HEALTH AND EDUCATION FOR SUSTAINABLE DEVELOPMENT AND THE AUSTRALIAN CARBON POLLUTION REDUCTION SCHEME

Carbon pollution reduction and international sustainable development directions

This article takes the international regulatory context for carbon trading as beginning in 1990, when the World Commission on Environment and Development defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Beder 2006, p. 18). The Australian government's carbon pollution reduction scheme green paper (08) claims its proposed arrangements are the best way to reduce greenhouse gas emissions and related carbon pollution, while minimizing the impact on Australian businesses and households. This article argues its approach is not scientific enough to achieve these goals and that the paper must also be judged as an element in achieving broader, new aims of sustainable development. The green paper appears to be derived from a range of perspectives more used to a feudal past. Popper defined science as the development of knowledge which is objectively grounded in the outcome of observation and experiment. More coordinated, scientific visions of industry and community development are necessary than the green paper provides. The policy direction recommended in this article follows Keynes, who called for the extension of 'publicness', with the government as leader rather than sole owner of funds to be competitively deployed with specified social and economic purposes and related evaluations. Management perspectives which seek stability and full employment through planning and investment of mandated insurance premiums or savings, so as to avoid market fluctuations, have been central to British and Australian developments since World War II. This article argues government, industry and related communities should now manage carbon trading together, scientifically and competitively.

In 1997 the Kyoto Protocol committed signatories to reducing greenhouse gas emissions which cause global warming, using the regulatory mechanism of national emissions caps and trading schemes. Ideally, this is a government and industry partnership approach to reducing carbon across communities. In this context, key differences between the statutory authority and private sector management models require consideration. A statutory authority is primarily driven by regulatory goals established in the interests of stakeholders, not run for the financial benefit of stockholders. The board is drawn from key stakeholders and other qualified community members. They report to the appropriate minister but perform independently, according to normal commercial principles, unless achieving the program goals requires some other action, which should be made clear. If the elected government interferes in the board or its administration this must be open, so it can be judged by all. The statutory authority management structure is designed to gain effective implementation of competition, as Hilmer (1993) and Australian heads of government envisioned it, to achieve the goals of sustainable development – economic, social and environmental – through service contracting and triple bottom line accounting. NSW WorkCover, which administers occupational health and safety (OHS), workers' rehabilitation, re-employment and insurance legislation, related funds and investments,

provides a rough model for continuing consideration, along with the management of industry superannuation and other investment funds. This vision needs communication.

In 1992 the United Nations (UN) Rio Declaration on Environment committed governments to producing healthier environments. The first principle is that humans are at the centre of concern for sustainable development and entitled to a healthy and productive life in harmony with nature. Earlier World Health Organization (WHO) directions defined health as a state of complete physical, mental and social wellbeing. This requires broader health management perspectives than the medico-legal model, which focuses on diagnosis and treatment of sick bodies, rather than on improving the debilitating conditions which may surround and influence them daily. A study by the Harvard School of Public Health in cooperation with the UN and the World Bank provided a comprehensive and systematic overview of world health problems in 1990, on a nation by nation basis, with projections to 2020. Life expectancy at birth is expected to grow for women in all regions and also for men, but more slowly, mainly due to tobacco use. The average life expectancy at birth in the least developed countries ranged from 38 to 52 years, in comparison with between 76 and 81 years for developed nations. Investigation of mortality, disability and risk factors indicated a substantial proportion of international and national disease prevention planning should relate to controlling the main risks of premature death, which are malnutrition, poor water supply, sanitation and hygiene, unsafe sex, tobacco use, alcohol, and occupation. Much broader communication of sustainable development visions is necessary for planning and implementation of coordinated, consultative, partnership approaches to developing health and other services and investments. Integrated consideration of land and water use, as well as air pollution from greenhouse gas emissions is required in all related industry and regional contexts, as exploitation of natural resources can either undermine or support biodiversity and the quality of life of future generations.

