

## WHAT'S *LEFT* OF SUSTAINABLE DEVELOPMENT?

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Twenty years ago it seemed that 'sustainability' was an idea whose time had come. The United Nations 'World Commission on Environment and Development' released its watershed report – *Our Common Future* (WCED 1987) – and its promotion of 'sustainable development' was subsequently embraced internationally as a key policy principle. Yet after two decades, and despite some positive achievements, global environmental degradation has accelerated and a new wave of environmental concern has emerged around the specifics of climate change (Kovel 2002:4; UNEP 2007). The UK's *Stern Review* (2006) was a timely *aide memoire* to the ongoing and unresolved question of 'sustainability' while the current *Garnaut Review* (2008) seeks to tackle this problem directly in the Australian context.

With its emphasis on market instruments, Professor Garnaut's report on climate change provokes a sense of *deja-vu*. His 1989 report on the *Northeast Asian Ascendancy* (Garnaut 1989) enthusiastically promoted trade liberalisation. Yet it is that process of expanding the scope of the market – and of the policies of neoliberalism more generally – that has intensified global environmental problems despite two decades of national and international policies for sustainable development. In dusting off and re-fashioning the economic orthodoxies underpinning *Ascendancy*, Garnaut has ensured that any debate about the use of market instruments for delivering environmental policy is confined to the problem of 'how best to implement them'. The more important question of whether or not such instruments are at all suitable for ecological problems has disappeared from view.

How did we arrive at this point of poverty in the policy imagination? It is appropriate to reflect on the way in which the current 'state of play' has evolved and to reconsider whether or not 'sustainable development' is a useful concept for the achievement of *ecological* sustainability. In doing so, this article traces the emergence and transformation of the sustainability discourse in the aftermath of the post-war boom and subsequent rise of neoliberalism. It examines the way in which the economy-environment problematic was re-conceptualised during this period, resulting in the conflation of 'sustainability' (the ecological problem) with 'development' (the economic problem). This was a key factor in laying the foundation for neoliberal norms in environmental policy and management which Garnaut's market-oriented proposals now extend.

### **History and Meaning: the Evolving Discourse of Sustainability**

Despite the international 'consensus' on sustainable development, the meaning of sustainability remains a contested one. On the one hand, it has been taken up by corporate leaders and politicians in claiming the green credentials of their economic growth agendas. This 'economic sustainability' position is itself increasingly perceived as contributing to the climate change 'tipping point' (Hansen 2006:949). On the other hand, sustainability can be understood to embody radical normative dimensions that point to the need for an equitable society served by an economy operating within ecological limits. From this latter 'ecological sustainability' perspective, the critical questions are about the way in which society organises production, consumption and reproduction in relation to the natural environment which sustains it. Although a mainstream concept today, sustainability first emerged within this radical tradition as a critical and transformative discourse.

Throughout the 1970s and early 1980s, the idea of 'building a sustainable society' that was both socially equitable and ecologically sustainable was thought by its proponents to be both possible and necessary (Brown 1981). That period provided fertile ground for 'alternative social visions' not just because of the perceived *ecological* crisis, but also because of the

broader ‘policy vacuum’ left by the *accumulation* crisis that characterised the collapse of the post-war boom (Bryan 2002:153). Ironically, the opportunity provided by such a context ultimately proved to be a double-edged sword for the environment movement as neoliberal ideas penetrated that vacuum and began to hold sway over policy makers looking for solutions to economic stagnation. The need for ‘ecological restructuring’ thus fell victim to the perceived immediacy of economic concerns, notwithstanding the inseparable links between economy and ecology to which the emergent sustainability literature was drawing attention at that time.

One of the first publications to explicitly use the word ‘sustainable’<sup>1</sup> in this context was the *1972 Yearbook* of the International Union for the Conservation of Nature (IUCN). It asserted that the natural environment should be conserved and managed ‘so as to achieve the highest sustainable quality of human life’ (in Kidd 1992:13). Meanwhile, the editors of *The Ecologist* published *Blueprint for Survival* (Goldsmith *et al.* 1972), wherein sustainability appeared unambiguously for the first time as a major theme (Kidd 1992:13). Echoing some of the concerns expressed in the *Limits to Growth* report (Meadows *et al.* 1972), *Blueprint* argued that the ‘principal defect of the industrial way of life with its ethos of expansion is that it is not sustainable...*indefinite* growth of whatever type can not be sustained by *finite* resources’ (Goldsmith *et al.* 1972:3). From these concerns with the ‘unsustainability’ of *growth* economies, ‘sustainability’ emerged as a critical discourse synonymous with the idea of a *steady-state* economy (Kidd 1992:15). It was understood as marking the transition from high growth to low or even no-growth societies.

Steady-state theorists argued that unlimited growth was a biophysical impossibility and that sustainability would require a ‘low throughput’ economy (Georgescu-Roegen 1971; Daly 1973). In this, they pointed to more than a tension between ecology and economics; they argued there was ‘an axiomatic incompatibility’ between maximising economic

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1 That is, as a physical-biological-social concept. Previously, it had been used in resource management (forestry and fishing) as a purely physical concept that represented ‘maximum sustainable yield’ (maximum harvest consistent with maintenance of the stock) (Brown *et al.* 1987:714; Lafferty 1995:225).

growth and the goal of environmental sustainability (Carruthers 2001:94). However, sustainability was more than a purely economic or, for that matter, ecological concept. While the steady-state perspective emphasised policies and philosophies related to the reduction of energy consumption, especially away from fossil fuels, it also encompassed broader socio-political goals and ethical values. For example, Daly (1973) argued for 'qualitative development' rather than 'quantitative growth'; while Meadows (1977) posited the idea that a no-growth economy was not sufficient, in and of itself, to achieve sustainability. He (1977:36) argued that 'zero material growth...[needed to be]...consistent with equity, personal liberty, cultural progress, and the satisfaction of basic physical and psychological needs'.

