

Changing the record: Narrative policy analysis and the contested politics of emissions trading in New Zealand

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Abstract

The influence of discourse on climate politics has been debated extensively, yet discourse-related approaches are often criticised for an overemphasis on critiquing current policy situations and relative inattention to utilising communication studies to understand and enable policy change. This article explores how narrative policy analysis – a linguistic technique for analysing issues where uncertainty and complexity have bred polarisation and policy deadlock – can be utilised to recast disputes over climate policy in ways that facilitate compromise and policy change. As a focus, we examine disputes surrounding the New Zealand Emissions Trading Scheme, drawing on elite interviews and documentary analysis to chart contrasting narratives. The first portrays New Zealand as a trade-exposed country that makes only minor contributions to global emissions to defend cautious and low-cost policy. Its rival stresses the need for stronger domestic action even if this entails higher costs. Mapping the contentions, assumptions and characterisations in these narratives combined with analysis of recent policy developments in New Zealand reveal important insights on how narrative policy analysis can enhance understandings of policy change, in particular: the difficulties of attacking opponents' 'anchoring narratives'; how analysing minor narrative components and differences in narrative alliances can assist in overcoming barriers to policy change; how narrative changes and 'narrative diplomacy' can prepare the ground for policy change; and the importance of examining issues that become neglected as debates on climate policy become polarised.

Keywords: discourse, policy change, narrative policy analysis, emissions trading, New Zealand

Introduction

Academics have long ruminated on how ideas and discursive interactions shape political responses to environmental issues. Early conceptual analyses of how environmental discourses shape environmental politics (Dryzek, 1997; Hajer, 1995; Litfin, 1994), been followed numerous studies examining discourse and policy change on issues such as climate change, energy policy, ozone-depleting substances, biodiversity and water pollution (Christoff, 2013; Eckersley, 2016; Gillard, 2016a; 2016b; Gillard & Lock, 2017; Hovden & Lindseth, 2004; Kurki, Takala & Vinnari, 2016; Shin & Choi, 2014). In parallel, branches of the policy-change literature have also examined how policy change is enabled and enacted through ideas and language, including work on value frames, actor coalitions, and actors' construction of their interests (Sabatier & Jenkins-Smith, 1993; Pemberton & Oliver, 2004), issue streams (Kingdon, 1995), and iterations between policy stability and change (Hall, 1993; Bailey & Wilson, 2009).

Gillard (2016a) nevertheless argues that many studies still treat discourse as an ancillary influence on policy and only partially reveal how discursive processes alter institutional preferences and policy. Some studies have sought to utilise discursive institutionalism to explore the effects of discourses on actor strategies and normative alignments while still arguing that greater attention is needed to how ideas and discourse operate as distinctive forms of power (Lorenzoni & Benson, 2014; Gillard, 2016a). Another common criticism of discourse analysis it remains preoccupied with 'exposing ideological manipulation that shapes and perpetuates power imbalances through discourse' (Breeze, 2011: 516) and pays limited attention to examining the discursive processes through which unequal power relations and inadequate policy responses are, or might be, overcome (Martin, 2004). Whether prompted by methodological uncertainty or concerns about policy advocacy, this bystander critique mentality has muted discourse analysis as a transformative force in environmental politics. How far this is justifiable, given its concern with challenging unequal power relations (Hajer, 1995), is less certain when greater attention to examining alternative ways of discussing environmental problems may enhance understandings of how language shapes policy and how to manage contentious issues (Gibson-Graham, 2008).

One branch of linguistic analysis more forthcoming in this regard is Narrative Policy Analysis (NPA), a technique that applies literary theory to debates where complexity and uncertainty have created polarisation and hostile conditions for policy change (Hampton, 2009; Roe, 1989; 1994). Like other linguistic approaches, it sees issue framing and communication as central to political debate (McBeth, Shanahan, Arnell & Hathaway, 2007). However, its emphasis on analysing narratives to identify ways of engineering political space for solving policy problems creates possibilities for using discourse-related approaches to assist decision-makers to address environmental issues (Epstein, Farina & Heidt, 2014; Fischer & Forester, 1993; Roe, 1994).

To elaborate, how policy issues are formulated usually follows a narrative structure with: a beginning (current situations), a middle (issues associated with the problem), and an end (solutions); a plot (reasoning used to defend preferred actions); and heroes, villains and victims (those championing or opposing certain narratives or affected by decisions) (Stone, 2002). The first step in NPA entails constructing the narrative currently dominating a topic to clarify its reasoning, values, assumptions, evidence and supporters (Jacobs & Sobieraj, 2007). The next identifies 'counternarratives' challenging the dominant narrative (Epstein, Farina & Heidt, 2014); the two are then compared to seek a new 'meta-narrative', described by Bridgman & Barry (2002: 142) as 'a superordinate frame that joins two otherwise incommensurable positions' that 'underwrites and stabilizes the assumptions for decision making on an issue where current policy narratives are so conflicting as to paralyze decision making' (Roe 1994: 4).

NPA has been applied to a variety of issues, including: climate adaptation (Paschen & Ison, 2014); landscape change (McCoy, 2000; Thiha, Webb & Honda 2007); conservation (Lawton & Rudd, 2014); pesticides (Hirsch, Baxter & Brown, 2010); sustainable consumption (Berg & Hukkinen, 2011); transportation (van Eeten, 2006); public involvement in environmental decision-making (Hampton 2009); and fracking (Heikkila, Weible & Pierce, 2014). However, aside from Roe (1994) and Fløttum & Gjerstad (2017), NPA of climate mitigation policy remains sparse, despite long-running controversies in many countries, and the challenges of meeting national emissions reduction commitments under the 2015 Paris Agreement.

The goal of this article, accordingly, is to explore how NPA can assist in rendering controversial debates on climate policy more amenable to conventional policy-making. Our motivations are both practical: to help address political difficulties facing mitigation policy, and conceptual in strengthening connections between the discourse and policy-change literatures. The focus of the investigation is examine disputes surrounding the New Zealand Emissions Trading Scheme (NZ ETS), an emissions pricing scheme introduced in 2008 as New Zealand's primary mechanism for climate mitigation that has been criticised for failing to create meaningful emissions reductions (Bailey & Jackson Inderberg, 2016; Bertram & Terry, 2010; Emissions Trading Scheme [ETS] Review Panel, 2011; Motu Economic and Public Policy Research, 2018; New Zealand Productivity Commission, 2018). Some political parties, industry groups and analysts, however, maintain that it offers low-cost and flexible ways of meeting New Zealand's international mitigation targets (New Zealand Government, 2016; Motu Economic and Public Policy Research, 2018).

In the following sections, we discuss linkages between NPA and policy change, and explain the NZ ETS and our research methods. We then explore two key narratives on the NZ ETS, the first arguing that New Zealand is making a fair contribution to global mitigation relative to its size and trade exposure through a policy structure geared towards cost-effective emissions reduction, and the second advocating greater action by New Zealand to reduce domestic emissions through reforms to the ETS or its replacement. Following this, we analyse

opportunities for bridging divisions on climate policy in New Zealand before reflecting on the contribution of NPA to addressing obstacles to climate mitigation policy.

Policy Narratives and Policy Change

Discourse and narrative approaches are both concerned with how issue framing reflects and constructs social and political perceptions of environmental issues. However, whilst many discourse approaches emphasise macro-contexts, scrutinising discourses like ecological modernisation (Dryzek, 1997; Hajer, 1995), NPA's primary interest is in 'the more immediate effects of the use of language in political debate' (Hermville, 2016: 238). Roe (1994) argues that this proximate approach provides key advantages in understanding and addressing the dynamics of disagreement in policy debates. The mechanisms through which narratives affect institutional cultures and policy nevertheless merit further discussion, in particular how the construction of narratives influences power relations between ideas and actors, and the factors driving narrative and policy change.

Turning first to narrative construction, most political narratives possess two main dimensions: the storylines used to justify preferred policies, and a combative dimension rebutting counter-narratives that might de-legitimize policy choices or political actors (Jacobs & Sobieraj, 2007). The importance of this lies in underscoring that although narratives are important policy-making variables, they express both ideas and interests, and a key motivation for storytelling by policy-makers is to build political alliances and undermine sources of opposition (Carstensen & Schmidt, 2016). Additionally, understanding the nature of conflicts in policy debates (which and whose ideas are being legitimized or alienated) aids in identifying of narratives for reducing policy polarisation (Hermwille, 2016). The connection between narratives and the evidential 'truth' within any debate is formally questionable (Roe, 1994), but a narrative must be seen as legitimate by influential actors to have salience (Czarniawska-Jorges & Jacobsson, 1995).

