Politicians need to avoid the risk of being accused as having a Marxian philosophy when it comes to complying with the environmental concepts of inter-generational equity and sustainable development in their climate change policies. This observation is based on the statement loosely attributed to Marx: “Why should I care about the future generation, what have they ever done for me?" 

Australia will hold a Federal election on 18 May 2019. Climate change will be a key issue in the Federal election campaign given that it featured heavily in the outcomes of the Federal Wentworth by-election in October 2018 and the Victorian State election in November 2018. These elections stripped the Liberal National Party Coalition (the “LNP”) of its parliamentary majority.

But there are significant differences, at the Federal level, in the policies for taking action for climate change between Australia’s three major political parties, the LNP, Labor and the Australian Greens (“The Greens”): Differences that have polarised public opinion, igniting controversy within the community.

These policy differences have created community divisions over action on climate change that need to be resolved to enable Australians to vote objectively on climate policy. Also, for Australia to maintain its trustworthiness, prestige, influence and international reputation, at the global level, by complying with the UNs climate change treaties.
Emission reduction targets are the cornerstone of action for climate change in all three policies. But differences in emission reduction targets between the three major political parties are at the core of an information conflict in policies of the LNP, Labor and the Greens:

- **The LNP action for climate change policy is to meet a global emissions target of 26% to 28% below 2005 levels by 2030.**
- **Labor is committed to reducing Australia’s pollution by 45% on 2005 levels by 2030 and net zero pollution by 2050.**
- **The Greens want net zero or net negative Australian greenhouse gas emissions by no later than 2040.**

However, transitioning to a low carbon economy - from resources to renewables or other energy sources - requires a balanced approach to the current and future energy mix. But, under the Paris Agreement, a balanced approach goes beyond simply reducing emissions.

*This article outlines a pathway for achieving a balanced approach by applying accepted principles for environmental conflict resolution within a framework of legal obligations imposed by UN climate change treaties: Obligations that must be considered in order to evaluate and to implement emission reduction targets.*

---

**Understanding Australian Community Climate Change Interests**

*Interests* refer to the needs, concerns or hopes that a party seeks to have satisfied through conflict resolution. Concerns over potential adverse environmental consequences from climate change would be a substantive interest. The dynamic of focussing on “*interests*” that need to be satisfied, rather than the “*position*” held, is a well-accepted principle for resolving conflict.

Polling in Australia by the *Essential Report* provides significant insight for policy-makers into *community interests on climate change*. Their social research methodology evaluates issues at depth and over the long-term.
The following poll results identify the following substantive community interests: To do more to address climate change e.g. by reducing emissions and to recognize that climate change is real and caused by human activity:

The most recent Essential Report Poll (21 February 2017), on this issue, found “that 60% of Australians agree that climate change is happening and is caused by human activity and 25% believe that we may just be witnessing a normal fluctuation in the earth’s climate”.

For 9 polls conducted from November 2009 – December 2016, the median was 53% and 34%, respectively.

The Essential Report Poll (04 December 2018) found that 24% of Australians think that Australia is doing enough to address climate change – but just over half (53%), think that Australia is not doing enough; 9% think too much is being done to address climate change.

The Essential Report Poll (11 September 2018) found that 69% of Australians think it is important for the Federal Government to agree to a policy for reducing carbon emissions to address climate change; compared to 23% who think it is not important.

Community Concerns on Climate Change and Information Needs

Information conflicts predominate in any environmental conflict, like climate change; differences will almost certainly exist in the information available. A feature of climate change science is that there may have been only limited experimental research directly undertaken on some issues, so that some degree of scientific uncertainty will prevail; and in turn, may lead to conflict.

The link between effective public participation concepts and its goals, is a well-accepted body of knowledge within the social sciences. The goal of public education requires all relevant and reliable scientific information to be made freely available to the community and in a form that is easily understood.

The following information is the basis for the need to reduce emissions:

- The central aim of the Paris Agreement (2015) is to strengthen the global response to the threat of climate change by keeping global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.
Before the Industrial Revolution started in the mid-1700s, the global average amount of CO₂ was about 280 ppm.

By the time continuous observations began in 1958 at Hawaii by the United States National Oceanic and Atmospheric Administration (“NOAA”), the global atmospheric CO₂ was already 315 ppm. In March 2019, the Monthly Average atmospheric CO₂ was 411.97 ppm – an increase of 2.56 ppm above the March 2018 value.

The UN's Environment's “Emissions Gap Report 2018” concluded that global GHG emissions show no signs of peaking. Global CO₂ emissions had increased in 2017, following a three-year period of stabilization. Global peaking of emissions by 2020 is crucial for achieving the temperature targets of the Paris Agreement, but the scale and pace of current mitigation action remains insufficient.

