 delegates, the emphasis is on interaction, discussion, and debate in a friendly, supportive, and relaxed atmosphere. This year's conference will include a stream on ethics related research sponsored by the *Business and Professional Ethics Group* at *The University of Sydney*.

The precise format of the conference is not final. We may present the papers in a single session or in parallel sessions. The format will depend on demand from registrants and the papers offered.

Submit your abstract and full paper by Monday 10th September 2007.

All papers will be blind-refereed and the referees will only consider full papers. We will provide authors of accepted and rejected papers with referee comments where appropriate and as provided by the referees. We will provide authors of papers accepted subject to revisions will be supplied with referee comments and revision recommendations.

The *Scientific Committee* of: Professor James Guthrie, Geoff Frost, Matthew Egan,

Sharron O'Neill, Abdul Razeed, Nonna Martinov-Bennie, And Sandra Van Der Laan appreciate input from potential conference participants and will endeavour to tailor conference sessions to suit participants.

Send your enquiries to: Nuala Corr, Conference Administrator, CSEAR 2007, Room 347, Economics and Business, Building H69, cnr Codrington & Rose Sts Darlington NSW 2006

Phone + 61 2 9351 6624
Fax +61 2 9351 6638
CSEAR@econ.usyd.edu.au

To submit a paper to this conference visit <http://escholarship.library.usyd.edu.au/conferences/index.php/CSEAR2007>

Call for conference papers

Critical Perspectives on Accounting
Emerging Critical Scholars Workshop
European Critical Accounting Symposium

Deadline: 20 Jan 2008

Dates

Emerging Critical Scholars Workshop:
Thursday April 24th, 2008
Main Conference: Thursday Evening, April 24th - Saturday, 5:30 pm, April 26th, 2008
European Critical Accounting Symposium:
Monday, April 28, 2008

Venue

Baruch College Conference Centre, 14th Floor, Newman Vertical Campus, Lexington Ave & 24th Street, New York City, 10010, USA

Aims and scope

The 2008 Critical Perspectives on Accounting Conference, main meeting, provides a forum for exploring critical research on emerging issues in accounting, auditing, and teaching. It brings together interested faculty, professionals, policy makers, accounting students and others

concerned with professional and regulatory issues in the corporate, university, government, and financial sectors.

The conference addresses urgent questions that currently face the profession, and seeks radical changes in the conduct of accounting and auditing practice, education and research. The conference and our journal affiliates seek original contributions that examine these issues of social, governmental, and corporate accountability which presently face professionals, educators, and scholars. Several *boutique* session-streams will be offered.

A one-day *Emerging Critical Scholars Workshop*, prior to the main meeting, on Thursday, April 24.

Contact David Cooper, the Workshop organizer for more information: <mailto:david.cooper@ualberta.ca>.

A one-day *European Critical Accounting Symposium*, is scheduled for Monday, April 28, 2008, following the main meeting.

Contact Chris Carter, the symposium organizer for more information: <mailto:cc67@st-andrews.ac.uk>

The following are illustrative, but not exhaustive of the general conference themes:

- The Big 4 after Enron
- Lessons from Andersen
- Problems of Coercion and Ethics in doing Critical Doctoral Research
- Resisting and transforming the commodification of practice and teaching
- Race & Class
- Multicultural Analysis
- Poetry of Accounting
- Institutional Failures - Litigation, Malpractice & Competition
- Impact of Information Technologies
- Social Audits, Accounting & the State

- Ecology & Green Accounting
- Gender Relations & Feminist Theories
- European and African accounting issues
Globalization & International Issues
- Critical Histories -Auditing as Social Dialogue
- Public Sector and Healthcare Issues
- New Technologies in teaching & practice
- Management Accounting Developments
- Regulation, standard setting and capital markets
- Critical Ethnographies

Sponsorship

Previous sponsors and participants include the *Critical Perspectives on Accounting Journal*, *Deloitte & Touche*, *Center for Accounting Ethics* (Binghamton University), the *Public Interest Section* and the *Gender Section* of the *American Accounting Association* (AAA), the *Advances in Public Interest Accounting Journal*, the *Accounting*

Forum and the *Accounting, Auditing, and Accountability Journal* (AAAJ).

CONFERENCE

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EMERGING SCHOLARS

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WEBSITES

<http://aux.zicklin.baruch.cuny.edu/Tinker/cpa2008/>

<http://www.st-andrews.ac.uk/~cpaedit/2008CPA/>



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