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Markets, nature, neoliberalism and conservation through private protected areas in southern Chile

4 A vibrant literature has emerged in recent years exploring moves towards neoliberal forms of conservation, with a reduced role for the state and an enhanced role for markets and 5 6 private and civil society actors. Yet there is a need for studies which explore how and why 7 this trend has emerged, and what impact this has on both people and nature. This paper is a 8 detailed examination of private protected areas, which are often associated with neoliberal 9 approaches to conservation, in Chile, a country which has had a long and deep engagement 10 with neoliberalism. It finds that private protected areas demonstrate a broad range of 11 attitudes towards the use of markets in conservation, from enthusiasm to hostility. Yet all have been made possible, indeed incentivised, by Chile's liberalised property markets and 12 13 individualistic political culture, products of earlier neoliberal reforms within Chile's society and economy. As such, they provide only a limited challenge to the social and environmental 14 consequence of the integration of southern Chile's natural resources into global neoliberal 15 16 economic chains. It emphasises the importance of considering how broader neoliberal 17 economic, political and social reforms have allowed certain forms of conservation to emerge and thrive. 18

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3

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21 In recent years, an emerging body of research within geography has explored the

22 neoliberalisation of nature, the integration of the material world into markets in increasingly

varied ways, the logics behind this trend and the processes by which it happens (Castree,

24 2008). Nature in many forms, from traditional resources (agricultural produce, forests) to socio-natures (the human body, genetically-modified organisms) to more abstract forms 25 26 (ecosystem services) are increasingly being turned into tradeable commodities, subject to 27 decreasing regulation by states and other actors and increasingly governed by market forces 28 and logics as part of a broader embrace of markets within society. Part of this literature 29 explores neoliberal conservation, the deployment of the logics and tools of free market 30 capitalism to save nature. Neoliberal conservation promises seductive win-win scenarios - to 31 preserve endangered biodiversity, save habitats and prevent climate change through 32 market based processes such as payments for ecosystem services, biodiversity offsetting 33 and ecotourism whilst simultaneously contributing to economic growth and prosperity (Igoe and Brockington, 2007). Neoliberal conservation purports to solve any environmental 34 35 problems emerging from global free market capitalism. The expanding literature has 36 outlined the generalities of the trend, the variation and heterogeneity within it, and the 37 tensions between theories of how neoliberal conservation should work and empirical observations of it in practice (Büscher et al, 2012; Roth and Dressler, 2012). Neoliberal 38 39 conservation has been criticised for its hubris, its inefficiencies in conserving biodiversity or improving livelihoods, for facilitating the grabbing of land and resources by powerful actors 40 41 at the expense of the most vulnerable, and for supporting unsustainable economic systems 42 (Büscher et al, 2012; Igoe and Brockington, 2007). It is therefore important to understand 43 the potential of neoliberal conservation to bring about environmentally sustainable and 44 socially just forms of natural resource governance in a context where nature is increasingly subject to market logics. This paper explores three linked questions: how has conservation 45 engaged with neoliberalism, why it might be doing so, and what effects this has for both 46 47 people and the environment.

To answer these, it focuses on private protected areas (PPAs), a conservation strategy seen 49 as a neoliberal form of conservation (Büscher and Wande, 2007; Fletcher, 2010; Igoe and 50 51 Brockington, 2007). PPAs are nature reserves, national parks, sanctuaries and other places 52 designated for the conservation of biodiversity which are owned and controlled by a private actor, including individuals, corporations, NGOs, or cooperatives (Dudley 2008). Whilst 53 54 there is substantial anecdotal evidence that PPAs are quietly growing in number and extent, 55 they are largely absent from social and natural science literatures on conservation, and there are no previous detailed empirical studies on their engagement with neoliberalism, 56 despite being implicated in broader debates about grabbing of land and resources under 57 global neoliberalism (Carter et al, 2008; Holmes, 2014; Langholz and Lassoie, 2001). This 58 paper explores PPAs in Chile, an ideal case study for understanding how neoliberalism and 59 60 conservation might interact through PPAs because it has large numbers of PPAs- more than 61 300, covering 2.12% of the country's surface area (Holmes, 2014) – and because Chile has 62 seen perhaps the longest and deepest engagement with neoliberalism of any country, 63 where its natural resources are increasingly integrated into global capitalist chains (Valdés, 1995). This paper considers how private protected areas are engaging with the broader 64 neoliberalisation of natural resources in southern Chile and whether PPAs are making this 65 66 more socially and environmentally beneficial. It begins by exploring what defines neoliberal 67 conservation and how PPAs fit into this, before examining the heterogeneity of Chilean PPAs in detail. 68

