

## **Working our way out of a crisis: the 'Green Jobs' solution**

### **Abstract**

The connection between the economic and ecological is becoming an integral aspect of sociological research and inquiry as ecological issues increasingly impact on state policy, economic relations and electoral politics. This paper examines the growing interconnection between economic and environmental policy via the concept of green jobs, which are increasingly being promoted by governments, businesses and organised labour as a solution to the short term economic and the longer term ecological crises confronting modern society. In this paper I examine the ambiguous nature and theoretical foundations of green jobs. This paper also scrutinises the Australian government's policy approach to green jobs and the significant contest surrounding this policy agenda. This paper also examines divisions within the Australian union movement over what can be defined as a green job and the potential benefits or costs of establishing green jobs in Australia. This paper proposes that the current focus on green jobs may inhibit transformations that could more adequately address environmental degradation.

### **Pushing the green jobs agenda forward**

The recent push to develop green jobs in Australia has arguably been motivated by two crises of global scale and importance. The first is an economic crisis born out of a collapse in the global financial system. The global financial crisis (GFC) was largely triggered by a rupture in the United States housing market bubble. The global nature of the crisis became apparent as the growing wave of United States mortgage defaults resulted in the bankruptcy or near bankruptcy of a number of key financial institutions, a crash in stock markets around the world and a number of state interventions in haemorrhaging financial institutions (Das 2009, 10-11). In Australia for example, the stock market lost \$95 billion dollars in one day (Jackson 2008, 36) and the Federal Government provided a state guarantee for almost all bank deposits (Alexander 2008, 2).

The foundation of the GFC can be seen as a result of long-term economic shifts within capitalism. For example, economic theorists such as Gowan have suggested that the GFC represents a broader crisis within capitalism and is the consequence of the 'New Wall Street

System... and the extraordinary harmony between Wall Street operators and Washington regulators' (2009, 20). Important features of the New Wall Street System are increases in lender-trading; speculative arbitrage and the generating of asset-price 'bubbles'; maximizing financial leverage; the formation of a shadow banking system; and a large expansion in the availability of credit (Gowan 2009, 7-17). Other theorists see the financial crisis as a result of broader economic shifts, whereby capitalism has over the last thirty years been unleashed from the grip of the welfare state (Glyn 2006), and established itself as a more carnivorous economic system (Williams 2000). This new form of capitalism and the current financial crisis can also be explained through David Harvey's (2003) notion of the relationship between financialisation and accumulation by dispossession. Harvey argues that the current financial system is harnessed by capital to manipulate economic crises and extend the reach of 'the market', because such crises drastically undermine the value of assets, allowing capital to accumulate assets cheaply and expand their economic power (2003, 137-161; 2005, 160-165). This theoretical argument can be extended to ecological sustainability, as current responses to environmental protection expand the accumulation frontier of capital 'by incorporating resources, peoples, activities, and lands that hitherto were managed, organized, produced under social relations other than capitalist ones' (Swyngedouw 2007, 52). For example, market based responses such as the use of private property rights or emission trading schemes dispossess the commons of the environment while creating new areas of accumulation for capital (see for example: Bellamy Foster 2007; Charman 2008; Jones 2009; Smith 2007; Wallis 2008). The point should be made that, at least in Australia, the economic crisis appears to have subsided; arguably because of two ecologically destructive processes; demand from China for our natural resources such as coal; and a government stimulus package which encouraged Australians to ramp up private consumption and emphasised expanding building and construction without careful consideration of environmental sustainability or efficiency.

The second crisis driving the social and political push to develop green jobs is the destruction of the global environment and its potential impacts of human society (Keane 2008; Rootes 2008). The dominant ecological issue surrounding the environmental crisis is the increasing evidence of human induced climate change and its consequences (Steffen 2009; The Hadley Centre for Climate Prediction and Research 2007' 29). The potential consequences of a warming climate include coastal flooding, increased draught severity, a swell in environmental refugees, the destruction of fragile ecosystems and increases in infectious

disease (IPCC 2007, 10). Prime Minister Rudd has even described climate change as the ‘great moral and economic challenge of our time’ (2008a). Apart from a warming climate, other crucial ecological issues confronting modern society include species extinction, desertification, water shortages, air pollution and deforestation (Bellamy Foster, Clark & York 2008, 1). Society’s failure to resolve these potential ecological crises to date has lead theorists such as John Bellamy Foster to argue that the environmental catastrophes may even result in the end of human civilisation:

When we speak today of the world ecological crisis, however, we are referring to something that could turn out to be *final*... Human actions are generating environmental changes that threaten the extermination of most species on the planet, along with civilisation, and conceivably our own species as well (Foster 2010, 1-2).

It is in the context of these economic and environmental crises that the ‘win win’ paradigm of green jobs and more broadly sustainable economics have gained momentum as legitimate solutions to averting these potential environmental catastrophes (Curran 2009; HSBC Global Research 2009; York, Clark & Foster 2009).

