

RESEARCH

*ESD in Higher Education,
the Professions and at Home*

Copyright © 2012
SAGE Publications
(Los Angeles, London, New Delhi,
Singapore and Washington DC)
www.sagepublications.com
Vol 6(1): 121–136
10.1177/097340821100600119

Professional Associations

Their Role in Promoting Sustainable Development in Australia

IAN THOMAS, KATHRYN HEGARTY, STUART WHITMAN AND VAL MACGREGOR

Abstract

Professional associations have a strong influence on what is covered in the curricula of universities, especially that of professional degrees. They also

Ian Thomas, an associate professor, teaches environmental policy at RMIT University, Melbourne, Victoria, Australia. He has investigated the issues of embedding environmental education and sustainability education in the curricula of universities, examined the status of tertiary environmental programs, and investigated employment of graduates from these programs.

Email: ian.thomas@rmit.edu.au

Kathryn Hegarty is a lecturer in environment and planning in the School of Global Studies, Social Science and Planning at RMIT University. Her current research focuses on curriculum development, graduate skills and attributes, professional education in the built environment, undergraduate assessment, and the role and purpose of universities in social democratic states.

Email: Kathryn.hegarty@rmit.edu.au

Stuart Whitman has worked in the Australian government, business and university sectors and in secondary education. Most recently he pursues entrepreneurship opportunities arising from science and innovation policy. Email: Stuart.whitman@rmit.edu.au

Val MacGregor manages the Skills for Sustainability Program for Sustainability Victoria, developing courses in sustainability for tradespeople and professionals. She is also chair of the National Framework for Energy Efficiency Trades and Professions Training and Accreditation Committee, which has been developing courses in energy efficiency for specialists.

Email: val.macgregor@sustainability.vic.gov.au

Acknowledgements: Sustainability Victoria granted funds that enabled the survey to be conducted, and we gratefully acknowledge that support. Also the agency's agreement to use the survey results in this paper is appreciated. Nonetheless, all interpretations and opinions expressed in this paper are those of the authors and do not necessarily reflect the position of Sustainability Victoria. We also have appreciated the valuable comments of the editor and anonymous reviewers in shaping the final paper.

provide members with professional development throughout their careers. Professional associations have the potential to facilitate development of sustainability competency in the workforce in many professions. A survey of professional associations in Australia indicated that by the end of the 2000s, few were facilitating sustainability, either through their input to university curricula, or through professional development. The experiences of a few associations that do facilitate sustainability can be used to build a strategy for enlisting other professional associations to facilitate sustainability competency amongst their members.

Keywords: Professional associations, university curricula, sustainability competency, professional development

INTRODUCTION

Professional associations (PAs) have a close relationship with universities and training institutions. In Australia, and other countries, there is a growing interest in sustainable development (or 'sustainability'), especially in the context of concerns related to climate change. Although some PAs (e.g., Australian Institute of Management 2008) require their members to practice their profession in accordance with sustainable development principles, the majority of Australian PAs do not. Likewise, while some seek to ensure that entering members have capabilities in sustainable development by virtue of a relevant university degree (e.g., Engineers Australia 2006), most do not. These factors are interconnected though the discussion of 'green jobs' through which professionals and others will be directly working to deliver sustainable development.

In this article, we, first, briefly explore the role of PAs and their involvement with sustainable development, and the relationship of green jobs to professional activity; second, report the results of a 'desktop' survey of a sample of Australian PAs, principally operating in the state of Victoria, to explore their relationship to sustainable development; and third, discuss the possibilities for engaging PAs more closely in promoting sustainable development amongst their members.

Professional Associations

According to Babylon Ltd. (2009),

a professional association is an organisation, usually non-profit, that exists to further a particular profession, to protect both the public interest and the interests of professionals. ...On the one hand, professional bodies may act to protect the public by maintaining and enforcing standards of training and ethics in their profession. On the other hand, they may also act like a cartel or a labor union...

However, Millerson (1964) argues that PAs are different from trade unions, principally because PAs are concerned with multiple functions, rather than the single economic function of unions.

The evolution of PAs has a long history, as indicated by Carr-Saunders and Wilson (1968). In Europe, before 1200, medieval traders and craftsmen, teachers and students formed groups, similar to guilds of learning. From such associations, universities developed granting the degrees that allowed teachers to practice. Universities, which produced 'learned men' to administer societies, became closely associated with churches, and the students and teachers entered ecclesiastical orders—teachers and priests became almost indistinguishable. Around the end of the 1500s, the professions became secularised, and through the 1700s they were regarded as gentlemen's occupations. As Carr-Saunders and Wilson (1968) note 'though they might not offer large material rewards ... (the professions) did provide a safe niche in the social hierarchy' (p. 295). At this point, some half dozen professions provided all the skilled services that society needed to function. The newer crafts that developed were more closely based on science, and the work of engineers led to the evolution of intellectual techniques associated with other professions.

