sustainability

MDPI

Article

Understanding the Social Licence of Carbon Farming in the Australian Rangelands

Alex Baumber [1,*], Rebecca Cross [2], Cathy Waters [3], Graciela Metternicht [4] and Hermann Kam [5]

1 TD School, University of Technology Sydney, Sydney, NSW 2007, Australia
2 School of Geosciences, The University of Sydney, Sydney, NSW 2050, Australia; r.cross@sydney.edu.au
3 NSW Department of Primary Industries, Dubbo, NSW 2830, Australia; cathy.waters@dpi.nsw.gov.au
4 School of Biological, Earth and Environmental Sciences, PANGEA Research Centre, UNSW Sydney, Sydney, NSW 2052, Australia; g.metternicht@unsw.edu.au
5 Faculty of Natural Sciences, Centre for Environmental Policy, Imperial College London, London SW7 2BX, UK; j.kam19@imperial.ac.uk
* Correspondence: alex.baumber@uts.edu.au

Abstract: Carbon farming has expanded in Australia's rangelands over recent years, incentivised under the Australian Government's Emissions Reduction Fund. While this has largely been driven by economic benefits for landholders, the long-term viability of the carbon farming industry depends on its ability to obtain and maintain a social licence to operate in affected communities. Using a combination of survey, interview and focus group methods, involving key stakeholders in far-western New South Wales (NSW), this study reveals that the greatest threat to the social licence of carbon farming is the lack of confidence in governance related to policy complexity and uncertainty. Procedural fairness is a relative strength because of the involvement of trusted community members, and the trust-building strategies employed by the aggregators who recruit landholders to carbon farming. Perceptions of distributional fairness are strengthened by the benefits beginning to flow through rangeland communities, but are weakened by concerns around the equity of eligibility and the land management rules. A focus on participatory policy development, aligning rules with local values and local-scale trust building, is required in order to enhance the social licence for carbon farming in the NSW rangelands.

Keywords: carbon farming; sequestration; trust; equity; SLO; rangelands

Citation: Baumber, A.; Cross, R.; Waters, C.; Metternicht, G.; Kam, H. Understanding the Social Licence of Carbon Farming in the Australian Rangelands. *Sustainability* **2022**, *14*, 174. https://doi.org/10.3390/su14010174

Academic Editor: Giuseppe Todde

Received: 3 December 2021
Accepted: 20 December 2021
Published: 24 December 2021

1. Introduction

Carbon farming, which encompasses a range of practices designed to store carbon in vegetation and soils, has emerged as an important and rapidly growing land-use option in the Australian rangelands over recent years. This expansion has primarily been driven by the Australian Government's AUD2.5 billion Emissions Reduction Fund (ERF), which was extended by a further AUD2 billion in February 2019. While the primary objective of this incentive program is to mitigate climate change through the biosequestration of carbon, a range of other social, environmental, and economic impacts have been observed in, or have been predicted from, carbon farming. Where such outcomes are positive, they are typically referred to as "co-benefits", and these can include the provision of habitat for biodiversity, the protection of soils, enhanced productivity, and the protection of cultural sites and activities [1]. However, not all outcomes of carbon farming are viewed as positive by all stakeholders, with some representing "disbenefits" rather than "co-benefits" [2].

Some of the potential disbenefits of carbon farming that have been raised by various stakeholders include the expansion of undesirable invasive native scrub or "woody weeds" [3], a loss of flexibility for future land-use options [4], and social divisions in rural communities between those receiving payments for carbon farming and those missing out [5]. The balance between the benefits and costs, and their distribution across different stakeholders, are critical factors in determining whether emerging land-use activities, such

as carbon farming, are able to obtain a "social licence to operate" from the communities affected by them [6].

The social licence to operate (SLO) concept has been applied most widely in the mining sector [7], and it is commonly defined as the ongoing acceptance of a project or activity by a local community [8]. Over the past two decades, the SLO concept has moved well beyond its origins in mining and has been applied to a diverse range of land-use practices, including forestry [9], wind energy [10], and cotton farming [11], as well as to a range of other activities outside of the land-use sector, such as finance [12], education [13], and the sharing economy [14].

Carbon farming has yet to be analysed through the lens of the SLO in the academic literature. To address this gap, this paper explores the social licence of the emerging carbon farming industry, using the rangelands of far-western New South Wales (NSW), Australia, as a case study. This is of importance because of the growing dependency on the land sector to deliver low-cost abatements in moving towards net-zero emission aspirations [15,16]. Unlike mining, where the SLO has been explored most extensively, carbon farming has been specifically promoted by the Australian Government for its potential to offer public-good environmental outcomes. In this sense, carbon farming has more in common with certain other activities to which the SLO concept has been applied in recent years, such as wind farms [10], bioenergy plantations [17], and the creation of protected areas [18]. Applying the SLO concept to practices such as these offers the potential to modify and adapt the existing SLO frameworks that have been developed in the mining sector, as well as to better understand the role that governments could, or should, play in facilitating the creation and maintenance of a social licence for the environmentally beneficial practices they seek to promote.

We provide background to the carbon-farming sector in Australia and the SLO concept in Section 2, together with the key research questions that arise from bringing these domains together. The case study methodology is then introduced in Section 3. This is followed by the results (Section 4), and a discussion (Section 5), which is guided by the research questions outlined in Section 2.4.

2. Background and Aims

2.1. Carbon Farming in Australia

Carbon farming refers to land-use practices aimed at sequestering carbon in vegetation and soils. Such practices have been promoted in Australia through the Emissions Reduction Fund (ERF), an auction mechanism through which the Australian Government preferentially purchases lowest-cost emission abatements. While the ERF covers a broad range of emission abatements, the fact that it incorporates carbon sequestration into farming systems makes it a Payment for Ecosystem Services (PES) scheme [2], with the primary ecosystem service of interest being climate regulation through the removal of atmospheric carbon.

Two of the approved ERF vegetation methodologies, human-induced regeneration and avoided deforestation, have seen considerable adoption in the rangelands of northwest New South Wales (NSW) and southwest Queensland [2]. The human-induced regeneration method involves landholders making changes, such as removing grazing animals to allow trees to regenerate, while avoided deforestation involves forgoing a pre-existing right to clear trees. Both methods are subject to eligibility rules that take into account the vegetation type, previous land management, and land-use rights [19]. While most Australian carbon farming sites to date have been in the rangelands, there is increasing focus on the potential expansion of carbon farming in higher rainfall areas, including recent scientific and policy research into land-use practices that increase the soil organic carbon [20].

Aside from climate change mitigation, carbon farming offers a range of other potential benefits for landholders and affected communities. Amongst these "co-benefits" are biodiversity conservation, erosion control, water-quality improvements, productivity increases, and cultural benefits for Indigenous and other local communities [21]. It has been argued that, by capitalising on such a diverse range of benefits, and by enhancing the adaptive ca-

pacity of land managers to deal with future disturbances, carbon farming has the potential to enhance the broader socioecological resilience of Australia's rangelands [5,22]. However, most co-benefit studies have based their forecasts on modelling [23,24] or stakeholder perceptions [25,26], and the hypothesised co-benefits are yet to be monitored, reported, or incentivised in a manner that takes into account contextual differences around individual methods and locations [21].

The acceptance of carbon farming by landholders and surrounding communities may be influenced not only by its potential benefits, but also by the risks of the "disbenefits" being incurred. At the landholder level, potential disbenefits include negative impacts on other farm enterprises and the loss of flexibility around future land use [4,21,25]. For communities surrounding carbon farming sites, potential disbenefits include increased risks from pests and fire [26], and an increase in invasive native scrub at the expense of grass cover, which is typically associated with an unhealthy landscape by many graziers [3]. Social impacts may include an increase in absentee landholdership, and an increased gap between the "haves", who hold land that is eligible for human-induced regeneration or avoided deforestation, and the "have-nots", whose land is not eligible under the rules [5].