Another feature of narrative construction relevant to policy change is the hierarchical structuring of arguments. Drawing on the logic of anchoring practices (Swidler, 2001), *anchoring narratives* encapsulates the contentions and assumptions that provide the supporting logic for subordinate arguments, enabling them to form a fully-fledged storyline. This hierarchical relationship between anchoring and constituent narratives may have implications for narrative memberships where anchoring narratives form an important part of a group's beliefs. For example, the assumption that carbon emissions are best controlled through carbon pricing may be crucial to economists or industry and may constitute anchoring narratives where they enable sub-narratives on policy instrument selection and/or design (Roe, 1994). The further importance of anchoring narratives stems from the potential for political actors to destabilise opposing narratives or encourage defections among key opponents by targeting anchoring narratives.

In addition to considering linkages between narrative construction and policy change, attention is needed to how the dynamics of policy change affect competition between narratives. Howlett (2014) notes that major policy innovations are rare, sometimes because decision-makers ignore developments that conflict with the desired *status quo*, and sometimes to avoid failures for which they can be held accountable (Jones & Baumgartner, 2012; Schmidt, 2010). Risk management also encourages decision-makers to craft narratives that enable them to defend choices and where these become institutionalised in key areas of government and society, advocates of change face uneven challenges in fashioning narratives to challenge the status quo (Bailey & Wilson, 2009). Radical shifts in narrative dominance and policy can occur, however, where gaps between policy and reality trigger ‘tectonic plate-like readjustments to existing policies’ (Howlett, 2014: 397; Jacobs & Sobieraj, 2007).

Drivers of change in narrative logic and balances of power between narratives can be broadly grouped into exogenous and endogenous factors, though the two often operate concurrently and in mutually constitutive ways:

Exogenous factors: shifts originating outside the policy debate in question. These are difficult to categorise but Gillard (2016a) charts how government austerity in the UK was accompanied by a discursive shift in climate policy from narratives emphasising leadership and moral responsibility towards risk management and justifying initiatives on the basis of co-benefits rather than standalone climate benefits. Exogenous drivers may equally involve gradual changes, minor events that gather significance, or abrupt incidents, including elections and or actions by other countries. They may also undermine or strengthen dominant or competing narratives depending on which side assimilates the exogenous factor more successfully into its narrative logic, though challenging narratives often require greater momentum to trigger policy change (Hall, 1993; Pemberton & Oliver, 2004).

Endogenous change: shifts in interests, influence, or storylines related to the policy being debated, encompassing changes in the narrative itself or in allegiances among influential groups that alter the balance of power between incumbent and challenging narratives (Jones & McBeth, 2010). Endogenously-driven change commonly operates through the tactical co-optation of opponents’ narratives, where an argument is integrated into a counter-narrative (Jensen 2012), or debunking of adversaries’ anchoring narratives.

Changes in narrative memberships can also have implications for narrative stability and policy change. Diverging interests within a group may trigger narrative defections and lead to new coalitions, particularly when highly influential actors decide their interests are better served elsewhere. For example, in 2010, the chief executive of BHP Billiton precipitated a shift in business and political debate on carbon pricing in Australia months after the government had abandoned proposals for carbon pricing because of widespread opposition by declaring his support for carbon pricing to establish Australian leadership in low-carbon investment (Bailey, MacGill, Passey & Compston, 2012).

The impression so far is that narrative competition is predominantly adversarial and that narrative and policy change occurs mainly when one group outmanoeuvres rivals. However, compromise is central to NPA's approach (Roe, 1994). Similarly, Bailey & Compston (2012) discuss how trading political resources – such as adjusting emissions targets or carbon-tax schemes in exchange for industry cooperation – can help to broker compromises on contentious climate-policy initiatives. Although resource exchange rather than narrative shift is the key variable in such situations, such strategies also rely on industry groups communicating their new stance and contributing to a recalibration of mainstream narratives on the issue (Weible, Sabatier & McQueen, 2009).

Summing up, analysing how narratives influence debates on environmental issues offers promising avenues for understanding policy change and strengthening connections between discourse and policy-change analysis. NPA has nevertheless drawn criticism for not establishing testable hypotheses (Sabatier, 2000), for focusing on language at the expense of power, and for paying insufficient attention to the meanings ascribed to narratives by analysts (Roe, 1994). Space constraints prevent discussion of these points (see Jones & McBeth, 2010) except to argue that NPA directly scrutinises how storylines project power and recognises that controversial issues involve basic disagreements over values, evidence or actions, both of which align closely with the ways politics is perceived and practiced by participants. Having sketched these ideas on how narratives influence policy change, we now explore the main narratives influencing New Zealand climate policy and how NPA might help in identifying opportunities for policy change.

The NZ ETS

The NZ ETS was legislated in 2008 as New Zealand's flagship policy for achieving its Kyoto Protocol targets. Its supporters hailed the ETS as the world's first emissions trading scheme to encompass all economic sectors and Kyoto greenhouse gases (Bullock, 2012; Moyes, 2008). However, it was introduced shortly before Labour lost the 2008 election and the incoming coalition led by the National Party, which had opposed the ETS legislation, introduced major reforms in 2009 and 2012 that critics argue removed much of its emissions-reduction potential.

To understand these disputes, we first outline the main factors affecting the NZ ETS's design. New Zealand accounted for just 0.17% of global gross emissions in 2014, although its emissions-intensive primary industries and relatively high transport demand meant that in 2015 (when the research was conducted) it ranked 21st globally for per-capita gross emissions (Ministry for the Environment, 2018a). New Zealand also has a distinctive emissions profile: around 85% of electricity is generated from renewables, while agriculture produces nearly 49% of national emissions, mainly biological emissions by ruminant animals (Ministry for the Environment, 2018a). Mitigation challenges for New Zealand include further reducing energy emissions given the high level of renewables generation, addressing transport emissions and

reducing agricultural emissions without harming the sector's international competitiveness and/or producing emissions leakage overseas (Leining and Kerr, 2018).

In response, the NZ ETS was designed without a domestic emissions cap and instead operated within the global cap created by the Kyoto Protocol (New Zealand Government 2007). Instead of constraining domestic emissions through caps, the intention was that pricing emissions would incentivise abatement across the economy where abatement was cost-effective within a scheme that requires targeted sectors to surrender allowances to cover their actual emissions from prescribed activities (Leining & Kerr, 2018). In the 2008 legislation, the total amount of allowances allocated freely to each sector was fixed and participants surrendered one allowance per tonne of CO₂-equivalent emitted (Jackson Inderberg, Bailey & Harmer, 2017). Owners of forests planted before 1990 carried unit liabilities for deforestation, while post-1989 forest owners could opt to receive units for removals in return for accepting future liability for reversals. Another provision permitted sectors to cover their emissions by buying unlimited eligible overseas Kyoto units to help manage abatement costs. However, unfettered access to international units was criticised for undermining the scheme by exposing it to low international prices. Linking to the Kyoto market was discontinued in 2015 following the New Zealand government's decision to take its 2013-2020 emissions reduction commitment under the United Nations Framework Convention on Climate Change (UNFCCC) rather than the Kyoto Protocol (Leining and Kerr, 2018). The 2008 legislation also planned progressive phasing-in of sectors, beginning with forestry (2008), liquid fossil fuels (2009), stationary energy and industrial processes (2010), and agriculture and waste (2013).

In 2009, the new government established a series of transitional arrangements to the NZ ETS, including: delaying entry of some sectors (notably agriculture) into the scheme; allowing the stationary-energy, transport and industrial processes sectors to surrender one NZU for every two tonnes of CO₂-equivalent; and adding a ceiling price of NZD25 to protect competitiveness (Bullock, 2012). The 2012 revision introduced fewer changes but extended the transitional moderation measures indefinitely, contrary to recommendations by the ETS Review Panel (2011). In 2016, the government decided to phase out the 'two-for-one' obligation in non-forestry sectors by 2019 and announced in-principle decisions to reform the architecture of the NZ ETS to make it fit for purpose under the Paris Agreement. In 2017, the New Labour-led government signalled its intention to reform the NZ ETS in line with increasing New Zealand's goals for domestic mitigation (Ministry for the Environment, 2018b). We return discuss more recent announcements later in the article..