### **Introducing green jobs in Australia**

As outlined above, there is clear scientific evidence to suggest that human actions are generating an environmental crisis, particularly in the form of climate change, which demands significant targeted policy action if this trend is to be reversed. One strategy that has been advanced both within the global context and within Australia is the development of green jobs. Identifying this policy strategy exemplifies the ecological modernisation framework, which is outlined below, within Australian environmental policy and the ‘light green’ character of this jobs plan. This paper discusses recent advancements in Australia’s green jobs policy agenda, while also acknowledging past Australian policy commitments and the global context of green jobs.

As a way of introducing the concept of green jobs and to demonstrate their presence within Australian Federal state policy, it is worth noting the recent announcement made by Prime Minister Kevin Rudd at the Labor Party National Conference on 30 July 2009:

The Government will now create 50,000 new green jobs, traineeships and apprenticeships aimed chiefly at helping young Australians to obtain new skills

during the downturn – new skills which will become highly applicable in the low carbon economy of the future (Rudd 2009).

The 50,000 green jobs policy consists of four separate elements:

1. 30,000 Green Skilled Apprenticeships. These will see sustainability and green trade skills integrated into existing vocational training programs. Examples include, electricians being trained in the installation of solar and heat technologies, plumbers being taught about water recycling and automobile mechanics trained to understand new green car technologies.
2. 10,000 National Green Jobs Corps, which are aimed at long-term unemployed youth who will take part in a 6 month job training and work experience programme. This training programme includes tree planting, habitat protection and training for installation of energy efficient devices into existing buildings.
3. 4,000 Training places for insulation installers. Ceiling insulation training will be provided to disadvantaged jobs seekers to help support the Rudd government's \$3.8 billion home insulation programme, which was announced as part of the government's \$42 billion stimulus package in February 2009.
4. 6,000 Local Green Jobs, which will be targeted at disadvantaged communities to assist with retrofitting energy efficient lighting and plumbing, and to improve local environments through revegetation and environmental protection (Australian Labor Party 2009).

This policy announcement provides a number of insights into the Rudd government's approach to green jobs. Green jobs and training places are primarily designed to assist disadvantaged individuals or communities, with little of the announcement aimed at developing long term green jobs or new green industries. The policy thus fails to provide a framework for future government policy and spending beyond the \$94 million policy commitment. These Green jobs are also primarily targeted at responding to the recent global financial crisis and the subsequent job losses that the economic downturn has or may cause. This suggests that the priority of this green jobs package is Australia's short-term economic interests. The jobs and training places announced by Kevin Rudd are also reactive rather than preventive, as this policy commitment lacks green jobs which are aimed at preventing ongoing environmental degradation. For example, there is no funding for the development of

alternative energy, water recycling and biomaterials manufacturing green jobs, which could have created more significant environmental and economic benefits. Moreover, the announced green jobs and training places are all essentially tied to existing government programmes such as Work for the Dole and apprenticeship training programmes.

### **What are green jobs?**

The Rudd government's recent green jobs and training policy announcement raises the question, what is a green job? This question is important as notions of green-collar work, green jobs and environmental employment have all increasingly been espoused and applied to a wide range of occupations, not only by political leaders, but by environmental organisations, corporations and organised labour. The International Labour Organisation defines a green job as one which reduces 'the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable' (2008, 2). This definition is ambiguous and too broad to provide a framework to scrutinise the green job label. The vagueness of what can be characterised as a green job is also evident in the concept of 'shades' of green work which has been utilised by a number of environment and labour organisations. For example, the Australian Conservation Foundation divides green jobs into two streams, 'deep green jobs' such as the construction of energy efficient homes or the instillation of renewable energy, and 'light green jobs' such as mining workers involved in land rehabilitation or cleaners who use non-toxic chemicals (2008). This wide ranging classification not only creates ambiguity, but has allowed the Australian Workers Union (AWU) to make the dubious claim that work in the steel industry is a green job, as steel is recyclable and is an essential component of renewable energy technologies such as wind turbines (Howes & Leahy 2009, 12). Kate Crowley (1999, 1017) has attempted to solidify the boundaries of the spectrum by framing green jobs within three distinct typologies deep, mid and light green (see table 1). This typology is useful as it provides a framework within which the green credentials of occupations can be evaluated and identified. Using Crowley's framework, it can be suggested that the AWU's claim, that work in the steel industry is a green job, is highly contentious, as it scarcely engages any of the fields even within the light green typology. However, the Rudd government's green jobs and training policy announcement does fit into the light green category. This is because the policy is reactive, short term, accommodating of economic interests and aimed at remedying or adapting to ecological decline rather than preserving nature. The mid green job category on the other hand focuses on the pragmatic integration of environmental concern into existing industries,

for example the greening of the construction industry, while the deep green job typology is fundamentally proactive such as the design and manufacture of renewable energy technologies. This green jobs classification system is however problematic, as its broad spectrum allows for the green label to be applied to a range of occupations with vague green credentials, often retrospectively as in the case of roof insulation installation. This typology is also limited, as it does not account for notions of decent work, pay and conditions, which the labour and environment movement argue are central to the success of any transition to green jobs (see for example: ACF & ACTU 2008; UNEP et al. 2008; Van 2008). Defining a green job is clearly complex, and the simple act of classifying a job as green does not ensure ecological benefits, create long term equitable job opportunities or transform existing jobs into environmentally sustainable well paid jobs of the future. Despite this, Crowley's typology will be utilised in this paper to evaluate Australia's green jobs policy commitments.