2.2. Social Licence to Operate

The SLO concept first rose to prominence in the mining sector in the late 1990s [27–29], where the licence metaphor was used to emphasise the importance of obtaining community approval for extractive projects [30]. References to the SLO concept have grown exponentially over the past two decades, and its application has been extended from mining into other sectors, such as energy, forestry, agriculture, infrastructure, and tourism [31]. In contrast to a legal licence or formal regulatory approval, a social licence is informal and intangible in nature, being sourced from a local community through uncertain and undocumented processes, rather than through a government agency [32,33]. It can be applied at the level of an individual operator, such as a mining company [28], or at the level of an entire industry or practice [6].

While the informal nature of a social licence can make it difficult to measure and verify, failure to obtain one can have very real consequences, such as increased operating costs for industry [27] or increased regulatory restrictions on future developments [34]. Boutilier argues that the failure to acknowledge the de facto veto power that certain civic sector actors can wield by withholding a social licence can have "mortal consequences" for mining companies [30].

The loss of social licence does not automatically lead to a loss of regulatory approval, but a lack of community acceptance can increase the pressure on governments to increase restrictions, or encourage other civic actors to boycott or otherwise hinder development. Recent years have seen an increased recognition that agricultural sectors, such as the red meat industry, risk losing market shares and access if they are unable to demonstrate sustainable land management practices and stewardship to retain their social licence to operate [35]. For practices such as carbon farming, which have been promoted by governments for their potential environmental benefits, there are added risks, such as the environmental benefits not being realised, public money and effort being wasted, and future opportunities being lost because of a lack of trust and goodwill within affected communities.

Carbon farming differs from mining in that it is not an extractive industry, and it has been actively promoted by Australian governments for its environmental benefits. However, these factors do not insulate carbon farming from the risks of failing to obtain a social licence to operate. Wind energy is also a nonextractive industry promoted by the government for its environmental benefits, but it has, nonetheless, encountered resistance in some local communities in Australia, resulting in increased regulatory restrictions [34]. Bioenergy production is another controversial practice that offers the potential for climate change mitigation, as well as other co-benefits for biodiversity and soils, but it has struggled to gain social licence in some contexts because of community concerns about forest harvesting, landscape aesthetics, and air pollution [17]. Protected areas provide a further

example of where environmental benefits supported by governments may not be realised if local communities do not provide the necessary social licence [18].

A key trend in SLO research over the past decade has been the emergence and evolution of models and frameworks for evaluating and measuring the SLO [36]. One commonly used SLO framework, developed by Zhang et al. at the Australian Government's Commonwealth Scientific and Industrial Research Organisation [6], features trust as a central factor, which is determined by community perceptions of distributional fairness, procedural fairness, and confidence in governance (Figure 1). "Distributional fairness" relates to how the costs and benefits of an activity are distributed between stakeholders; "procedural fairness" refers to the equitability of the processes of decision-making undertaken by the proponents of an activity; and "confidence in governance" relates to the extent to which affected communities have faith in the overarching regulatory environment covering an activity [6]. Moffat et al. argue that these determinants, or "drivers" of SLO can be systematically modelled and measured using surveys of citizen attitudes [33].

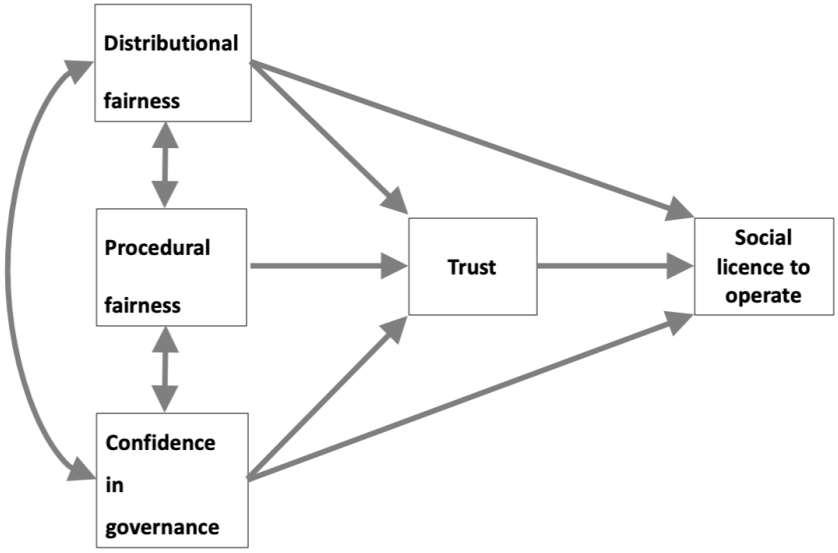

Figure 1. Factors influencing the SLO and their relationships to one another. Adapted from Zhang et al. [6].

Aside from the framework shown in Figure 1, many other SLO frameworks emphasise the importance of trust, including in relation to mining [8], forestry [37], and renewable energy [10,17]. Thomson and Boutilier contend that the SLO can exist at different levels, with "legitimacy" and "credibility" acting as steppingstones on the way to establishing "full trust" [8]. Baumber suggests that procedural fairness and confidence in governance may be interrelated in cases where governments act as the proponents of new land-use activities, such as by providing policy incentives for renewable energy [17]. Some SLO researchers have also noted how a proponent's responsiveness, or adaptability, to changing circumstances plays an important role in not only building an SLO, but also in maintaining it over time [17,37,38].

2.3. Carbon Farming and the SLO

While carbon farming has not been previously analysed using SLO frameworks in the academic literature, previous research suggests that the SLO factors shown in Figure 1 may also be relevant to carbon farming. Trust has been explored in relation to carbon farming in the Australian states of Victoria [26] and Queensland [3], albeit without being explicitly linked to the SLO. In both of these examples, the potential mistrust of the operators of carbon farming programs was highlighted as a potential barrier to the adoption of carbon farming by landholders, and to its acceptance by the broader community. Trust has been identified as a critical factor for enhancing the effectiveness of PES schemes more broadly,

including for biodiversity conservation in tropical forests [39], and watershed protection in Mexico [40].

Distributional fairness has been discussed previously in relation to carbon farming in terms of the financial benefits flowing to the eligible "haves", rather than to the ineligible "have-nots", in far-western NSW [5]. The distribution of the co-benefits and disbenefits amongst different stakeholders has also been discussed in Queensland and Western Australia [21,25]. With regard to procedural fairness, community perceptions may be influenced by the behaviour of those promoting carbon farming, such as the "aggregators" who recruit landholders and aggregate their credits for sale under the ERF. Aggregators and other brokers of carbon farming projects have been identified as less trusted than local early adopters in Victoria [26], and the lack of an on-the-ground "honest broker" has been identified as an issue in the Queensland rangelands [3]. To promote the integrity of the Australian carbon market, a voluntary code of conduct has been established by the Carbon Market Institute that commits ~20 corporate signatories to professional and ethical behaviour [41].

Distributional fairness can overlap with procedural fairness, where the distribution of benefits is determined by rules that have been set outside of the local community (e.g., eligibility rules under the ERF). Procedural fairness can also overlap with confidence in governance, especially in cases where the government acts as both the promoter and the regulator of an activity. In relation to carbon farming, the Australian Government performs this dual role by providing ERF payments as an incentive for adoption, while also setting eligibility rules and ensuring compliance. As such, it is both the proponent of a new industry that needs to build a social licence, as well as the entity that may need to step in with new regulations if the industry fails to build that social licence. Previous carbon farming studies have explored this overlap zone arising from the Australian Government's attempts to simultaneously encourage and regulate carbon farming. Issues that have emerged as a result include confusing eligibility rules, inflexible commitment requirements, policy uncertainty, and high transaction costs [3,21,25].