Research approach

The main analysis consisted of mapping the main narratives surrounding the NZ ETS to identify their assumptions, plot and temporal elements, characters (heroes, villains, and victims), and policy solutions (Roe, 1994; Jones & McBeth, 2010). This enabled systematic recording of narrative disputes, anchoring narratives, and potential points of accommodation (Ney, 2006; Stone, 2002). Establishing two main narratives inevitably involved aggregating subsidiary

narratives identified during the research (Czarniawska, 2004). However, these narratives captured the main areas of contestation at the time the research was conducted in 2015. Further analysis linked stakeholders to narratives, recognising the potential for groups or individuals to subscribe to different narratives simultaneously, switch allegiances or narrative components, and to attach differing importance to individual arguments. Although the narratives reflected relatively stable interests and attitudes among protagonists at the time of the research, these variations mean that NPA invariably entails some aggregation and stylisation of viewpoints to maintain the clarity of storylines.

The data consisted of secondary documents and 23 expert interviews conducted in 2015 with representatives from New Zealand's main political parties, government departments, businesses, NGOs and independent analysts (Table 1). Interviewees were selected using expertise mapping from documentary sources complemented by 'snowballing' during interviews. Efforts were made to cover all opinions identified in the secondary analysis, though it proved challenging to recruit NGO interviewees because few had detailed knowledge of the political processes accompanying the design of the ETS. This was compensated by recruiting independent analysts with expertise in the scheme. The interviews included questions on the design of, and changes to, the NZ ETS, the main actors involved, and the political processes accompanying its development. Interviews were then transcribed and sent to interviewees for approval.

TABLES 1 and 2

The secondary analysis utilised official reports, party, cabinet and parliamentary papers, public reports and independent academic analyses (Table 2). Stakeholder documents yielded most sources because the design and reviews of the NZ ETS involved input from several multi-stakeholder advisory groups that operated during the design process, including the Climate Change Leadership Forum and the Stationary Energy and Industrial Processes Technical Advisory Group. Individual companies and sector associations also produced analyses of the NZ ETS; these showed greater variation in viewpoints compared with government documents and parliamentary debates. Content analysis was used to identify themes corresponding with the NPA components presented above, using data triangulation and discussion within the research team to interpret each narrative.

New Zealand climate narratives

Two main narratives around the actions New Zealand should take on climate change emerged from the analysis. Before reviewing these, it should be restressed that both main narratives contained variations in the logics and arguments employed, the emphases placed on different arguments, and the motivations underpinning actors' standpoints. Two broad classifications could nevertheless be identified in the policy approaches advocated to manage climate mitigation in New Zealand. These have been identified on the basis of the empirical data and particularly the interview information. The *International Offsetting Narrative* contended that the NZ ETS is achieving its objectives as long as it meets its international responsibility target

even if domestic emissions continue to rise, and that New Zealand is making a fair contribution to global mitigation relative to its size and economic circumstances. The *Domestic Efforts Narrative* argued, conversely, that stronger action is needed to reduce New Zealand's domestic emissions and rejected the suggestion that the country is too small to make a significant contribution to tackling climate change. Although such 'compound narratives' involve some conflation of arguments and viewpoints, the following section also explores commonalities and divergences in the arguments within each narrative to assist in investigating opportunities for narrative and coalition shifts and policy change.

International Offsetting Narrative (ION)

The ION has historically dominated debates on the NZ ETS, and although its policy prescriptions were frequently criticised during the research by some Labour politicians and members of green political parties, activist groups and many independent analysts, several of its contentions were shared by business leaders and representatives from centre-right political parties, including the National Party, New Zealand First, and ACT New Zealand. Aspects of the narrative were also expressed by some members of the public administration, including the Treasury, Ministry for Primary Industries, and to a lesser extent the Ministry for Environment, as well as by some academics and forestry representatives. The ION accepted anthropogenic climate change but argued that policy should focus on reducing emissions at least cost globally rather than compelling individual countries with relatively high efficiency and mitigation costs to take on unaffordable burdens. Accordingly, the view was that developed countries should accept targets that reflected their national circumstances but have the flexibility to achieve them at least cost by meeting part of national targets through the Kyoto Flexibility Mechanisms and ETS linking. Cost effectiveness thus formed the ION's first anchoring argument but another contention to justify avoiding adopting 'reckless' targets and economic burdens (expressed by industry representative) was that New Zealand is too small to influence climate change through its own actions. As such, an appropriate contribution to global mitigation efforts by New Zealand consisted of participating in international negotiations, pricing carbon to incentivise domestic abatement where New Zealand possesses cost advantages, and purchasing international allowances.

The ION's other main anchoring narrative was the need for strong economic safeguards because of: limited options for low-cost abatement in stationary energy and transport; technical and economic barriers to reducing biological agricultural emissions; and the trade exposure of several key sectors, including agriculture (Leining, Ormsby & Kerr, 2017; Pastoral Greenhouse Gas Research Consortium, 2014). Several interviewees argued that New Zealand was a 'price-taker' on international markets, so pricing biological agricultural emissions would damage the sector's competitiveness unless other countries introduced similar measures. Economic arguments were further legitimated by assertions about carbon leakage: 'If agricultural activities move overseas to reduce emissions, this just makes New Zealand poorer but makes no difference to global emissions because they simply occur elsewhere... Taking sheep off the land just devalues an economically efficient activity' (agriculture representative).

However, interviews also revealed interest-led differences of opinion. Meat producers claimed they had fewer mitigation options than dairying, where controls could be imposed on slurry and feedstuffs, whereas reducing emissions from extensive grazing necessitated de-stocking. Both sectors nevertheless emphasised efficiency gains per unit of product ('the beef and lamb sectors' emissions are 17% lower in 2015 than in 1990 for similar production' (industry representative)), leading to suggestions that New Zealand should actually contribute to reducing global emissions by increasing exports from its emissions-efficient agricultures.

ION exponents used such reasoning to stress the NZ ETS's suitability for the country's circumstances and making a fair contribution to international emissions reduction. As one official argued: 'the policy has performed as intended... it has enabled New Zealand to meet its targets at least cost.' Similarly, an independent expert stressed: 'we were the first to try an all-sectors, all-gases approach and proved it can be done, although agriculture has never moved into implementation', while another official highlighted the cost-effectiveness of forestry offsets: 'Forests was important, and they are a manifestly different proposition from anything Europe was trying to achieve... the EU limits on offsets were not in line with the goals of the NZ ETS.' One industry representative likened the ETS to a machine, claiming the critical element was its legal structure because 'the machine has the right cogs but the dials are turned down, giving it limited bite. Labour set the dials to three, but National turned them to one and zero for agriculture... [but] this made it politically acceptable'.

Another subsidiary aspect of the ION aimed at managing administrative costs mentioned by interviewees was a preference for streamlined regulation, including self-reporting of emissions with the threat of audit (an approach also used in the New Zealand tax system) and placing the point of obligation as far upstream in the supply chain as possible so that most businesses are not required to participate in the ETS (Leining and Kerr, 2018). Interviewees related this to neoliberal traditions that emerged following the 'Rogernomics' economic reforms of the 1980s, which have propagated an ethos of light-touch, market-led regulation. An ETS (especially one with no limit on importing international units) was consistent with the view that market forces, not government, should decide where emissions reductions should occur. Allied to this was a belief that NZ ETS prices would incentivise action across the economy. As one official noted, 'the ETS is the main instrument for achieving New Zealand's target, so there is less inclination to have complementary measures (e.g. renewable energy targets) for reasons of double regulation.' Experts argued that the ETS had familiarised companies with incorporating carbon prices into business models and stressed the importance of testing the ETS's functioning while retaining the option to strengthen its settings if economic and political circumstances allowed.