**Table one: green jobs typology**

	<b>Deep Green</b>	<b>Mid Green</b>	<b>Light Green</b>
<b>Mode</b>	Proactive	Integrative	Reactive
<b>Scope</b>	Long Term	Intermediate Term	Short Term
<b>Nature</b>	Transforming	Reforming	Conforming
<b>Objective</b>	Redefine Growth	"Ecologise" Growth	Enhance Growth
<b>Operation</b>	Rejectionist	Reinventionist	Accommodationist
<b>Aim</b>	Ecological Sustainability	Ecological Modernity	Sustainable Development
<b>Jobs</b>	Preserving Nature	Greening Industry	Remedying Ecological Decline

*Source:* (Crowley 1999, 1017)

### **The theoretical foundation of green jobs**

The strategy of developing green jobs and industries is closely interlinked with the theory of ecological modernisation, a theory that has been identified as a companion and successor to the notion of 'sustainable development' (Boland 1994, 135). The concept of sustainable development has however been strongly criticised for its ambiguous nature and its almost universal meaning and application (Næss & Høyer 2009; O'Connor 1998, 234-35). Ecological modernisation is a theory that has become increasingly influential within the social sciences, and more particularly within the fields of sociology, politics and geography

(Buttel 2000, 57-8). This theoretical approach to ecological sustainability was first developed in Western Europe in the 1980s as a counter argument to the radical environmental movement's critique of modern capitalism as an ecologically unsustainable economic system (Fisher & Freudenburg 2001; Mol 2000, 45-6; Mol & Spaargaren 2000, 19). The development of ecological modernisation was also spurred on in Western Europe by the apparent failure of prescriptive environmental state policy in the 1970s and the rising influence of environmental 'realists' within the German Greens Political Party (Boland 1994, 135-36; Wolf 2007). In broad terms the theory of ecological modernisation 'puts its faith in the technological, organisational, and financial resources of the private sector, voluntary partnerships between government agencies and business, flexible market-based measures, and the application of environmental management techniques' (Levy & Egan 2003, 821). Ecological modernisation's central school of thought has been extensively advanced by two leading theorist within environmental sociology, Arthur Mol and Gert Spaargaren (see for example: Mol & Spaargaren 2000; Mol & Spaargaren 2005; Mol 2002; Spaargaren & Mol 1992). Buttel, summarising Spaargaren's theory of ecological modernisation emphasises the positive role of the market in facilitating sustainability:

It is hypothesised that not only is capitalism sufficiently flexible institutionally to permit movement in the direction of "sustainable capitalism", but its imperative of competition among capitals can - under certain political conditions - be harnessed to achieve pollution-prevention eco-efficiencies within the production process, and ultimately within consumption processes as well (Spaargaren, 1996 cited in Buttel 2000, 61)

Thus, the growth and promotion of green jobs is explicitly linked by ecological modernisation to the development of green industries, which are being transformed by capitals, driven by competitive and political pressures, to be environmentally sensitive. Ecological modernisation at its heart therefore prescribes "sustainable capitalism" as the remedy to the current destruction of the global environment. The promotion of green jobs also bypasses the argument that environmental protection necessarily leads to negative employment and economic outcomes, by suggesting that green jobs offer a 'double dividend' of economic and environmental prosperity (Crowley 1999, 1013). The theory of ecological modernisation therefore considers the growth and promotion of green jobs as fundamental to achieving its stated goal of "sustainable capitalism".

The theoretical basis of green jobs has evoked a diverse range of criticisms. Ecological modernisation has been criticised for its narrow focus on economic and technocratic solutions which ignore the necessary social context required to embed ecological concerns within industrialised society (Christoff 1996, 490). Furthermore, Blowers argues that ecological modernisation ‘appears to be indifferent to the process by which the project is brought about... an authoritarian regime is equally as able to enforce modernisation as a liberal, pluralist one – and both are unlikely to address questions of social inequality’ (1997, 854). Questions have also been raised as to the ability of science and technology to solve ecological issues. As James O’Connor notes, since ‘the beginning of industrial capitalism, technologies have been chosen on the basis of their effects on costs and sales, not on the environment’ (1998, 204). Other theorists have argued that where ecological modernisation has been adopted there is no convincing ‘evidence that the environment has been emancipated from the economic in decision making’ (Pellow, Schnaiberg & Weinberg 2000, 111). Ecological modernisation has also been criticised for its anthropocentric disposition and for basing its theoretical foundations ‘entirely on Western Industrial experience’ (Blowers 1997:854), which ignores global economic realities and differences in cultural contexts (Pellow, Schnaiberg & Weinberg 2000; Sonnenfeld 2000). Moreover, ecological modernisation has been criticised for extending the interests of capital and the free market through its promotion of a neoliberal environmental policy agenda (Charman 2008, 854; McCarthy & Prudham 2004). This promotion of neoliberal environmentalism is clearly visible in its support for a greening of capitalism, where ‘free market’ forces and mechanisms, such as tradable pollution rights, are seen as the most acceptable means of protecting the environment. It is argued that this neoliberalisation of nature also extends the broader interest of capital by allowing nature to become a new domain of capitalist activity and accumulation (Smith 2007:20).