The disciplines evolved in parallel with the professions. In his review of Foucault's analysis of disciplines, Deacon (2002) emphasises the role the disciplines have in exerting control over their interests, 'with the advent of the disciplines, we enter the age of the effectivity of knowledge and the productivity of networks of power' (p. 447), with power being exercised through hierarchical observation and normalising judgement, which provide the context for examination. Examination provides the ability to include or exclude members on the grounds of knowledge and, as Macdonald (1995) points out, it may lead to the exclusion of 'those of a particular race, gender, religion, and thus play a part in the structured inequality of society' (p. 29). Members of the discipline become participants in the power networks to implement the discipline's goals, more effectively than if goals were imposed by an external agent; such as government (Deacon 2002). The background of Christian pastoral practices also assisted in shaping the modern disciplines, which have played an important role in education and social advancement. Deacon (2002) comments that while other analyses of the development of education point to personal growth, economic growth and the like, the power networks of disciplines have helped to create a situation where 'society as a whole is becoming more and more like a school' (p. 456). While power networks and 'schooling' can work to maintain historical ideas and processes, they can also assist in bringing about change.

The original objective of the disciplines and related societies that led to modern PAs was to promote 'study'. Yet, as noted by Macdonald (1995) the development of knowledge provides the basis for a monopoly. By the beginning of the 1800s, the associations' functions had expanded to include promotion of respectability and status for their members, which led to the protection of their interests. This protection of interests brought about a response from the state, since 'the almost inevitable consequence that a bid for monopoly will, if successful, elicit from the state the imposition of a number of restrictions and requirements' (Macdonald 1995: 12). Thus, in Britain at least, Parliament began to regulate professions that rendered a service that was vital; fiduciary (mainly the legal professions); or had an immediate relation to public safety to ensure the efficiency of the profession and remove suspicion of favouritism (especially with professionals employed by the government) (Carr-Saunders and Wilson 1968).

In the 1500s there was a rapid increase in the number of universities stemming from the demand for lawyers and administrators. Since the early 1800s, ‘qualifying’ PAs developed that examined the qualifications of prospective members; previously qualifications were confirmed through pupilage or apprenticeship programs (Millerson 1964). Although PAs rarely maintain a training institution, occasionally they have been granted power by government to conduct an entrance examination to their profession (Carr-Saunders and Wilson 1968).

More usually PAs are involved in outlining what should be taught to students wanting to enter the profession. In these situations, the professional associations ‘including some of which have founded schools of their own, have pressed upon universities and technical colleges the need for courses to meet the needs of their own students; they have even founded lectureships and endowed scholarships’ (Carr-Saunders and Wilson 1968: 376). This trend, discussed by Millerson (1964) increased substantially during the early 1990s so that admission to the associations has come via completion of university degrees (or similar). As a consequence, an important part of PA’s educational role has been the coordination and advice provided to educational institutions, like universities. As Millerson (1964: 143–44) notes ‘some organisations ensure that these connections remain active two-way lines of communication and influence’, with the extent of engagement depending on the PA’s area of interest and work, and on its status.

An example of PA’s involvement in the accreditation, or testing, of members to confer a level of professional standing, is reported by Harris and Jago (2001) in respect of the Australian tourism professions. More broadly Gonczi (1994) has noted the involvement of PAs in the development of competency-based approaches to assessing the performance of students (potential members of the PAs), and comments on the widespread involvement of Australian PAs in working with governments and universities on this project—whereas in other countries this had not been the case.

The role of many PAs has moved from direct testing to directing institutions, such as universities, to test applicants. Yet, as PAs have lost this direct contact with members, an additional educational role has developed. Newall and Swan (1995) have reported that PAs have the ability to be mechanisms for innovation by virtue of their role in diffusion of knowledge to practitioners, creation of informal networks, and linking members from different organisations. Based on a survey of professionals these authors note that PAs are important for innovation in specific, operational technologies. However, ‘for more complex technologies that have implications for the overall philosophy of operations, different predictors—the existence of a ... (relevant) strategy, the level of external communication, and the level of influence of individuals—are relevant’ (p. 371). In the context of sustainable development, Dickson (2009), Dzinkowski (2007), and Oblinger (2009) report examples of how innovation has been facilitated through PAs.

The extent to which both roles were evident in PAs in Australia, in relation to education about sustainability, was the focus of our study.

