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Conservation labour and the environmental state

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ABSTRACT

This paper develops a labour theory of the environmental state through an analysis of natural resource management (NRM) work in regional New South Wales, Australia. Drawing on 20 career-history interviews with community coordinators, state extension officers, NGO staff and ecological scientists, it examines three decades of organisational churn: the rise and retreat of Landcare, the replacement of Catchment Management Authorities by Local Land Services and the growth of market-based regulation. NRM workers describe careers marked by contingency, gendered divisions of labour and continual adaptation to shifting regimes of regulation and funding. While institutions are repeatedly reconfigured, the NRM branch of biodiversity governance persists through the everyday work of professionals who carry knowledge, relationships and practices across reform cycles. Situating these trajectories within state theory, the paper argues that conservation labour is the connective tissue through which formal instability coexists with operational continuity, enabling the environmental state to manage ecological crisis, despite ongoing organisational churn.

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Introduction

Environmental statecraft is the practice through which governments organise institutions, policies and labour to govern ecological crises while sustaining the conditions for capital accumulation and political legitimacy. State theorists in multiple traditions have shown how states deliver and regulate nature as a use-value to capital (e.g. O'Connor 1998; Parenti 2015), how environmental governance is shaped by democratic legitimacy struggles and professional expertise (e.g. Frickel and Davidson 2004; Harrison 2016). Across this work, the state can be seen as contradictory, facilitating resource exploitation, while simultaneously tasked with environmental protection. In conservation, holding these contradictory dynamics together requires collective work amidst institutional instability.

Biodiversity governance in southeastern Australia offers a crucial case. The mismatch between ecological and political time is highly visible, as is a pattern of recurrent institutional change. Ecological restoration of temperate woodlands and grasslands requires decades of continuity, while governments recycle programmes with each electoral term (Robins 2007; Robins and Kanowski 2011). Conservation scientists warn that threatened species require stable institutions, long-term monitoring and durable community relationships (Lindenmayer, Bennett, and Hobbs 2010; Woinarski, Garnett, and Legge 2024). However, Australian biodiversity policy is marked by frequent programme redesign and organisational restructuring. Importantly, this does not imply institutional disappearance. Environmental laws persist, organisational repertoires endure, reports get archived and later reworked and organisations like Landcare continue even as funding streams and administrative arrangements intermittently wobble.

Natural resource management (NRM) has been the main framework through which governments in Australia have attempted to address biodiversity decline on private land. From the voluntarism of the 1989 National Landcare Program, through the regionalisation of state agencies like Catchment Management Authorities, Australian NRM has cycled through successive institutional designs that promised durable capacity but were repeatedly reworked (e.g. Marsh and Pannell 1998; Pannell et al. 2006; Robins 2007). These reforms did not erase conservation governance, but they have altered the terms under which

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continuity had to be produced, leaving staff and communities to adapt within shifting organisational arrangements.

This paper advances a labour process approach to this example of environmental statecraft. State theory treats the state as a relational ensemble rather than a unitary actor (Jessop 2008). Feminist perspectives show that state projects are materialised in the daily work and employment conditions of bureaucrats (Connell 1990, 2006a). Similarly, recent research demonstrates how environmental officials' discretionary judgements mediate between political priorities, organisational norms and social movements (Harrison 2016). From this perspective, labour is the connective tissue of the environmental state. Conservation work is the site where state contradictions are enacted and negotiated in practice.

This paper asks two questions: (1) How have shifting NRM paradigms restructured the work of conservation on the ground? (2) What does the labour of NRM professionals reveal about the character of the environmental state in Australia? Our argument is that biodiversity governance in NSW demonstrates a distinctive modality of statecraft: permanent reform (Hood 1998). Programmes are launched and dismantled, institutional designs tried and abandoned, and markets layered onto voluntarism and regulation. Using evidence from career interviews, the paper develops a labour theory of the environmental state. It argues that Australian NRM operates through a pattern of permanent reform in which formal instability coexists with operational continuity sustained through the everyday labour of conservation workers.

Towards a labour theory of the environmental state

Understanding how the state governs biodiversity in Australia requires a framework that goes beyond policy instruments or institutional design. The long history of NRM reveals a system marked by repeated institutional reorganisation, while ecological crises worsen (Lindenmayer, Bennett, and Hobbs 2010). Importantly, this churn does not imply institutional collapse, but a reworking of the conditions under which continuity is produced. Regional NRM therefore provides a critical case for rethinking environmental state theory through attention to labour.

Scholars have urged us to recognise that the state is comprised of people and interpret everyday practices of officials and environmental staff as they respond to social movements and public conflict (Harrison 2016, 2017, 2022; Sneddon, Magilligan, and Fox 2022). Frickel and Davidson (2004) similarly theorise environmental professionals as central to legitimacy and reform. By placing labour at the centre, this paper theorises not only the contradictions of the environmental state but also its recursive reorganisation also its recursive reorganisation – what Palumbo and Scott (2018) call *permanent reform*.