The concerns with sustainability were also recognised as important for developing economies. As early as 1962, a United Nations (U.N.) resolution recognised the threat that declining natural resources would have on the prospects for economic development in the Third World. Subsequently, the need for conservation and restoration of natural resources laid the basis for linking development, conservation and sustainable resource use (O'Riordon 1981:35). However, amidst the 'limits' debate, which implied western affluence could not be duplicated, the apparent failures of the 'development paradigm'<sup>2</sup> drove the search for alternative models. At the grassroots level, these focused on development paths that would be sustainable and socially just (Dryzek 2005:148). They emphasised small scale production, appropriate technology,<sup>3</sup> sensitivity to cultural norms and local knowledge, and redistribution of wealth and resources (Carruthers 2001:97). These themes became central elements in the idea of 'eco-development' – the forerunner to sustainable development – especially in its radical interpretation where it was understood as 'development...within the constraints of local ecosystems' (Dasmann 1984:20).

These disparate First and Third World 'stakeholders' were brought together in the landmark U.N. 'Conference on the Human Environment' held in Stockholm during 1972. The Stockholm Conference enabled co-

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2 See Bartelmus (1986); Shiva (1989); Sachs ed. (1992).

3 *Small is Beautiful: Economics as if People Mattered* (Schumacher 1973) was a particularly influential book in launching the 'appropriate technology movement'.

operation at the international level on environmental issues that crossed national borders, creating a basis for the development of international environmental law in the process<sup>4</sup> (Pallemaerts 1996:626). The conference also focused on the global implications of many environmental problems for biophysical and economic linkages, with such concerns being based on an understanding that economic activity would need to be constrained (White 1980:189). The economy and the environment were conceived as opposing sides in a zero-sum game which implied trade-offs between economic efficiency and ecological integrity (Sanwal 2004:17). This 'incommensurability' gave rise to a raft of legislative events for environmental protection that were similar in nature and timing across much of the developed world (Weale 1992:10; White 1980:189).

However, the regulatory response proved to be fragile on two fronts. Unsurprisingly, in the context of accumulation crises and growing influence of neoliberalism, the emergent trend in developed economies was toward *enabling*, rather than *constraining*, the forces of capital. The oppositional way in which economy-environment interactions had been conceptualised at Stockholm also proved problematic for developing countries. On the one hand, developing country leaders were suspicious of environmental motives in the North, especially the emphasis on pollution abatement, as a potential restriction on their development aspirations (Sanwal 2004:17). Grassroots 'eco-development' initiatives remained marginal to their official policies because the apparent prioritisation of ecology over development was perceived by elites as a similar threat (Bernstein 2001:57). Developing country leaders therefore rejected both low and no-growth scenarios, seeking instead a more equitable engagement with the global economy (Carruthers 2001:97).

Subsequently, international environmental concern was broadened from the problems of urban industrialisation in developed economies to include those generated by rural poverty in developing countries. The inclusion of poverty as a cause of environmental degradation helped to generate acceptance of the idea that the environment was a problem for

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4 The conference was proposed by Sweden which had been suffering trans-boundary pollution in the form of 'acid-rain' caused by industrial emissions elsewhere in Europe (Brenton 1994:34).

the development process (Kidd 1992:17). Development could then be a pathway for solving both poverty and its attendant environmental problems. Attempts to institutionalise environmental governance after Stockholm therefore focused on integrating the opposing normative frameworks of 'environment' and 'development' (Bernstein 2002:3-4; Pallemarts 1996:626). In this way, the Stockholm conference stimulated changes to the content and rationale of development programs and set in place the foundation for a fundamentally different understanding of 'sustainability' to that which had emerged in the 'no-growth' school (Kidd 1979:17-18).

### **From Stockholm to Rio: Transforming Sustainable Development**

The U.N. Environment Program (UNEP), under the leadership of Maurice Strong,<sup>5</sup> was an important link in re-conceptualising economy-environment relations. In the broader context of accumulation crises and oil shocks, UNEP sought a conceptual middle ground. Rather than reinforcing their tensions, Strong took up the term 'eco-development' after Stockholm to capture the idea of reconciling the environment with the concerns of development. Subsequently, UNEP (1978) produced one of the first U.N. documents incorporating the concept of sustainability. Placing its emphasis on developing economies, the report noted that, in order for development to be sustainable, it had to be construed as eco-development which aimed at 'sustaining the yield of renewable resources' and reconciling 'the needs of present and future generations' (in Kidd 1992: 17-18). However, in emphasising economic growth 'of a sustainable kind', Strong (in Bernstein 2001:56-57) argued, under the influence of development economics, that in both industrialised and 'less-developed societies' eco-development should mean 'better growth, sounder growth and perhaps even more growth in qualitative terms'.

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5 Strong had been secretary-general of the Stockholm conference and was later a commissioner on the World Commission on Environment and Development (WCED) and secretary-general of the United Nations Conference on Environment and Development (UNCED) conference in Rio de Janeiro (Bernstein 2001:145&259n12).

Ultimately, UNEP was influential in building the language of 'sustainability' and 'development' which served to eclipse that of eco-development, and with it, the idea of ecological limits as a constraining factor in economic growth. When sustainability was used in U.N. documents it was devoid, from the outset, of any link to the no-growth school (Kidd 1992:18). By the end of the decade the term 'sustainable growth' became common in the literature and the arguments about 'limits' disappeared from mainstream discourse (Kidd 1992:15; Beder 1996:17). Although the idea of sustainability came to dominate popular discussion of the environment by the 1980s, it was through the concept of 'sustainable development' that it gained significance at the policy level. This idea of sustainable development was conceived as a 'breakthrough' in reconciling environment-development goals.

The transformation of the discourse was considerable, but not absolute. In the *World Conservation Strategy* (IUCN, UNEP, WWF 1980), which first gave currency to the term 'sustainable development', the meaning of 'development' had echoed the earlier grass-roots eco-development movement (Dassman 1984:21). The *Strategy* (1980:1) encouraged paradigmatic change, arguing that 'a new international economic order...[and]...a new environmental ethic' were necessary for sustainable modes of development. In doing so, it emphasised the *ecological* dimension of life-support systems, genetic diversity and sustainable utilisation of species and ecosystems. It focused less on cultural, political and economic issues. These *social* dimensions were later taken up by the World Resources Institute (WRI) which was established in 1982 for the purpose of examining global resource and population problems. Compared to *Strategy* (1980), the WRI's publications elaborated a less radical idea of sustainable development, fostering a quite different view of 'sustainability' as the 'dominant discourse on the environment-development problematic' (Carruthers 2001:93).