Economic considerations also dominated the narrative's temporal focus; interviewees stressed that ambitious unilateral policies would rapidly damage New Zealand's primary industries. Another temporal element emphasised the short lifespan of methane to oppose strict controls on agriculture. For example, one industry representative argued that: 'UNFCCC

rules treat methane as 24 times more potent than CO₂ but if herd sizes remain constant, there is a constant atmospheric stock of methane because of its rapid breakdown.’ He further contended that methane is discriminated against compared with forestry offsets because tree-carbon returns to the atmosphere with decomposition. Modelling by the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGGRC) in fact indicates that emissions need to be reduced by 10-22% below 2016 levels by 2050 and 20-27% by 2100 for New Zealand to ensure methane from livestock causes no additional contribution to climate change (Parliamentary Commissioner for the Environment, 2018). The use of temporal ‘stocks-and-flows’ arguments to defend excluding biological agricultural emissions nevertheless illustrates the selective use of evidence to support narrative arguments.

‘Villain and victim’ arguments expressed by ION supporters often focused on discrimination against rural communities by urban elites, emphasising farmers’ exposure to higher production costs if carbon pricing was imposed on biological emissions (Cooper & Rosin, 2014), and to an extent on competitiveness risks to emissions-intensive, trade-exposed industries. One agricultural interviewee added ‘why should we be taxed before anybody else does anything and if we don’t have meaningful alternatives. This comes from city-dwelling greenies who want to feel good.’ This perceived lack of sympathy was also directed at economists who prioritised rapid emissions reduction over farm livelihoods: ‘Their answer is to change land use, in effect destroy export revenue and livelihoods’. Correspondingly, the narrative’s chief *villains* were ‘city-dwelling greenies’ represented by the Green Party, Labour factions, and dogmatic academics. The main *heroes*, meanwhile, were farmers, who formed the backbone of New Zealand’s low-emissions agricultural sector. Forest owners were also portrayed as heroes for providing low-cost emissions credits, while farmers were also *victims* whose trade exposure merited protection from unfair regulation (Cooper & Rosin, 2014), and taxpayers who would pay more for goods under a stronger ETS.

The preferred ION solution was to strengthen the ETS only where there was conclusive evidence that proposed changes would not damage important economic sectors or the wider economy. New Zealand had demonstrated its commitment to international efforts by accepting a Kyoto target but could not solve the problem, so strong domestic action was senseless and economically irresponsible. Focusing on low-cost domestic and international abatement was consequently prudent and fair, given current commitments by other countries. Stronger measures were only acceptable if other countries introduced similar requirements.

Domestic Efforts Narrative (DEN)

The main argument underpinning the DEN was that design flaws impeded the NZ ETS from producing meaningful emissions reductions, and that New Zealand – a wealthy and high per-capita emitting country with major endowments in renewable energy and flexible land-use for carbon storage – lacked a credible climate-change strategy (Bertram & Terry, 2010). According to this narrative, the ETS gives the impression of action while protecting business-as-usual and

creating future risks. Views among its supporters ranged from criticism of the scheme's management to outright cynicism towards the ETS. One industry representative claimed, 'the ETS' objectives have not been achieved. It is supposed to drive a low-carbon economy, not just low-cost abatement', while an academic argued, 'The NZ ETS has important weaknesses. A carbon tax is easier to defend if ministers and officials are minded. The ETS is so complicated and expert-driven that it undermines the democratic mandate.'

Another recurring theme within the DEN was disbelief that international allowances produced credible emissions cuts. Accordingly, it stressed the need for domestic abatement: 'How does buying Ukrainian 'hot air' help the climate?' (politician). Similarly, interviewees criticised the scheme's approach to emissions limits and allocating allowances. One industry interviewee noted, 'They called it cap-and-trade; now they just call it emissions trading. Leaving the domestic cap out is the biggest mistake.' Those more supportive of the Kyoto cap lamented the government's decision not to ratify Kyoto II: 'People said 'you don't have a cap'; we had the Kyoto cap until we lost that' (independent expert). Others accused the government of double standards: 'We ratified Kyoto then opted out of period two, but still want to use its allowances' (politician). 'It's a question of making a proportionate effort reflecting the country's capabilities, but the government will have a hard job selling the New Zealand target to the UNFCCC because it's done nothing' (industry representative). 'The politicians always start off talking about the costs of action and design the scheme from there. A discussion about defining New Zealand's fair share is where you must start... then analyse what is economically feasible' (politician).

Some DEN advocates also maintained that more allowances should be auctioned to increase incentives and that allocations should be based on absolute emissions, not per unit of production, because production increases may outstrip efficiency gains. Others, reflecting the scope for variation within 'broad church' general narratives, still supported output-based free allocation where genuine concerns existed about economic impacts and/or carbon leakage. DEN supporters were also scornful of allowing sectors to submit one NZU for every two tonnes of emissions and the exemption of biological agricultural emissions. Alongside pressing for action on a major emissions source, the DEN argued that 'agriculture needs to stop treating dairy as a speculative commodity with everything based on short-termism, and start thinking about the wider benefits of sustainable farming for water, carbon, biodiversity, recreation' (independent commentator).

The main temporal element of the DEN centred on preventing an imminent climate crisis and the inadequacy of cautious experimentation. Another temporal element emphasised the competitiveness benefits of decarbonisation as other countries adopted low-carbon technologies and consumption. Further procrastination was likely to exacerbate future economic risks because carbon prices would need to increase more rapidly, and New Zealand may face plummeting demand for its goods and services unless it embraced the low-carbon agenda. Another aspect utilised historical comparisons. As one independent commentator

noted, 'Industry's attitude is that the ETS adds costs, especially in export markets. But New Zealand has seen unprecedented exchange-rate rises. Did this cause mass bankruptcy? No, and neither have other price fluctuations. Businesses have adapted. It is interesting how modest carbon prices induce paranoia, but other price variations are accepted.'

Key *villains* in the DEN were agriculture, particularly dairying, for avoiding emissions and other environmental responsibilities. Fonterra, New Zealand's main dairying cooperative, was singled out by one expert: 'Fonterra's lobbying behaviour is based on being the country's largest exporter and its capacity to press trade exposure.' Some consultancies were regarded as both heroes and villains. The New Zealand Institute of Economic Research (NZIER) and Business and Economic Research Limited (BERL) were seen as being in opposing camps and having uneven influence: 'NZIER assessments were more pessimistic about the ETS's economic impacts... Treasury called both to discuss their modelling... BERL won on virtually every point, but policy was informed more by NZIER modelling... The big polluters got 90% of their obligations paid for by the taxpayer', according to an independent commentator.

The National Party was frequently portrayed as lacking the political courage to tighten the NZ ETS. One commentator noted, 'the global financial crisis was used as a smokescreen for the fact that the Nationals were heavily populated by climate sceptics and there was no serious commitment to tackling the issue. I have my doubts whether the current climate minister believes in climate change,' and 'National completely gutted the ETS' (politician). Some academics argued that differences between the two major parties were largely rhetorical, but ACT and NZ First were identified as villains for working against regulation and only recently acknowledging human-induced climate change. The DEN's *heroes* were green activists, the Green Party, parts of the Labour Party, academics who criticised the scheme, and companies involved in low-carbon innovation. Some Labour ministers who legislated the NZ ETS were even regarded as visionaries who had been thwarted by business and the National Party. Victims, meanwhile, were the New Zealand public, whose quality of life and livelihoods were threatened by short-sighted policies. Sympathy was also expressed for foresters because of financial risks created by the NZ ETS.

Two main solutions were proposed under the DEN. Reformists felt the NZ ETS could remain part of New Zealand's climate strategy provided its flaws were addressed and complementary policies were introduced, particularly for renewable energy and electric vehicles. This view was commonest among experts who had advised the government: 'There is scope to use the ETS to tighten action on climate change, but it requires a change in mind-sets' (independent commentator). Other reforms mentioned included limiting or prohibiting international allowances; ending the 'two-for-one' scheme; changing the basis for free allocations; absolute emissions allocations; auctioning; removing the price ceiling; and a price floor. Others advocated replacing the NZ ETS with a carbon tax, despite a proposed tax being rejected in 2005: 'even with amendments to the ETS, I'm still uncertain about supporting it' (politician). Table 3 summarises the key features of the two narratives.