Managing the biodiversity crisis in Australia

Biodiversity conservation has been a foundational domain of environmental governance in Australia since the first National Parks were set up in the late 19th century. Early conservation institutions were primarily oriented towards public land and protected areas. NRM as a field is defined as a form of state conservation work a century later. NRM is focused on both private and public conservation efforts, responding to intersecting biodiversity, water and soil salinity crises, extending conservation governance beyond public reserves and leading to a proliferation of local groups – especially in NSW – where coordinators, often women on short contracts, built volunteer networks around tree-planting, creek fencing and weed control (Beilin 1995; Lockie and Lyons 2001).

This institutional experiment unfolded against the backdrop of a worsening biodiversity crisis. Australia has one of the highest extinction rates in the world: more than 1800 are formally listed as threatened (Bradshaw 2012; Woinarski, Burbidge, and Harrison 2015). Ecological scientists consistently record declines in woodland birds, mammals and reptiles, driven by land clearing, invasive species and climate change (Lindenmayer et al. 2018; Woinarski, Garnett, and Legge 2024). They emphasise that repair requires long-term stability, monitoring and continuity, which is precisely the conditions undermined by short-term projects and organisational churn (Lindenmayer, Bennett, and Hobbs 2010).

Regional NRM is a regime of policy and programmes within the broader biodiversity conservation domain where the mismatch between ecological and political timescales is especially stark. Ecological restoration

demands decades. Policy cycles last about 3 years. This temporal mismatch sets the stage for understanding how the environmental state governs biodiversity through repeated reorganisation rather than coherent long-term institutional strategy and frames the analysis that follows of how biodiversity governance is organised and sustained in practice.

State theory and permanent reform

Environmental state theory was advanced by Australian political scientists in the 1990s, as the prospects for ecologising the institutions of modernity took hold in Europe (Christoff 1996; Dryzek 1995). In Australia, translating these debates into empirical analysis presented political scientists with a range of contradictions between economic, political and ecological imperatives visible in the state. In his early work on the environmental state, Dryzek (1992) articulated structuring and discursive tensions over the imperatives of capitalism, democracy and the administrative state.

Eckersley (2004) articulated the normative vision of a green state: a democratic order capable of integrating ecological values into governance. By contrast, Parenti and other critical scholars describe the state as an environment-making apparatus that renders nature governable while managing capitalism's ecological contradictions (Escobar 1999; O'Connor 1998; Parenti 2015). Together, these accounts foreground a tension between institutional durability and continual reworking in environmental governance.

Rather than beginning from a prescriptive account of what ecological systems require, this paper approaches environmental governance through a simpler theoretical puzzle: how does relative continuity in state practice persist amid continual institutional reform? Here, Hood (1998) adds a crucial dimension to our thinking about the state's approach to public management. He argues that reform itself has become routinised. Crises justify reorganisation, while the instability created by one reform sets the stage for the next (Palumbo and Scott 2018, 26). Australian biodiversity governance provides a clear empirical instance of this pattern. Since the late 1990s, NRM has been subject to repeated cycles of regionalisation, recentralisation and reconfiguration, with programmes and authorities replaced before they have consolidated institutional capacity (Robins 2007; Robins and Kanowski 2011).

If constant reform is an enduring dimension of statecraft, then it is also a strategic and relational condition that redistributes responsibilities for producing institutional continuity over time. Rather than implying chaos or institutional absence, *permanent reform* describes a governing condition in which formal instability coexists with operational continuity. In NRM, environmental laws endure, organisational repertoires persist and policy goals remain recognisable, even as administrative forms and funding mechanisms are repeatedly reworked. Reform governs the conditions under which institutional stability is produced, largely through collective labour.

Seen through this lens, Australian NRM is not as weak or failed, but it can be understood an expression of structural contradiction. The state promises ecological repair while maintaining commitment to the conditions of agricultural production and landholder property rights. It builds new institutions, then dismantles them and funds conservation, then withdraws local support while advancing new performance measures. These oscillations are constitutive of the environmental state rather than anomalies to be resolved.

Labour as the connective tissue of the environmental state

To theorise the work of environmental statecraft, we need to bring labour into state theory. Jessop (2002, 2008) strategic-relational approach emphasises that the state is not a unitary actor but a relational ensemble of institutions, strategies and actors. The state is a process, not a thing. Because the state is a terrain of institutions, which have relative autonomy from competing capitals (e.g. agriculture lobbies) and social interests (e.g. conservation advocates), the state does reform for the purpose of securing society's ecological goals. As reform processes unfold, the state condenses or embodies the outcomes struggles between these forces into the logics of laws, policies and funding decisions. These struggles are enacted through administrative work. And crucially, the work of translating policy into practice takes work.