### **Historical context of green jobs in Australia**

The support of a transition to green jobs within Australian policy is not a new strategic direction, but has been evolving since the 1980s. Green jobs have a somewhat sporadic history within Australian public policy and debate, with Crowley suggesting that “the legitimisation of the ‘green job agenda’ in Australia has so far been achieved because of its compatibility with economic growth rather than with any ecological imperatives” (1996b, 607-8). The first sign of green employment opportunities being established in Australia occurred in 1989, via the Greening Australia initiative and through the Hawke government’s



commitment to a National Strategy for Ecologically Sustainable Development (Crowley 1996b, 620; 2004, 403). This policy approach focused on land rehabilitation through the “Jobskills” programme, where recipients of unemployment benefits planted one billion trees, at the same time as encouraging eco-tourism and waste management industries (Crowley 1996b, 620; 1999, 1018). This policy platform was later abandoned by Paul Keating, with the only green jobs surviving this policy switch being “those least threatening to the market, in particular those addressing long term unemployment” (Crowley 1996a, 9). The Hawke Keating government’s ‘light green’ jobs agenda was in essence focused on vocational training and unemployed youth and was essentially compatible with dominant economic interests.

The decade that the Howard government was in power saw little policy movement in the area of green jobs. The conservative Coalition government refused to ratify the Kyoto Protocol and continually placed economic priorities ahead of ecological concerns (Christoff 2005; Curran 2009, 207; Pearce & Stilwell 2008, 122). Professor Ian Lowe subsequently described the Howard government’s approach to environmental concerns as obsessed ‘with short-term economic priorities and ideologically committed to market-based approaches’ (2004, 263). The partial sale of Telstra in 1996 did see the Howard government commit \$1.25 billion to the Natural Heritage Trust fund which was to create thousands of green job opportunities in rural communities. However, the fund was extensively criticised by opposition parties and environmentalists for being a ‘green barrelling’ exercise (Crowley 1999, 1022). This was because money was funnelled directly to or to projects in the direct interest of farmers in Liberal National party held seats with seemingly little government oversight or regard for ecological concerns (Crowley 1999, 1022; Martin 2006). The Howard government’s environmental credentials came under intense pressure in the 2007 Federal election, as the Labor opposition led by Kevin Rudd made climate change and the environment a key policy battleground (Rootes 2008).

The Labor opposition went on to win the election, which marked a substantial shift in Australian environmental policy and debate. The Rudd Government quickly ratified the Kyoto Protocol and then began developing an Emissions Trading Scheme (ETS) with the assistance of its policy advisor Professor Ross Garnaut and his report *The Garnaut Climate Change Review* (Garnaut 2008). Although the government’s proposed ETS did not spell out a specific green jobs agenda the proposed ETS was expected to have a substantial impact on

the future of green jobs and jobs associated with highly polluting industries (Pearce & Stilwell 2008, 123-125). This is based on the argument that green jobs and industries would expand as existing highly polluting industries, and associated jobs, were made financially accountable for their carbon emissions. This historical overview of green jobs in Australia reveals that green job policy initiatives from successive governments on both sides of the political divide have not gone beyond what Crowley's typology defines as light green jobs. This demonstrates a continued reluctance in Australian public policy to instigate even incremental improvements in Australia's green jobs agenda. Critically, the Rudd government appeared to be maintaining a similarly light green jobs policy agenda.

### **The Rudd government's light green jobs stimulus**

As already noted, a prominent green job policy agenda was not adopted by the Rudd government until after the global financial crisis triggered an economic downturn at the end of 2008. In response to this crisis the Government announced an economic stimulus package that included an Energy Efficiency Home Programme. This programme aimed to provide free ceiling insulation to approximately 2.7 million uninsulated homes at a cost of \$3.8 billion and would stimulate the insulation industry, which is considered to be a green job sector (HSBC Global Research 2009, 14). The driving force behind this green jobs initiative was clearly the economic imperative of avoiding a recession in Australia. Concurrently, the Rudd government allocated \$1.3 billion to the Green Car Innovation Fund which was set up to promote green jobs through the manufacturing of environmentally friendly cars (Bracks et al. 2008; Carr 2008). Once again, this green jobs policy funding was linked with the economic interests of existing industries, particularly one that had become increasingly vulnerable to global restructuring. In a statement made to Federal Parliament on World Environment Day, the Prime Minister Kevin Rudd stated that the auto industry was looking for new opportunities and a growth plan:

Creating a new generation of fuel-efficient cars may not only making motoring more affordable and reduce our carbon footprint. It may also revitalise the Australia automotive industry. (Rudd 2008b, 4693)

These green job policies, along with the 50,000 green jobs and training package already noted, indicate that the Rudd government's green jobs agenda was a continuation of the light green economically compatible approaches of previous Australian governments.