Australia has followed the UN and WHO direction which sees human rights as in part conceived as nationally guaranteed minimum standards of care. In 1984 the taxpayer funded Medicare system replaced hospital and medical insurance which consumers had formerly purchased in the market with government subsidy. Medicare entitles all residents to health care free or at low cost. To increase choice and the total services pool, the government provides extra subsidies to consumers who purchase additional care entitlements through private health insurers. The US is the only OECD country where private expenditure accounts for more than half of the total expenditure on health care. It is also the one where health care expenditure is least cost-effective. (Duckett 2004). A government guaranteed approach to health care provides greater service access, equity and cost containment than having the market decide how care is delivered. Because of its national scope and influence over providers, the Medicare structure has stronger but unmet potential to improve the quality of care through comparison of care practices and outcomes, than is available in market driven systems. Since 1986, Australian government health promotion programs have reduced death from HIV/AIDS, cardiovascular disease, accidents and cancers primarily by changing the behaviour and environment of relevant populations through public education, screening and related improvements in technology and management. The aims of the National Health and Hospitals Reform Commission

(NHHRC) inquiry into Australia's future health system now focus on improving frontline care to promote healthy lifestyles and to prevent and intervene early in chronic illness. Related aims are to improve health services in rural areas and provide a well qualified and sustainable health workforce. Good communication systems are vitally necessary for this.

Following Bell and Drucker, Florida sees global political convergence as increasing because of the spread of science and called for open management systems which increase potential for broader community learning and creativity through sharing knowledge. Sen proposes a new concept of human security in which support for the poor, freedom of speech and transparent management are all understood as essential for effective operation of the market and equality. Traditional ideas about the market and competition, which have gradually extended globally from European, feudal origins, are now challenged vocally in many quarters. More open global markets reveal more demands for fairer treatment to meet more diverse development requirements. Sustainable development is a comparatively new and democratic vision supporting this direction, which ideally also requires an internationally coordinated focus on regional and local community health and the related identification and solution of key environment problems. For example, the Bill and Melinda Gates Foundation take prioritized, regional, holistic and scientific approaches to helping those who are globally poorest. It funds programs to improve community health, develop agriculture, and to provide access to financial security, libraries and related information networks. Some Australian organizations and communities are assisting this development and their own. Open education, like that delivered by the Open University (OU), which aims for quality, access and scale of delivery, in cooperation with regional communities and their tutors, is urgently necessary more broadly to develop new skills for sustainable development, greater social equality and to control inflation. Michael Young proposed the OU in 1962. It was backed by the British Broadcasting Commission and government which first set it up experimentally on radio and television. In 2003, the Sunday Times University Guide (14.9.03) rated the OU as 5th best in national teaching assessments by students. Cambridge University was first and Oxford sixth.

The Australian carbon pollution reduction scheme and its limitations

Under Australia's carbon pollution reduction scheme the government will place a limit, or cap, on the amount of carbon pollution industry can emit. It will require affected businesses to acquire a 'pollution permit' for each tonne of carbon they put into the atmosphere. The number of carbon pollution permits issued by the government in each year will be limited to that necessary for the total carbon cap for the Australian economy. The cap will be progressively reduced. The scheme will concentrate on the biggest polluters - around 1000 companies. The quantity of emissions they produce will be monitored and audited. At the end of each year, each liable firm would need to 'surrender' a carbon pollution permit for every tonne of emissions it produced that year. Firms will compete at auction once per year or more to purchase the number of carbon pollution permits they require. Firms that value carbon permits most highly will be those prepared to pay most for them, either at auction, or on a secondary trading market. For others it is

assumed cheaper to reduce emissions than to buy permits. The government recognizes the costs to industry of reducing emissions will normally be passed on to Australian consumers in those industries sheltered from international competition. The cost of reducing emissions may also cause business failures in trade exposed industries and in other emissions intensive businesses, which can no longer compete effectively in global and/or domestic arenas. The government therefore pledges a range of supports to low and middle income households. It will also allocate around 30% of total Australian carbon permits free to emissions-intensive trade-exposed, entities (EITE) at the scheme start, possibly with additional compensation for strongly affected industries. The expectation is permit allocations will move towards 100% auctioning as the scheme matures.