Jessop has little to say about the role of labour in sustaining these relations. Who carries the outcomes of 'policies processes' into the state's institutions? Who improvises when institutional paradigms falter? Feminist state theory provides one approach to bringing the work of statecraft into the conceptual

frame. Connell (1990) develops a theory of the state combining strategic-relational analysis with feminist research, arguing that the state is not only an abstract structure but also a social field, where bureaucrats, often women, enacted and negotiated reforms. Her studies of the ‘feminist state’ (Connell 2006a, 2006b) revealed how gender policy ambitions were translated, diluted, or undone through the daily work and employment conditions of staff. Here too, bureaucrats were workers negotiating contradictions. Sometimes they were sympathetic to feminist goals, sometimes institutional goals held stronger. Similarly, environmental bureaucrats’ expertise and discretion mediate between bureaucratic and professional norms and social movements (Harrison 2016).

Connell’s approach offers a model for studying environmental statecraft and the process of negotiating change. NRM staff are not neutral implementers but workers negotiating contradictory ecological, economic and administrative imperatives. They do not replace institutions; rather, they activate, recombine and stabilise institutional fragments under conditions of repeated reform. Their careers carry the institutional memory of programmes, their daily tasks mediate between ecological goals and agricultural power, and their precarious conditions reflect the fiscal austerity and political constraints of the state. It is through this labour that the environmental state achieves continuity in practice.

Methods and study cohort

This paper combines a literature survey with interview data, split into two sections: Findings I and Findings II. Findings I draws on a qualitative synthesis of existing policy analyses, ecological research and institutional histories to characterise the evolution of NRM governance in NSW. This section consolidates established findings on programme design, reform cycles and governance paradigms to specify the structural conditions shaping conservation work. Findings II builds on this context through interview material, examining how NRM workers navigate and reproduce governance amid institutional churn. Table 1 synthesises these sources, drawing on the literature, a desk review of key NRM programmes and interview data.

The analysis draws on 20 career history interviews with community coordinators, state extension officers, NGO staff and ecological scientists working in southeast New South Wales. Interviews invited participants to narrate their work trajectories in their own terms, beginning with early life and education, then moving through employment histories and present roles. This approach, adapted from Connell and Wood’s (2002) method situates careers within shifting institutional landscapes shaped by class, gender and geography.

Table 1. Shifts in Australian NRM governance (federal, state, regional).

Period (paradigm)	Federal (Commonwealth)	NSW state	Regional (NSW)	Implications for NRM labour
Late 1980s–1990s Voluntarism	National Landcare Program (from 1989) funded community groups.	Vegetation laws weak; emphasis on partnership with farmers.	Hundreds of local Landcare groups form.	→ Volunteer capacity relies on unpaid/short-term local coordinators (mostly women)
2000s Regionalisation	Natural Heritage Trust (NHT), NAPSWQ required regional plans.	Supported CMA legislation and bioregional authorities.	Catchment Management Authorities (2003–04).	→ Salaried staff and local science engagement, but dependent on federal grants.
2007–2013 Centralisation	Caring for Country recentralised funds, shifted to tenders.	Implemented funding through state contracts.	CMAs constrained; short-term projects.	→ Staff churn; grant-writing dominated.
2013–2016 Re-agriculturalisation	Federal programmes ongoing but narrowed.	CMAs amalgamated into Local Land Services (LLS, 2013–14).	NRM absorbed into LLS agriculture/biosecurity agencies.	→ Biodiversity effort diluted; job cuts, outsourcing.
2010s–2020s Market-building and volatility	Carbon Farming Initiative (from 2011), ERF (from 2014); Nature Repair Market (from 2023); Safeguard reforms (from 2023).	NSW Biodiversity Conservation Act (2016) with offset scheme.	NGOs shift to brokerage; regional NRM and Landcare staff extension dealing with offsets and carbon projects.	Smaller NRM initiatives at risk; monitoring subordinated to compliance metrics; ecological outcomes deferred.

The cohort included Landcare groups, Local Land Services (LLS), conservation NGOs and research institutions, reflecting the organisational ecology of NRM in NSW. Landcare coordinators were typically employed on short-term or part-time contracts in community-facing roles, while LLS staff more often held stable advisory or technical positions, and NGO workers occupied hybrid roles shaped by project funding and emerging market logics.

Findings I. The contingent states of rural conservation

The governance of biodiversity in NSW is shaped across three interlocking scales. At the federal level, the Commonwealth sets the funding logics and legal frameworks, from the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999* to carbon farming and biodiversity markets. At the state level, NSW governments have retained primary control over land-clearing policy and the institutional architecture of NRM, moving from CMAs to Local Land Services (LLS) and introducing the *Biodiversity Conservation Act 2016*. At the regional level, the work of conservation is enacted: CMAs, LLS staff, Landcare groups and NGOs translate shifting federal and state priorities into day-to-day projects. It is here, in the labour of coordinators, extension officers and local networks, that the contradictions across scales are managed.