The idea of 'paradigmatic change' put forward by the WRI was not as threatening to the *status quo*, especially in the industrialised economies, because sustainability was articulated in terms of the long-run capacity to maintain and even improve living standards. *The Global Possible* (Repetto 1985) and *Not Far Afield* (Myers 1987) both reinforced the

Institute's idea that it was poverty in the developing world, as opposed to affluence in the developed world, that was the central factor in global environmental problems. Myers (1987:4) defined sustainable development as 'the permanent process for generating economic benefits while maintaining the natural-resource base' and argued that, although environmental degradation was common in 'the temperate zones', it was in the 'tropical Third World' where the greatest damage was being done. Advocacy groups in developing countries also supported the idea that sustainability in development should be a basic and permanent objective (Kidd 1992:19).

However, the most significant institution to popularise and propel political engagement with the concept of sustainable development was the World Commission on Environment and Development (WCED). Established as an independent body by the U.N. in 1983, the commission's report, *Our Common Future* (WCED 1987:23), argued that the acceleration of global environmental problems required proactive management and that international co-operation on sustainable development was the appropriate response. In the WCED articulation of sustainable development the long standing 'North-South' tensions in the environment-development question seemed to be reconciled (Meadowcroft 2000:371). The 'limits' perspective, which suggested First World living standards were being temporarily maintained by living on 'natural capital' (Diesendorf 1997:84), implied that developing countries could not expect to follow the same development path. This made Third World governments suspicious that plans for environmental protection might halt their development aspirations. In this context, a pre-requisite for 'moving forward' on 'environmental concerns' was their reconstitution as 'economic concerns'.

As a result, 'policy entrepreneurs' working within key organisations, such as the OECD and the WCED, tried to situate environmental norms within the growing consensus on a liberal economic order by re-conceptualising the environment as an *economic* rather than *ecological* problem. This facilitated an acceleration of international co-operation on environmental issues and helped to move environmental concern into the mainstream of international governance (Bernstein 2002:8). The OECD (1985) actively promoted a model of sustainable development based on

strengthening the reciprocity between policies for environmental protection and those for economic growth, advocating a key role for markets in that process.<sup>6</sup> The OECD environment director, Jim MacNeill, was chosen as secretary general of the WCED by its chair, Gro Harlem Brundtland, ensuring the OECD's 'market-based' conclusions on sustainable development would be a major influence on the Commission's outcome (Bernstein 2002:9).

At a time of debt crisis and economic stagnation, the WCED fostered a political 'compromise' seeking to avoid a 'no-growth' scenario that might perpetuate poverty and social disadvantage in poorer countries (Meadowcroft 2000:371). Whereas the earlier formulation of eco-development had presented 'ecologically', the WCED conception of sustainable development began with the imperative of economic growth and then moved to the question of how such growth might be made sustainable (Bernstein 2002:9). The Commission's report (*Our Common Future*) laid claim to social and environmental concern while continuing to emphasise economic growth as the path to national prosperity. It conceded that the concept of sustainable development implied limits, but not absolute limits: only those 'imposed by the present state of technology and social organisation...and by the ability of the biosphere to absorb the effects of human activities' (WCED 1987:8). Optimistically, it argued these factors could be 'managed and improved to make way for a new era of economic growth' (WCED 1987:16). Central here was the idea that, over time, technological advances could improve the earth's carrying capacity, implying that the biophysical context of humanity was a frontier to be conquered rather than a limit to be respected.

*Contra* the steady-state argument that sustainable development can only make sense if conceived as 'development without growth' (Daly and Townsend 1993:267), the WCED tried to encourage development as both a quantitative and qualitative phenomenon. In pursuing increased GNP, *Our Common Future* stressed the moral claims of the world's poor and future generations on the Earth's 'resources' at the same time as it

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6 The OECD's (1975) earlier development of economic theory into the 'polluter pays' principle was crucial in creating 'an intellectual basis' for such policies (Bernstein 2002:8; Rosewarne 2002:183).

encouraged 'ecological modernisation' through technological innovation in the name of progress (Meadowcroft 2000:371). The WCED model emphasised the need for equity and also poverty eradication, but accepted distributional 'trickle-down'. Its conceptual ambiguity thereby enabled support to be garnered from environmentalists and advocates for distributive justice alongside business and governments (Carruthers 2001:99). Rather than a cause for criticism though, Meadowcroft (2000:371) argues that the ambiguous nature of the WCED formulation was in keeping with sustainable development's role as a 'bridging' concept for uniting 'very different interests behind a common agenda'.

The 'success' of this approach is evident in the subsequent promotion of the concept by other international institutions and its widespread deployment by national governments. Having found synergies with a growing consensus about 'proper' economic conduct, the World Bank, for example, issued a report in 1988 stating that sustainable development would be central to its policy goals. The idea of sustainable development allowed the formulation of environmental policies consistent with its broader goals of promoting economic growth and trade liberalisation (Bernstein 2002:10). The legitimacy of sustainable development was also ratified by the G7 in 1989 when it declared that, in order for sustainable development to be achieved, it would 'ensure the compatibility of economic growth and development with the protection of the environment' (in Kidd 1992:22-23). Similarly, many national governments in the industrialised countries invoked sustainable development in depicting their policy orientations.

Across the OECD, governments launched national sustainable development strategy and planning processes. In Australia, working groups were established in 1990 which resulted in specific recommendations for promoting social, economic and industrial change.<sup>7</sup> This process was notable at the outset for its use of the idea of *ecologically* sustainable development which emphasised the importance

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7 Two national strategy documents were subsequently endorsed in 1992: the National Strategy for Ecologically Sustainable Development (NSED) and the National Greenhouse Response Strategy (NGRS) (Christoff 1995:71; Meadowcroft 2000: 375).

of preserving bio-diversity and considering intergenerational issues.<sup>8</sup> However, rather than sustaining ecological systems *per se*, the policy focus of the working groups centred on the areas which required preservation and protection so that *economically* sustainable development could be secured (Rosewarne 1993:54). By the mid 1990's the national government bureaucracy viewed 'ecologically sustainable development' as an obsolete language (Christoff 1995:72) and in keeping with international trends, the truncated 'sustainable development', with its substantive core of *economic* sustainability, became common parlance.