Sustainable Development Context

Before the introduction of environmental protection legislation, most private organisations and government agencies did not recognise environmental concerns. With

this legislation most were required, at a minimum, to make sure that their discharges of pollutants were within their agreements with the relevant environmental protection agency (e.g., Mennenöh 1997; Phillipson 1995; Smith 1995). In addition, however, corporations began to look beyond compliance with legislation, to embrace the concept of sustainable development as promoted in the Brundtland report (World Commission on Environment and Development 1987). In parallel, Callenbach et al. (1993) set out a clear rationale for corporations to take the need for environmental management seriously based on arguments as outlined in the response of the Business Council for Sustainable Development to the (then) developing discussion of the United Nations' call for sustainable development (Schmidheiny 1992).

A clear indication that the business community has recognised the need to engage with government and community expectations for environmental management was its role at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro. A major outcome of the conference was *Agenda 21*, which provided directions for governments, communities and businesses in facilitating sustainable development.

Four chapters were directly relevant to professional associations:

Chapter 27—Strengthening the role of nongovernmental organisations: partners for sustainable development

Chapter 30—Strengthening the role of business and industry

Chapter 31—Scientific and technological community

Chapter 36—Promoting education, public awareness and training (Division for Sustainable Development 2009)

Of relevance to universities was the proposal in Chapter 36 that:

Countries should set up training programmes for school and university graduates to help them achieve sustainable livelihoods, and encourage all sectors of society, including industry, universities, governments, non-governmental organizations and community organizations, to train people in environmental management.

In 2002, the World Summit on Sustainable Development in Johannesburg reconfirmed and promoted the need to reorientate the role of education within the sustainability agenda. Subsequently we saw the declaration of a United Nations Decade of Education for Sustainable Development which began in 2005. As Thomas (2004) notes, there has been a growing emphasis on the integration of sustainability into university curriculum, to the point that Filho and Carpenter (2006: 9) comment that universities 'are very well placed to promote sustainability both in respect of policy and in respect of academic practice'. These directions have been given specific emphasis by government policies such as 'Living Sustainably: The Australian Government's National Action Plan for Education for Sustainability' (Commonwealth of Australia 2009) and 'Sustainable Development in Higher Education' (Higher Education Funding Council for England 2005).

Green Jobs

Many reports predict an upswing in 'green' technical jobs that will be needed to address changes in energy technology and various conservation measures that will

be needed to limit CO₂ emissions. A comprehensive overview of global green job trends and future demand is 'Green Jobs: Towards Decent Work in a Sustainable Low-Carbon World', a report from a coalition of four highly respected international organisations—UNEP, International Labour Organization, International Organisation of Employers and International Trade Union Confederation (UNEP 2008a). In essence the report argues (p. 13) that there is 'tremendous potential' for green jobs:

Encouragingly, the business case for greening both the economy and the job market has been growing increasingly powerful.... The greening of the economy presents a major opportunity to start new businesses, develop new markets and lower energy costs.

Other reports express similar optimism and advocacy for green jobs (American Solar Energy Society, Gallon 2001, Apollo Alliance 2008, Green For All 2009, Global Insight 2008 in North America; Ghani-Eneland and Renner 2009 in Europe; The House of Representatives Standing Committee on Environment, Recreation and the Arts 1994, Hatfield-Dodds et al. 2008, Department of Education and Training 2009, Ehmcke, Philipson and Kold-Christensen 2009, in Australia).

What is a 'green job'? Although many reports focus on jobs associated with energy management needed to slow climate change (e.g., Bezdek 2007, Pew Charitable Trusts 2009), the United Nations Environment Programme (2008b) proposes that:

Green jobs are found in many sectors of the economy from energy supply to recycling and from agriculture and construction to transportation. They help to cut the consumption of energy, raw materials and water through high-efficiency strategies, to de-carbonize the economy and reduce greenhouse-gas emissions, to minimize or avoid altogether all forms of waste and pollution, to protect and restore ecosystems and biodiversity.

Green jobs play a crucial role in reducing the environmental footprint of economic activity (p. 5).¹

Green jobs will affect all areas of employment. Thus PAs in all sectors can assist in the move to sustainability. Lo (2003) has argued that PAs are intimately connected to the state and the market, and particularly to social issues such as race, ethnicity and gender. He suggests that PAs provide the location for professionals to identify and promote their relation to social issues in the context of their professional institution. Further, he proposes, since the professions are intimately connected with society we need to understand their role in caring about social issues—one of which is sustainability.

In this context, how are PAs positioning themselves to help their current members apply themselves to environmental and sustainability issues, and how are they guiding future members graduating from universities? To gain insight into the activity of PAs in the Australian context we undertook a brief 'desktop' survey of PAs in the State of Victoria (many of which operate nationally).