Australia's NRM system was born in the late 1980s out of concern about land degradation, salinity and biodiversity decline and consolidated under the banner of the 1989 National Landcare Program, which seeks to enrol farmers and communities as stewards of land (Curtis 2000; Robins 2018). The Landcare movement was widely celebrated, but it was not neutral. Funding for coordinators was short-term, often part-time and disproportionately taken up by women juggling family responsibilities (Beilin 1995; Lockie and Lyons 2001). From its inception, then, Australia's NRM model combined voluntarism with precarity, relying on the enthusiasm and unpaid labour of rural residents while retreating from long-term public investment. This configuration established an enduring pattern of reform without consolidation.

At the same time, NRM governance was never simply neoliberal. Lockwood and Davidson (2010) argue that Australian NRM has always been a hybrid regime, shaped by three competing and co-existing 'mentalities': neoliberalism, ecocentrism and localism. These competing constructions of 'nature' frame ecologies variously (Escobar 1995), sometimes as natural capital, sometimes in terms of intrinsic values, local stewardship and community autonomy. Together these logics interact in contradictory ways – sometimes competing, sometimes accommodating each other. Their shifting balance has structured NRM's institutional trajectory.

By the early 2000s, policymakers recognised that small groups could not solve systemic ecological crises alone. The response was regionalisation. NSW established Catchment Management Authorities (CMAs) in 2003–2004, one in each bioregion, charged with developing and implementing regional strategies for land, water and biodiversity. The CMAs were funded through block grants, often buoyed by mining royalties and privatisation proceeds. They were widely viewed as a promising experiment in devolved environmental governance (Dovers and Wyborn 2009).

Importantly, CMAs were not just state government creations. They were embedded in federal strategies under the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality (NAPSWQ). Yet optimism soon faded. The 2007 launch of the federal *Caring for our Country* programme re-centralised control. Block funding was replaced with short-term, competitive tenders tied to narrowly measurable outputs. As Robins (2008) observed, the logic of capacity building was replaced by a focus on deliverables – hectares treated, weeds removed, kilometres fenced. Regional bodies lost autonomy, and institutional memory fragmented as staff churned between projects. The contradiction created frustration in the sector. The state invested in regionalisation precisely because ecological repair requires long-term capacity, then it undermined that capacity through funding design.

At the national level, Evans (2016) shows that biodiversity loss is driven not only by ecological pressures but also by macroeconomic cycles, enabled by tenure regimes. Clearing surges when commodity prices rise and when state vegetation laws are weakened, particularly in Queensland and NSW. National policy for biodiversity, and now for 'carbon farming', recognises these drivers but fixates on grant-based funding vulnerable to electoral cycles (Denniss and Grudnoff 2011; Pearse 2018).

The next wave of reform came with the amalgamation of CMAs into Local Land Services (LLS) in 2013–14. The rationale was efficiency: bringing NRM, agricultural advisory and biosecurity under one roof. In practice,

it meant NRM was diluted within agencies dominated by agriculture. Staff numbers fell sharply, outsourcing grew and biodiversity was no longer a dedicated focus (Robins and Kanowski 2011). This regionalisation reasserted agriculture's primacy in institutional design (Gunningham 2009; Lockie 2009), even as federal frameworks under the EPBC Act continued to set the legal context. For those working in regional offices, this meant negotiating priorities in agencies whose core business was farm productivity rather than ecological repair.

At the same time, the market turn gathered pace. The Carbon Farming Initiative (legislated in 2011) and Emissions Reduction Fund (ERF, first announced in 2014) created incentives for land carbon sequestration, while the *NSW Biodiversity Conservation Act* (2016) introduced a biodiversity offsets scheme. NGOs like Greening Australia pivoted into brokerage, packaging revegetation projects as credits. Clive Spash (2010, 2015) and Lindenmayer et al. (2023) warn that such schemes risk perversity, where ecological projects are designed for accounting rather than ecosystems. Gibbons et al. (2018) found that even after a decade of biodiversity offsetting, there was no measurable decline in deforestation rates, with notional vegetation gains projected more than a century into the future. Markets will not solve the underlying drivers of loss and the organisational churn problem (Pearse and Böhm 2015).

In the 2020s, the state has doubled down on markets and offsetting at the national level of government. The *Nature Repair Act 2023* promised a national framework for biodiversity credits. The 2023 Safeguard Mechanism reforms revived carbon offset demand. NGOs now debate whether to remain educators or become intermediaries in biodiversity finance. Some hope markets will finally deliver continuity; others fear they will amplify volatility and erode community trust. Bonneuil (2015) traces the ideological roots of biodiversity offsetting to a managerial rationality that seeks to reconcile economic development with ecological crisis, while masking structural contradictions. Here Evans (2023) critique of 'backloading' offset decisions under the EPBC Act applies: national biodiversity markets project benefits decades into the future, while leaving unresolved the political conflicts over land clearing and agricultural expansion in the present. Regional NRM staff in NSW are left to mediate these contradictions on the ground, tasked with enrolling landholders and monitoring credits while coping with the instability of shifting policy instruments.