As with trust, questions around distributional fairness and government rule-setting have also been important research topics within the broader PES literature [40,42]. These broader PES questions are yet to be framed through the lens of the SLO, which offers the potential to consider not only the factors that influence adoption by individual landholders, but also the factors that influence the acceptance from the broader community in an affected region. In relation to carbon farming, applying the SLO concept enables community acceptance to be evaluated, either for individual projects, specific practices (e.g., assisted regeneration in the NSW rangelands), or for the entire carbon farming industry.

2.4. Research Questions

While the key factors identified in previous SLO research appear relevant to carbon farming in Australia, it is unknown which factors are most important, which specific sub-factors are important within each factor, and whether there are any additional factors that are not adequately covered by the existing frameworks. Most SLO frameworks have been developed around mining, and there are key differences between mining and carbon farming that may need to be taken into account. These factors include the facts that carbon farming is not an extractive industry, that its impacts may be less visible than those of mining, and that it has received government policy support because of its role in mitigating climate change. As such, this study focuses on three subquestions within an overarching research question:

Research Question: What are the factors influencing whether a social licence is able to be obtained and maintained for carbon farming at the case study location, including:

(a) Which subfactors are influencing community perceptions of distributional fairness, procedural fairness, confidence in governance, and trust around carbon farming?
(b) Are there any other important influences on the SLO of carbon farming that are not covered by the four factors above?

(c) How do the factors influencing the carbon farming SLO differ from the SLO in mining and other contexts where the SLO has been applied?

3. Case Study Methodology

The target area for this research is the Western and Central West LLS (Local Land Services) regions of New South Wales (Figure 2), where most carbon farming projects in the state are located. A mixed-method multistage approach was employed, including an initial scoping workshop in Sydney that included a focus group, an online survey, and follow-up interviews across the Western and Central West LLS regions, as well as a final focus group held with a different group of stakeholders in Bourke (in the Western LLS region). Rather than providing a representative cross-section of stakeholders suitable for statistical analysis, the methodology employs a phenomenology approach [43] to understand the real and potential impacts of the phenomenon of carbon farming expansion in the NSW rangelands, with a diverse group of stakeholders.

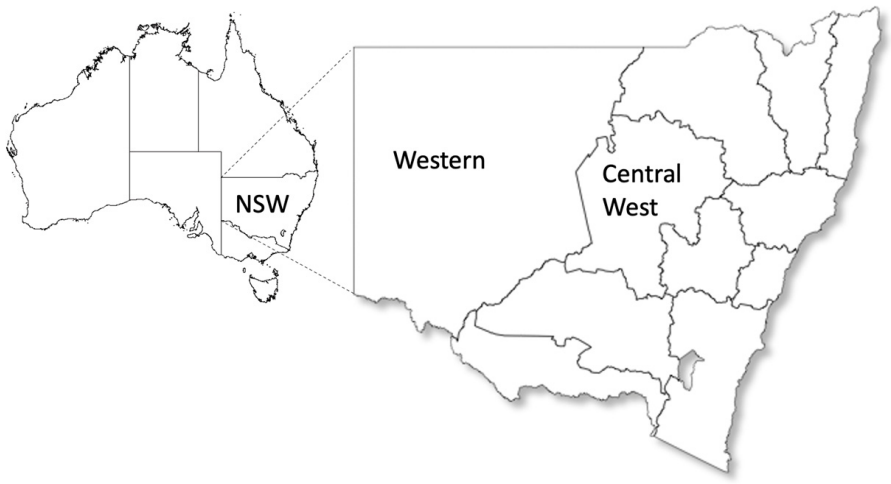

Figure 2. Location of the Western and Central West Local Land Services natural resource management regions within New South Wales (NSW), Australia.

The online survey was developed using Qualtrics to capture and quantify information about the factors influencing stakeholder attitudes towards carbon farming. The survey was distributed via the stakeholder networks of the Western and Central West Local Land Services and the NSW Department of Primary Industries, including local Landcare groups (i.e., groups of landholders collaborating on conservation and production) and special interest/community social media sites. The survey was open online for approximately four months (25 March 2019–31 July 2019), and it generated 38 useable responses, including 20 private landholders (9 with carbon farming projects), 11 government employees, 4 aggregators, and 3 rural service providers. Aside from a range of questions related to the potential benefits and risks of carbon farming, respondents were asked to indicate their level of agreement with each of the four following statements related to SLO factors, on a scale from 0 (strongly disagree) to 100 (strongly agree), with 50 being neutral (neither agree nor disagree):

1. "I trust the companies providing carbon farming services in my region to act responsibly" (trust);
2. "Generally speaking, the benefits and costs of carbon farming are distributed fairly across the community" (distributional fairness);
3. "The carbon farming industry involves fair processes and respects community opinions" (procedural fairness);
4. "I have confidence in the legislation and regulations underpinning carbon farming" (confidence in governance).

The survey was complemented by 10 semistructured interviews and 2 focus groups. These were designed to provide a deeper understanding of the issues and opportunities identified in the survey. The interviews were conducted in person and over the phone, with 9 participants being landholders, and 5 being employees of government NRM agencies (4 were both landholders and government employees). The focus group in Bourke explored similar themes to the interviews, and involved 16 participants (9 landholders, 4 government employees, 2 aggregators, and 1 service provider). The sample sizes are appropriate for a phenomenological research approach, whereby participants are selected on the basis of their shared experience of the phenomenon being studied (the expansion of carbon farming in western NSW), as well as their varying individual characteristics and experiences [43].

The results from the survey, interviews, and focus groups were analysed to identify where the key SLO factors of trust, distributional fairness, procedural fairness/governance, and adaptability were discussed, along with other factors linked to social acceptance or legitimacy not covered by the four SLO factors. The quotes presented from the surveys, interviews, and focus groups were thematically analysed in NVivo 12, and are coded throughout this paper using S (survey), I (interview), or FG (focus group), followed by the participant number and their stakeholder category (e.g., landholder with a carbon project).

4. Results

4.1. Survey Findings

Of the four statements relating to the SLO factors from Zhang et al.'s framework [6], the statement on trust attracted the highest level of agreement across every stakeholder category (mean = 60/100 across all respondents). The statement on procedural fairness had the second-highest level of agreement (53/100 across all respondents), while the statements on distributional fairness and confidence in governance attracted scores below 50 (i.e., the respondents, on average, were more likely to disagree than agree with them).

While the mean levels of agreement with the statements on trust (60/100) and procedural fairness (53/100) were higher than the levels of agreement with the statements on distributional fairness (44/100) and confidence in governance (39/100), differences were also observed between the stakeholder groups. Unsurprisingly, landholders with carbon farming projects tended to agree more strongly with all four statements than landholders without carbon farming projects. Similarly, aggregators expressed higher levels of trust in the companies providing carbon farming services (i.e., themselves). More surprisingly, government respondents expressed lower levels of confidence in governance (32/100) than other stakeholders (e.g., 53/100 for landholders with carbon projects). However, because of the highly variable responses within each group and the small sample sizes, these results should not be interpreted as statistically significant differences between groups.