The world-wide support for this interpretation of sustainable development reached its apogee in 1992 at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro. It had become a new 'meta-narrative' subscribed to by local, national and international government and non-government organisations and institutions (Meadowcroft 2000:370; Dryzek 2005:153). Creating a 'global partnership' for sustainable development, national government delegations at the 'Rio Earth Summit' signed on to *Agenda 21* (UNCED 1992) which committed signatories to developing and implementing national 'plans of action' (Lafferty 1996:194; Jacobs 1995:1471). However, UNCED's understanding of sustainable development reconstructed the idea that a healthy environment is central to securing continued economic growth in such a way that growth is central to securing a healthy environment. Where sustainable development once implied 'ecological sustainability', it was now commonly promoted as 'economic sustainability': sustaining the 'growth in material consumption' (Lele 1991:608-609).

Where *Our Common Future* (WCED 1987) had been 'ambiguous', *Agenda 21* (UNCED 1992) overtly promoted growth while rejecting the discourse of scarcity and limits (Carruthers 2001:99). Although the production and consumption habits of developed countries were acknowledged as a major source of environmental problems, UNCED

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8 According to Christoff (1995:71), despite much conflict over definitions, the term *ecologically* sustainable development was emphasised mainly as a result of the efforts of environmental advocates, especially the Australian Conservation Foundation (ACF).

documents recommended more economic growth (in both developed and developing countries) as the solution to such problems (Dryzek 2005:149). In the WCED rhetoric, sustainable development had been promulgated as a principle for reconciling the interests of North and South, rich and poor, with goals that included environmental improvement, population stabilisation, international equity, and peace (Dryzek 2005:148-149). *Our Common Future* had tried to make economic growth consistent with such goals, but in *Agenda 21*, UNCED made economic growth the means for achieving them. Twenty years after sustainability first emerged as a radical challenge to unlimited economic growth in *Blueprint for Survival* (Goldsmith *et al.* 1972), the concept of sustainable development was now being used by global institutions for explicitly promoting growth (Carruthers 2001:99; Foster 2003:3-4).

At UNCED, there was widespread acceptance of the argument that the structural transformation of poor societies into market-based economies was a prerequisite for eliminating poverty and for encouraging technological innovation.<sup>9</sup> Growing economies were conceived as creating the resources and incentives necessary to solve environmental problems (Carruthers 2001:99). With economic growth viewed as the central 'end' of governance, a consensus on market mechanisms as 'means' inevitably followed. More significantly though, in *Agenda 21* a commitment to the environment was situated within *free-market* principles; the engine of renewed economic growth would be found in the reduction of tariff barriers and the expansion of international competition. And, rather than being problematised for their role in environmental problems, capitalist business enterprises were conceived as the agents of a more sustainable world, both in bringing about growth as well as technological innovation (Foster 2003:3). Indeed, 'partnerships' between governments and business were flagged as

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9 The model of development embodied in this perspective has been challenged by Vandana Shiva (1989:179) who argues that the embrace of international capitalism in many developing countries has brought about 'maldevelopment' rather than 'progress', especially with regard to its effects on gender. She (1989:10) points out that 'being poor' does not necessarily equate to 'poverty'. The latter emerges under capitalist structures which, in the process of dispossession, distort or remove traditional access to subsistence, thereby bringing about the structural deprivation associated with poverty.

important for the process of realising the goals of *Agenda 21*, partly due to the efforts of the business lobby.

The Business Council for Sustainable Development was active at UNCED and also helped to finance the Rio summit (Foster 2003:3-4). It had been formed in 1990 at the invitation of Maurice Strong in his capacity as secretary-general of UNCED (Dryzek 2005:152). Stephan Schmidheiny, a key figure in the council, promoted the shift in emphasis towards business as the agents of sustainable development in his book *Changing Course* (Schmidheiny 1992) which also argued for the free operation of market forces and integration of the 'polluter pays' principle. This type of environmental 'accommodation' seeks to apply market principles to natural resources (through commodification) and to encourage innovative environmental options for business and industry. Such ideas are distinguished from the 'ecological modernisation' embedded in *Our Common Future* by their appeal to (private) profitability which is promoted as a way of obviating the need for a (public) regulatory apparatus.<sup>10</sup>

Taking up the business view, *Agenda 21* effectively collapsed the distinction between 'sustainable development' and 'sustained economic growth', making sustainability congruent with the free-market dictum that 'a rising tide lifts all ships'. The conflict between unlimited economic growth and the limits of 'nature' as resource and sink was thereby eliminated. *Agenda 21* seemingly overcame distributional conflicts; offered equity for future generations (presuming the substitutability of 'man-made' and 'natural' capital); averted attention from over-consumption in the North; and promised compatibility between environmental preservation and the maximisation of growth (Carruthers 2001:101). Between Stockholm and Rio, economic growth, once the problem, had been recast as the solution, and the oppositional discourse of sustainability had been transformed into an orthodoxy of accumulation (Carruthers 2001:93). Not surprisingly, this reconstituted principle of sustainable development was widely embraced at the level of national and international environmental governance.

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10 Ecological modernisation tends to be linked with a proactive role for the state in generating incentives for private sector innovation (Gouldson and Murphy 1997:74).

That embrace enabled UNCED to achieve the institutionalisation of neoliberal norms as the framework underpinning and guiding future action on how global environmental problems ought to be managed (Bernstein 2001:100). Rio's particular synthesis of economy-environment concerns had emerged from the compromises between North and South that were (partly) enabled by the 'ideational shift' in how environmental issues were framed and dealt with by the international community (Bernstein 2002:2). UNCED reinforced state sovereignty over the exploitation of resources, as well as environment and development policies, but it also promoted market instruments in a context where free trade and liberal markets were conceived as compatible with the environment. In so doing, the earlier ideas about global redistribution and direct regulatory action were marginalised in favour of 'governance by the market'. In this way, UNCED prioritised international development goals over those of international environmental law (Pallemaerts 1996:673)

### **The Road from Rio: Toward the Spectre of Privatisation**

Despite the enthusiasm surrounding the new discourse of sustainable development, the post-UNCED reality fell somewhat short of 'Rio rhetoric'. Rather than fulfilling the promise of development for those on the periphery of world capitalism, the pursuit of 'market forces' in the name of growth has perpetuated environmental destruction and the gap between rich and poor. As Foster (2003:4) argues, such forces served to 'deepen the economic stagnation of most third world countries' and justified 'watering down...meaningful global environmental change'. Despite the growing number of international environmental treaties and other initiatives, the period of 'transnational capital' has correlated with a marked deterioration in global environmental quality. Damage to coral reefs, species extinction, and deforestation all persisted, while global emissions of greenhouse gas carbon dioxide continued to climb (Worldwatch Institute 2002:5).