Australia was not alone in supporting green industries as part of its economic stimulus response to the global financial crisis. According to HSBC Global Research a total of \$US430 billion has been allocated globally to assist low-carbon industries and jobs via economic stimulus packages (2009, 2). A majority of this money was allocated to energy efficiency (68 percent) and water conservation (19 percent), with only 9 percent allocated to renewable energy. The Obama administration has, for example, committed \$US150 billion over ten years to create five million green jobs (Schulz 2009, 15). Similarly, the South Korean government has allocated \$US36 billion over four years to support green industries (HSBC Global Research 2009, 20). Prior to the announcement of these stimulus packages, a number of states in Western Europe, have been developing significant green job industries. For example, employment in Germany's renewable energy sector has expanded from 66,600 employees in 1998 to 259,100 employees in 2006 (UNEP et al. 2008, 8); and Green job industries have been advocated by the International Labour Organisation the United Nations Environment Programme, the International Organisation of Employers and the International Trade Union Confederation . Australia's commitment to the development of green jobs and industries is clearly part of a global shift in economic environmental policy.

### **Green jobs policy fight in Australia**

Although the current economic and environmental challenges have clearly encouraged the development of green jobs and industries, there is also a political reality behind this push. The promotion of green job opportunities must be understood within the broader context of the Rudd government's policy shift on climate change and its promise to reduce Australia's greenhouse gas emissions. The changing policy and economic climate has resulted in jobs being a central battleground within the environmental debate in Australia. The concept of jobs verses the environment has of course been a constant theme within environmental discourse (Goodstein 1999; Lipsig-Mumme 2008). Opposition to the Rudd government's environmental policy has predominantly come from highly profitable polluting fractions of capital. The Minerals Council of Australia recently commissioned a report which found that the Rudd government's proposed ETS would result in the loss of 24,000 mining jobs by 2020 (Taylor 2009a, 1). Similarly, the Australian Coal Association recently launched a blatant advertising campaign against the ETS with the slogan 'let's cut emissions not jobs' (2009). Strong concerns about probable job losses, economic profitability and the potentiality of green job creation have also been raised by the Federal Opposition (O'Brien 2009; Taylor 2009b), elements of the Australian union movement (Orchison 2009b, 5), sections of the

Australian media (Orchison 2009a, 12; Shanahan 2009, 12) and by leading neoliberal think tanks such as the Institute of Public Affairs (Moran 2009). The Rudd government has dismissed these concerns, arguing that its economic modelling demonstrates continued economic and job growth under its proposed climate change policies (Kerr 2009). Two of the leading advocates of a green jobs agenda within Australia, the Australian Council of Trade Unions (ACTU) and the Australian Conservation Foundation (ACF) have also strongly argued that protecting the environment will have positive job outcomes. However, both the ACTU and ACF have also argued that the Rudd government needs to go further with its policy initiatives and introduce an ambitious 'Green New Deal', which they believe would create 500,000 green jobs by 2030 (2008, 2). These arguments demonstrate that even though the Rudd government has clearly promoted a light green jobs agenda, its policies have been vehemently opposed by economic and political interests. This has resulted in an environmental debate subjugated by economic concerns that ignore pressing environmental issues as both sides of the green jobs battleground seek to take the economic high ground.

### **Conflict in the union movement**

The centrality of jobs within the Australian environmental debate has not only created a political and economic policy battleground, but has also produced significant divisions within the Australian union movement (Lipsig-Mumme 2008, 6-7). This division has occurred between unions who are at best supportive of light green jobs and unions who are encouraging a more ambitious green jobs agenda. The Australian Workers Union (AWU) which supported the Rudd government's large financial concessions to energy intensive trade-exposed industries has argued that greater concessions need to be given to these particular industries to protect jobs. In essence, the AWU is opposed to any environmental policy action, such as the promotion of green jobs or emission reduction targets that might threaten the current jobs or industries of its membership base (Lipsig-Mumme 2008, 6). Also publicly hostile to any strong green jobs agenda is the Construction Forestry Mining Energy Union (CFMEU) and its president Tony Maher. Maher has labelled the notion of green jobs 'dopey' arguing that 'a coalminer or a power station worker isn't going to leave their job... to install low-wattage light bulbs or insulation' (Maher 2009, 6). Clearly, unions such as the CFMEU and the AWU view green jobs as threatening to the interests of their membership base. The Australian Manufacturing Workers Union (AMWU) has taken a significantly different approach to green jobs and climate change by encouraging state action to promote green job industries and manufacturing. The AMWU wants the state to assist with retooling