4.2. Participant Discussion of SLO Factors

The participants involved in the survey, interviews, and focus groups elaborated on the factors affecting trust, procedural fairness, distributional fairness, and confidence in governance in relation to carbon farming. With regard to trust, aggregators, in particular, were cited as having undertaken specific steps to build trust in the region through personal connections, by hiring local people, by listening to landholders, by conducting intense on-the-ground monitoring of carbon projects, and by taking on some of the risk associated with carbon farming. The following responses demonstrate how the perceived quality of the contact processes followed by aggregators (i.e., procedural fairness) have influenced the levels of trust amongst landholders and other community members in the region:

- "*[Aggregator] embedded themselves in the local community, they spend money on education and school days and are always at the show. They tick the trendy box, they employ on values and have employed local people. When they come out to conduct vegetation surveys they camp for 7 days or more in 40-degree heat and they make sure they shop locally*" (I6, Government)
- "*Knowing that they don't get paid unless we are generating credits helps me sleep at night*" (FG1, Landholder with a carbon project)

- *"Thought [aggregators] were just Sydneysiders, didn't trust them, but [they] were great to deal with, they actively built trust with us and are really wearing a big risk"* (I2, Landholder with a carbon project)

Aside from aggregators, landholders were also cited as an important trusted group, whose involvement in the processes of information dissemination could enhance the adoption of carbon farming:

- *"Found out about it at Landcare, had confidence in [early adopter] and he got into it so I gave [aggregator] a call"* (I4, Landholder with a carbon project)
- *"Would prefer an organisation (such as Landcare) that is non-political and not for profit as this would instil more trust."* (S1, Landholder without a carbon project)

While references to aggregators and landholders were largely positive in relation to procedural fairness and trust, numerous concerns were raised about the regulatory environment for carbon farming (i.e., confidence in governance). Specific governance factors cited by participants as barriers to carbon farming include the complexity of the carbon farming rules (e.g., eligibility, land management requirements, treatment of income for taxation purposes), a lack of clear and easily accessible information, and uncertainty about future directions (Table 1). Notably, many of these statements were made by government participants working for state or regional agencies. This reflects the survey results shown in Figure 3, in which confidence in governance was lower amongst government participants than it was amongst landholders.

Table 1. Participant statements evidencing a lack of confidence in governance.

Complexity of Rules	Lack of Information	Uncertainty
"Why isn't it primary production? It was only available to us if we had a PVP (Property Vegetation Plan). We have to maintain firebreaks and help monitor the project and it is only on our property" (I5, Landholder with a carbon project)	*"Where do you go to for info? Farmers are not corporate investors and are trusting of those who knock on their door, maybe even gullible. There was no one to go [to], only two LLS staff had any knowledge of carbon farming"* (I2, Landholder with a carbon project).	*"I question the legitimacy of carbon abatement measured from avoided deforestation and regrowth projects . . . it creates a very narrow view of a very big complex system"* (S23, Government)
"Got 3.5 years worth of carbon payments in one year and lost a lot to tax. We would've paid it out, but now we've put in place things, a different business structure." (I2, Landholder with a carbon project)	*"We had so many landholders asking us very technical questions about carbon farming, many of which remain uncertain to this day. There was a dearth of impartial knowledge in the landscape"* (I8, Government)	*"Being involved in carbon farming business as a project owner and working in the industry I have found that there is a lot of uncertainty in the future direction of carbon farming (policy)"* (S19, Landholder with a carbon project)
	"Need information on who are you dealing with . . . need to be shown it is a bonafide system." (I4, Landholder with a carbon project)	*"Uncertainty created by government indecision is most harmful."* (S31, Government)

With regard to distributional fairness, the research data revealed both positive and negative perceptions. When asked about motivations for adopting carbon farming in the survey, the five most commonly cited factors were all related to economic benefits at the property scale, including diversifying income, diversifying enterprises, increasing income, increasing business resilience, and reducing risk (Figure 4). A key factor for distributional fairness was not just the ways in which the benefits and costs were distributed, but also how risk was distributed, particularly the sharing of risk between landholders and aggregators. Environmental benefits were less commonly identified and were primarily discussed at the property scale (e.g., value of increased vegetation cover and soil health for stock). Some respondents reported broader-scale benefits, such as *"an improved environment for*

animals along with benefits to local biodiversity" (S6, Landholder with C project), but others raised concerns that carbon farming could have negative impacts at the landscape scale by increasing "woody weeds", a common term for invasive native scrub.

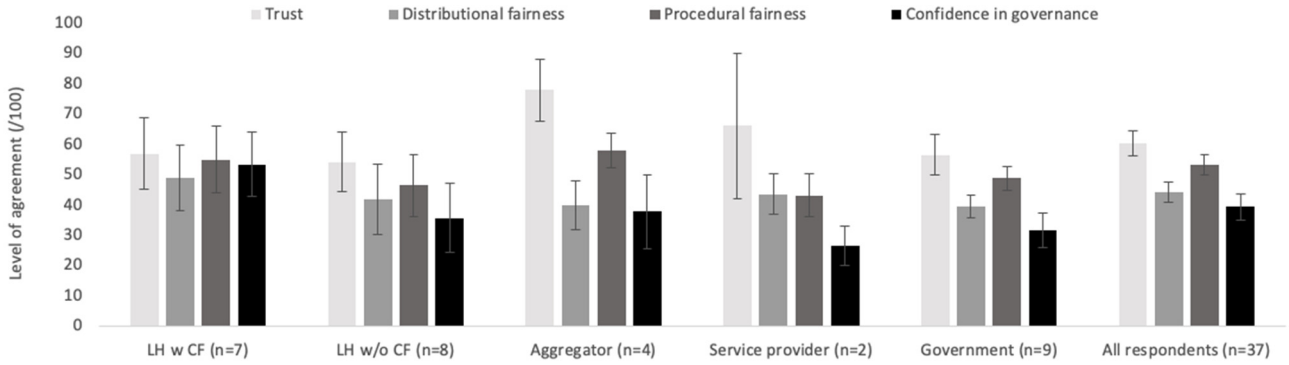

Figure 3. Mean levels of agreement with statements on trust, distributional fairness, procedural fairness, and confidence in governance. Error bars show standard error.

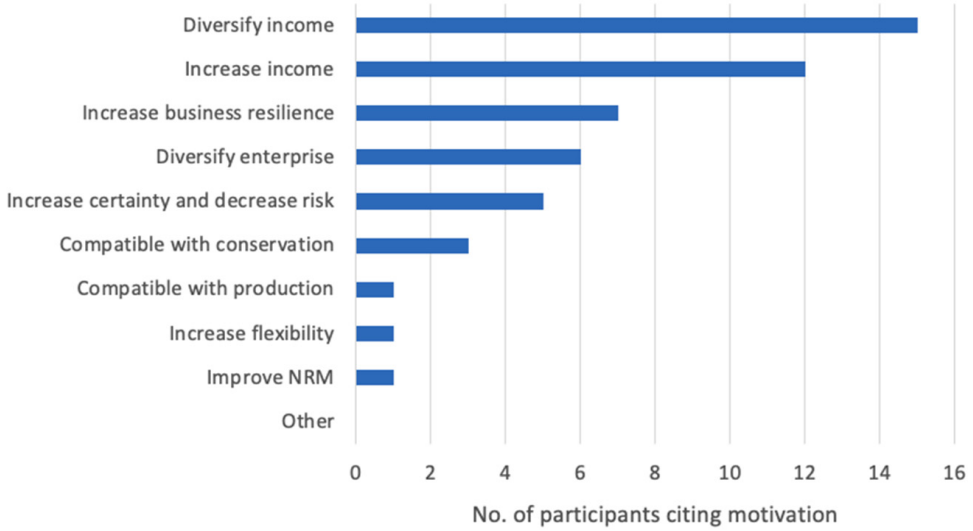

Figure 4. Motivations cited by survey respondents for adopting carbon farming (n = 38).

While interviewees and focus group participants mostly discussed economic benefits for participating landholders at the property level, some discussed the potential flow-on effects for the broader community, which include enabling landholders to hire on-farm labour, to keep their children on the land, and to reinvest money locally to boost the regional economy. For example:

- "*We were able to provide jobs for the kids so they didn't have to keep working in the mines.*" (I2, Landholder with a carbon project);
- "*It is a boom economically on-farm and off-farm . . . while it hasn't been long enough to see evidence of this in the town, not like when you go to cotton towns, it is starting to trickle through*" (I8, Government).