These shortcomings were brought into sharp focus with the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg. The

WSSD was convened in order to define the instruments for tackling global poverty and reaching ecosystem security, as well as setting timeframes and targets for *Agenda 21* which contained no binding agreements for implementation and accountability (von Frantzius 2004:467). The summit was the largest UN conference that had been held – its scale and title being testament to the stature of the ‘sustainable development’ concept. Critics though were sceptical of what could be achieved. A number of high profile environmentalists – including Wolfgang Sachs, Paul Hawken, Hazel Henderson and Anita Roddick – pointed out in *The Jo’burg Memo* that governments at UNCED had already committed to curbing environmental decline and social impoverishment ‘in front of the eyes and ears of the world’. Yet, humankind continued to sink ‘deeper into poverty and ecological decline, notwithstanding the increase of wealth in specific places’ (Sachs 2002:11).

At the WSSD, governments reaffirmed the commitments they had made in Rio and the Summit’s key documents continued to reflect the consensus that economic growth was central to environmental improvement (Dryzek 2005:149; Hayward 2003:72-73). However, there was a general failure to achieve multilateral consensus on targets, concrete timeframes, and funding provisions for implementing *Agenda 21*, with governments giving little indication as to how they would realise its various goals (Wapner 2003:3). A critical failure was the weak approach taken toward climate change and use of renewable energy, with the need for time-bound targets replaced by the rhetoric of ‘urgency’<sup>11</sup> (La Vina *et al.* 2003:63). This ‘stagnation’ in multilateral negotiations and legally binding decisions among governments (Type I agreements) was accompanied by a shifting emphasis toward ‘decentralised’ forms of environmental governance.

The void left by the relative absence of Type I agreements at Johannesburg was filled by the negotiation of voluntary partnerships.

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11 Australia was among the countries that resisted targets at that time, but the Rudd Government took a more positive role in the recent climate change conference held in Bali. However, agreement on targets remains outstanding from the thirteenth climate change conference, with agreement reached to merely ‘consider a 25 to 40 per cent emissions cut by 2020 as a guide for negotiations on the next commitment period when Kyoto expires’ (UNCCC 2007).

Almost three hundred such partnerships between business, governments and NGO's were established for the purpose of carrying out specific on-the-ground actions (Dryzek 2005:150; Wapner 2003:3). Most significantly, these 'Type II' agreements were recognised for the first time as 'official', rather than *de facto*, policy implementation mechanisms. Many such partnerships involved private business entities who were overtly shaping the sustainable development agenda. As with UNCED, the business lobby at WSSD continued to argue that the only hope for the world's poor was economic growth produced by free-trade. Rather than focusing on consumption habits or global redistribution, the wealthier states that had previously championed environmental concern also emphasised the 'benefits of development that could be achieved through globalization and free trade' (Dryzek 2005: 152 & 149).

More than a decade of such policies had done little to address either global poverty or environmental decline. However, the message emanating from WSSD was that, in order for sustainable development to be achieved, industrialised countries simply needed to open markets and increase development aid, leaving private enterprise and partnerships to do the rest (von Frantzius 2004:472). Despite the failure of governments to adopt and finance effective institutional mechanisms for sustainability (La Vina 2003:67), both critics and advocates agree that the 'partnership dynamic' at Johannesburg marked a potentially significant turning point in global environmental governance (Hayward 2003:62; Speth 2004:112). That 'turning point', with its emphasis on co-operation, participation, and community, seemed to embody much of the progressive rhetoric associated with the idea of a vibrant 'global civil society'. However, the prospect of sustainable development being reduced to a series of commercial endeavours also signals its emergent 'privatisation' (Wapner 2003:4).

### **Co-opted and Contested: Reclaiming Sustainable Development?**

Subsuming sustainable development into the imperatives of accumulation has led critics to conclude that the notion is 'vacuous': capable of justifying any policy rather than embodying an identifiable

model capable of operational implementation (Richardson 1997:45). From this viewpoint the project is tainted and should be abandoned (Richardson 1997:58). A rather different view, put by Dobson (1996) and Barry (1996), regards 'ecological sustainability' as still being an important concept, albeit at the margins of policy relevance in the face of an official 'growth' consensus. The marginalisation of the ecological sustainability concept clearly raises doubts about the capacity of 'sustainable development' to challenge the existing profit regime in the service of progressive ends. However, those who reject the integrity of 'neoliberal' environmental policies more broadly, are seeking to contest and re-claim the notion of sustainable development.

According to Meadowcroft (2000:373), sustainable development should not be conceived either as a logical construct or an operational maxim, but rather as a political meta-objective with a suggestive normative core. While acknowledging its ambiguity and potential for various interpretations, that 'core' is often understood to be a social democratic one (Dryzek 2005:155; Meadowcroft 2000:382; Jacobs 1995:1483). Advocates see in *Our Common Future* (WCED 1987) a more 'purist' version of sustainable development than that emerging in UNCED's *Agenda 21* five years later. Lafferty (1996:189-190) for example, argues that a core set of (social democratic) values, norms and goals, including global and generational equity, characterise the WCED conception of sustainable development. It is seen to embody an ideological and mobilising function for social and environmental justice that remains unrealised.<sup>12</sup> At the same time, any attempt by neoliberalism to gain legitimacy from the language of sustainable development is considered 'both logically and ethically unsound' (Lafferty 1996:205).

Certainly, the social democratic elements of *Our Common Future* were important in sustainable development's acceptance by a broad range of

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12 Meadowcroft (2000:382) suggests it is 'hardly coincidental' that important figures involved in the WCED, as well as countries that have enthusiastically embraced sustainability, are 'linked to social democracy'. The Commission's Chair (Gro Harlem Brundtland), for example, was from Norway which has been a high achiever in international sustainable development rankings (Prescott-Allan 2001; see also Dryzek 2005:158&162; Meadowcroft 2000:375; Lafferty 1996:204; Christoff 1995:74).

interests (Dryzek 2005:160). As Meadowcroft (2000: 370; 382) puts it, the WCED provided the term with 'a plausible content and a heady dose of legitimacy' which has gained acceptance across the ideological spectrum. However, during the time sustainable development has established itself as the leading transnational environmental discourse, neoliberalism has been a more effective global movement in terms of shaping policies, practices, and institutions (Dryzek 2005:160). As a result, the confidence expressed in *Our Common Future* about the power of human reason to comprehend problems and to 'consciously remould social institutions and practices' (Meadowcroft 2000:382) has been vindicated; but that 'remoulding' has been away from social democratic structures towards those of neoliberalism. Evidently, the sustainable development concept has not just 'gained acceptance'; it has been 'appropriated' by a *particular* ideological perspective with the result that, according to Dryzek (2005:160-161), 'sustainable development's prospects are poor'.