TABLE 3

Discussion: Narrative analysis and policy change

Analysis of the main New Zealand climate-policy narratives revealed strongly polarised views and few interviewees saw much scope for compromise. However, significant narrative and policy shifts began during 2018, when the Labour-led government began consultations on the future of New Zealand climate policy and introduced the Climate Change Response (Zero Carbon) Amendment Bill to Parliament in May 2019. The main measures proposed in the bill include:

- An independent Climate Change Commission to provide advice and monitoring to help keep governments on track towards long-term climate goals;
- Reduction of New Zealand's net greenhouse emissions to zero by 2050 with the exception of biogenic methane, where alternative targets were proposed to reduce gross emissions by 10% from 2017 levels by 2030 and by 24-47% below 2017 levels by 2050;
- Emissions (carbon) budgets to provide stepping-stones towards the 2050 target (Parliamentary Counsel Office, 2019).

In 2018 and 2019, the government also announced sweeping changes to the NZ ETS, including a framework to enable capping of New Zealand's ETS emissions in the future to restrict the supply of units and increase incentives to reduce emissions. Auctioning is also set to be introduced to align supply with New Zealand's emissions targets, while a cost containment reserve allowing units to be auctioned when a predetermined market price is reached is scheduled to replace the \$25 price ceiling in 2020. Another change limits the number of international units allowed into the scheme and provides for regulations to ensure their environmental integrity. The use of international units will additionally be conditional on satisfactory progress towards New Zealand's emissions targets, adequate incentives for domestic abatement, and sound economic justifications for allowing international units into the scheme (Ministry for the Environment, 2019).

Other changes sought to improve the scheme's transparency and compliance by publishing emissions and removals (mainly forestry) data for individual participants and by introducing automatic penalties of three times the market price for participants that fail to surrender or repay units by their due date, with further penalties where enforcement agencies need to amend emissions returns or assessments, or where participants knowingly misreport emissions. Finally, the government announced measures to enable the appointment of an independent auction monitor to promote fair auctions and competitive price formation, removal the price ceiling no later than 31 December 2022 in the event of delays to auctioning, the enablement of a price floor if desired in the future, and the establishment of a separate programme to advise on options for market governance (Ministry for the Environment, 2019).

Having outlined these changes, we now re-examine the ION and DEN narratives in conjunction with our earlier discussion to explore ongoing and potential processes of narrative and policy change in New Zealand climate policy.

We begin by exploring the potential effects of exogenous events. During the research, one interviewee identified shifts in public or institutional opinions (particularly within the Treasury), and the signing of a new international climate agreement as possible 'game-changing' events. Although the impact of such events is difficult to specify, the signing of the Paris Agreement later in 2015 appears to have prompted a sea change in New Zealand climate policy. In particular, the Zero Carbon Bill makes direct reference to developing 'clear and stable climate policies that contribute that contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels' (Parliamentary Counsel Office, 2019). The consultation conducted prior to the bill's introduction to the New Zealand parliament already indicated broad support for many of its measures (Ministry for the Environment, 2018c) but personal communications suggest that the Intergovernmental Panel for Climate Change (2018) 1.5°C report published in October 2018 further propelled public opinion in favour of more ambitious domestic action, further indicating the capacity for focusing events to produce narrative shifts and improved conditions for policy change

The next option involved undermining opponents' anchoring narratives in order to encourage narrative and/or coalition defection. Space constraints restrict discussion mainly to vulnerabilities within the ION, though weaknesses in the DEN and possibilities for its arguments to gain ground are also considered. The ION's main anchoring narratives can be recalled as follows:

- Climate change is an important issue but strong action to reduce domestic emissions would jeopardise New Zealand's trade-exposed export economy and have negligible effect on global emissions;
- The electricity sector's already low carbon footprint and difficulties reducing biological agricultural emissions without reducing production limit the options for low-cost emissions reductions relative to other countries;
- A market mechanism with international linkages is the most cost-effective efficient way of contributing to global emissions reductions.

The key elements of the DEN in turn were:

- Climate change is an imminent threat to New Zealand and other countries;
- New Zealand is a wealthy and high per-capita emitting country that has a moral responsibility to take stronger action to reduce domestic emissions;

- The country has considerable capacity to reduce net emissions in areas such as renewable energy, transport, and land management;
- The current design of the NZ ETS does little to incentivise domestic emissions reduction and requires substantial reform of emissions caps, allocation mechanisms, and price management.

Although each of these narratives had their detractors, most interviewees agreed that New Zealand climate policy needed to reflect the country's trade exposure and distinctive emissions profile, and there was near-universal support for carbon pricing, if not necessarily the ETS. This suggests that attacking anchoring narratives may be problematic where they reflect widely-held societal concerns (Schmidt, 2010). That said, targeting weaker elements of anchoring narratives may help to shift the equilibrium of debates, especially if counter-narratives resonate with other social beliefs. For example, Labour's 2017 election manifesto challenged the portrayal of New Zealand as an insignificant player on climate change: 'It is not good enough to say we are too small to matter – most countries individually could claim the same' (Labour, 2017). In so doing, Labour invoked alternative imaginaries of New Zealand as a 'clean, green' country that 'punches above its weight' to depict a resourceful and responsible nation in contrast with the ION's representation of New Zealand as a country disempowered by its economic vulnerabilities (Driver, Parsons & Fisher, 2018).

The difficulties of challenging established narratives also draw attention to the change potential of incremental narrative shifts and using 'bridging' narratives to lessen polarisation, especially where governing institutions already acknowledge gaps between policy rhetoric and reality (Howlett, 2014). One reason for agriculture's reluctance for including biogenic emissions in the NZ ETS was that the government's preference for processor-level obligations inhibited individual farms from benefitting from farm-scale initiatives to control emissions or convert land-uses (Cooper & Rosin, 2014). Relaxing this requirement, initially by allowing individual farms voluntarily to register biological emissions and sell allowances from verified low-cost abatement or offsets, might offer a way to enhance the scheme's mitigation potential and would be consistent with narratives stressing the cost-effectiveness of economy-wide emissions pricing. Several interviewees also speculated that this could encourage wider coalition shifts if actors like Fonterra could be persuaded to champion agriculture's participation. Stressing other issues like the water-quality benefits of reducing effluent discharges might also reinforce inter-coalition support for including biological emissions. There is, however, the risk that bridging narratives may create new controversies. Sectors with mandatory obligations could complain about government favouring farmers, while converting land uses through small-scale on-farm forestry projects, may clash with ION arguments about carbon leakage.

The example nonetheless demonstrates how marginal narrative shifts might precipitate larger shifts in climate policy debates. It also illustrates the value of diplomacy in narrative contests through recognising and renegotiating opponents' arguments in order to reach shared

interpretations of how address problems rather than just seeking to invalidate alternative viewpoints (Miskimmon, O'Loughlin & Roselle, 2014).

Another option involves identifying where differences in interests and arguments within narrative alliances might encourage coalition changes (Heikkila, Weible & Pierce, 2014). One example concerns disputes between dairy and meat producers on emissions baselines, despite sector-wide support for excluding biological emissions. Meat producers claimed they would consider entering the NZ ETS if 1990 baseline emissions were adopted because they would receive credit for improved efficiency. However, dairying wanted later baselines because higher production since 1990 meant the sector would lose financially under absolute emissions measures and still face pressure under intensity-based measures, despite reducing biological emissions by 20% per unit of production since 1990 (Eggleton, 2017). Absolute free allocation here refers to the distribution of allowances on the basis of greenhouse gases emitted using historical emissions. 'Intensity-based free allocation' refers to emission units distributed as a proportion of production, factoring in emissions efficiency. This issue has caused intra-group frictions, as one industry representative explained: 'the feeling was that government listen more if we speak with a collective voice. However, when dairy talks about unity, they often mean other sectors should agree with them.' Although most agriculturalists drew on trade-exposure narratives, interest differences indicate some potential to destabilise this coalition by offering selective policy concessions. Again, however, coalition-splitting tactics may backfire if they fuel new narratives of unjust treatment for some New Zealand's farmers (Kurki, Takala & Vinnari, 2016).