SURVEY OF AUSTRALIAN PROFESSIONAL ASSOCIATIONS

The initial stage of the project entailed the identification of relevant PAs. We sought all PAs operating in Victoria, including those with a national focus with a Victorian presence. Internet searches (using Yahoo and Google) identified PAs aligned to industry sector titles. A list of 52 professional associations was developed. The range included those administering tertiary education accreditation (some associated with trade or vocational certification), a small number of professional interest groups or institutes, and three unions. The list of PAs represented a range of sectors (listed in Table 1).

Extracting Relevant Information

The following information was sought from each PA's website:

- A strategy, plan or vision/mission statement that made reference to sustainability
A statement that the PA accredited any university programs as a pathway for professionals.
- If accreditation was undertaken, whether the criteria included anything that related to sustainability.
- A statement that the PA organised or provided professional development for its members.
- If professional development was provided, did it include sustainability issues.
- Whether member feedback was encouraged through the site.

The format in which PAs present their identity on websites ranges from general 'About Us' statements to more detailed 'Vision and Values', or 'Mission Statements'—in some case including a corporate or strategic plan.

Identifying Accreditation, Professional Development, Feedback

The requirement of accreditation of education programs for entry to the profession, the availability of professional development, and opportunities to provide feedback (from members, or the public) has been tracked across the PAs. In some cases associations clearly identified their role in accreditation and working with educational organisations, perhaps through a link titled 'accreditation'. In other instances it is implied.

Professional development activities were identified as 'yes' only where workshops, seminars or activities are offered by the association. We did not include annual conferences in this category.

In some instances, PAs encourage feedback and include a specific feedback link or discussion form. This feedback mechanism could provide a vehicle for members concerned about sustainability, to promote its inclusion in the PA's strategies and activities. Where there is merely a 'Contact Us' section with a phone number, address and email, and no feedback form, we concluded that interest in feedback was low.

Identifying Sustainability

The concept of triple bottom line provides a framework for identifying sustainability activity. Elkington (1999: 19) comments:

The sustainability agenda, long understood as an attempt to harmonise the traditional financial bottom line with emerging thinking about the environmental bottom line, is turning out to be much more complicated.... Increasingly, we think in terms of a 'triple bottom line', focusing on economic prosperity, environmental quality, and—the element which business has tended to overlook—social justice.

Indicators or descriptors used for the three elements of the triple bottom line, environment, social and economic, were used to measure the commitment or response to sustainability of the PAs. A clear commitment was registered for each of these three elements if the PA's key source document addressed the following:

Environment—language that reflects environmental awareness or indicates valuing member knowledge and actions to avoid impacting the environment with unsustainable workplace practices or actively promotes ecological awareness and efficient use of resources.

Social/Cultural—language that reflects social awareness or indicates valuing member knowledge and actions to appreciate the importance of diversity and community and to avoid workplace practices that negatively impact human rights and equity requirements. Framed positively, it could also indicate a valuing of diversity or the empowerment of minority or disadvantaged groups.

Economic—language that reflects or values member knowledge of alternative measures of well-being and progress and promotes workplace practices to enhance these.

In some instances, key documents implied these indicators without direct reference to sustainability, or used some terms of these three elements, and in these cases the PA was rated as having a 'partial' commitment. However, where there was no reference explicitly or by implication, a zero commitment was recorded.

Other Information

Frequently, the PAs provided links to secondary-source documents; either policy statements, areas of interest, or professional research that aligned more closely with sustainability measures than the key organisational document, which were noted as useful sources to track the associations' evolving attitudes towards sustainability and how they may eventually feed back into the associations' key identity documents or professional development activities. These documents might also provide a platform for further discussions with the association.

RESULTS

The intent was to determine the extent of PAs' engagement in sustainability and their potential for extending this engagement in regard to university programs and in-service professional development programs. It was not to catalogue the details by which sustainability was pursued by individual PAs; subsequent researchers may wish to explore these details to assess the effectiveness of specific forms of accreditation or of particular types of 'in-service' programs.

For the vast majority of PAs sustainability issues were not on the radar screen (Table 1).

Table 1 Professional associations mentioning elements of sustainability in core documents

	Environmental Awareness	Social Awareness	Economic Alternate Measures
Yes (clearly indicated)	6	9	9
No (not indicated)	40	35	41
Partial (indicated)	6	8	2
Unclear	NIL	NIL	NIL

Note: Total professional associations surveyed = 52.

Where an aspect of sustainability was clearly indicated, one aspect was indicated by six PAs, two aspects were indicated by four, and three aspects were indicated by three.