existing manufacturing industries to take advantage of green job opportunities. It also wants increased funding for new technologies and research and the right for unions to negotiate environmental responsibility into labour contracts (2008, 20-1). This approach is linked to the idea of a 'Just Transition' developed by the Canadian Labour Congress, which argues for 'a social climate change agenda focusing on developing a multi-levelled labour voice in the green transformation of jobs and work, with labour and community actively involved in planning, deciding and operationalising all phases' (Lipsig-Mumme 2008, 7). This alternative approach to labour and the environment moves beyond the light green focus of successive Australia governments and aligns more closely with Crowley's mid green jobs typology, as it seeks a green retooling of industry and an integration of sustainability into existing manufacturing practices and labour contracts. In a similar vein the president of the ACTU Sharan Burrows has stated that manufacturing, 'construction, renewable energy, waste and other green collar areas offer considerable potential to create jobs and export opportunities' (2009, 8). Both the AMWU and the ACTU argue that green jobs and industries offer significant employment opportunities for labour. As we can see, there is a substantial divide between unions which support green jobs and those that believe that a strengthening of the environmental agenda will destroy existing jobs. Critically, such division within the Australian union movement undermines agency for moving green jobs beyond their current light green position to a more transformative green job agenda, as highlight by Crowley's mid and dark green job classifications.

## **Conclusion**

The notion of a green job seemingly offers a 'working' resolution to two critical issues confronting the modern world; a sustainable environment and economy. However, Crowley's typology of deep, medium and light green jobs exposes the ambiguous and malleable character of green jobs. A brief examination of green jobs within Australia reveals that they have consistently paralleled Crowley's light green typology. This is because green jobs have only been supported when compatible with existing economic growth or nonthreatening to the economic interests of polluting industries and jobs. Divisions within the Australian union movement have also undermined the possibility of a coherent promotion of a stronger green jobs agenda. As a solution between the boundaries of economic and environmental sustainability, green jobs in Australia have consistently been shown in this paper to come down on the economic side of the boundary. It should be noted that light green jobs are more positive than no green jobs. However, this paper demonstrates that

Australian governments have consistently promoted a light green jobs policy agenda which lacks any long term direction towards mid or dark green job opportunities. In this way light green jobs have acted as a type of inoculation against potential advancements in Australia's green job agenda. More fundamentally, green jobs fail to address capitalism's ecologically destructive drive for growth, bring into question whether green jobs can ever move from light green margins to a deep green transformative system. The issue becomes even more apparent as competing political, business and labour interests within society battle over environmental policy and appear to only pay lip service to the notion of green jobs and environmental sustainability more broadly.

## References

- ACF and ACTU. 2008. *Green Gold Rush: How Ambitious Environmental Policy can Make Australia a Leader in the Global Race for Green Jobs*. Gladesville: Cambiar Pty Ltd.
- Alexander, D. 2008. Rudd widens guarantee to stall exodus of investment . *Canberra Times*. October 29.
- AMWU. 2008. *Making our future: Just Transitions for climate change mitigation*. [www.amwu.org.au](http://www.amwu.org.au) (accessed 9 June, 2009).
- Australian Coal Association. 2009. *Australian Coal Association launches campaign against new emissions tax on coal mines*. [www.australiancoal.com.au/media.aspx](http://www.australiancoal.com.au/media.aspx) (accessed October 7, 2009)
- Australian Conservation Foundation. 2008. *Green Jobs Fact Sheet*. [www.acfonline.org.au/articles/news.asp?news\\_id=1963](http://www.acfonline.org.au/articles/news.asp?news_id=1963) (accessed April 20, 2009).
- Australian Labor Party. 2009. *50 000 New Green Jobs and Skills Training*. [www.alp.org.au/media/0709/mspm300.php](http://www.alp.org.au/media/0709/mspm300.php) (accessed 30 July, 2009).
- Bellamy Foster, J. 2007. The Ecology of Destruction. *Monthly Review* 58 (9): 1-14.
- Bellamy Foster, J. B. Clark and R. York. 2008. Ecology: The moment of Truth - An Introduction. *Monthly Review* 60(3): 1-11.
- Blowers, A. 1997. Environmental Policy: Ecological Modernisation or the Risk Society?. *Urban Studies* 34 (5-6): 845-71.
- Boland, J. 1994. Ecological Modernization. *Capitalism Nature Socialism* 5 ( 3): 135-41.