Another way of utilising NPA is to investigate marginalised storylines. One illustration of this was the limited attention given by interviewees to the economic and social consequences of climate change for New Zealand. Although the ION and DEN both acknowledge climate change as an important issue, and numerous impact assessments have been conducted (Ministry for the Environment, 2016; New Zealand Agricultural Greenhouse Gas Research Centre, 2012), climate impacts were rarely discussed and debates on the NZ ETS appeared to be dominated by technicalities and the costs of action rather than inaction. Christoff (2013) similarly notes how discourses emphasising weak valuations of environmental costs have diminished the influence of scientific and ethical discourses in debates on climate policy in Australia. Although reinjecting climate-impact storylines might counteract preoccupation with the economic threats of climate policy, gaining traction for such stories may require coalitions of actors spanning perceived heroes, victims and villains, including economic actors like insurers and major agricultural companies, actively discussing the risks to their organisations and employment from climate change (Richter & Chambers, 2014).

Arguably the main device used by the government to reframe debates on climate policy has been the Zero Carbon Bill consultation conducted in 2018. The discussion document for the consultation provided impetus for this reframing by presenting the government's proposals on long-term targets, domestic action and agriculture, and economic modelling that indicated

only minor economic impacts with investment in innovation, new forestation and protection for less affluent households. Importantly, the ministerial introduction of the Zero Carbon Bill also stressed the social and economic effects of climate change on New Zealand to reinforce the case for moving to a zero-carbon economy (Ministry for the Environment, 2018d: 7).

Results from the consultation included 67% support for an immediate 2050 target, 58% support for net zero emissions across all greenhouse gases by 2050, and 60% support for meeting targets only from domestic emissions reductions and new forest planting (Ministry for the Environment, 2018c). Despite resounding support for the government's climate agenda, the Zero Carbon Bill has still drawn criticism, from Greenpeace for the 'miserly' 10% cut in methane, and from the National Party, which despite supporting the bill, argued that methane targets should be decided by the Climate Commission (McLachlan, 2019). The consultation thus highlights both the difficulties in gaining consensus in this contentious debate and the imperative art in narrative and policy contests to focus on securing sufficient support and legitimation for new narratives prior to attempting major policy change.

Conclusion

Discourse analysis has made important contributions to understanding how ideas and discourses contribute to policy change (Schmidt, 2010) but has paid less attention to how language studies can provide insights that help to address political disputes on issues like climate change (Breeze, 2011; Gillard, 2016a; Lorenzoni & Benson, 2014). This article has explored how narrative policy analysis might be utilised in this way. Evidence from the NZ ETS indicates that NPA's capacity to reveal the anatomy of policy debates offers considerable promise for disentangling issues where uncertainty and complexity have impeded policy development (Roe, 1994; Shanahan, Jones & McBeth, 2011). In particular, distinguishing the components of arguments, how narrative elements interrelate and use anchoring narratives to cohere storylines, the presence or absence of themes in narratives, and how combatants position themselves in relation to narrative components can help illuminate the causes of conflict and opportunities for reducing polarisation (Fløttum & Gjerstad, 2017).

In terms of more specific insights, the study highlights the obstacles to achieving decisive victories in entrenched debates. Although actors seeking policy change might see attacking opponents' anchoring narratives as an effective strategy for destabilising alternative policy positions, dislodging institutionalised narratives is likely to encounter stern resistance from influential government and non-government actors who, for various reasons, will argue that existing policy approaches have been successful in solving policy problems. Equally, challenging narratives acquire prominence by offering plausible alternatives and dislodging either completely is challenging. A more likely scenario in many cases is the incorporation of new ideas that progressively transform prevailing narratives and enable greater policy experimentation (Pemberton & Oliver, 2004). Focusing on more accommodative and

incremental approaches may, thus, lead to more wholesale change, especially where changes in narrative emphasis create possibilities for more extensive shifts in actor standpoints.

Second, how individual actors' interests affect their narrative allegiances may offer further avenues for exploring change within dominant coalitions. Combative approaches seek to erode coalitions by offering selective concessions to wavering actors, whereas less provocative tactics involve negotiating with leading coalition actors to encourage them to formulate and socialise new norms among their peers. Third, what is *not* discussed in policy debates can make a major difference. Absent discussions may indicate areas of consensus or topics protagonists feel uncomfortable broaching. It may also indicate where actors have locked into certain disputes (Bailey & Wilson 2009) and where reminding actors of neglected issues like New Zealand's climate vulnerabilities may stimulate creative thinking on how to resolve disputes.

Further indications of NPA's utility in examining how changing narratives influence policy change have emerged in post-research developments under the new Labour-led government. During and since the election campaign, Labour stressed the risks of climate change, the costs of inaction, and New Zealand's responsibility to act, arguing 'It is not good enough to say we are too small to matter – most countries individually could claim the same' (Labour, 2017). These narrative shifts have been accompanied by moves to strengthen the ETS, the Zero Carbon Bill, and to establish the Climate Change Commission. Importantly, these have been accompanied by detailed consultations, indicating the government's alertness to the influence of ION thinking and the need to incubate shifts in climate policy debates that avoid alienating influential players. Such developments underscore the potential for narrative approaches to assist not just in explaining policy track records but also in exploring the mechanisms through which ideas translate into policy change.

References

- Bailey, I., & Jackson Inderberg, T.H. (2016). New Zealand and climate change: What are the stakes and what can New Zealand Do? *Policy Quarterly*, 12, 3–12. <https://doi.org/10.26686/pq.v12i2.4598>
- Bailey, I., & Wilson, G. (2009). Theorising transitional pathways in response to climate change: Technocentrism, ecocentrism and the carbon economy. *Environment and Planning A*, 41, 2324–2341. <https://doi.org/10.1068/a40342>
- Bailey, I., & Compston, H. (2012). *Feeling the heat: The politics of climate policy in rapidly industrializing countries*. Basingstoke, UK: Palgrave Macmillan.
- Bailey, I., MacGill, I., Passey, R., & Compston, H. (2012). The fall (and rise) of carbon pricing in Australia: A political strategy analysis of the Carbon Pollution Reduction Scheme. *Environmental Politics* 21, 691–711. <https://doi.org/10.1080/09644016.2012.705066>
- Berg, A., & Hukkinen, J. (2011). The paradox of growth critique: Narrative analysis of the Finnish sustainable consumption and production debate. *Ecological Economics*, 72, 151–160. <https://doi.org/10.1016/j.ecolecon.2011.09.024>
- Bertram, G., & Terry, S. (2010). *The carbon challenge: New Zealand's emissions trading scheme*. Wellington, NZ: Bridget Williams Books.

- Breeze, R. (2011). Critical discourse analysis and its critics. *Pragmatics*, 21, 493–525.
<https://doi.org/10.1075/prag.21.4.01bre>
- Bridgman, T., & Barry, D. (2002). Regulation is evil: An application of narrative policy analysis to regulatory debate in New Zealand. *Policy Sciences*, 35, 141–61.
- Bullock, D. (2012). Emissions trading in New Zealand: Development, challenges and design. *Environmental Politics*, 21, 657–675. <https://doi.org/10.1080/09644016.2012.688359>
- Carstensen, M., & Schmidt, V. (2016). Power through, over and in ideas: Conceptualizing ideational power in discursive institutionalism. *Journal of European Public Policy*, 23, 318–337. <https://doi.org/10.1080/13501763.2015.1115534>
- Christoff, P. (2013). Climate discourse complexes, national climate regimes and Australian climate policy. *Australian Journal of Politics and History*, 59, 349–367.
<https://doi.org/10.1111/ajph.12020>
- Cooper, M., & Rosin, C. (2014). Absolving the sins of emission: The politics of regulating agricultural greenhouse gas emissions in New Zealand. *Journal of Rural Studies*, 36, 391–400. <https://doi.org/10.1016/j.jrurstud.2014.06.008>
- Czarniawska, B. (2004). *Narratives in social science research*. London, UK: Sage.
- Czarniawska-Joerges, B., & Jacobsson, B. (1995). Political organizations and commedia dell'arte. *Organization Studies*, 16, 375–394.
<https://doi.org/10.1177/017084069501600301>
- Driver, E., Parsons, M. & Fisher, K. (2018). Technically political: the post-politics(?) of the New Zealand emissions trading scheme. *Geoforum*, 97, 253–267.
- Dryzek, J. (1997). *The politics of the Earth. Environmental discourses*. Oxford, UK: Oxford University Press.
- Eckersley, R. (2016). National identities, international roles, and the legitimation of climate leadership: Germany and Norway compared. *Environmental Politics*, 25, 180–201.
<https://doi.org/10.1080/09644016.2015.1076278>
- Eggleton, F. (2017). Fonterra's approach to climate change. *paper to New Zealand Agricultural Greenhouse Gas Research Centre Mitigation Conference 2017*, Palmerston North, NZ: Massey University.
- Emissions Trading Scheme Review Panel. (2011). *Doing New Zealand's Fair Share. Emissions Trading Scheme Review 2011: Final Report*. Wellington: Ministry for the Environment.
- Epstein, D., Farina, C, & Heidt, J. (2014). The value of words: Narrative as evidence in policymaking. *Evidence and Policy*, 10, 243–258.
<http://dx.doi.org/10.1332/174426514X13990325021128>
- ETS Review Panel. (2011). *ETS Review 2011: Summary of submissions*,
<http://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/summary-of-submissions.pdf>.
- Fischer, F. & Forester, J. (1993). *The argumentative turn in policy analysis and planning*. Durham, NC: Duke University Press.
- Fløttum, K., & Gjerstad, Ø. (2017). Narratives in climate change discourse. *WIREs Climate Change*, 8, 1–15. <https://doi.org/10.1002/wcc.429>
- Gibson-Graham, J.K. (2008). Diverse economies: Performative practices for 'other worlds'. *Progress in Human Geography*, 32, 613–632.
<https://doi.org/10.1177/0309132508090821>