However, it is not just that neoliberalism has 'perverted' the institutionalisation of sustainable development. The trans-nationalisation of capitalism and the embrace of sustainable development have been *symbiotic* processes. Thus, while neoliberal imperatives – trade liberalisation, capital mobility and economic growth – were unable to confront limits in nature, in sustainable development the conflict between economic growth and limits in nature is (conceptually) eliminated, thereby legitimising and facilitating neoliberalism (Carruthers 2001:101). Conversely, at a time when economic stagnation gave impetus to a focus on growth, the language of the market provided a common idiom through which sustainable development could be articulated, firstly via the 'Washington Consensus' and then in the more radical neoliberal form.<sup>13</sup> The establishment of market-based economic norms across developed and developing economies thereby facilitated global co-operation on the environment (Bernstein 2001:72).

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13 According to the creator of the 'Washington Consensus', John Williamson (1993:1334), his concept is distinct from neoliberalism because the latter does not represent the 'conventional wisdom of serious economists' and he argues that, with its emphasis on the positive economics subscribed to by conservatives, neoliberalism is more aptly referred to as neo-conservatism.

Highlighting sustainable development's social democratic elements is therefore problematic: *contra* Carruthers (2001:102), there is no 'authentic' sustainable development. Sustainable development's 'appealing ambiguity' (Eckersley 1992:37) has made it vulnerable to the prevailing neoliberal ideological hegemony. As Dryzek (2005:159) acknowledges, 'market liberalism' is a 'powerful discourse in the international system...furthered by the same corporations now so active in the...politics of sustainable development'. In such a climate, national and international governance has increasingly turned to the market mechanism as a substitute policy delivery system, requiring that sustainable development be made consistent with business profitability and economic growth. The opportunity for profits embedded in the Garnaut proposal for trading of carbon emission permits – effectively private property rights in pollution – is symptomatic of this process.

However, the promise of compatibility between liberal markets and environmental protection has not been substantiated in practice. In the ten years between UNCED and WSSD, it proved difficult to formulate specific responses to global environmental problems and progress on implementing *Agenda 21* has been protracted as a result (Bernstein 2002:14). While the theoretical explication and advocacy of market instruments is clear and simple, the 'real-world' introduction of charges and marketable permit schemes rarely occurs in textbook form because of the design and implementation problems they pose (Dryzek 1997:111). The OECD (1994:181) too, itself a key advocacy group for utilisation of market instruments, has acknowledged that such instruments have proven difficult to put into practice and, once in place, are less successful than anticipated.

There are good reasons for these problems. The 'highly restrictive assumptions' that underpin neo-classical economic theory render it problematic for policy development because it 'gives no clear guidelines...in most practical circumstances in an imperfect world' (Stilwell 2000:42). There is no clear evidence that market incentives are superior to regulatory mechanisms. Their choice is often the result of ideological, rather than empirical or effectiveness-based criteria (Majone 1989:145). Even Jeffrey Sachs (2008), the well known advocate of 'shock-therapy' for transition economies, has stated that trading schemes,

such as that proposed by Garnaut (2008), are more costly and administratively complex than traditional regulatory or taxation mechanisms. Yet, while market instruments are inadequate for achieving the desired ecological effects (OECD 1994:181), tough regulatory responses continue to be perceived as illegitimate. In their respective states, the *Stern* (2006) and *Garnaut* (2008) reviews may have shaken the 'inaction'<sup>14</sup> of the post-UNCED governance milieu but they have failed to deviate from the direction taken on the road from Rio.

## Conclusions

Contemporary environmental priorities have largely been shaped by the imperatives of capital accumulation. Although poverty eradication remains central to the current rhetoric of sustainable development, there is little to connect that goal to the eco-development movements of the 1970's where sustainability was a critical discourse aimed at the established orthodoxies. Compared to its radical roots, a quite different 'sustainability' emerged; one where economic rather than ecological concerns dominate the environment-development discourse. In the process of political 'compromise', sustainable development has been divorced from its critical content and 'reconfigured' to make it congruent with neoliberal policies (Carruthers 2001:93). Consequently, the potential for 'sustainable development' to serve as the vehicle for a progressive 'ecological restructuring' was severely weakened, and the rhetoric of sustainability was instead utilised as a discursive frame for consolidating a neoliberal 'economic restructuring'.

The WCED opened the door to sustainable development's 'neoliberalisation' by charting a course between the idea of absolute limits to growth and that of unlimited potential for growth. It appealed to the notion of progress in the context of ecological threats to social

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14 The post-UNCED decade was certainly disappointing in its practical achievements, with some commentators arguing that ongoing international negotiations and environmental treaties merely created the illusion that progress was being made (Speth 2004:98; Sanwal 2004:17).

advance, especially in poor countries<sup>15</sup> (Meadowcroft 2000:382). However, whereas the WCED understood environmental protection as a necessary condition of sustainable development, the UNCED subsequently reversed this logic in its conception of economic growth as a necessary condition of environmental 'protection' (Pallemarts 1996:633). This re-conceptualisation of economy-environment relations prioritised market instruments over 'political' alternatives such as direct regulatory actions which imply trade-offs with market values (Dryzek 1997:114).

'Environmental neoliberalism' has gone further in denying that there is any necessary incompatibility between the values of economic growth and environmental protection (Leff 2002; Bernstein 2002:14). Moreover, its emphasis on economic criteria has furthered the opportunities for profit generation without achieving the promised social and environmental benefits. The shift to a neoliberal interpretation of sustainable development may have facilitated greater global prominence for environmental issues, but its terms of engagement have been costly. 'Government through the market' has failed both 'sustainability' and 'development'. The global environment continues to deteriorate and inequality between North and South continues to widen (UNEP 2002:1; UNEP 2007:72).