While this history is often narrated as one of the repeated institutional failure, it is better understood as a pattern in which formal instability coexists with operational continuity.¹ As studies of environmental governance show, policy effectiveness frequently depends less on stable organisational forms than on the social and professional networks that connect actors across scales (Bodin and Crona 2009). In NSW NRM, programmes are renamed and funding streams get reconfigured. Meanwhile, familiar repertoires of practice persist. Landcare, and increasingly LLS, dependence on grants is a symptom. Reports are produced and the issues rebranded over time, and regional offices retain tacit knowledge of landscapes, landholders and past interventions. What changes is not the existence of conservation programmes, but the terms under which continuity must be actively produced, increasingly through relational labour rather than durable institutions.

Across these decades, a pattern is visible. Every decade brought a new 'paradigm' (Robins 2007). Table 1 characterises these paradigms as voluntarism, regionalisation, centralisation, re-agriculturalisation and marketisation. Each promised an institutional fix. Each was undone within years. What has remained constant is the displacement of continuity onto NRM labour rather than institutions. Programs are designed for electoral cycles, not ecological timescales. Institutional memory resides in the people who carry projects across restructures, not in agencies themselves.

In short, state reforms re-assert agriculture's primacy, and regional NRM bodies cope through highly contingent collective labour. It is this labour – rather than institutional stability – that sustains biodiversity governance in practice, shaping their careers and ecological work.

Findings II: the labour of NRM as a source of continuity

Careers of the contingent state

Careers in NRM are a window into how institutional continuity is actively produced by its labour force. Organisations are restructured, re-named or dismantled, but many workers move between Landcare, CMAs, LLS, NGOs and research groups. They knit the conservation apparatus together through memory, skills and relationships. Most interviewees trained in agricultural or environmental science, but also by pragmatic

moves between short contracts, shifting agencies and lifestyle choices. Distinct career types emerge: local coordinators, itinerant professionals and boundary-spanning scientists. Together, these careers show how permanent reform reorganises work of continuity. As organisational forms change, continuity must be assembled through mobile careers, re-used materials and relationship maintenance.

Finnegan described his career in terms of institutional movement, from: *'a national NGO to a statutory authority in Victoria to a community-based NGO to statutory authority and now an agency within a department in New South Wales'* (Finnegan, manager, LLS). His trajectory captures the style of career mobility that defines modern conservation work, where continuity depends on individuals adapting to the churn of programmes and employers. Sally (coordinator, Landcare) has held a similar set of community-facing roles across multiple organisations and funding rounds: *'I've been doing the same job for 20 years, but with multiple employers.'* Her continuity embodies a stable practice sustained under precarious employment. Through Sally's labour, the same relationships and ecological commitments are sustained.

Across interviews, staff consistently described NRM as structurally contingent, defined by project-based funding rather than enduring public service provision. Within middle management of the state government agencies, Sam (senior officer, LLS) traced the evolution of extension from relational advice to performance-managed project work. *'We don't charge people for our services. So therefore, the state has certainly questioned why we should be in that one-on-one type role ...'* Sam further reflected on the turn to *'project managing'*, contrasting this with earlier periods when extension officers combined plans, field days, workshops and sustained one-on-one engagement to support landholders to implement works over time.

Others echoed this view, emphasising that extension remains an incremental and trust-based craft, even as formal roles shift toward project oversight rather than direct engagement. Ian (conservation NGO) described a parallel shift, from few staff doing hand-on work, more time spending managing contracts and third-party delivery. Landcare is an organisation where relational work is kept alive. Sally contrasted the creativity and autonomy of Landcare with the rigidity of government work: *'The reason why I left the CMA was because that pathway to have ideas and make things happen isn't there in government ... it's very set ... whereas, in Landcare it's a lot more flexible.'* Her pragmatic solution to funding churn was simple: *'We invent projects [laughs] for good people to do.'*

Managers also pointed to the contraction of funding available for long-term, science-informed management, particularly in comparison to earlier periods. Ivan, a long-term officer working across government and NGOs, observed that NRM has always been contingent: *'there's no long-term funding of NRM ... not like a healthcare system'* (manager, LLS). Luke (senior officer, LLS) quantified the local workplace decline: *'We started with 90 staff, we're down to 60 now ... 70% are contracted.'* The local financial squeeze is just as stark: *'In 2006 we had a revegetation project in [our region] that was \$3 million ... this year for the whole [region] it's \$300,000.'*

Taken together, these trajectories demonstrate how state contingency shapes not only policy outcomes but also professional lives. NRM careers are less about climbing ladders than about surviving collapses, shifting between organisations and carrying memory across institutional churn. At the same time, NRM workers operating in a cooperative organisational ecology. Workers provide continuity across changing organisational landscape, but at the cost of insecurity.