The paper states that a well designed auction will channel carbon permits to those bidders that value them most, deploying resources to derive maximum benefit. Over time the secondary carbon market will begin to play a greater role in this regard. It points out that clear and simple rules reduce transaction costs and that scheme rules that are ambiguous and contradictory generate uncertainty and increase compliance costs for market participants. However, for reasons discussed later, the paper fails to convince that its proposals will achieve the goal of reducing carbon pollution cost-effectively. Global warming from greenhouse gas emissions is a scientifically identified problem which seems most likely to be fixed by scientifically designed emissions reduction solutions which can be openly applied, challenged and refined in continuing practice. Because of incorrect assumptions, inconsistent and unclear industry categorizations and poor scheme design, the green paper is very high risk policy. It appears to have been an attempt to give as many Australian lobby groups as possible what they want, without disturbing the past. More independently objective consideration is necessary to allow scientific approaches to identification of schemes which serve the broadest possible community of interests better.

The government preferred position is that a carbon pollution permit would be an entitlement composed of various ‘rights’ contained in legislation and that carbon pollution permits would be personal property (p. 150). It is unclear how this ‘right’ is related to other so-called ‘human’ or ‘property’ rights. Australian governments have resisted a bill of rights partly because rights and obligations are ideally conceptualized and considered together for effective governance and decision making to occur. Relevant rights legislation does not carry a clear concept of an individual’s obligation to the community of which they are a part. The idea that rights are ‘inalienable’ rather than forged in culturally bound democratic struggles, indicates the feudal belief that they are innate in the order long ago given by God. Nevertheless, the UN Declaration of Human Rights is the logical beginning of more scientific, protective and egalitarian community orders, based on the requirement of respect for all individuals and their environments. Many earlier forms of common law, property rights and human rights concepts remain, however, in highly contradictory formulations, depending on their cultural origins. More broadly informed and openly scientific approaches to accountability are necessary for democracy, as well as for sustainable development, but the courts still infect much lower administration with narrowly pre-scientific assumptions and practices. These are also contained in many laws with voluminous prescriptions but no aims or clear definitions. Such laws are often

reverentially built upon existing rules and past legal interpretations of them, case by case. Evidence gathering and court presentation is adversarial and comparatively partial, rather than scientific. Courts adopt hardly any of the modern management and data gathering practices necessary for any kind of scientific administration and costing of services.

According to a recent Productivity Commission (PC) paper, economic regulations 'intervene directly in market decisions such as pricing, competition, market entry or exit'. Social regulations 'protect public interests such as health, safety, the environment and social cohesion.'(PC 2008, p.5). This division is problematic, because economic activity is undertaken with the social aim of supporting life and its associations. One wonders whether the government sees the green paper as a preparation for economic or social legislation. This matters because court practices are tightly rule bound, unlike scientific endeavour, which changes the material world by testing after judging. When Hilmer wrote his report on national competition policy which led to the passing of the Competition Policy Reform Act (1995) he defined competition as, 'striving or potential striving of two or more persons or organizations against one another for the same or related objects' (1993, p.2). This could have led naturally to management partnerships using triple bottom line accounting for sustainable development. However, the Trade Practices Act (TPA) contains no definition of competition and is wedded to outdated propositions that competition is always for money and that the greatest number of market players provides the ideal conditions for the contest, which can only do everybody good. In this paradigm, the consumer may be conceived as just another kind of trader or ignored. For example, in 2000, the treasurer called an inquiry into telecommunications competition regulation. In its report, the PC (2001) stated that, 'the main way in which pay TV providers compete is via content – in the words of some participants in the inquiry 'content is king' (p. 145). This is, however, one of few references to content in the report, in spite of the fact that the terms of reference specified that the review should have regard to the established economic, social and environmental objectives of the Australian government. The response is also typical of the Australian Competition and Consumer Commission (ACCC) and other government organizations, which take their lead from courts to avoid trouble.