Some participants expressed scepticism that the benefits of carbon farming were being distributed fairly. The eligibility rules were perceived to be a major reason for this, highlighting the interconnections between governance arrangements and the distribution of benefits. Some participants noted that the eligibility rules had led to social divisions, including carbon farmers being seen as a *"secret club"* (I4, Landholder with a carbon project), and the exclusion of carbon farmers from some community events. Comments relating to an unfair distribution of benefits included:

- *"It has given large income to people on poor country where trees were going to grow regardless."* (S12, Landholder without a carbon project);
- *"Generally, more money [is] in the community but not everyone is getting it, [there are] stock agents and graziers that are not eligible"* (S19, Landholder with a carbon project);
- *"[My wife's] family are jealous, they are the have nots"* (I4, Landholder with a carbon project);
- *"Why give some people bucketloads? Why don't they give a bit to everyone to keep everyone on the land?"* (FG2, Landholder without a carbon project).

4.3. Other Factors Affecting Community Acceptance of Carbon Farming

Shared values came up as an important factor that is not explicitly considered in the SLO framework of Zhang et al. [6]. The important shared values identified in this case study include: that land should be actively managed; that future generations should continue to manage the land as graziers; and that a healthy landscape consists predominately of grass rather than trees (Table 2). Landholder values around the active management of land were further demonstrated through the agreement of 84% of the survey respondents with the position (27/32) that carbon farming rules should require the active management of a property in order to prevent absenteeism (Figure 5).

Table 2. Participant statements demonstrating shared values around how land should be used.

Absenteeism	Need for Active Management	Trees vs. Grass
" . . . less people running the landscape" (I8, Landholder without a carbon project)	*"Animal impact is critical in a healthy landscape. Grazing should be permitted with metrics included to ensure it's having a positive effect on the country* e.g., *groundcover, SOC."* (S23, Government)	*"Woody weeds have destroyed good land, why now are we wanting to keep it? I've been trying to control INS [invasive native scrub] for 20 years . . . I want to grow grass not scrub"* (FG2, Landholder without a carbon project)
"Carbon farming is driving down the population . . . " (FG2, Landholder without a carbon project)	*"I believe depending on the project being implemented that carbon farming is very complimentary to agricultural production, particularly grazing management whereby production can potentially be increased while simultaneously sequestering carbon in grasslands."* (S6, Landholder without a carbon project)	*"I am concerned with the long-term growth of shrubs in the area, as this is/was primarily a grassland landscape."* (S9, Government)
" . . . dogs are a major issue on absentee blocks" (I4, Landholder with a carbon project)		

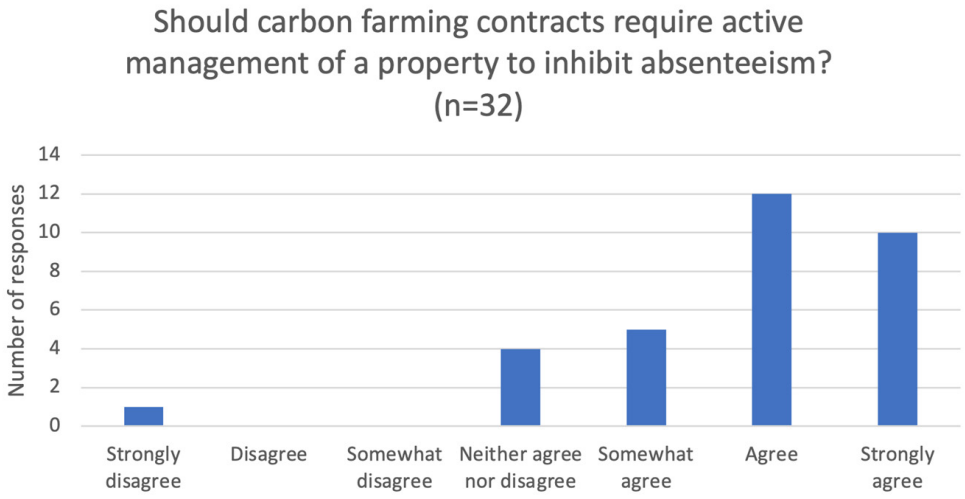

Figure 5. Perceptions of the need for an active management feature in carbon project contracts.

Another factor discussed by participants was adaptability, which has been cited as a determinant of the SLO in previous studies [17,37,38]. Several participants identified the ways in which carbon farming had enhanced their own adaptive capacities by enabling diversification, providing buffers, and facilitating investment in grazing management that would otherwise not have been possible (e.g., fencing, watering points). For example:

- "*We can take risks now with changing our management because we have a guaranteed yearly income*" (I3, Landholder with a carbon project);
- "*[The income] helped fast-track what we would have done anyway, moved ahead much quicker with putting in infrastructure and rehabilitation practices.*" (I2, Landholder with a carbon project);
- "*There is a story around the reinvestment . . . the cash injection lets us expand in a different direction*" (FG2, Landholder with a carbon project).

The potential for carbon farming to enable additional adaptation through reinvestment and risk-taking highlights the fact that, in determining the SLO of carbon farming, it may also be necessary to consider the SLO of any activities that flow from the reinvestment of carbon income. Similarly, adaptations may be undertaken by aggregators or government policymakers on the basis of experiences with the roll-out of carbon farming in regions such as far-western NSW. This feedback may determine how the SLO changes over time, but it is not explicitly considered within the four factors included in Zhang et al.'s framework for the mining SLO [6].

5. Discussion

The results of this study suggest that the greatest barrier to gaining and maintaining a social licence for carbon farming appears to be a lack of confidence in governance resulting from regulatory complexity, policy uncertainty, and shortcomings in information provision. The fact that this lack of confidence is prominent amongst government employees is a particular cause for concern, as the government acts as both the promoter and regulator of carbon farming in Australia. Conversely, procedural fairness appears to be a relative strength of carbon farming in relation to the SLO, particularly because of the conduct of aggregators and early-adopters within the landholder community. Distributional fairness falls somewhere in between these other two factors, with some community and landscape-scale benefits beginning to be observed in the region, but social divisions are also emerging because of a perception that the eligibility rules are producing inequitable outcomes. The distribution of risk also emerged as an important element of distributional fairness from the results of the survey, interviews, and focus groups.

While previous studies on carbon farming in Australia have not focused on the SLO, many have discussed similar factors to those identified in this study. Policy complexity and uncertainty have previously been identified as barriers to the adoption of carbon farming in Western Australia and Queensland [21,25,44]. Community-scale benefits have also been discussed previously, most commonly in relation to Indigenous communities in northern Australia [45,46]. Our study suggests that the benefits for families and other community members are not only relevant to projects that involve Indigenous landholders. Undesirable social trends, such as increased absenteeism and the division of landholders into "haves" and "have-nots", have previously been discussed in both Queensland [3] and NSW [5] and have the potential to decrease the social acceptance of carbon farming.

The distribution of benefits amongst different community members, and the rules governing these distributive processes, are common themes in the broader PES literature [42,47,48]. Pascual et al. (2014) argue that the procedural (i.e., the inclusiveness of decision making) and the distributional (i.e., the cost/benefit distribution) are critical to the social equity of PES schemes, and that the failure to consider these factors increases the risk of nonparticipation and noncooperation [48]. Similarly, trust has been identified by previous researchers as a critical factor for enhancing the effectiveness of other PES schemes. This includes trust in other community members, which has been linked to the greater effectiveness of tropical forest conservation schemes [39], as well as trust in those

promoting a PES scheme, which can be enhanced through careful adaptation to the local social, economic, and environmental contexts [49].

One notable result from this study is that the survey scores for trust in those promoting carbon farming were higher than the scores for procedural fairness, distributional fairness, and confidence in governance. This is noteworthy, as under Zhang et al.'s SLO model [6], trust is determined by the other three factors acting together. Our survey results suggest that trust may be influenced by additional factors that are not accounted for in their model. One possible influencing factor is the pre-existing level of trust in other landholders, which has been identified as a critical factor in enhancing the effectiveness of PES schemes overseas [40]. Within the context of the carbon farming SLO, landholders perform multiple roles: as the practitioners of carbon farming; as sources of information for other landholders; and as members of the community who must decide whether to grant a social licence. This differs from the mining sector, where mines are generally developed and managed by mining companies. This may have implications for the SLO in other contexts, where landholders act as the key practitioners of emerging practices, including around agriculture, agroforestry, and renewable energy.