Dealing with organisational churn and permanent reform

NRM workers have lived through the churn of paradigm shifting since the 1990s. The celebrated rise of Landcare, the shift to CMAs, the short-lived regional model and the amalgamation into LLS were all described not as neutral reforms but as cycles of upheaval. Workers expressed fatigue and pragmatism in equal measure. They spoke of constantly adjusting to new institutional logics and new priorities while trying to hold ecological projects steady. This 'permanent reform' has drained capacity, undermined institutional memory and destabilised relationships with landholders. Yet workers continue to improvise, holding together community networks and ecological commitments as best they can.

Crucially, reform also redistributes continuity-work: proposal-writing, metric compliance, partnership maintenance and the reuse of materials and relationships become core tasks rather than background support. Several interviewees framed NRM's volatility through the rhythms of public finance itself. Ivan recalled the early 2000s as a time when *'They had a fair bit of money and they were throwing a fair bit of money into the landscape towards revegetation works or remnant protection type works'* (Ivan, LLS). Others stressed

how these temporary surges acted as regional stimulus. Sally (Landcare) observed: *'We underdo the economic impact of those [funding booms] ... it kept a heap of local contractors going through times when they wouldn't have had any money.'*

Sally described the labyrinthine funding channels that have accompanied these reforms: *'It's ironic, most of the funding we get really comes through federal channels. Now it goes through LLS, then back to us.'* Ivan (LLS), who experienced the CMA-to-LLS transition from within, explained how *'It becomes a much bigger organisation ... but ultimately it means less dollars going to core NRM, and less dollars towards monitoring and evaluation reporting.'* He also noted how accountability had shifted with NSW Treasury's changing demands: *'In the early days of LLS, they were very much about, "Just tell what activity you do ... how many hectares." Whereas now ... they're more about, "What have been the outcomes?"'* Luke (LLS) was blunter about the perverse effects of funding booms, when *'you're shovelling money out the door ... instead of being strategic with it.'*

What's at stake is the capacity for sustained collective work. Nina (coordinator, Landcare) questioned whether the new metrics captured meaningful change: *'I can understand they need outcomes ... but we haven't engaged 40 people. How many of those will change anything?'* Ian (conservation NGO), recalling a major national programme, was equally cynical: *'20 Million Trees ... it was stems out. Dollars in, stems out. Fairly blunt ecological metric.'* Sally (Landcare) described organisational whiplash from one restructuring: *'It nearly killed a lot of Landcare groups when government changed its policy and gave all the money to CMAs ... and then we had to negotiate to have it come back out.'*

The state's funding architecture has produced an uneven ecology of work, where responsibility for environmental repair is divided, casualised and distanced from structural change. Rosemary (coordinator, Landcare) drew out the informal division of labour that has evolved through these shifts: *'Because Landcare doesn't have those strict government guidelines ... it's good to put the little farmer's projects into a Landcare grant'*, she said. *'If LLS is doing that well, let's not get in competition with each other ... I think they can see Landcare has potential to do more of that capacity building stuff.'* Natalie (coordinator, Landcare) illustrated how this logic filters down to the level of wages and hours. *'In [our region] ... they divided the amount of money by the number of coordinators. Which means that each of us gets 8.75 hours of work.'*

Faced with such fragmentation, workers have developed improvisational habits to hold projects together. *'Sometimes you're spoilt for choice and sometimes there's very little. This is the program for this year. We'd better work something out that we can do with it'*, said Sally (Landcare). Daniel (conservation NGO) described the practical reality of 'chasing tenders'. Luke (LLS) took a structural view, predicting ecological crisis will fuel more institutional change: *'Everyone other than probably the federal government has realised climate change is a fair dinkum threat ... that's the issue that will drive us towards wholesale change.'*

These accounts depict organisational churn not as a background condition but as a structuring logic shaping conservation labour. Workers improvise by chasing tenders, reworking ideas and carrying relationships across programmes. They develop pragmatic skills to cope with permanent reform, but they also absorb its emotional and ecological costs. In this way, churn functions as a mode of governance. NRM workers become both the buffers and the shock absorbers of the environmental state's volatility.

The paradox of professionalisation

Over the past three decades, NRM has become steadily more professionalised. Where the early years of Landcare and catchment management were shaped by volunteers and community organisers, most current workers now hold degrees in environmental science, agriculture or ecology. This formalisation has lent the field credibility and technical capacity, but it has also layered scientific authority onto work that still depends on persuasion, translation and mutual aid. Professionalisation has made NRM more accountable to bureaucratic and data regimes, yet its effectiveness continues to rely on trust-based relationships and local knowledge.