Beyond their mission documents, 26 PAs indicated an awareness of sustainability to varying degrees on their websites as follows:

- Ten PAs' sites mentioned environmental, social and/or economic issues in their standards, code of conduct or ethics statements
- Two sites mentioned environmental, social and/or economic issues in reference to a statement of set of principles
- Eight sites gave links to interest groups/websites/projects that mentioned environmental, social and/or economic issues
- Six sites identified a specific policy mentioning environmental, social and/or economic issues; three of which related to environmental issues, and three to sustainability broadly.

Table 2 shows that although most PAs do not sponsor an accreditation process, most do sponsor professional development activities. A minority encourage feedback on their websites.

Most PAs conduct professional development activities, while a smaller number run an accreditation process. However, only a handful engage in sustainability. Most

Table 2 Professional associations with accreditation process, professional development activities and member feedback mechanism

	Accreditation Process Evident	Professional Development Activities Evident	Feedback Encouraged
Yes	17	41	17
No	32	10	27
Partial	1	NIL	1
Unclear	2	1	7

Note: Total number of professional associations surveyed = 52.

professional development activities are currently not delivering insights about sustainability. An exception is the Australian Institute of Management, which provides a range of development activities, including the training course ‘Sustainable Business Practices’ to explore sustainability and ways to introduce sustainable principles to participants’ workplaces (Australian Institute of Management 2011). Similarly the National Farmers Federation exposes its members to environmental and sustainability issues, often through partnerships with other organisations, for example the FarmReady program (National Farmers Federation 2011) which provides access to information and training for farmers to develop Environment Management Systems (Department of Agriculture, Fisheries and Forestry 2011).

Table 3 shows which sectors are most involved in sustainability, accreditation and professional development.

Table 4 suggests that there are PAs in the Construction/ Design/ Planning/ Real Estate and Property sector where sustainability has been adopted, where professional development activities are undertaken, and some where accreditation is required. This industry is the best base for sustainability advocates to work with to expand the incorporation of sustainability into other professions. Other, less-developed sectors may also have experiences to offer.

DISCUSSION AND CONCLUSION

This desktop study indicated that there has been some activity within PAs in relation to sustainability. Recognising the limits of the survey, that the associations’ web pages may provide an incomplete picture of sustainability activity or may be out of date, means that a more detailed survey could indicate a somewhat different picture. However, it is reasonable to assume that if sustainability were a feature of a PA, the organisation would want to promote it to its members and the public.

Within this context, the data indicate that very few PAs operating in Victoria have engaged in sustainability and related issues. Of PAs that incorporated sustainability in their key documents, such as mission statements, roughly 15 per cent indicated a strong connection to sustainability. When we include those that indicate sustainability in some way (code of ethics, links to others’ pages) we see that slightly more than 50 per cent indicate some degree of awareness of sustainability.

Table 3 Sectors rated by evidence of sustainability goals and professional training

	Evidence of Sustainability	Accreditation Processes	Professional Development
Strong Engagement*	Construction/Design/Planning/Real Estate and Property	Accounting/Administration/Management/Advertising, Public Relations/Human Resources; Community and Sports	Accounting Administration/Management/Advertising/Public Relations/Human Resources; Community and Sport; Construction/Design/Planning/Real Estate and Property; Education and Training; Engineering/Mining, Oil and Gas; IT Technology/Telecommunications; Environment; Healthcare and Medical; Legal; Manufacturing; Primary Industry; Retail/Sales and Marketing; Service; Transport and Logistics
Some Engagement	Primary Industry	Construction/Design/Planning/Real Estate and Property and Legal	Banking and Finance; Science and Technology

Note: *At least some of the PAs in the sector show more than partial engagement with the three aspects of sustainability; or more than half in the sector have accreditation or professional development activities.

Table 4 Analysis by sectors and attributes of sustainability practice

Sector	No. of Records	Environmental Awareness	Social Awareness	Economic Alternate Measures	Accreditation Process	Professional Development	Feedback
Accounting	2	0	1 + P	1	2	2	1
Administration/Management/ Advertising/PR/Human Resources	6	1	1	1	4	5	3
Banking and Finance	3	0	0	0	0	1	1
Community and Sport	2	0	2	1	2	2	1
Construction/Design/Planning/Real Estate and Property	5	2 + P	1 + P	2	2	5	1
Education and Training	2	0	0	0	1	1	2
Engineering/Mining, Oil and Gas/IT Technology/Telecommunications	8	2P	2P	P	2	8	2
Environment	1	1	0	0	0	1	0
Healthcare and Medical	9	P	2	1	2	6	3
Hospitality and Tourism	1	P	P	P	0	0	0
Legal	2	0	P	0	1	1	2
Manufacturing	1	0	0	0	0	1	1
Primary Industry	1	1	1	1	0	1	1
Retail/Sales and Marketing	2	P	P	1	1	2	0
Science and Technology	5	0	1	1	1	2	0
Service	1	0	P	0	0	1	1
Transport and Logistics	1	0	0	0	0	1	0

Note: The figures represent the number of associations that stated the attribute (e.g., Environmental Awareness) on their website; P indicates the attribute was partially indicated.