The *Stern Review* (2006) did not depart significantly from the UNCED model and does not offer a new path for 'sustainable globalisation'. It promotes the pursuit of economic growth and emphasises economic instruments in its array of recommended policy responses. The *Garnaut Review* (2008) is predictable in its conformity, maintaining a 'business as usual' approach and advocating market-oriented policy instruments. Resisting these current privatisation trends in environmental policy and governance requires challenging the co-option of sustainability as an 'economic category'. Unless this is done, and the dominant imperative of accumulation and commercialisation is rejected, the 'prospects are poor' for the social democratic model of sustainable development.

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15 In this, the social democratic agenda for sustainable development is no different to the socialist, liberal, or neoliberal traditions: all embody the faith in social improvement inherent in the modernist ideal of 'progress' (Dryzek 2005:156).

*The author would like to thank Frank Stilwell, Stuart Rosewarne and the two anonymous referees for their valuable comments on a previous version of the paper.*

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### **References**

- Barry, J. (1996) 'Sustainability, Political Judgement and Citizenship: Connecting Green Politics and Democracy' in B. Doherty and M. de Geus eds., *Democracy and Green Political Thought: Sustainability, Rights and Citizenship*, London: Routledge.
- Bartelmus, P. (1986) *Environment and Development*, London: Allen & Unwin.
- Beder, S. (1996) *The Nature of Sustainable Development*, 2nd ed., Newham, Vic.: Scribe Publications.
- Bernstein, S. (2001) *The Compromise of Liberal Environmentalism*, New York: Columbia University Press.
- Bernstein, S. (2002) 'Liberal Environmentalism and Global Environmental Governance', *Global Environmental Politics*, Vol.2, No.3, pp.1-16.
- Brenton, T. (1994) *The Greening of Machiavelli: the Evolution of International Politics*, London: Earthscan Publications Ltd.
- Brown, B. J., M. E. Hanson, D. M. Liverman, and R. W. Merideth (1987) 'Global Sustainability: Towards Definition', *Environmental Management*, Vol.11, No.6, pp.713-719.
- Brown, L. R. (1981) *Building a Sustainable Society*, New York: W W Norton & Co Inc.
- Bryan, D. (2002) 'Alternative Economic Strategies: An Evaluation', *Journal of Australian Political Economy*, No. 50, p153-162.
- Carruthers, D. (2001) 'From Opposition to Orthodoxy: The Remaking of Sustainable Development', *Journal of Third World Studies*, Vol.18, Issue 2, pp.93-113.
- Christoff, P. (1995) 'Whatever Happened to Ecologically Sustainable Development?', *Cappuccino Papers*, Vol.1, pp.69-74.
- Daly, H. E. ed. (1973) *Toward a Steady-State Economy*, San Francisco: W.H. Freeman.
- Daly, H. E. and K. N. Townsend (1993) *Valuing the Earth: Economics, Ecology, Ethics*, Cambridge, MA.: MIT Press.

- Dasmann, R. (1984) 'An Introduction to World Conservation' in F. Thibodeau and H. Field eds., *Sustaining Tomorrow: A Strategy for World Conservation and Development*, London: University Press of New England.
- Diesendorf, M. (1997) 'Principles of Ecological Sustainability' in M. Diesendorf and C. Hamilton eds., *Human Ecology, Human Economy: Ideas for an Ecologically Sustainable Future*, St. Leonards NSW: Allen & Unwin.
- Dobson, A. (1996) 'Environment Sustainabilities: An Analysis and a Typology', *Environmental Politics*, Vol.5, No.3, Autumn, pp.401-28.
- Dryzek, J. S. (1997) *The Politics of the Earth: Environmental Discourse*, Oxford: Oxford University Press.
- Dryzek, J.S. (2005) *The Politics of the Earth: Environmental Discourses*, 2<sup>nd</sup> ed., Oxford: Oxford University Press.
- Eckersley, R. (1992) 'Sustainable Development and the Politics of Language', *Canberra Bulletin of Public Administration*, No.69, pp.36-41.
- Foster, J. Bellamy. (2003) 'A Planetary Defeat: The Failure of Global Environmental Reform', *Monthly Review*, Vol.54, No.8, pp.1-9.
- Frantzius, I. von (2004) 'World Summit on Sustainable Development Johannesburg 2002: A Critical Analysis and Assessment of the Outcomes', *Environmental Politics*, Vol.13, No.2, pp.467-473.
- Garnaut, R. (1989) *Australia and the Northeast Asian ascendancy: report to the Prime Minister and Minister for Foreign Affairs and Trade*, Canberra: Australian Government Publishing Service.
- Garnaut, R. (2008) *The Garnaut Climate Change Review Final Report*, Port Melbourne: Cambridge University Press, <http://www.garnautreview.org.au/index.htm>
- Georgescu-Roegen, N. (1971) *The Entropy Law and the Economic Process*, Cambridge Mass.,USA: Harvard University Press.
- Goldsmith, E. et al. (1972) *Blueprint for Survival (by the editors of The Ecologist)*, Boston: Houghton Mifflin.
- Gouldson, A. and J. Murphy (1997) 'Ecological Modernisation: Restructuring Industrial Economies' in M. Jacobs ed., *Greening the Millennium? the New Politics of the Environment*, Oxford: Blackwell Publishers.
- Hansen, J (2006) 'Can We Still Avoid Dangerous Human-made Climate Change?', *Social Research*, Vol. 73, No.3, pp. 949-974.
- Hayward, S. F. (2003) 'A Sensible Environmentalism', *Public Interest*, Spring, No.151, pp.62-74.
- IUCN (1972) *Yearbook*, (International Union for Conservation of Nature and natural Resources) Gland, Switzerland: IUCN