69

70 Defining neoliberal conservation

72	The literature on neoliberal conservation is too large and diverse to summarise concisely,
73	given that many phenomena have been labelled as neoliberal conservation in varied
74	contexts, compounded by imprecise definitions of neoliberalism in much of the literature
75	(Barnett, 2005; Büscher et al, 2012; Igoe and Brockington, 2007). Nevertheless, some
76	commonalities about what defines neoliberal conservation are identifiable in the literature,
77	although not all case studies identified as neoliberal conservation share all these
78	characteristics. Firstly, neoliberal conservation is generally understood as a blend of
79	ideology and practices – both ways of thinking about how to save nature in capitalist terms,
80	and specific projects, structures, and techniques that use capitalist approaches to conserve
81	biodiversity (Büscher et al, 2012; Castree, 2008; Igoe and Brockington, 2007).
82	
83	Secondly, the state's role is changing. States are rolling back from directly intervening in
84	biodiversity conservation, but instead are facilitating an increased role for the private sector
85	and civil society in conservation by creating market structures, incentives and other
86	supportive measures. For example, Robertson (2004) shows how the US state has
87	withdrawn from direct interventions to protect wetlands but has instead created a market
88	in wetland credits in which developers who destroy wetlands can pay to have one
89	conserved or created elsewhere. State intervention is essential in the tricky process of
90	turning natural resources such as wetlands intro tradable commodities such as wetland
91	credits (Hodge and Adams, 2012).
92	
93	Thirdly, markets have become central to saving biodiversity. Existing practices and
94	techniques to save nature by selling it, such as ecotourism, have been expanded, and new

95 ones such as payments for ecosystem services or wetland banking have been created

96 (Brockington, Duffy and Igoe, 2008). New discourses have emerged which have a triumphalist attitude towards the potential of markets to solve all conservation problems 97 98 (Dressler and Roth, 2011). Distinctions between conservation as philanthropy and 99 conservation as business are deliberately blurred under ideas of philanthrocapitalism, which 100 sees market-based philanthropy as more efficient and innovative than traditional 101 approaches (Holmes, 2012). Neoliberal discourses view capitalism not a threat to 102 biodiversity, but part of the solution, with an assumption that economic growth is necessary 103 for conserving biodiversity (Büscher et al, 2012). Contradictions are glossed over or 104 presumed resolved as neoliberal discourses promise solutions that work for nature, people, 105 and the economy, without need for compromise or conflict (Igoe and Brockington, 2007). 106 Fourthly, civil society has risen alongside markets, with NGOs growing in number, size and 107 108 prominence. Conservation NGOs have become more like businesses in their structure and 109 operations, developing closer links to corporations and including market practices in their conservation strategies (Corson, 2010; Holmes 2011). The increased role of private and civil 110 111 society actors in areas that were traditionally domains of the state has blurred the distinction between the state, market, and civil society (Brockington and Scholfield 2010; 112 113 Hodge and Adams, 2012; Holmes 2012; Igoe and Brockington, 2007). Geographers studying 114 neoliberal conservation have undertaken fieldwork not only in the forests, grasslands and 115 other places where neoliberal conservation projects are being implemented, but also the conference halls, ministries and meeting rooms where ideas are circulated and agreements 116 117 reached, and where lines between state, market and civil society are blurred.