- Bracks, S. N. Apple, T. Harcourt, P. Upton, and E. Webster. 2008. *Review of Australia's Automotive Industry*. Canberra: Australian Government.
- Burrow, S. 2009. Combating global warming is a shared task. *Australian Options* 56 Autumn: 8-9.
- Buttel, F.H. 2000. Ecological modernization as social theory. *Geoforum* 31: 57-65.
- Carr, K. 2008. *A New Car Plan For A Greener Future*.  
[www.minister.innovation.gov.au/Carr/Pages/ANEWCARPLANFORAGREENERFUTURE.aspx](http://www.minister.innovation.gov.au/Carr/Pages/ANEWCARPLANFORAGREENERFUTURE.aspx) (accessed May 19, 2009).
- Charman, K. 2008. False Starts and False Solutions: Current Approaches in Dealing with Climate Change. *Capitalism Nature Socialism* 19 (3): 29-47.
- Christoff, P. 1996. Ecological Modernisation, Ecological Modernities. *Environmental Politics* 5 (3): 476-500.
- Christoff, P. 2005. Policy Autism or Double-Edged Dismissiveness? Australia's Climate Policy under the Howard Government. *Global Change, Peace & Security* 17 (1): 29-44.
- Crowley, K. 1996a. Ecology and Social Change: Is Greener Employment Possible? *Just Policy* 8 (11): 3-10.
- Crowley, K. 1996b. Environmental Employment Opportunities: How Green are Australia's Green Job Credentials?. *Environmental Politics* 5 (4): 607-31.
- Crowley, K. 1999. Jobs and environment: the "double dividend" of ecological modernisation?. *International Journal of Social Economics* 26 (7/8/9): 1013-26.
- Crowley, K. 2004. Environmental Policy and Politics in Australia. In) *Australian public policy*, ed. A. Fenna, 388-417. 2<sup>nd</sup> ed. Frenchs Forest: Pearson Education Australia.
- Curran, G. 2009. Ecological Modernisation and Climate Change in Australia. *Environmental Politics* 18 (2): 201-17.
- Das, S. 2009. Built To Fail. *The Monthly* April: 8-13.
- Fisher, D.R., and W.R. Freudenburg. 2001. .Ecological Modernization and Its Critics: Assessing the Past and Looking Toward the Future. *Society and Natural Resources* 14: 701-9.
- Foster, J.B. 2010. Why Ecological Revolution?. *Monthly Review* 61 (8): 1-18.
- Garnaut, R. 2008. *Garnaut Climate Change Review*. Port Melbourne: Cambridge University Press.
- Glyn, A. 2006. *Capitalism Unleashed*. Oxford: Oxford University Press.

- Goodstein, E. 1999. *The trade-off myth: fact and fiction about jobs and the environment*. Washington: Island Press.
- Gowan, P. 2009. Crisis in the Heartland: Consequences of the New Wall Street System. *New Left Review* 55 January-February: 5-29.
- Harvey, D. 2003. *The New Imperialism*. Oxford: Oxford University Press.
- Harvey, D. 2005. *A Brief History of Neoliberalism*. Oxford: Oxford University Press.
- Howes, P., and M. Leahy. 2009. Steel is green as the wind. *The Australian*, 25 March.
- HSBC Global Research. 2009. *A Climate for Recovery: the colour of stimulus goes green*. London: HSBC Bank.
- International Labour Organization. 2008. Green Jobs: facts and figures. Geneva: International Labour Organization.
- IPCC 2007. *Climate Change 2007: Synthesis Report Summary for Policymakers*. [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf) (accessed October 29, 2008).
- Jackson, A. 2008., Worst trading day since 1987 - THE LONG SLOW CRASH OF '08'. *The Australian*, October 11.
- Jones, P. 2009. Saving the planet or selling off the atmosphere? Emissions trading, capital accumulation and the carbon rent. *Marxist interventions* 1 : 9-22.
- Keane, B. 2008. *Climate Change 1: Wrestling the debate back from Wall St*. <http://www.crikey.com.au/2008/10/17/climate-change-1-wrestling-the-debate-back-from-wall-st/.au> (accessed October 23, 2008).
- Kerr, C. 2009. Gillard dismisses ETS 'ambit claim' from minerals council. *The Australian*, May 22.
- Levy, D., and D. Egan. 2003. A Neo-Gramscian Approach to Corporate Political Strategy: Conflict and Accommodation in the Climate Change Negotiations. *Journal of Management Studies* 40 (4) 803-29.
- Lipsig-Mumme, C. 2008. But what about the jobs? Negotiating climate change in a warming world. *Australian Options* Spring: 3-8.
- Lowe, I. 2004. The Environment. In *The Howard Years*, ed. R. Manne, 245-64. Melbourne: Black Inc. Agenda..
- Maher, S. 2009. Green jobs dopey: CFMEU leader. *The Australian*, September 14.
- Martin, J. 2006. *Green plan brings pork talk*. <http://www.abc.net.au/rural/tas/content/2006/s1615862.htm> (accessed October 6, 2009).