For anybody not an economist, it requires a giant leap of faith to assume, as the green paper does, that making as much money as possible and reducing greenhouses gases as much as possible are naturally achieved most cost-effectively through trading processes. As the Director of CHOICE consumer policy and campaigns pointed out in the Australian Financial Review (11.8.08, p.65), until commission-based remuneration and asset-based fees disappear, consumers cannot be confident they are receiving impartial advice that is in their interests rather than in the interests of financial advisers. The green paper also takes an economic approach which appears to see government as omnipotent, like God, and in control of what industry does on a daily basis. For example it states that:

> The key benefit of an emissions trading scheme over a tax is that it secures the environmental objectives by controlling the quantity of emissions directly. Emissions trading may provide greater long term policy credibility as the

> community can see the direct link between the policy instrument and the environmental objective (p. 78).
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> 'The emissions trading scheme controls the quantity of emissions through the issuance of permits and leaves the price to be determined in the carbon market. In contrast, a carbon tax would control the price of emissions and leave the market to determine the quantity (p.161)

Such statements are articles of faith. No government regulator can control the quantity of emissions, because industry produces them and government regulators do not. This was recognised by all Australian government during the 1980s when OHS acts, which provide those at the workplace with duties of care, were introduced. The employer is in charge of work and others should cooperate. Government can only provide economic incentives to change behaviour, education, or punishment for breaches of law. The green paper hardly addresses education or penalties. A carbon tax is also unable to control, as distinct from influence, the price of emissions. The tax is only one of many influences determining the emissions price and its level of acceptance. The green paper explains the failure of European Union (EU) carbon trading as being because too many permits were allocated by EU member states through their national allocation plans for 2005-2007. The combination of generous allocations and the ability to pass on most costs apparently meant that some fossil fuel-fired generators were able to earn windfall profits from the scheme, which also provided other perverse incentives and outcomes (p. 347). Australia now seems headed down a similar road. Government and industry planning and related scientific and openly competitive approaches to carbon reduction are necessary instead for best results.

The success of individual operations between and within EITE industries is highly variable. Some firms may serve both domestic and international markets comparatively profitably or unprofitably. It is not reasonable for government to offer to compensate them all for the cost of their emissions reduction. Some mining operators, for example, may be emissions intensive and trade exposed but also very wealthy, as well as large polluters. The Queensland government has imposed a windfall profits tax on coal mining. It seems foolish to establish new systems where governments give away large amounts of money from general revenue with one hand, whilst taking it from the same source with the other. Automatic government provision of money to all firms in designated trade exposed and/or emissions intensive industries follow outdated notions of industry protection which Australia had formerly been renouncing. Government subsidy to assist sustainable regional development, funded by cutting all outdated regulation, would be better.

It is unclear in the green paper which firms will get their carbon permits free, which will have to go to auction to bid for them, and which will get extra compensation. Individual organizations are likely to be confused about their entitlements, as the paper concentrates on industry treatment, however poorly. This is likely to increase the demands on government and related scheme costs. Garnaut's interim report on climate change warned:

> Care would need to be given to the design of the institutional arrangements for administering the allocation and use of permits. Variation in the number of permits on issue or the price would have huge implications for the distribution of income, and so could be expected to be the subject of pressure on Government. There is a strong case for establishing an independent authority to issue and to monitor the use of permits, with powers to investigate and respond to non-compliance '(2007, p.65).

Such views appear irresponsible because government is elected to govern and by giving away its power to a body established at arm's length from itself, it can only make itself more ignorant and unaccountable than it would otherwise have been. The idea that establishing fund management bodies at arms length from an original body will guarantee objective management is particularly misguided if the appointed trustees have secret relationships and drivers of their own. The report of the Parliamentary Joint Committee on Corporations and Financial Services (2007) on the structure and operation of the superannuation industry recommended treasury conduct a review of regulation governing superannuation funds to identify how they may be rationalised and simplified. There is a prior need to describe and justify the funds' trustees and their wider aims and relationships, which the Joint Committee did not question. Otherwise, Australians may be paying for the privilege of increasing their own ignorance, costs and loss of control over their financial affairs. If industry superannuation funds openly tender their key service provision agreements it would encourage the market through educating it. This assumes perfect information, perfect competition, perfect accountability, perfect risk management and perfect democracy are logically and positively related. Surely all can agree on this?