The data indicate that while there has been some move to adopt sustainability in PAs, there is clearly some way to go before PAs as a whole could be seen as drivers for sustainability. The inertia associated with such change should not be underestimated, as change within organisations is complex and often difficult (e.g., Benn and Dunphy 2006). Atkinson (1999) discusses the five stages of change in organisations—innovators, change agents, early adopters, transformers and mainstreamers.

Our results suggest that at the time of our survey (2009) a small number of PAs are innovators (or possibly change agents depending on their influence on others) as they have engaged strongly with sustainability. Moving the bulk of the PAs towards engagement with sustainability principles will take time and resources.

To begin this process, our results provide two clear opportunities for working with PAs. First, the data provides information about PAs that currently operate accreditation processes. The opportunity exists to contact these PAs to discuss the relevance of sustainability to their industry and government policy and legislation. It should be possible to demonstrate the benefits of having new members, specifically new graduates, entering the profession with sustainability attributes. Implementation of this proposal may require assistance to the PAs to review their accreditation processes to include sustainability.

In Australia, where some PAs accredit university programs/degrees, these associations could make an impact on the content of the programs by requiring the inclusions of sustainability concepts and issues. Hence, universities would need to work alongside the PAs introducing sustainability to ensure that programs and teaching staff were capable of delivering the requirements of the PA.

The majority of PAs offer professional development activities. In some places, meta-level associations exist to help PAs plan their professional development agenda, and in a few cases these organisations have formed sustainability agendas. For example, in the United Kingdom, the Professional Associations Research Network, the Institution of Environmental Sciences, and the Society for the Environment have formed a partnership called Professional Practice for Sustainable Development (PP4SD) to promote sustainable practice among professionals. PP4SD develops professional development materials and sponsors events that encourage cross-professional activity (PP4SD 2011). In the United States, the Disciplinary Associations Network for Sustainability (DANS) is an informal network of professional associations working on, among other things, professional development for association members (DANS 2008).

These initiatives provide Australian institutions with examples of targeted professional development activities to facilitate sustainability amongst professionals. It would be interesting to investigate what has inhibited the adoption of these international initiatives in Australia.

An additional opportunity exists to encourage PAs that do not yet have accreditation processes, or professional development activities to include sustainability concepts from the start. This may be seen as a lesser priority compared with engaging with PAs already involved.

Note

- 1 This description focuses on the environmental aspect of sustainability and represents the others currently discussing green jobs (as above). It appears that much of the impetus for thinking about green jobs has been prompted by recent concerns about climate change. As our understanding of the role of green jobs matures we can expect to see a greater discussion of how social and economic elements are involved.

References

- American Solar Energy Society. *ASES Green Collar Jobs Report Forecasts 37 Million Jobs From Renewable Energy and Energy Efficiency in U.S. by 2030*. Available at www.ases.org/greenjobs. Accessed October 2009.
- Annandale, D., A. Morrison-Saunders and L. Duxbury. 2004. 'Regional Sustainability Initiatives: The Growth of Green Jobs in Australia', *Local Environment*, 9 (1): 81–87.
- Apollo Alliance. 2008. *Home Page*. Available at <http://apolloalliance.org/>. Accessed August 2009.
- AtKinson, A. 1999. *Believing Cassandra: An Optimist Looks at a Pessimist's World*. White River Junction (Ver): Chelsea Green Publishing.
- Australian Human Resources Institute. 2010. *AHRI Accredited Courses*. Available at <http://www.ahri.com.au/scripts/cgiip.exe/WService=AHRI-LIVE/ccms.r?PageId=11099>. Accessed November 2010,
- Australian Institute of Management. 2008. *Code of Conduct: Guides to Good Management Practice*. Available at <http://www.aim.com.au/about/conduct.html>. Accessed January 2010,
- . 2011. Sustainable Business Practices. Available at <http://www.aimnsw.com.au/education-and-training/open-programs/leading-business/sustainable-business-practices.cfm>. Accessed April 2011.
- Australian Nursing Federation. 2010. *Feedback*, Available at <http://www.anf.org.au/html/feedback.html>. Accessed November 2010.
- Babylon Ltd. 2009. *Professional Associations*. Available at <http://dictionary.babylon.com/professional%20associations>. Accessed January 2010.
- Benn, S. and D. Dunphy. 2006. *Corporate Governance and Sustainability: Challenges for Theory and Practice*. London: Routledge.
- Bezdek, R. 2007. *Renewable Energy and Energy Efficiency: Economic Drivers for the 21st Century*, ASES—American Solar Energy Society. Available at <http://www.greenforall.org/resources/renewable-energy-and-energy-efficiency-economic/download>. Accessed July 2009.
- Cairncross, F. 1995. *Green Inc: Guide to Business and the Environment*. London: Earthscan.
- Callenbach, E., F. Capra, L. Goldman, R. Lutz and S. Marburg. 1993. *EcoManagement: The Elmwood Guide to Ecological Auditing and Sustainable Business*. San Francisco: Berrett-Koehler.
- Carr-Saunders, A.M. and P.A. Wilson 1968. *The Professions*. London: Frank Cass & Co.
- Commonwealth of Australia. 2009. *Living Sustainably: The Australian Government's National Action Plan for Education for Sustainability*. Department of the Environment, Water, Heritage and the Arts. Canberra.
- Deacon, R. 2002. 'Truth, Power and Pedagogy: Michel Foucault on the Rise of the Disciplines', *Educational Philosophy and Theory*, 34: 435–58. Doi: 10.1111/j.1469-5812.2002.tb00518.x Accessed April 2011.
- Department of Agriculture, Fisheries and Forestry. 2011. *National Environmental Management Systems Implementation Plan*. Available at <http://www.daff.gov.au/climatechange/climate/>