Aside from the pre-existing levels of trust in landholders, another factor that does not feature explicitly in Zhang et al.'s SLO framework is the role played by shared values, norms, and worldviews in determining whether a practice is seen as socially acceptable. These factors have been widely discussed in the literature on the landholder adoption of carbon farming and other regenerative practices in Australia [3,25,50]. They have also been linked to PES effectiveness globally, with Pascual et al. (2014) arguing that the recognition of local knowledge and values is critical to ensuring that PES schemes are socially equitable [48]. In relation to the SLO, the alignment with pre-existing values and norms has been discussed by Dare et al. [37], and Ford and Williams [51], in studies focusing on forestry.

Recognition of the local knowledge and values requires that potential changes linked to carbon farming are not viewed solely in instrumental terms, including changes such as destocking, increased absenteeism, and the conversion of grassland to woodland. The participant responses indicate that the degree to which these changes align with prevailing worldviews, values, and norms can influence social acceptance, even amongst community members who are not directly experiencing these impacts. Previous social research in this region has also highlighted that social norms can shift over time, with carbon farming payments having the potential to alter the relative value placed on trees and grass in the landscape [52].

Adaptability has been discussed as a determinant of the SLO in previous studies on mining, forestry, and bioenergy [17,37,38]. Our results demonstrate that opportunities exist for carbon farmers to adapt their land-use activities by reinvesting carbon income, as well as for aggregators and policymakers to adapt their practices based on feedback from other stakeholders. Both of these forms of adaptation have the potential to influence the social licence of carbon farming going forward, and they highlight how the social licence should be viewed as an iterative and constantly changing phenomenon, rather than as something that is static. This notion of continual change is encapsulated by Thomson and Boutilier [8], who state that the SLO is "dynamic and non-permanent because beliefs, opinions, and perceptions are subject to change as new information is acquired" (p. 1779).

Drawing on the results of our case study research, Figure 6 presents a framework for understanding the social licence of carbon farming in the Australian rangelands that incorporates the key drivers of the SLO from Zhang et al.'s framework [6], along with the additional elements of pre-existing trust, prevailing values and norms, and feedback and adaptability. These additional elements have important implications for those seeking to build an SLO around carbon farming and other similar activities.

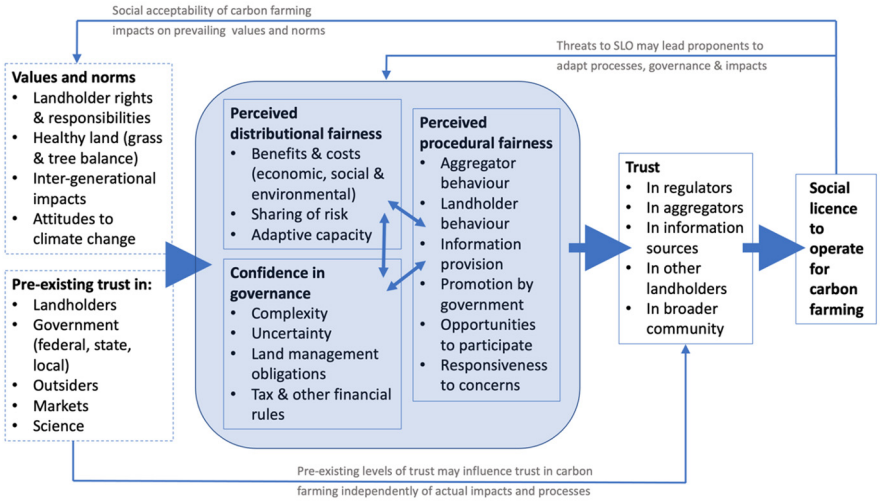

Figure 6. Proposed framework of SLO for carbon farming in the NSW rangelands. Double arrows indicate two-way interactions between SLO factors.

The following recommendations for building an SLO draw on the SLO factors in Figure 6, and may have relevance beyond the specific context of carbon farming in the Australian rangelands:

1. **Develop trust** by capitalising on existing trusted sources to disseminate information, as well as by being careful not to erode these sources of trust through misinformation. The examples of trust-building identified in this study around aggregators and early-adopters could also be drawn on to improve the processes for operationalising carbon farming policies, including spending time in affected communities, sharing some of the risk, and maintaining ongoing involvement in land management and monitoring after deals are made. These strategies align with those from other SLO studies, which emphasise the quality of contact over quantity, keeping promises, and using system disturbances as opportunities to demonstrate shared interests and values [7,8,37];
2. **Consider existing norms and values**, such as the importance of keeping people on the land in active management roles in order to avoid the association between carbon farming and issues of depopulation and absentee landholderships. Consistency with existing norms and values can be enhanced by promoting activities that can be integrated into existing management systems (e.g., carbon farming within a grazing system), rather than being framed as complete replacements or alternatives to current approaches. It is also important to ensure that the processes for determining rules and incentives are flexible enough to account for the changes in norms and values over time, as well as for differences between regions;
3. **Consider scale** when managing transitions to new land uses, such as carbon farming. Local-scale impacts and perceptions are critical for the SLO [32,33], but many of the key processes for carbon farming (and climate mitigation policy, more broadly) are often determined at the national (or even global) scale, such as the development of the eligibility rules and markets for carbon credits. Closing this gap requires participatory approaches to policy development that include landholders, service providers, and government agencies at the state and regional levels in order to enhance confidence in governance, reduce uncertainty, and improve perceptions of fairness;
4. **Consider the feedbacks** that exist between different elements of the SLO, such as the potential for the perceptions of distributional inequity to feed into perceptions of procedural inequity (and vice versa). Such feedbacks can not only accelerate the loss of an SLO, but can also enable the SLO to evolve in an iterative and adaptive manner (e.g., by modifying rules and processes in response to stakeholder views);
5. **Value co-benefits**, such as biodiversity conservation, soil health, and community resilience. While carbon farming has been promoted for its value in mitigating climate

change, valuing other co-benefits could allow it to become a viable practice on a greater diversity of properties, and could ensure that the stewardship shown by landholders who may not be eligible for carbon payments is acknowledged;

6. **Remove information barriers** around the abatement potential, market opportunities, and risks. This has the potential to reduce the inequality in the access to incentive schemes, such as the ERF;
7. **Decrease dependence on a single incentive program**, such as the ERF in the case of carbon farming in Australia. This may require the introduction of complementary incentive schemes focusing on different benefits or regions (e.g., through tailored eligibility rules). It also requires that co-investment is fostered so that the government is not seen as the sole driver of land-use change, and so that activities such as carbon farming can be more fully integrated into sustainable agricultural land management. It is also important to recognise nonmonetary incentives, as well as the potential for self-initiated or collaborative actions by landholders that combine conservation and production (e.g., the Landcare program that began in the 1980s, and that has continued despite a reduction in direct financial incentives from the government).

6. Conclusions

The results of this study add to the continually expanding body of knowledge around how the SLO can be measured and enhanced in different contexts, particularly for activities that involve government incentives to promote environmental benefits. While it was not designed to definitively measure whether or not carbon farming has a social licence to operate in the Australian rangelands, this study has revealed some potential threats and opportunities related to carbon farming and the SLO. Lessons from other sectors, such as mining [27] and renewable energy [34], suggest that the failure to address these threats may result in further development being constrained. In the case of carbon farming, such an outcome would represent not only a missed economic opportunity, but also a failure to achieve cost-effective climate change mitigation, a failure to achieve co-benefits, such as improved soil health and biodiversity conservation, a wasting of public money, and a hindering of future opportunities for sustainable land management in the Australian rangelands through a loss of trust and goodwill within the affected communities.