The green paper is not consistent in its attitude to industry. Its general approach suggests that whatever regulation exists should not normally be challenged. This is a major and increasing cause of inefficient management and consumer cost. The paper suggests adopting Australian and New Zealand Standard Industrial Classifications (ANZSIC) but at other times builds uncritically on outdated law like that reflected in the chart of Australia's national emissions profile in 2006. The national greenhouse gas inventory uses the categories 'stationary energy; transport; fugitive emissions; industrial processes; agriculture; waste; land use, land use change and forestry (deforestation and reforestation). Broadly recognized industry and environment categories which are used consistently are necessary for scientific and efficient regional management. Greenhouse gas categories and practices also need to be reformed as a result of coordinated consideration of land use planning, including weed or pest control, housing and related urban development and waste management systems. Planning reform to achieve sustainable development is ideally led in the primary sector because air, land and water are the foundation of all future life. The comfort of Australians also depends particularly on a variety of forms of mining, which may produce major pollution. Better understanding of such key industry production chains and their ideal links with surrounding communities and environments is vitally necessary to achieve the goals of sustainable development effectively and fairly. Strategies to reduce greenhouse gas emissions are ideally an element of more holistic, cooperatively planned approaches to competition to achieve broad community goals.

Market trading alone may achieve service provision only in indirect and costly ways, and may never do so, as the evidence on international health care provision suggests.

More open educational approaches must lead sustainable development before 2010

Work provides many securities, but may also create risks for workers, consumers, communities, employers, investors and taxpayers. It is also the source of risks to air, water, land and related biodiversity. If many inconsistent approaches to risk management arise, as currently appears to be the case, and these are driven by narrowly focused professional elites, red tape will be worse than ever before and business unsustainable. A vital part of the answer to this rapidly increasing problem is to develop open curricula for understanding and implementing sustainable development requirements as broadly as possible. In 1994, at the Asia Pacific Economic Cooperation (APEC) summit, national leaders agreed to create an Asia-Pacific free trade zone by 2020, and supported protection of health and the natural environment. Related goals should now guide government, industry and community planning, including for better designed and more open communication and education. Fund management structures to support planned development directions are ideally designed openly, so competitive performance and outcomes can be assessed. Decades of inquiry into Australian health insurance systems and superannuation funds suggest that social insurance models can harness the benefits of competition better to assist sustainable development than opaque, unstable markets which may often appear to focus only on more money for the most informed groups of investors.

The Council of Australian Governments (COAG) recently allocated $243 million for development of standard business reporting. This ideally will cut costs caused by much inconsistent legislation, bureaucratic isolation and inefficient information management. Related problems must be solved before the National Greenhouse and Energy Reporting System (NGERS) for carbon pricing is introduced, which requires baseline audit of major polluters, prior to carbon permit allocation in 2010. Management of risks to people and natural environments are ideally carried out together, in the regional work and community management contexts in which they arise as problems. The Productivity Commission (PC) review of Australia's national consumer policy framework (2008) recommended the COAG instigate and oversee a review and reform program for industry-specific consumer regulation. Carbon trading is ideally approached in similar industry and regional contexts, in which the carbon permit is viewed as an insurance related financial instrument, to be used in broadly planned and competitive investments to reduce carbon pollution and its effects. Government and industry partnerships for greenhouse gas reduction may then more easily lead many cooperative community ventures across many linked boards in more effectively prioritized visions. The World Wide Fund Climate Solutions Vision for 2050 (WWF 2007) and other key findings, appear ideally implemented through such industry and regional investment frameworks. The WWF recommends breaking the link between energy services and primary energy production, strategies to stop forest loss and concurrent growth of low-emissions technologies, development of more flexible fuels,

energy storage and new infrastructure and the displacement of high carbon coal with low carbon gas. Carbon capture and storage potential must also be addressed.