- adaptation-strategies/national_environmental_management_systems_implementation_plan. Accessed April 2011.
- Department of Education and Training (NSW). 2009. *Skills for Sustainability*, Second edition. Sydney: NSW Department of Education and Training.
- Dickinson, L. 2009. 'Institute's Seven Commitments Set Out Action Plan for Climate Change', *Planning*, 19: 22. Available at ProQuest Central database, <http://proquest.umi.com/pqdlink?index=1&did=1791341921&SrchMode=2&sid=4&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1263426750&clientId=16532>. Accessed January 2010.
- Disciplinary Associations Network for Sustainability (DANS). 2008. About DANS. Available at <http://www2.aashe.org/dans/about.php>. Accessed April 2011.
- Division for Sustainable Development. 2009. *Agenda 21*. Available at http://www.un.org/esa/dsd/agenda21/res_agenda21_00.shtml. Accessed December 2009.
- Dzinkowski, R. 2007. 'Saving the Environment', *Strategic Finance*, 89 (1): 50-54.
- Ehmcke, W., G. Philipson, & C. Kold-Christensen. 2009. *Who are the Green Collar Workers? A Definition and Taxonomy*, Connection Research and DECC NSW. Available at http://www.connection_research.com.au/LiteratureRetrieve.aspx?ID=32292&A=SearchResult&SearchID=370668&ObjectID=32292&ObjectType=6. Accessed July 2009.
- Elkington, J. 1999. 'Triple Bottom-Line Reporting: Looking for Balance', *Australian CPA*, 69 (2): 18-21.
- Engineers Australia. 2006. *Engineers Australia Policy on Accreditation of Professional Engineering Programs*, Document No. P02. Available at <http://www.engineersaustralia.org.au/>. Accessed July 2009.
- Filo, W.L. and Carpenter, D. 2006. Introduction, in W.L. Filho and D. Carpenter (eds) *Sustainability in the Australian University Context*, 9-10. Frankfurt am Main: Peter Lang.
- Financial Planners Association. 2010. *Home Page*. Available at <http://www.fpa.asn.au/>. Accessed November 2010.
- Gallon, G. 2001. 'Green and Growing: Environmental Job Numbers Now Rival Those for the Traditional Sectors such as Oil, Chemicals and Steel', *Alternatives Journal*, 27 (1): 22-23.
- Ghani-Eneland, M and M. Renner. 2009. *Low Carbon Jobs for Europe: Current Opportunities and Future Prospects: Executive Summary*, WWF. Available at http://assets.panda.org/downloads/low_carbon_jobs_summary_final.pdf. Accessed September 2009.
- Global Insight. 2008. *Current and Potential Green Jobs in the U.S. Economy*, prepared for US Conference of Mayors and Mayors Climate Protection Centre, Global Insight Inc, Lexington, MA. Available at <http://www.wildlandscpr.org/current-and-potential-green-jobs-u-s-economy>. Accessed December 2008.
- Goncz, A. 1994. 'Competency Based Assessment in the Professions in Australia, Assessment in Education: Principles', *Policy & Practice*, 1 (1): 27-44. Available at <http://dx.doi.org/10.1080/0969594940010103>. Accessed September 2009.
- Green For All. 2009. *Home Page*, Available at <http://greenforall.org/splash>. Accessed August 2009.
- Harris, R. and L. Jago. 2001. 'Professional Accreditation in the Australian Tourism Industry; An Uncertain Future', *Tourism Management*, 22 (4): 383-90. Available from Science Direct, http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6V9R-42XB5DY-7&_user=426478&_rdoc=1&_fmt=&_orig=search&_sort=d&_docanchor=&view=c&_searchStrId=1162518307&_rerunOrigin=scholar.google&_acct=C000020278&_version=1&_urlVersion=0&_userid=426478&md5=184868c579deeff24c2b2c7be0bc3644. Accessed January 2010.
- Hatfield-Dodds, S., H. Schandl, T. Doss, & G. Turner. 2008. *Growing the Green Collar Economy: Skills and Labour Challenges in Reducing Our Greenhouse Emissions and National Environmental Footprint*, Report to the Dusseldorp Skills Forum, CSIRO Sustainable