- McCarthy, J., and S. Prudham. 2004. Neoliberal nature and the nature of neoliberalism. *Geoforum* 35( 3): 275-83.
- Mol, A. 2000. The environmental movement in an era of ecological modernisation, *Geoforum* 31: 45-56.
- Mol, A., and G.Spaargaren. 2000. Ecological modernisation theory in debate: A review. *Environmental Politics* 9 (1): 17-49.
- Mol, A., and G. Spaargaren. 2005. From Additions and Withdrawals to Environmental Flows: Reframing debates in the environmental social sciences. *Organization and Environment*, 18 (1): 91-107.
- Mol, A.P.J. 2002. Ecological Modernization and the Global Economy. *Global Environmental Politics* 2 ( 2): 92-115.
- Moran, A. 2009. *The Costs to Australia of Renewable Energy*. Institute of Public Affairs. <http://www.ipa.org.au/publications/1690/the-costs-to-australia-of-renewable-energy> (accessed July 20, 2009).
- Næss, P. and K.G. Høyer. 2009. The Emperor's Green Clothes: Growth, Decoupling, and Capitalism. *Capitalism Nature Socialism* 20 (3): 74-95.
- O'Brien, K. 2009. *The 7:30 Report*. <http://www.abc.net.au/7.30/content/2009/s2706535.htm> (accessed October 6, 2009).
- O'Connor, J. 1998. *Natural Causes: Essays in Ecological Marxism*. New York: The Guilford Press.
- Orchison, K 2009a. Few jobs replace carbon clouds. *The Australian*, March 19.
- Orchison, K 2009b. Focus on carbon fallout, *The Australian*, April 25.
- Pearce, A., and F. Stilwell. 2008. 'Green-Collar' Jobs: Employment Impacts of Climate Change Policies. *Journal of Australian Political Economy* 62 December: 120-38.
- Pellow, D.N., A. Schnaiberg, and A.S. Weinberg. 2000. Putting the Ecological Modernisation Thesis to the Test: The Promises and Performances of Urban Recycling. *Environmental Politics* 9 (1): 109-37.
- Rootes, C. 2008. The first climate change election? The Australian general election of 24 November 2007. *Environmental Politics* 17 (3): 473-80.
- Rudd, K. 2008a. A Change of Climate - A New Approach to Australia-Europe Relations. Brussels: *European Policy Centre Briefing*.
- Rudd, K. 2008b. World Environment Day. Commonwealth of Australia: House of Representatives Hansard 5 June: 4692-7.

- Rudd, K. 2009. *Address to ALP National Conference*. <http://www.pm.gov.au/node/6079> (accessed 7 December, 2009).
- Schulz, M. 2009. Don't Count on 'Countless' Green Jobs. *The Wall Street Journal*, February 20.
- Shanahan, D. 2009. Idealism at the expense of jobs.. *The Australian*, March 13.
- Smith, N. 2007. Nature as Accumulation Strategy. *Socialist Register* 43: 16-36.
- Sonnenfeld, D.A. 2000. Contradictions of Ecological Modernisation: Pulp and Paper Manufacturing in South-east Asia. *Environmental Politics* 9 (1): 235-56.
- Spaargaren, G., and A. Mol. 1992.,Sociology, environment, and modernity: Ecological modernization as a theory of social change. *Society and Natural Resources* 5 (4): 323-44.
- Steffen, W. 2009. *Climate Change 2009: Faster change and more serious risks*. <http://www.climatechange.gov.au/science/publications/faster-change-more-risks.html> (accessed July 10, 2009).
- Swyngedouw, E. 2007. Dispossessing H2O: the contested terrain of water privatization. In *Neoliberal Environments: False promises and unnatural consequences*. Ed. N. Heynen, J. McCarthy, S. Prudham and P. Robbins, 61-62. Abingdon: Routledge, Abingdon.
- Taylor, L. 2009a. Climate Change Warning: Emissions Trading Scheme to 'cost 24,000 jobs'. *The Australian*, May 22.
- Taylor, L. 2009b. Rival carbon plan to save jobs - Turnbull talks up cheaper power as his Newpoll ratings worsen. *The Australian*, August 10.
- The Hadley Centre for Climate Prediction and Research. 2007. *Make a difference to your climate with the Met Office*. <http://www.metoffice.gov.uk/research/hadleycentre/pubs/brochures/together.pdf> (accessed October 29, 2008).
- UNEP, ILO, IOE, ITUC, Worldwatch Institute and Cornell University Global Labour Institute. 2008. *Green Jobs: Towards decent work in a sustainable, low-carbon world*. Nairobi: United Nations Environment Programme.
- Van, J. 2008. *The Green-Collar Economy: How One Solution Can Fix Our Two Biggest Problems*. New York: HarperCollins.
- Wallis, V. 2008. Capitalist and Socialist Responses to the Ecological Crisis. *Monthly Review* 60 ( 6): 25-40.
- Williams, K. 2000. From Shareholder Value to Present-Day Capitalism. *Economy and Society* 29 (1): 1-12.

Wolf, F.O. 2007. Part-Building for Eco-Socialists: Lessons from the Failed Project of the German Greens. *Socialist Register* 43:310-36.

York, R., B. Clark, and J.B. Foster. 2009. Capitalism in Wonderland. *Monthly Review* 61 ( 1): 1-18.