Lisa, a regional Landcare coordinator, explained how she depends on research intermediaries to bridge the gap between science and farmers: *'What [university scientists] have been really important – in communicating the research to the practical applications on a farm and what it actually means and why.'* Paul (LLS), who came into conservation through a farm business and government background, expressed similar dependence on translation. For him, scientific legitimacy comes through partnership rather than formal credentials: *'They're really good at bringing the science down to everyone's level ... I use them for field days, I use them to help me understand the systems better.'*

The point of combining science and farm production knowledge is to build imagination as much as legitimacy. Dean, an LLS extension officer, described a similar dynamic: *'For us it's gold because we don't do research. So when it's made so accessible and easy to read ... I just take that out to my next visit and give it to the farmer.'* Taken together, these accounts depict professionalisation not as a hierarchy of expertise but as a collaborative labour process oriented toward usability and relationship-building.

Professionalisation has also brought NRM deeper into the institutional logics of funding, research and evaluation. Ivan (LLS) observed that research now depends on constant reinvention to satisfy multiple funding streams: *'One of the big gaps was ... what difference is all this revegetation making? And that resulted in the contracting of [university scientists] who were already doing the work in the [region].'* The system, he explained, demands novelty: *'There always needs to be a new justification and a new focus, a new science ... but at the same time for me, it's those long-term studies that are the real pots of gold.'* The fragmentation of funding reinforces instability: *'Instead of it just constantly coming from government ... it's constantly, "Now we've got commonwealth, now the state, now philanthropic"'* (Ivan, LLS). Kate, an officer with LLS, made the same point more bluntly: *'LLS is not a research organisation'*. Luke (LLS) summarised the result: *'Resources for baseline science and evaluation have whittled down.'*

Scientists and coordinators alike noted growing reliance on modelling and the erosion of long-term, on-ground data collection. Angus, an ecologist, contrasted the modelling that now dominates evaluation with the grounded field data that once underpinned long-term studies: *'Nearly all long-term monitoring now is based on models ... but long-term monitoring gives proper on-ground, reliable data. And there's not too many people out there collecting it.'* (Angus, government agency). There's a need for environmental scientists in regional areas. Natalie, a regional Landcare coordinator, voiced frustration with limited professional capacity of this kind: *'I'm not an ecologist and none of the committee are ecologists ... I feel like there's definitely a place for a more active role ... It would be great to have someone like [a local scientist] on hand.'*

Within the environmental state's research workforce, there are other divisions. Several interviewees described persistent institutional and epistemic divides between ecological science and agricultural production research, limiting opportunities for integrated practice. Sam, a senior LLS programme manager, explained how structural reforms compounded these tensions: *'When NSW DPI was broken up ... the research component stayed with DPI, the extension component went to LLS.'* Even so, Sam insisted that informal relationships could still make things work: *'It's not as seamless, not as streamlined ... but a lot of us had very well established relationships with the researchers within DPI ... we've had great collaborations at a very local level to get things done.'*

Together, these accounts show that professionalisation in NRM has deepened the reliance on expert authority while exposing the limits of technocratic control. Knowledge is constantly translated across disciplinary, institutional and social boundaries. Its value depends as much on trust and local presence as on formal data. As markets and audit regimes expand, the same workers who mediate between science and community are increasingly pulled into roles of measurement, compliance and brokerage.

Marketisation as a green state labour transition

Across the interviews, carbon and biodiversity markets appeared as the next great transformation of regional NRM work. Staff who had long endured the churn of grants and short-term programmes now found themselves re-imagining familiar activities – fencing, revegetation, bird monitoring – as tradable goods. For some, markets promised a new, more durable form of funding; for others, they signalled the erosion of stewardship ethics and community trust.

Workers described a marked shift in who now shapes conservation finance. Large agribusinesses and corporate offset buyers have entered terrain occupied by community groups and public programs, bringing new forms of capital and new considerations about building community connection and trust. Marketisation is not just a policy framework but a reorganisation of labour, redefining what counts as good stewardship and who can participate in it.

A number interviewees observed that carbon and biodiversity offset markets favour larger (corporate) farms and middlemen. This led to a wariness for Landcare officers. Sally (Landcare) captured the contrast sharply: *'If you started having big corporates come in ... it's a whole different scenario. They're not interested in*

coming along for the social aspect ... it's about business.' New land market entrants tend to value reputation management and productivity metrics over community participation.

Ivan (LLS), reflecting on three decades of funding cycles, situated the carbon and biodiversity market shift in a longer history of economic boom and bust in the NRM funding regime: *'It hit its peak in the early 2000s ... Australia was pretty flushed with money from mining ... we'll probably go through another cycle and I'm suspecting that this next cycle is going to be driven by carbon.'* Finnegan (LLS) situated all payments for ecosystems services (carbon or biodiversity) within the cultural expectation of subsidies for conservation on private land, saying: *'... if we have profitable farms that are able to do good environmental practices on their farms, it'd be great if they could ... rather than going out skiing ... you might choose to set up a little refuge on your farm.'* Yet he also posed the unresolved question at the heart of this shift: *'... if that landholder's producing a public good ... then they should be paid for it. But who pays? Is it the taxpayer?'*