119 Fifthly, two complimentary reasons for conservation's neoliberalisation have been 120 identified. Some scholars have analysed it through the logics of capitalism, as capital sees 121 the business of saving nature as a new frontier for economic expansion, with money to be 122 made from conserving biodiversity (Büscher et al 2012; Castree, 2008; Igoe and Brockington 2007) – what Büscher and Fletcher (2014) call accumulation by conservation. Others have 123 analysed how conservationists have viewed neoliberalism as the dominant force in today's 124 125 world, and therefore how engaging with it can be the best way of conserving nature (Corson 126 2010; Holmes, 2012). The latter reason is particularly relevant to understanding the 127 potential of neoliberal conservation to produce a more environmentally sustainable form of 128 global capitalism. 129 Neoliberal conservation has been criticised for harming both people and nature. Individual 130

projects have failed to deliver promised social and environmental benefits, or have
exacerbated existing problems, whilst neoliberal conservation more broadly has been
accused of facilitating the grabbing of land and resources by powerful actors, and
supporting an unjust and unsustainable economic system (Büscher and Wande, 2007; Igoe
and Brockington, 2007). Neoliberal conservation can also be beneficial to communities, such
as when state roll back allows rural communities to own and benefit from local natural
resources (Benjaminsen and Bryceson 2012).

138

139 Whist it is important to clearly define neoliberal conservation and identify its generalities,

such a broad-brush approach should be tempered by empirically examining how supposedly

141 neoliberal conservation projects operate. Local particularities and variation, how different

142 resources in different places are becoming neoliberalised in unique ways, should be

143 recognised (Castree, 2008). Neoliberal conservation measures in any one place are fundamentally shaped by the legacies of previous and contemporary conservation schemes, 144 145 governance structures, social relations and numerous other place-specific factors (Dressler 146 and Roth 2011; Hodge and Adams, 2012; Roth and Dressler 2012). A gap exists between rhetoric about neoliberal conservation, from both proponents and critics, and the reality of 147 how such approaches are implemented on the ground, with careful empirical examinations 148 149 of supposedly neoliberal conservation projects finding they conform to neoliberal theory 150 only in a limited sense (Igoe and Brockington, 2007, Roth and Dressler, 2012). Studies of 151 neoliberal conservation have focused on what is new and different to previous conservation 152 efforts, but have neglected to consider what remains the same and why (Roth and Dressler, 2012). Key features of neoliberal conservation, such as use of markets, have been part of 153 154 conservation long before the emergence of neoliberalism in the 1980s, albeit to a lesser 155 extent and without the same triumphalist discourse (Roth and Dressler 2012). Few 156 geographers have considered counterfactuals in discussions of neoliberalism - what kind of 157 environmental governance might be present if neoliberal policies were absent - which is 158 important for moving away from overly crude generalisations and towards a more nuanced understanding of neoliberal conservation (Castree, 2008; Hodge and Adams, 2012). This 159 paper takes these insights and applies them to the case of PPAs in southern Chile. 160

161

PPAs have been considered as neoliberal in two ways. Firstly, Igoe and Brockington (2007) and Fletcher (2010; 2012) consider PPAs as part of trends within neoliberal conservation for private and civil society actors to replace the state in conserving biodiversity. For example, the African Parks Network takes over all aspects of financing and managing state protected areas which are seen as failing, operating them as quasi-private areas, financed through 167 luxury ecotourism (Holmes, 2012). In South Africa, private game reserves emerged following legal reforms in the early 1990s which allowed landowners to own and trade wildlife, and 168 169 now occupy a greater area than state protected areas (Gallo et al, 2009; Snijders, 2012). 170 Secondly, Büscher and Wande (2007) see PPAs as another way in which business activities can be incorporated into biodiversity conservation, particularly through for-profit PPAs. 171 172 PPAs can generate income from conservation either directly, mostly through ecotourism but 173 also through payments for ecosystem services, or indirectly, such as by boosting property 174 prices for homeowners and developers and allowing large landowners to avoid land reforms 175 (Holmes 2012; 2013).