Australian state OHS legislation provides a general regulatory context for more independent and broadly informed approaches to managing work and its risk. This can be compared with the scientific, evidence based approaches required of health workers towards communities and clients. Under OHS acts, managers are expected to identify, prioritise and control work related risks in consultation with workers and also to apply relevant codes of expert work practice unless there is evidence that another course of action is safer in specific circumstances. The health worker is ideally expected to identify community problems on one hand, or diagnose a particular client's problem on the other, so as to apply treatment after consultation and mutual consideration of relevant expert knowledge. Treatment may vary from the expected protocols when this appears necessary to meet specific situations. The reasons for deviation are documented. All such information may contribute to broader research aimed at improving governance and treatment outcomes for communities and individuals. Simple but practical and coordinated approaches to working more effectively to achieve solutions to a broad range of environmental problems are currently undermined by too many theoretically driven, controlling specialists. Open education for sustainable development ideally occurs before the start of carbon trading in 2010. Core management and vocational skills are ideally taught in broadly related regional and local contexts. Such pursuits should also be coordinated with the regional management of health, housing, transport and related development needs of children, the disabled and the aged, especially in poor communities. The strategies for national management and monitoring of native vegetation, for the conservation of biological diversity and for salinity and water quality should be considered for implementation as investments in related regional industry and community contexts.

In 1999, health experts advised health ministers to initiate national actions for safety and quality related to strengthening the consumer voice and learning from incidents, adverse events and complaints. Dispute resolution is ideally managed as a service, like health or education provision, which openly aims to improve all environmental outcomes. Alternative Dispute Resolution (ADR) is a process in which an impartial person assists those in dispute to resolve their issues. ADR can be facilitative, advisory, determinative or a combination of all three. In mediation, the practitioner helps the parties identify disputed issues, develop options, consider alternatives and try to reach an agreement about some issues or the whole dispute. A conciliator is a neutral party who considers and appraises a dispute. Expert assistance may be sought in regard to apparent facts of the dispute, the law, possible or desirable outcomes and how these may be achieved. Arbitration, expert determination and private judging are examples of determinative (decision making) ADR processes. Establishing dispute resolution systems and the comparative identification of their outcomes is a type of action research, consistent with Popper's view that all administration should be regarded as experiment. Action research is a problem focused activity proceeding in a spiral of steps, composed of planning, action and evaluation of the results of action. Community education, consultation, monitoring and outcome evaluation are also necessary for its undertaking. This is ideally a collective, emancipatory practice.

Current education development is far too narrow, opaque, slow, inflexible and expensive. When curriculum is not openly available to all, its quality cannot be judged and adds to all other learning problems. Since 1990, the COAG has sought national standards for health and environment protection, related occupations and supporting education. All governments passed mutual recognition legislation to prepare for national competition legislation in 1995. The shortages of doctors, nurses and other health professionals in rural areas are common knowledge. The PC review of the primary sector (2007) indicated the COAG initiatives to facilitate mutual recognition of skills certified under state legislation has made very slow progress and stated COAG programs should be broadened to cover all trades experiencing severe skills shortages, including for the primary sector (2007, p. 224). There are major shortages for competencies associated with mechanical and electrical trades, semi skilled employees (such as miners and plant operators) and for professionals (mining engineers, metallurgists and geoscientists). There are severe shortages in areas such as transport and logistics, heavy vehicle and train drivers and port and at-sea pilots. Based on protected future expansion, the minerals sector will require 75% (or 70000) more employees by 2015 than in 2005. The worst shortages are likely to be for semi-skilled workers and trades (PC, 2007, p.217). This will clearly create inflation. One particularly wonders who is going to deliver the huge construction and education program necessary for the National Rental Affordability Scheme, besides other major infrastructure projects.