- Gillard, R. (2016a). Unravelling the United Kingdom's climate policy consensus: The power of ideas, discourse and institutions. *Global Environmental Change*, 40, 26–36. <https://doi.org/10.1016/j.gloenvcha.2016.06.012>
- Gillard, R. (2016b). Questioning the diffusion of resilience discourses in pursuit of transformational change. *Global Environmental Politics*, 16, 13–20. https://doi.org/10.1162/GLEP_a_00334
- Hajer, M. (1995). *The politics of environmental discourse: Ecological modernization and the policy process*. Oxford, UK: Oxford University Press.
- Hall, P. (1993). Policy paradigms, social learning and the state: The case of economic policy in Britain. *Comparative Politics*, 25, 275–296.
- Hampton, G. (2009). Narrative policy analysis and the integration of public involvement in decision making. *Policy Sciences*, 42, 227–242. <http://www.ijstor.org/stable/40270995>
- Heikkila, T., Weible, C., & Pierce, J. (2014) Exploring the policy narratives and politics of hydraulic fracturing in New York, In M. Jones, E. Shanahan, & M. McBeth (Eds.) *The science of stories: Applications of the narrative policy framework in public policy analysis* (pp. 185-205) Aldershot, UK: Palgrave Macmillan.
- Hermwille, L. (2016). The role of narratives in socio-technical transitions: Fukushima and the energy regimes of Japan, Germany, and the United Kingdom. *Energy Research and Social Science*, 11, 237–246. <https://doi.org/10.1016/j.erss.2015.11.001>
- Hirsch, R., Baxter, J., & Brown, C. (2010). The importance of skillful community leaders: Understanding municipal pesticide policy change in Calgary and Halifax. *Journal of Environmental Planning and Management*, 53, 743–756. <https://doi.org/10.1080/09640568.2010.488110>
- Hovden, E., & Lindseth, G. (2004). Discourses in Norwegian climate policy: National action or thinking globally? *Political Studies*. 52, 63–81. <https://doi.org/10.1111/j.1467-9248.2004.00464.x>
- Howlett, M. (2014). Why are policy innovations rare and so often negative? Blame avoidance and problem denial in climate change policy-making. *Global Environmental Change*, 29, 395–403. <https://doi.org/10.1016/j.gloenvcha.2013.12.009>
- Intergovernmental Panel on Climate Change. (2018). *Global warming of 1.5°C, IPCC: Switzerland*.
- Jackson Inderberg, T. H., Bailey, I., & Harmer, N. (2017). Designing New Zealand's emissions trading scheme. *Global Environmental Politics*, 17, 31–50. https://doi.org/10.1162/GLEP_a_00414
- Jacobs, R., & Sobieraj, S. (2007). Narrative and legitimacy: U.S. congressional debates about the nonprofit sector. *Sociological Theory*, 25, 1–25. <https://doi.org/10.1111/j.1467-9558.2007.00295.x>
- Jensen, L. (2012). Norwegian petroleum extraction in Arctic waters to save the environment: Introducing 'discourse co-optation' as a new analytical term. *Critical Discourse Studies*, 9, 29–38. <https://doi.org/10.1080/17405904.2011.632138>
- Jones, B., & Baumgartner, F. (2012). From there to here: Punctuated equilibrium to the general punctuation thesis to a theory of government information processing. *Policy Studies Journal*, 40, 1–20. <https://doi.org/10.1111/j.1541-0072.2011.00431.x>
- Jones, M., & McBeth, M. (2010). Narrative policy framework: Clear enough to be wrong? *Policy Studies Journal*, 38, 329–353. <https://doi.org/10.1111/j.1541-0072.2010.00364.x>

- Kingdon, J. (1995). *Agendas, alternatives and public policies*. 2nd edn. New York, NY: Addison, Wesley, Longman.
- Kurki, V., Takala, A., & Vinnari, E. (2016). Clashing coalitions: A discourse analysis of an artificial groundwater recharge project in Finland. *Local Environment*, 21, 1317–1331. <https://doi.org/10.1080/13549839.2015.1113516>
- Labour. 2017. *Real action on climate change*. <https://www.labour.org.nz/climatechange>.
- Lawton, R., & Rudd, M. (2014). A narrative policy approach to environmental conservation. *Ambio*, 43, 849–857. <https://doi.org/10.1007/s13280-014-0497-8>
- Leining, C., Ormsby, J., & Kerr, S. (2017). Evolution of the New Zealand emissions trading scheme: Linking. *Motu Working Paper*, 17-06 [http://motu-
www.motu.org.nz/wpapers/17_06.pdf](http://motu-www.motu.org.nz/wpapers/17_06.pdf).
- Leining, C. and Kerr, S. (2018). *A guide to the New Zealand emissions trading scheme*, <https://motu.nz/assets/Documents/our-work/environment-and-agriculture/climate-change-mitigation/emissions-trading/ETS-Explanation-August-2018.pdf>.
- Litfin, K. (1994). *Ozone discourses: Science and politics in global environmental cooperation*. New York, NY: Columbia University Press.
- Lorenzoni, I., & Benson, D., (2014). Radical institutional change in environmental governance: Explaining the origins of the UK Climate Change Act 2008 through discursive and streams perspectives. *Global Environmental Change*, 29, 10-21. <https://doi.org/10.1016/j.gloenvcha.2014.07.011>
- Martin, J. (2004). Positive discourse analysis: Solidarity and change. *Revista Canaria de Estudios Ingleses*, 49, 179–202.
- McBeth, M., Shanahan, E., Arnell, R., & Hathaway, P. (2007). The intersection of narrative policy analysis and policy change theory. *The Policy Studies Journal*, 35, 87–108. <https://doi.org/10.1111/j.1541-0072.2007.00208.x>
- McCoy, M. (2000). *Narratives and international relations theory: Chinese ecological agriculture as a case study*. Lanham, MD: University Press of America.
- McLachlan, R. (2019). *NZ introduces groundbreaking zero carbon bill, including targets for agricultural methane*, The Conversation, <https://theconversation.com/nz-introduces-groundbreaking-zero-carbon-bill-including-targets-for-agricultural-methane-116724>.
- Ministry for the Environment. (2016). *Climate change projections for New Zealand: Atmosphere projections based on simulations from the IPCC Fifth Assessment*. Wellington, NZ: Ministry for the Environment, <http://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/nz-climate-change-projections-final.pdf>.
- Ministry for the Environment. (2018a). *New Zealand's greenhouse gas inventory 1990–2016*, https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/final_greenhouse_gas_inventory_snapshot.pdf.
- Ministry for the Environment. (2018b) *Proposed improvements to the New Zealand emissions trading scheme*, <http://www.mfe.govt.nz/consultation/ets>.
- Ministry for the Environment. (2018c). *Our climate, your say: Summary of submissions*, <http://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/Zero-Carbon-Bill-Summary-of-Submissions-FINAL.pdf>.
- Ministry for the Environment. (2018d). *Our climate your say: Consultation on the Zero Carbon Bill*, <https://www.mfe.govt.nz/sites/default/files/media/Consultations/FINAL-%20Zero%20Carbon%20Bill%20-%20Discussion%20Document.pdf>.