176

177 Just as the use of markets, private property or non-state actors does not necessarily make 178 any conservation intervention neoliberal (Roth and Dressler, 2012), so it follows that even 179 though PPAs represent private action in an area traditionally the domain of the state, 180 depend on private property rights, and often involve market mechanisms, they are not 181 necessarily a neoliberal form of conservation. Some PPAs emerged over 100 years ago, long 182 before neoliberalism (Hodge and Adams 2012). In many cases, it is unclear if PPAs are replacing state conservation efforts - that is, whether the state would have different 183 conservation policies if PPAs were absent. In South Africa, whilst current state policies view 184 185 game reserves as part of national biodiversity conservation efforts alongside state reserves, 186 creating incentives and stewardship standards for better management, the initial reforms turning wildlife into an ownable and tradable commodity were created to allow rural 187 landowners to develop new businesses, not for conservation reasons (Carruthers, 2008; 188 189 Snijders, 2012). Similarly, some PPAs are profit-seeking business, others include some 190 business activities to offset costs but don't seek profits, and others rely on non-market

activities such as donations for their income. As with other conservation interventions, what
distinguishes neoliberal PPAs from non-neoliberal counterparts is the extent to which
market mechanisms, particularly novel ways of commodifying nature (e.g. payments for
ecosystem services), are integral to their operations, the extent to which they facilitate a
reduction in direct state intervention in conservation, and the extent to which they are
accompanied by triumphalist discourses exposing markets as the only way to effectively
conserve biodiversity whilst producing social benefits.

198

Although subject to few studies, PPAs are subject to the same critiques as other forms of 199 200 neoliberal conservation. They make a relatively small contribution to global coverage of 201 protected areas, although in some regions they may cover more land than state protected 202 areas, including greater amounts of land with high biodiversity value (Gallo et al, 2009, 203 Pliscoff and Fuentes-Castillo 2012, Snijders 2012). There are doubts over their effectiveness 204 in conserving biodiversity, and whether owners have sufficient expertise and resources for 205 long-term conservation (Langholz and Lassoie 2001, Pasquini et al, 2011). For example, for-206 profit PPAs created in Australia as an explicit critique of inefficiencies and inadequacies in state conservation failed to generate enough income, and entered bankruptcy (Figgis 2006). 207 208 The search for revenue may push PPAs into overstocking land with tourist-attracting species 209 rather than more ecologically balanced compositions (Snijders 2012). Critics have implicated 210 PPAs in land grabbing, and in allowing large landowners to evade land reform processes (Holmes, 2014, Langholz et al. 2000; Snijders 2012). PPAs may reinforce certain elite ideas of 211 landscape and identity (Jones 2011), and may allow greenwashing of individual companies 212 who create PPAs and of capitalism more generally. 213

215 Neoliberalism in Chile

216

217 Chile was the first country to engage with neoliberalism, under the rule of General Augusto Pinochet (1973-90). For many decades, Chile suffered from significant inequality, 218 particularly between the wealthy and powerful land-owning class and the large landless 219 220 peasant class, leading the latter to call for sweeping reforms. The moderate reformist 221 government of Eduardo Frei Montalba (1964-70) introduced some reforms, but the socialist coalition of Salvador Allende (1970-73) was more radical, nationalising key industries and 222 223 introducing large-scale land reforms. These reforms precipitated a political and economic crisis, resulting in the military coup on 11th September, 1973. The Pinochet regime began its 224 engagement with neoliberalism by reversing many Allende era reforms, selling state 225 226 property and returning redistributed land. Guided by the "Chicago Boys", economists 227 trained under Milton Friedman who saw an opportunity to put Hayekian economic theory into practice, the regime began entrenching neoliberal reforms into the structure of Chile's 228 229 economy and society. As Valdéz (1995) notes, the Pinochet regime attempted a rapid, complete and permanent transformation of Chilean society, just as Allende had, albeit in the 230 opposite direction. Rather than the society guided by solidarity, equality and generosity 231 232 proposed by the socialist regime, they aimed to create one built upon principles of freemarket efficiency and libertarian morality, of economic freedoms, rationality and individual 233 234 liberty. The regime dramatically shrunk the state, strengthened individual private property 235 rights, liberalised the financial sector, opened up the economy to international trade and investment, and removed import tariffs and other trade restrictions. They cemented initial 236 neoliberal reforms in the 1980 constitution, and modified them after the 1982 financial 237 238 crisis, with further modifications coming from the series of largely centre-left governments

in power since the restoration of democracy in 1990. Yet these changes have been modest
relative to the sweeping transformation of all aspects of Chile's society and economy
brought about by the move towards neoliberalism.