For some conservation NGOs, marketisation has meant becoming intermediaries between corporations and ecological projects. Ian (NGO) explained: *'Corporate days are very popular still ... [Large retailer] plants two trees for every tree used in [their] production ... we are the vehicle for them to do that.'* He described this work as one of packaging and brokerage, where ecological projects are bundled with reputational and communicative benefits for corporate partners. As Ian observed, *'The carbon market has just mobilised a bunch of capital to put into private land.'*

Rosemary (Landcare) warned of the risks this turn entails. *'The sharks ... all want a piece of Landcare because they know we've got landholder databases. That, to me, is unethical.'* She insisted that trust could not be monetised or substituted by market incentives. *'The core benefits to your business is that if you're improving your carbon ... you're improving lots of other things ... selling your carbon is just the icing on the cake.'* Yet, she also recognised the need to support negotiation capacity among landholders.

Inside the state, some officers viewed carbon and biodiversity markets as a pragmatic extension of existing programmes. *'If there is that ability to generate a constant and sustainable level of income from environmental activities ... it will encourage more landholders to be involved'* (Sam, LLS). This logic of steady income mirrored the appeal of past stewardship programmes but transferred its responsibility to private finance. Dean (LLS) captured the dilemma of voluntary participation: *'Birds are an interesting one because farmers don't feel threatened by birds ... they don't eat grass and they don't kill lambs.'* He is drawing out the limits of voluntarism of market paradigms, suggesting that new market incentives alone may not be sufficient to drive participation.

Across these accounts, markets appear as both promise and threat, offering financial continuity but deepening bureaucratic complexity and organisational tension in the largely cooperative institutional ecosystem NRM workers labour to reproduce over time. For some, carbon and biodiversity finance seemed to rescue conservation from endless grant cycles; for others, it risked turning community-based stewardship into a service industry. What united them was recognition that environmental labour is being reconfigured again, from voluntary care and public service into the speculative and audited terrain of the green economy.

Conclusion

This paper has shown how the labour of NRM workers makes visible the contradictions of Australia's environmental state. Through career histories and narratives of daily practice, we see that governance is not enacted primarily through law or infrastructure, but through the contingent labour of coordinators, officers, NGO staff and scientists. These workers carry ecological knowledge across reforms, absorb the practical costs of instability and sustain conservation work. The empirical material does not suggest that NRM workers are uniformly oriented toward managing long-term ecological stability. More often, they're managing a crisis for the state. Creatively doing what they were trained to do. Their work is relational, aimed at creating connections and re-working existing organisational practices to fit new programmes and funding regimes. But it is precisely these professional habits and collective labour that makes biodiversity management possible over time.

At the same time, repeated reform does not imply institutions are ever fully dismantled. Programmes are renamed and funding streams reconfigured. But statutes remain in force, reports are archived and reused, and organisational repertoires and tacit institutional learning endure. What changes is the terms under

which continuity must be actively produced. NRM labour is the medium through which fragments of institutional stability are assembled into workable practice.

The contradictions of the environmental state appear in their testimony in grounded form. On the one hand, governments promise ecological repair; on the other, agricultural primacy and fiscal austerity prevent the long-term investment this requires. Workers are tasked with reconciling long ecological timescales with reforms cycles. The labour of NRM staff therefore functions as a kind of organisational ecology based on cooperation and adaptations. This analysis deepens state theory in two ways. First, it reframes reform itself as a governing practice. Permanent reform is not simply policy weakness but a relational condition that places environmental professions in a labour process of producing continuity amid constant change. In NRM, cycles of devolution, centralisation and marketisation continually reorganise institutions, producing formal instability while relying on labour to maintain operational continuity.

Second, it demonstrates that labour is the connective tissue of the environmental state. Just as feminist state research revealed how gender policy outcomes depended on the work of bureaucrats, so too biodiversity outcomes depend on the precarious, feminised workforce of conservation. NRM staff are not neutral conduits: they are actors negotiating contradictions, mediating between ecological knowledge, political logics and landholder relations. Their testimony illustrates how the contradictions of the environmental state are lived, not just designed.

Sneddon, Magilligan and Fox (2022) call this ‘peopling the environmental state.’ The case of Australian NRM labour extends this orientation by showing how institutional capacity is sustained through permanent reform. The implication follows: What would an environmental state look like if labour justice were treated as a condition of ecological repair? Durable stewardship requires stable funding, long-term staffing and recognition of relational expertise, not simply new markets or reporting systems. Without this, governance remains fragile, reliant on goodwill and improvisation. As biodiversity decline and climate change accelerates, the costs of permanent reform will mount. The challenge is not just to design better instruments but to reorient the state toward valuing and sustaining the labour that makes conservation possible.

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Author contributions

CRedit: **Rebecca Pearse:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing; **Shayma Taweel:** Formal analysis, Writing – review & editing.

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