In the national training system, Industry Skills Councils are responsible for consulting with employers, employees and other key stakeholders to identify current and anticipated skill needs of a particular industry sector. Training packages outlining competencies are developed and evaluated by industry stakeholders and approved by all state and territory training authorities prior to submission to the National Quality Council for endorsement. Once endorsed, the packages are delivered and recognised across Australian jurisdictions and become available on the National Training Information Service Website. However, they are not curriculum. Registered Training Organizations have responsibility for the design and delivery of curriculum. Teachers and trainers who meet the national teaching and assessment competency standards required by the Australian Quality Framework develop learning strategies and deliver programs. This is very closed, narrow, slow, and costly practice. All forms of communication and technology are ideally considered in the new global context in which skills and education for sustainable development must be developed as widely and effectively as possible before introduction of a carbon pollution reduction scheme in 2010. The objects of the Radiocommunications Act (1992) should have focused recent inquiries more effectively on educational and other screen content than was the case, because they seek management of the radiofrequency spectrum to:

- Maximise, by ensuring the efficient allocation and use of the spectrum, the overall public benefit derived from using the radiofrequency spectrum
- make adequate provision of the spectrum for use by agencies involved in the defence or national security of Australia, law enforcement, the provision of emergency services, or for use by other public or community services

The closed, computer-based, distance education initiatives which Australian universities have funded are comparatively little utilized (Gallagher 2000; Nelson 2002), their production costs are more expensive than classroom teaching and they have not made money (Marginson 2004). These products are not open to scrutiny so quality can be judged by hardly anyone except the students who have already paid dearly to consume them. Systems are not set up to utilize the wonderful archives possessed by Australian radio, video, television and newspapers. Australian emphasis on education partnerships which operate with much greater education quality, access and scale are vitally necessary. Open curriculum, communicated broadly and flexibly, is likely to be a much better guarantee of quality education which can reach wider audiences faster to create learning better networks. Students and communities can implement basic skills and governance principles related to injury prevention and rehabilitation, by doing practical exercises in the consultative identification and control of risks, in work or other community settings. Many may usefully make short films or similar products as part of their assessments.

The government's announcement of an 'education revolution' in late 2007, aimed to provide each school child with access to a personal computer, the 'tool-box of the future'. In his article entitled 'Abandon left and right for a vision to unite' in the Sydney Morning Herald (17.4.08, p.11) the Prime Minister discussed a vision to 'unleash the national imagination from beyond the ranks of politics and the public service' and 'to help fashion a national consensus around a common vision for the nation, with common goals to aim for within that vision'. The Australian Broadcasting Commission (ABC) outlined its plans for five channels. ABC5 will be the Educational Channel providing English and foreign language tuition, curriculum material and an integral digital resource for a newly developed national schools curriculum, with at least 50 percent Australian content to meet teachers' and students' needs. Coordinated consideration and attainment of open education and related entertainment content is vitally necessary, so learning on the job and away from it is easier for everybody. Community benefits can be derived across all boards if industry leaders, their organizations and members participate in broader, more open, regional community planning approaches which also address effective health service delivery, communication, skills and related innovative developments to achieve the diverse goals of sustainable development for as many as possible. The carbon pollution reduction scheme presents this opportunity in 2010. Focus on open education now.

Conclusion

Australian design of a carbon permit trading scheme should be understood in the context of broader requirements for sustainable development and draw on earlier social insurance, administration and competitive investment perspectives. These have developed over recent decades in Australia primarily through community and work related health insurance, superannuation savings and supporting investment models which are also guided by national competition requirements and relevant international agreements.

Without an effectively scientific, industry and community management framework for sustainable development, carbon permit trading will be to be too narrowly focused and uncertain, with many associated risks and costs passed on to those without the knowledge or power to control them. Governments, industries and communities should cooperatively establish regionally coordinated, consultative and transparent planning, risk management and related fund management and investment structures, to support sustainable development goals competitively. Regionally coordinated, industry and community identification and prioritization of problems which can be solved by a range of simple or complex innovative projects for sustainable development are now required to meet the economic, social and environmental requirements for triple bottom line accounting. Broad communication partnerships and open education for development are vital to link, deliver and achieve the broadest possible vision cost-effectively. Carbon pollution reduction ideally leads this broader development, which is ideally also led by primary producers and in all related land and water management. Government, industry and community development partnerships for communication, skills development, education and other innovation could assist attainment of many other development aspirations internationally.

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