- IUCN, UNEP, WWF. (1980) *World Conservation Strategy: Living Resource Conservation for Sustainable Development*, (International Union for Conservation of Nature and Natural Resources, United Nations Environment Program, World Wide Fund for Nature) Gland, Switzerland: IUCN.
- Jacobs, M (1995) 'Sustainable Development: Assumptions, Contradictions, Progress' in J. Lovenduski and J. Stanyer eds., *Contemporary Political Studies*, Belfast: Political Studies Association.
- Kidd, C. V. (1992) 'The Evolution of Sustainability', *Journal of Agricultural and Environmental Ethics*, Vol.5, No.1, pp.1-26.
- Kovel, J. (2002) *The Enemy of Nature: The End of Capitalism or the End of the World?*, London: Zed Books.
- Lafferty, W. M. (1995) 'The Implementation of Sustainable Development in the European Union' in J. Lovenduski and J. Stanyer eds., *Contemporary Political Studies: Proceedings of the Political Studies Association Vol.3*, Belfast: Political Studies Association.
- Lafferty, W. M. (1996) 'The Politics of Sustainable Development: Global Norms for National Implementation', *Environmental Politics*, Vol.5, No.2, pp.185-208.
- La Vina, A. G. M., G. Hoff, and A. M. DeRose. (2003) 'The Outcomes of Johannesburg: Assessing the World Summit on Sustainable Development', *SAIS Review*, Vol. 23, No.1, pp.53-70.
- Leff, E. (2002) 'Alternatives to Environmental Neoliberalism', *Notable Writings*, Tierramerica, <http://www.tierramerica.net/2002/0728/igrandesplumas.shtml>
- Lele, S. M. (1991) 'Sustainable Development: A Critical Review', *World Development*, Vol.19, No.6, pp.607-621.
- Majone, G. (1989) *Evidence, Argument and Persuasion in the Policy Process*, New Haven: Yale University Press.
- Meadowcroft, J. (2000) 'Sustainable Development: A New(ish) Idea for a New Century?', *Political Studies*, Vol.48, No.2, pp.370-387.
- Meadows, D.H. et al. (1972) *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*, London: Earth Island Limited.
- Meadows, D. L. ed. (1977) *Alternatives to Growth I: A Search for Sustainable Futures*, Cambridge MA: Ballinger.
- Myers, N. (1987) *Not Far Afield: U.S. Interests and the Global Environment*, Washington, D.C.: World Resources Institute.
- OECD (1975) *The Polluter Pays Principle: Definition, Analysis, Implementation*, Paris: Organisation for Economic Co-operation and Development.
- OECD (1985) *Environment: Resource for the Future*, Paris: Organisation for Economic Co-operation and Development.

- OECD (1994) *Managing the Environment: The Role of Economic Instruments*, Paris: Organisation for Economic Co-operation and Development.
- O'Riordon, T. (1981) *Environmentalism*, London: Pion.
- Pallemaerts, M. (1996) 'International Environmental Law in the Age of Sustainable Development: A Critical Assessment of the UNCED Process', *Journal of Law and Commerce*, Vol.15, No.2, pp.623-676.
- Prescott-Allen R. (2001) *The Wellbeing of Nations: A Country-by-Country Index of Quality of Life and the Environment*, Washington: Island Press.
- Repetto, R. (1985) 'Overview' in R. Repetto ed., *The Global Possible: Resources, Development, and the New Century*, New Haven: Yale University Press.
- Richardson, D. (1997) 'The Politics of Sustainable Development' in S. Baker *et al.*, eds., *The Politics of Sustainable Development: Theory, Policy, and Practice within the European Union*, London: Routledge.
- Rosewarne, S. (1993) 'Selling the Environment: A Critique of Market Ecology' in S. Rees, G. Rodley, and F. Stilwell eds., *Beyond the Market: Alternatives to Economic Rationalism*, Leichhardt NSW: Pluto Press Australia.
- Rosewarne, S. (2002) 'Towards an Ecological Political Economy', *Journal of Australian Political Economy*, No.50, December, pp.179-199.
- Sachs, J (2008) 'Confronting Global Challenges', *Keynote Address*, China Update, Canberra: Australian National University.
- Sachs, W. ed. (1992) *The Development Dictionary: A Guide to Knowledge as Power*, London: Zed Books.
- Sachs, W. ed. (2002) *The Jo'Burg Memo: Fairness in a Fragile World*, Berlin: Heinrich Boll Foundation, <http://www.joburgmemo.org>
- Sanwal, M. (2004) 'Trends in Global Environmental Governance: The Emergence of a Mutual Supportiveness Approach to Achieve Sustainable Development', *Global Environmental Politics*, Vol.4, No.4, November, pp.16-22.
- Schmidheiny, S. (1992) *Changing Course: A Global Business Perspective on Development and the Environment*, Cambridge, MA.: MIT Press.
- Schumacher, E. F. (1973) *Small is Beautiful: Economics as if People Mattered*, New York: Harper & Row.
- Shiva, V. (1989) *Staying Alive: Women, Ecology and Development*, London: Zed Books.
- Speth, J. G. (2004) *Red Sky at Morning: America and the Crisis of the Global Environment*, New Haven: Yale University Press.
- Stern, N. (2006) *The Stern Review Report on the Economics of Climate Change*, HM Treasury: UK Government, [http://www.hmtreasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://www.hmtreasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)

- Stilwell, F. (2000) *Changing Track: A New Political Economic Direction for Australia*, Annandale NSW: Pluto Press Australia Limited.
- UNCCC (2007) *United Nations Climate Change Conference*, Bali 3-14 December, [http://unfccc.int/meetings/cop\\_13/items/4049.php](http://unfccc.int/meetings/cop_13/items/4049.php)
- UNCED (1992) *Agenda 21: A Blueprint for Action for Global Sustainable Development into the 21<sup>st</sup> Century*, New York: United Nations Conference on Environment and Development.
- UNEP (1978) *Review of the Areas: Environment and Development, and Environment Management*, United Nations Environment Program.
- UNEP (2002) *Global Environment Outlook 3: Past, Present and Future Perspectives*, Nairobi: United Nations Environment Programme.
- UNEP (2007) 'GEO Indicators', *Global Environmental Outlook Year Book*, United Nations Environment Program, <http://www.unep.org/geo/yearbook/yb2007/>
- Wapner, P. (2003) 'World Summit on Sustainable Development: Towards a Post-Jo'burg Environmentalism', *Global Environmental Politics*, Vol.3, No.1, pp.1-10.
- WCED (1987) *Our Common Future: World Commission on Environment and Development (The Brundtland Report)*, Oxford: Oxford University Press.
- Weale, A. (1992) *The New Politics of Pollution*, Manchester: Manchester University Press.
- White, G. F. (1980) 'Environment', *Science*, Vol.209, No.4452, pp.183-190.
- Williamson, J. (1993) 'Democracy and the 'Washington Consensus'', *World Development*, Vol21, No.8, pp.1329-1336.
- Worldwatch Institute (2002) *State of the World 2002: A Worldwatch Institute Report on Progress Toward a Sustainable Society*, New York: W. W. Norton & Company.