A lack of confidence in the governance arrangements for carbon farming poses a threat to successfully obtaining and maintaining a social licence over time. Concerns around the fairness of how benefits and costs are distributed is also producing social tensions that, if left unchecked, could undermine the potential for carbon farming to achieve cost-effective large-scale climate change mitigation in the rangelands. Conversely, there are also opportunities for policymakers and commercial partners to enhance trust in the emerging carbon farming industry by leveraging the existing networks of trust within the affected communities, focusing explicitly on trust-building when designing recruitment and outreach processes, recognising co-benefits and stewardship actions beyond carbon sequestration, and ensuring that methodologies and management rules do not contradict local values on how land should be managed.

Carbon farming has strong potential to enhance the socioecological resilience of Australia's rangelands [22], but in order to do so, it must first obtain a social licence that is itself resilient to the social controversies, economic disruptions, policy shifts, and environmental changes that are inherent to rangeland systems. This requires national-scale policy mechanisms, such as the ERF, encompassing local-scale factors related to trust, equity, values, and norms. This cannot be achieved simply by incentivising lowest-cost carbon abatements. Consideration must also be given to how the costs and benefits are distributed, to the fairness of the processes involved, and to who and what can be trusted to deliver outcomes that align with community values.

Author Contributions: Conceptualization, G.M. and C.W.; methodology, R.C.; investigation, R.C., H.K. and C.W.; resources, C.W.; data curation, R.C.; analysis, R.C. and A.B.; writing—original

draft preparation, A.B.; writing—review and editing, A.B.; project administration, G.M.; funding acquisition, G.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research was undertaken as part of the New South Wales Department of Primary Industries Climate Change Research Strategy, "Accessing Carbon Markets" project, funded by the NSW Climate Change Fund.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Not applicable.

Acknowledgments: Thank you to all of the participants in our survey, interviews, and focus groups.

Conflicts of Interest: The authors declare no conflict of interest. Cathy Waters, as an employee of the funding body (New South Wales Department of Primary Industries), was involved in the design of the study; in the collection, analysis, and interpretation of data; in the writing of the manuscript; and in the decision to publish the results.

References

1. Bryan, B.A.; Runting, R.K.; Capon, T.; Perring, M.P.; Cunningham, S.C.; Kragt, M.E.; Nolan, M.; Law, E.A.; Renwick, A.R.; Eber, S.; et al. Designer policy for carbon and biodiversity co-benefits under global change. *Nat. Clim. Chang.* **2016**, *6*, 301–305. [CrossRef]
2. Baumber, A.; Metternicht, G.; Cross, R.; Ruoso, L.-E.; Cowie, A.L.; Waters, C. Promoting co-benefits of carbon farming in Oceania: Applying and adapting approaches and metrics from existing market-based schemes. *Ecosyst. Serv.* **2019**, *39*, 100982. [CrossRef]
3. Jassim, D. *Community Perceptions of Carbon Sequestration Projects under the Emissions Reduction Fund in Australia: A Case Study of the Mulga Lands Bioregion, South-West Queensland*; The University of Queensland: Brisbane, Australia, 2018.
4. Baumber, A.P.; Merson, J.; Ampt, P.; Diesendorf, M. The adoption of short-rotation energy cropping as a new land use option in the New South Wales Central West. *Rural Soc.* **2011**, *20*, 266–279. [CrossRef]
5. Cowie, A.L.; Waters, C.M.; Garland, F.; Orgill, S.E.; Baumber, A.; Cross, R.; O'Connell, D.; Metternicht, G. Assessing resilience to underpin implementation of Land Degradation Neutrality: A case study in the rangelands of western New South Wales, Australia. *Environ. Sci. Policy* **2019**, *100*, 37–46. [CrossRef]
6. Zhang, A.; Moffat, K.; Lacey, J.; Wang, J.; González, R.; Uribe, K.; Cui, L.; Dai, Y. Understanding the social licence to operate of mining at the national scale: A comparative study of Australia, China and Chile. *J. Clean. Prod.* **2015**, *108 Pt A*, 1063–1072. [CrossRef]
7. Baumber, A.; Scerri, M.; Schweinsberg, S. A social licence for the sharing economy. *Technol. Forecast. Soc. Chang.* **2019**, *146*, 12–23. [CrossRef]
8. Thomson, I.; Boutilier, R. The social license to operate. In *SME Mining Engineering Handbook*, 3rd ed.; Englewood, Colo.: Society for Mining, Metallurgy, and Exploration; Darling, P., Ed.; Society for Mining, Metallurgy, Exploration: Englewood, NJ, USA, 2011; pp. 1779–1796.
9. Edwards, P.; Lacey, J.; Wyatt, S.; Williams, K.J.H. Social licence to operate and forestry—An introduction. *Forestry* **2016**, *89*, 473–476. [CrossRef]
10. Hall, N.L. Can the "Social Licence to Operate" Concept Enhance Engagement and Increase Acceptance of Renewable Energy? A Case Study of Wind Farms in Australia. *Soc. Epistemol.* **2014**, *28*, 219–238. [CrossRef]
11. Roth, G. Retaining the social licence: The Australian cotton industry case study. In *Defending the Social Licence of Farming: Issues, Challenges and New Directions for Agriculture*; Martin, P., Williams, J., Eds.; CSIRO Publishing: Melbourne, Australia, 2011; pp. 69–83.
12. O'Brien, J.; Gilligan, G.; Roberts, A.; McCormick, R. Professional standards and the social licence to operate: A panacea for finance or an exercise in symbolism? *Law Financ. Mark. Rev.* **2015**, *9*, 283–292. [CrossRef]
13. Haynes, B. The role of trust in the teaching of history. *Educ. Philos. Theory* **2018**, *50*, 174–182. [CrossRef]
14. Baumber, A.; Schweinsberg, S.; Scerri, M.; Kaya, E.; Sajib, S. Sharing begins at home: A social licence framework for home sharing practices. *Ann. Tour. Res.* **2021**, *91*, 103293. [CrossRef]
15. Griscom, B.W.; Adams, J.; Ellis, P.W.; Houghton, R.A.; Lomax, G.; Miteva, D.A.; Schlesinger, W.H.; Shoch, D.; Siikamäki, J.V.; Smith, P.; et al. Natural climate solutions. *Proc. Natl. Acad. Sci. USA* **2017**, *114*, 11645. [CrossRef]
16. Waters, C.; Cowie, A.; Wang, B.; Simpson, M.; Gray, J.; Simmons, A.; Stephens, S. *Abatement Opportunities from the Agricultural Sector in New South Wales: Modelling to Support the Development of the Primary Industries Productivity and Abatement Program*; NSW Department of Primary Industries: Sydney, Australia, 2020; p. 170.
17. Baumber, A. Social licence and energy cropping: What's trust got to do with it? *Biomass Bioenergy* **2018**, *108*, 25–34. [CrossRef]
18. Voyer, M.; Gladstone, W.; Goodall, H. Obtaining a social licence for MPAs—Influences on social acceptability. *Mar. Policy* **2015**, *51*, 260–266. [CrossRef]