- Eco-systems, Canberra. Available at <http://www.csiro.au/files/files/plej.pdf>. Accessed July 2009.
- Higher Education Funding Council for England. 2005. *Sustainable Development in Higher Education*, Statement of Policy July 2005/28, Higher Education Funding Council for England, Bristol. Available at http://www.hefce.ac.uk/pubs/hefce/2005/05_28/05_28.pdf. Accessed October 2010.
- House of Representatives Standing Committee on Environment, Recreation and the Arts 1994. *Working with the Environment: Opportunities for Job Growth*. Canberra: Parliament of the Commonwealth of Australia.
- Lo, M.M. 2003. Modernity and the Social Formation of Professions. Paper presented at the annual meeting of the American Sociological Association, Atlanta Hilton Hotel, Atlanta, GA. Available at http://www.allacademic.com/meta/p107098_index.html. Accessed April 2011.
- Macdonald, K.M. 1995. *The Sociology of the Professions*. SAGE: London.
- Mennenöh, H. 1997. 'Environmental Liability in Germany: Risks and Risk Reduction Strategies for Companies and Managers', *International Environmental Reporter*, 20 (12): 591.
- Millerson, G. 1964. *The Qualifying Associations: A Study in Professionalization*. Routledge & Kegan Paul: New York.
- National Farmers Federation. 2011. Education and Training. Available at <http://www.nff.org.au/policy/education-training.html>. Accessed April 2011.
- Newall, S. and J. Swan. 1995. 'Professional Associations as Important Mediators of the Innovation Process', *Science Communication*, 16 (4): 371-87.
- Oblinger, D.G. 2009. 'Sustainability', *Review*, 44 (6): 112.
- Pew Charitable Trusts. 2009. *The Clean Energy Economy: Repowering Jobs, Business and Investments Across America*, Pew Charitable Trusts. Available at http://www.pewcenteronthestates.org/uploadedFiles/Clean_Economy_Report_Web.pdf. Accessed August 2009.
- Phillipson, M. 1995. 'Enforcement of Environmental Law: New Zealand's Statutory Model', *Environmental and Planning Law Journal*, 12 (5): 308-17.
- Planning Institute of Australia. 2008. *Sustainability Policy Position Statement*. Available at <http://www.planning.org.au/documents/item/280>. Accessed November 2010.
- Professional Practice for Sustainable Development (PP4SD). 2011. *Welcome*. Available at <http://www.pp4sd.org.uk/>. Accessed April 2011.
- Schmidheiny, S. 1992. *Changing Course: A Global Business Perspective on Development and the Environment*. Cambridge (Mass.): The MIT Press.
- Smith, S.L. 1995. 'Doing Time for Environmental Crimes: The United States Approach to Criminal Enforcement of Environmental Law', *Environmental and Planning Law Journal*, 12 (3): 168-82.
- Thomas, I. 2004. 'Sustainability in Tertiary Curricula: What is Stopping it Happening?', *International Journal of Sustainability in Higher Education*, 5 (1): 33-47.
- United Nations Environment Programme. 2008a. *Green Jobs: Towards Decent Work in a Sustainable Low-Carbon World*, UNEP. Available at http://www.unep.org/labour_environment/PDFs/Greenjobs/UNEP-Green-Jobs-Report.pdf. Accessed September 2009.
- . 2008b *Green Jobs: Towards Decent Work in a Sustainable Low-Carbon World: Policy Messages and Main Findings for Decision Makers*, UNEP. Available at http://www.unep.org/labour_environment/PDFs/Greenjobs/UNEP-Green-Jobs-Towards-Sustainable-Summary.pdf. Accessed September 2009.
- World Commission on Environment and Development. 1987. *Our Common Future*. Oxford: Oxford University Press.