- Ministry for the Environment. (2019). *Proposed improvements to the NZ ETS*, <http://www.mfe.govt.nz/climate-change/proposed-improvements-nz-ets>.
- Miskimmon, A., O'Loughlin, B. & Roselle, L. (2014). *Strategic narratives: Communication power and the new world order*, New York: Routledge.
- Motu Economic and Public Policy Research. (2018). *Improvements to the New Zealand emissions trading scheme: Submission to the Ministry for the Environment*, <https://motu.nz/assets/Documents/our-work/environment-and-agriculture/climate-change-mitigation/emissions-trading/2018-09-21-Submission-from-Leining-Kerr-and-Winchester-Improvements-to-the-New-Zealand-Emissions-Trading-Scheme-Final.pdf>.
- Moyes, T. (2008). Greenhouse gas emissions trading in New Zealand: Trailblazing comprehensive cap and trade. *Ecology Law Quarterly*, 35, 911–966. <https://doi.org/10.15779/Z380KOG>
- New Zealand Agricultural Greenhouse Gas Research Centre. (2012). *Impacts of global climate change on New Zealand agriculture*, file:///C:/Users/Ian/Downloads/2_Impacts%20of%20Global%20Climate%20Change%20on%20New%20Zealand%20Agriculture%20-%20Fact%20Sheet.pdf.
- New Zealand Government. (2016). The New Zealand emissions trading scheme evaluation report 2016, <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/ets-evaluation-report.pdf>.
- New Zealand Productivity Commission. (2018). *Low-emissions economy*, https://www.productivity.govt.nz/sites/default/files/Productivity%20Commission_Low-emissions%20economy_Final%20Report_FINAL.pdf.
- Ney, S. (2006). *Messy issues, policy conflict and the differentiated polity: Analysing contemporary policy responses to complex, uncertain and transversal policy problems*. Department of Comparative Politics, University of Bergen, Norway.
- Parliamentary Commissioner for the Environment. (2018). *A note on New Zealand's methane emissions from livestock*, <https://www.pce.parliament.nz/publications/a-note-on-new-zealand-s-methane-emissions-from-livestock/new-zealands-methane-emissions-from-livestock>.
- Parliamentary Counsel Office. (2019). *Climate Change Response (Zero Carbon) Amendment Bill*, [http://www.legislation.govt.nz/bill/government/2019/0136/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Climate+Change+Response+\(Zero+Carbon\)+Amendment+Bill_resel_25_a&p=1#LMS183736](http://www.legislation.govt.nz/bill/government/2019/0136/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Climate+Change+Response+(Zero+Carbon)+Amendment+Bill_resel_25_a&p=1#LMS183736).
- Paschen, J., & Ison, R. (2014). Narrative research in climate change adaptation: Exploring a complementary paradigm for research and governance. *Research Policy*, 43, 1083–1092. <https://doi.org/10.1016/j.respol.2013.12.006>
- Pastoral Greenhouse Gas Research Consortium. (2014). *5 year science progress report 2007–2012: Developing solutions to reduce New Zealand agricultural emissions*. Wellington, NZ: Pastoral Greenhouse Gas Research Consortium.
- Pemberton, H., & Oliver, M. (2004). Learning and change in 20th-century British economic policy. *Governance*, 17, 415–441. <https://doi.org/10.1111/j.0952-1895.2004.00252.x>
- Richter, J., & Chambers, L. (2014). Reflections and outlook for the New Zealand ETS: Must uncertain times mean uncertain measures? *Policy Quarterly*, 10, 57–66. <https://doi.org/10.26686/pq.v10i2.4485>

- Roe, E. (1989). Narrative analysis for the policy analyst: A case study of the 1980–1982 medfly controversy in California. *Journal of Policy Analysis and Management*, 8, 251–273. <https://doi.org/10.2307/3323382>
- Roe, E. (1994). *Narrative policy analysis*. Durham, NC: Duke University Press.
- Sabatier, P. (2000). Clear enough to be wrong. *Journal of European Public Policy*, 7, 135–140.
- Sabatier, P., & Jenkins-Smith, H. (1993). *Policy change and learning: An advocacy coalition approach*. Boulder, CO: Westview.
- Schmidt, V. (2010). Taking ideas and discourse seriously: Explaining change through discursive institutionalism as the fourth ‘new institutionalism’. *European Political Science Review*, 2, 1–25. <https://doi.org/10.1111/j.1467-9248.2012.00967.x>
- Shanahan, E., Jones, M., McBeth, M. (2011). Policy Narratives and policy processes. *Policy Studies Journal*, 39, 535–561. <https://doi.org/10.1111/j.1541-0072.2011.00420.x>
- Shin, H., & Choi, B. (2014). Risk perceptions in UK climate change and energy policy narratives. *Journal of Environmental Policy & Planning*, 17, 84–107. <https://doi.org/10.1080/1523908X.2014.906301>
- Stone, D. (2002). *Policy paradox: The art of political decision making*. 3rd ed. New York, NY: W. W. Norton.
- Swidler, A. (2001). What anchors cultural practices. In T. Schatzki, K. Cetina, & E. von Savigny (Eds.), *The practice turn in international politics* (pp. 83–101). London, UK: Routledge.
- Thiha, Webb, E., & Honda, K. (2007). Biophysical and policy drivers of landscape change in a central Vietnamese district. *Environmental Conservation*, 34, 164–172. <https://doi.org/10.1017/S037689290700389X>
- van Eeten, M. (2006). Narrative policy analysis. In F. Fischer, G. Miller, & M. Sidney (Eds), *Handbook of public policy analysis: Theory, politics, and methods* (pp. 251–269). Boca Raton, FL: CRC Press.
- Weible, C., Sabatier, P., & McQueen, K. (2009). Themes and variations: Taking stock of the advocacy coalition framework. *Policy Studies Journal*, 37, 121–140. <https://doi.org/10.1111/j.1541-0072.2008.00299.x>

Table 1: Interviews by sector

Sector	No. of interviewees
Politician	5
Departmental official	4
Industry representative	6
Independent expert (e.g. consultancy, NGO)	5
Academic	3
Total	23

Table 2: Documentary sources

Classification	No. of documents
Government publications and documents	48
Parliamentary records	25
Stakeholder groups	109
Independent analysts	36
Academic publications	22
Total	240

Table 3: Main assumptions of the NZ ETS narratives

Issue opinions	Domestic Efforts Narrative	International Offsetting Narrative
Membership	Greens, partly Labour, ENGOs, many academics, foresters	National, ACT, NZ First, trade- exposed industry, farmers, some academics, foresters
Views on climate change	Pressing policy issue	Important policy issue
Trust in the ETS	Low trust in the NZ ETS or in the current calibration of the ETS	Trust in the NZ ETS because it achieves government goals
Kyoto scheme	NZ applies double standards by declining to join Kyoto II while still using its rules	Kyoto rules are internationally recognised and NZ contributes effectively by emphasising international emissions reductions
NZ domestic emissions	NZ domestic emissions must be reduced; the economy should restructure	Global emissions are what matter. NZ emissions can rise provided the country contributes fairly to international efforts. It is better to have production in NZ's emissions-efficient economy
Performance of NZ ETS	Does not reduce emissions, but gives appearance of action while sanctioning business as usual	Works as intended. Sectors accept carbon price because the price is not too high; it is impacting on behaviour
International linking	Linking weakens incentives for domestic emissions reduction	International links are central to achieving targets and reduce net global emissions
Trade-exposure	Trade exposure does not justify avoiding domestic action. Little evidence of major carbon/production leakage. NZ economy needs to decarbonise to retain long-term competitiveness and green image	Carbon burdens should be imposed on overseas competitors. NZ industry is exposed to international competition and needs protection; the emphasis must be on reducing cost burdens
International allowances	Not reliable in quality or price; should be avoided or used within strict rules	NZ should contribute to global abatement by using international allowances. Regulation secures the integrity of international allowances
Types of allocation	Auctioning based on absolute emissions; no free allowances.	Intensity-based allocations do not constrain growth or place excessive costs on business