In 2018, researchers from the Universities of Southampton and Liverpool, and the Australian National University in Canberra projected that if immediate action is not taken, Earth’s global average temperature is likely to rise to 1.5°C above the period before the industrial revolution within the next 17-18 years; and to 2.0°C in 35-41 years - if the carbon emission rate remains at its present-day value.

Paris Agreement Obligations and Emission Reduction Targets: The Known Knowns (‘Things we know we know’)

Sustainable development, equity and the CBDR principle are inter-dependent and mutually supporting obligations for taking a balanced approach for climate change action and setting emission reduction targets under the Paris Agreement.²

In 2015, the UN charted a new course for sustainable development.³ A sustainable solution requires the multiple and competing objectives of sustainable development – environmental, economic, social (including cultural) - to be balanced equitably, not weighted in favour of one objective only.

● Environmental: e.g. Effectiveness of the mix of mitigation/adaptation measures of Australia’s emission reductions to meet the Paris temperature goals;
• **Economic**: e.g. Cost-competitiveness of the mix of mitigation/adaptation measures undertaken by Australia for reducing CO\(_2\) emissions; and

• **Social (including Cultural)**: e.g. Ensuring affordability and reliability to offset inequalities in access to energy.

  These objectives must be assessed and balanced **equitably**

  to meet the long-term temperature goals
  of the Paris Agreement
  and to ensure that future risks to people, economies and ecosystems, from climate change, are effectively managed.

The concept of **sustainable development** replaces the positional model of “Jobs OR the environment” with “Jobs AND the Environment”

☑ The plain and legal meanings of ‘equity’ are similar: “fairness”, “justice”.

  The application of equity, as a fair treatment guideline
  for achieving sustainable outcomes,
  means that no consumer, business or industry in Australia should
  bear a disproportionate share of the negative consequences resulting from
  mitigation/adaptation measures
  implemented to achieve emission reduction targets.

☑ **The CBDR principle**, a long-held principle of international law, has two elements: The common responsibility of nations to protect the environment, or parts of it, at the national, regional and global levels; and

  The need to take into account the different circumstances, particularly each nation’s contribution to climate change and its ability to prevent, reduce and control the threat – in the light of different national circumstances.

  **There are two considerations when applying the CBDR principle:**

  The cumulative responsibility of each country
  for contributing to climate change
  - the historical as well as current responsibility –
  and the economic and technical capability of each country
  to combat climate change.
Comment:

(i) **What does taking real action for climate change really mean? What are the climate policies trying to achieve?** Understanding the link between the obligations of equity and CBDR to implement the Paris Agreement is the key for addressing these issues. Their effective integration would facilitate fair outcomes through shared responsibility to offset historic contributions to global temperature rise and so provide the foundation for ensuring a level playing field.

(ii) **Under the CBDR principle, each country has an obligation to share in the global responsibility for their contribution to historical cumulative CO₂ emissions over some defined baseline period e.g. pre-industrial to 2016 (the year the Paris Agreement came into force).**

(iii) **To resonate with equity (fairness), this obligation would extend to require each country to offset their actual contribution to historic global temperature rise over the baseline period. Evaluating the reduction achieved by their emission reduction targets to offset their contribution to historic global temperature rise would enable conclusions to be made whether their actions for climate change were equitable (“fair”).**

For example, the contributions to historic global temperature rise from fossil fuel and land-use CO₂ emissions and non-GHG emissions over the time period of 1800-2005 were estimated in a Canadian study published in 2014; the top 20 ranked countries contributed 0.7°C of the global warming over this period. Australia was ranked 19th and contributed 0.006°C. Applying the CBDR principle and equity obligations to set an emission reduction target, would mean that Australia’s responsibility would be to offset its less than 1% (0.86%) contribution to the historical global temperature rise over the period 1800-2005.

(iv) **A level playing field would arise where each country’s responsibility to set emission reduction targets resulted in an effective offset of their contribution to historical global temperature rise over a common defined period of time.**

(v) **Addressing global temperature rise arising from cumulative CO₂ emissions have two dimensions in time: Historical Responsibility and Current/Future Responsibility. Only the Historical Responsibility is discussed here - notwithstanding both dimensions in time share common elements.**
A review of the action for climate change policies released by the LNP, Labor and the Greens for the 2019 election reveals that the Greens are the only party to refer to equity – but only as one of their Principles: “Equity must be at the core of climate change negotiations and measures, and the transition to an economy that supports a safe climate.”

No party makes any reference to the CBDR principle in their policies.

Nor does any party incorporate the guiding principles for sustainable development in their climate change policies.

Yet, following the Rio Declaration on Environment and Development (June 1992), Australia led the world by implementing an innovative national environmental policy in December 1992. The policy set out the guiding principles for sustainable development and was drawn up and agreed to by all levels of Government in Australia – Federal, State, Territory and Local: The National Strategy for Ecologically Sustainable Development.