19. Clean Energy Regulator Sequestration Decision Tree. Available online: http://www.cleanenergyregulator.gov.au/DocumentAssets/Documents/Sequestration%20decision%20tree.pdf (accessed on 4 February 2021).
20. Badgery, W.; Murphy, B.; Cowie, A.; Orgill, S.; Rawson, A.; Simmons, A.; Crean, J. Soil carbon market-based instrument pilot—the sequestration of soil organic carbon for the purpose of obtaining carbon credits. *Soil Res.* **2021**, *59*, 12–23. [CrossRef]
21. Evans, M.C. Effective incentives for reforestation: Lessons from Australia's carbon farming policies. *Curr. Opin. Environ. Sustain.* **2018**, *32*, 38–45. [CrossRef]
22. Baumber, A.; Waters, C.; Cross, R.; Metternicht, G.; Simpson, M. Carbon farming for resilient rangelands: People, paddocks and policy. *Rangel. J.* **2020**, *42*, 293–307. [CrossRef]
23. Bryan, B.A.; Nolan, M.; Harwood, T.D.; Connor, J.D.; Navarro-Garcia, J.; King, D.; Summers, D.M.; Newth, D.; Cai, Y.; Grigg, N.; et al. Supply of carbon sequestration and biodiversity services from Australia's agricultural land under global change. *Glob. Environ. Chang.* **2014**, *28*, 166–181. [CrossRef]
24. Cunningham, S.C.; Mac Nally, R.; Baker, P.J.; Cavagnaro, T.R.; Beringer, J.; Thomson, J.R.; Thompson, R.M. Balancing the environmental benefits of reforestation in agricultural regions. *Perspect. Plant Ecol. Evol. Syst.* **2015**, *17*, 301–317. [CrossRef]
25. Kragt, M.; Dumbrell, N.; Blackmore, L. Motivations and barriers for Western Australian broad-acre farmers to adopt carbon farming. *Environ. Sci. Policy* **2017**, *73*, 115–123. [CrossRef]
26. Torabi, N.; Mata, L.; Gordon, A.; Garrard, G.; Wescott, W.; Dettmann, P.; Bekessy, S.A. The money or the trees: What drives landholders' participation in biodiverse carbon plantings? *Glob. Ecol. Conserv.* **2016**, *7*, 1–11. [CrossRef]
27. Franks, D.M.; Davis, R.; Bebbington, A.J.; Ali, S.H.; Kemp, D.; Scurrah, M. Conflict translates environmental and social risk into business costs. *Proc. Natl. Acad. Sci. USA* **2014**, *111*, 7576–7581. [CrossRef] [PubMed]
28. Prno, J.; Slocombe, D. A Systems-Based Conceptual Framework for Assessing the Determinants of a Social License to Operate in the Mining Industry. *Environ. Manag.* **2014**, *53*, 672–689. [CrossRef] [PubMed]
29. Cooney, J. Reflections on the 20th anniversary of the term 'social licence'. *J. Energy Nat. Resour. Law* **2017**, *35*, 197–200. [CrossRef]
30. Boutilier, R.G. From metaphor to political spin: Understanding criticisms of the social licence. *Extr. Ind. Soc.* **2021**, *8*, 100743. [CrossRef]
31. Dumbrell, N.P.; Adamson, D.; Wheeler, S.A. Is social licence a response to government and market failures? Evidence from the literature. *Resour. Policy* **2020**, *69*, 101827. [CrossRef]
32. Joyce, S.; Thomson, I. Earning a social licence to operate: Social acceptability and resource development in Latin America. *Can. Min. Metall. Bull.* **2000**, *93*, 49–53.
33. Moffat, K.; Lacey, J.; Zhang, A.; Leipold, S. The social licence to operate: A critical review. *Forestry* **2016**, *89*, 477–488. [CrossRef]
34. Hall, N.; Ashworth, P.; Devine-Wright, P. Societal acceptance of wind farms: Analysis of four common themes across Australian case studies. *Energy Policy* **2013**, *58*, 200–208. [CrossRef]
35. Red Meat Advisory Council Australian Beef Sustainability Framework: Governance. Available online: https://www.sustainableaustralianbeef.com.au/governance/ (accessed on 26 October 2021).
36. Santiago, A.L.; Demajorovic, J.; Rossetto, D.E.; Luke, H. Understanding the fundamentals of the Social Licence to Operate: Its evolution, current state of development and future avenues for research. *Resour. Policy* **2021**, *70*, 101941. [CrossRef]
37. Dare, M.; Schirmer, J.; Vanclay, F. Community engagement and social licence to operate. *Impact Assess. Proj. Apprais.* **2014**, *32*, 188–197. [CrossRef]
38. Prno, J. An analysis of factors leading to the establishment of a social licence to operate in the mining industry. *Resour. Policy* **2013**, *38*, 577–590. [CrossRef]
39. Andersson, K.P.; Cook, N.J.; Grillos, T.; Lopez, M.C.; Salk, C.F.; Wright, G.D.; Mwangi, E. Experimental evidence on payments for forest commons conservation. *Nat. Sustain.* **2018**, *1*, 128–135. [CrossRef]
40. Pfaff, A.; Rodriguez, L.A.; Shapiro-Garza, E. Collective Local Payments for ecosystem services: New local PES between groups, sanctions, and prior watershed trust in Mexico. *Water Resour. Econ.* **2019**, *28*, 100136. [CrossRef]
41. CMI. *Australian Carbon Industry Code of Conduct Version 2.0*; Carbon Market Institute: Melbourne, Australia, 2021; p. 31.
42. Loft, L.; Le, D.N.; Pham, T.T.; Yang, A.L.; Tjajadi, J.S.; Wong, G.Y. Whose Equity Matters? National to Local Equity Perceptions in Vietnam's Payments for Forest Ecosystem Services Scheme. *Ecol. Econ.* **2017**, *135*, 164–175. [CrossRef]
43. Moser, A.; Korstjens, I. Practical guidance to qualitative research Part 3: Sampling, data collection and analysis. *Eur. J. Gen. Pract.* **2018**, *24*, 9–18. [CrossRef]
44. Dumbrell, N.P.; Kragt, M.E.; Gibson, F.L. What carbon farming activities are farmers likely to adopt? A best–worst scaling survey. *Land Use Policy* **2016**, *54*, 9–37. [CrossRef]
45. Moran-Ordonez, A.; Whitehead, A.; Luck, G.; Cook, G.; Maggini, R.; Fitzsimons, J.; Wintle, B. Analysis of Trade-Offs Between Biodiversity, Carbon Farming and Agricultural Development in Northern Australia Reveals the Benefits of Strategic Planning. *Conserv. Lett.* **2017**, *10*, 94–104. [CrossRef]
46. Robinson, C.; Renwick, A.; May, T.; Gerrard, E.; Foley, R.; Battaglia, M.; Possingham, H.; Griggs, D.; Walker, D. Indigenous benefits and carbon offset schemes: An Australian case study. *Environ. Sci. Policy* **2016**, *56*, 129–134. [CrossRef]
47. Sommerville, M.; Jones, J.P.G.; Rahajaharison, M.; Milner-Gulland, E.J. The role of fairness and benefit distribution in community-based Payment for Environmental Services interventions: A case study from Menabe, Madagascar. *Ecol. Econ.* **2010**, *69*, 1262–1271. [CrossRef]

48. Pascual, U.; Phelps, J.; Garmendia, E.; Brown, K.; Corbera, E.; Martin, A.; Gomez-Baggethun, E.; Muradian, R. Social Equity Matters in Payments for Ecosystem Services. *BioScience* **2014**, *64*, 1027–1036. [CrossRef]
49. Higgins, V.; Dibden, J.; Potter, C.; Moon, K.; Cocklin, C. Payments for Ecosystem Services, neoliberalisation, and the hybrid governance of land management in Australia. *J. Rural Stud.* **2014**, *36*, 463–474. [CrossRef]
50. Gordon, E.; Davila, F.; Riedy, C. Transforming Landscapes and Mindscapes through Regenerative Agriculture. Available online: https://link.springer.com/article/10.1007/s10460-021-10276-0 (accessed on 2 November 2021).
51. Ford, R.M.; Williams, K.J.H. How can social acceptability research in Australian forests inform social licence to operate? *Forestry* **2016**, *89*, 512–524. [CrossRef]
52. Berry, E.; Metternicht, G.; Baumber, A. 'This country just hangs tight': Perspectives on managing land degradation and climate change in far west NSW. *Rangel. J.* **2019**, *41*, 197–210. [CrossRef]