Five of its seven ‘Guiding Principles’ provide the framework for evaluating action for climate change and emission reduction targets in the context of sustainable development.

- Decision making processes should effectively integrate both long- and short-term economic, environmental, social and equity considerations;
- The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised;
- The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised;
- The global dimension of environmental impacts of actions and policies should be recognised and considered; and
- The need to deal cautiously with risk and irreversibility.
Comment:

(i) The Kyoto Protocol (at Article 2) required policies and measures aimed at reducing or limiting GHG emissions, to promote sustainable development!

When the Paris Agreement came into force on 4 November 2016, it was looked on as a day when countries of the world set off with determination towards a sustainable future.

(ii) If action for climate change in Australia had been considered in the context of sustainable development, from the time Kyoto entered into force in February 2005 - rather than placing an inordinate focus on emission reduction targets - it would not have taken over a decade to identify unintended consequences such as the reliability and affordability of power supply and their impacts on the community, business and industry - such as prices and investment decisions.

(ii) The lesson from this: Any policy that aims to integrate climate change and energy security e.g. the National Energy Guarantee, must set emission reduction targets within a framework that complies with the Paris Agreement’s obligations for the CBDR principle, equity and sustainable development.

Conclusion:

The Unknown Unknowns ('Things we don’t know we don’t know')
Which Climate Policy Should be Supported?

The diffusion (“spread”) of scientific information from climate change policies does not simply end with the public release of the policy. The more difficult challenge is whether the policy will be widely accepted by the community and adopted after the diffusion stage.

Based on the information contained in party policies released for the election,

the challenge for adopting a climate change policy is for each elector to decide

whether the climate policy emission reduction targets will be climate change-effective and cost-effective, sustainable,

and create a level playing field for Australia to meet the Paris Agreement’s long-term temperature goals.
A problem-solving approach to address this challenge can be based on a key principle of conflict resolution: To insist that objective criteria be relied on to resolve the information conflict over emission reduction targets.

The book, “Diffusion of Innovations” by Professor Everett Rogers, first published in 1962 (and now in its 5th edition), is regarded as a classic work on understanding how, why, and at what rate new scientific ideas and innovations spread (“diffusion”) and their uptake (“adoption”).

The objective criteria, as defined by Rogers, have been applied in the context of climate change science in the outline that follows: It should be seen as a guide to enable an objective assessment of policy differences in emission reduction targets. The objective criteria⁴ include:

- **RELATIVE ADVANTAGE**: Does the emission reduction target have a clear advantage over competing targets, in terms of being climate change-effective and cost-effective? Expert opinion suggests that relative advantage is an essential condition absolutely necessary for adoption. The impact of costs (both direct and indirect) versus benefits is a relevant consideration as an innovation attribute for adoption.

- **COMPATIBILITY**: In transitioning to a low carbon economy - from resources to renewables or other energy sources - a mix of mitigation/adaptation measures to achieve an emission reduction target that is compatible with intended industry and community values, norms, and perceived needs is more likely to be readily taken up and to have a significant impact on a decision to adopt.

- **COMPLEXITY**: Where the outcome of an emission reduction target is perceived as easy to understand it is more likely to be adopted.

To be persuasive, policies on action for climate change need to translate outcomes using language and experiences of everyday life e.g. By reporting outcomes in terms of the effectiveness of emission reductions to offset Australia’s actual contribution to historic global temperature rise for a defined baseline period e.g. the 1800-2005 study.

- **RISK**: If there is a high degree of uncertainty in achieving the outcome(s) of an emission reduction target - or a perception of risk – adoption is less likely.
• **REINVENTION:** The ability to adapt, refine or modify a mitigation/adaptation measure to suit the specific use needs of industry and the community will allow it to be more easily adopted.

**End Notes:**

1 This statement was made by Groucho Marx – not Karl Marx.

2 Legal obligations in Article 2 of the Paris Agreement (Version 22 October 2018) include:

   **Article 2.1:** Enhancing the implementation and strengthening of the global response to the threat of climate change, *in the context of sustainable development* and efforts to eradicate poverty in achieving the long-term temperature goals, including by:
   
   (a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels...

   **Article 2.2:** Implementation of the Agreement to reflect *equity* and the *principle of common but differentiated responsibilities* (“CBDR”) and respective capabilities, in the light of different national circumstances.

3 The **UN’s 2030 Agenda for Sustainable Development**, released in 2015, has “Climate Action” as one of its 17 interrelated goals (*Sustainable Development Goal 13*). This goal will be one of the inter-related goals to be reviewed in-depth at a high-level UN political forum in New York in July 2019.

4 Following Rogers, Steven Kelly (2012) published an updated, detailed Research Report that reviewed the key criteria of Rogers because of their potential impact on the rate of adoption of innovations: *Literature Review on the Diffusion of Innovations and Best Practice for Technology Transfer*