242

Chile's neoliberalisation has engaged with environmental issues in various ways. The 243 Pinochet regime largely left environmental regulation to the market, as with all aspects of 244 245 planning, with weak and minimal government controls. Democratic-era governments 246 continued this light regulatory approach. Tecklin, Bauer and Prieto (2011) characterise the 1994 National Environmental Framework Law, the foundation of environmental regulations, 247 248 as "market-enabling", facilitating rather than preventing projects. Successive governments have driven through large scale developments, particularly infrastructural or industrial 249 250 projects, despite substantial environmental concerns. Recent high profile failures of 251 environmental regulation have increased pressures for reforms, yet governments continue 252 to emphasise that environmental protection should not impede economic growth 253 (Sepulveda and Villaroel, 2012, Latta and Aguayo, 2012). Secondly, the Pinochet regime 254 viewed primary industries, particularly mining, agriculture, fisheries, and forestry as the source of Chile's prosperity, and supported them accordingly. Large scale exporters were 255 promoted at the expense of domestic markets and small-scale producers (Murray 2002). For 256 257 example, the state sold land to forestry companies at vastly reduced prices, and greatly 258 subsidised the creation of tree plantations. Between 1970 and 1996, the forestry sector expanded at three times the rate of the Chilean economy, becoming the second largest 259 exporter behind copper, and making forestry companies the largest landowners in southern 260 261 Chile (Carruthers and Rodriguez 2009; Meza 2009; Niklitschek 2007). Agriculture, fisheries 262 and forestry have had significant environmental impacts (Latta and Aguayo 2012). Large

263 areas of native forest have been replaced with exotic plantations, reducing biodiversity and ecosystem services, although regulations and incentives to protected native forest were 264 265 introduced in 2008. Thirdly, individual property rights were strengthened and reinforced to 266 encourage investment, particularly foreign investment, with minimal central control or 267 oversight. Rural planning and development was left to the market. The Pinochet regime introduced legal reforms facilitating the parcelisation of communal property, particularly 268 269 affecting indigenous lands (Azócar et al, 2005). Chile has a strong legalist tradition long 270 predating the Pinochet regime, with respect for legal process, which gave particular strength to these neoliberal property reforms (Tecklin, Bauer and Prieto 2011). State roll-271 272 out created new commodities based on environmental resources, particularly the 1981 273 water code which separated rights to use water resources from land ownership, and 274 allowed them to be claimed and subsequently traded on the basis that markets would 275 increase efficiencies over state regulation (Budds, 2004). Large hydro-electricity companies 276 have secured water rights for almost all rivers in southern Chile in anticipation of future 277 power generating projects. These Pinochet era neoliberal reforms combined to polarised 278 land ownership, with forestry, agriculture, mining and water companies amassing large amounts of land, and democratic-era governments have been unwilling or unable to 279 challenge this inequality or its causes (Murray, 2002, Nikitschek 2007, Latta and Aguayo 280 281 2012). Finally, whilst the environment was an issue around which opponents of the Pinochet 282 regime coalesced, the dictatorship left a legacy of a weakened civil society in many areas, including environmental issues. Whilst some explorations of neoliberal conservation 283 284 highlight how NGOs and civil society have an increased role under neoliberalism, the 285 repressive context in which neoliberalism was introduced means this is not the case in Chile 286 (Caruthers 2001).

287

288 Private protected areas in Chile

289

290 This section explores the origins and heterogeneity of PPAs, particularly their approaches to 291 market-based conservation, to investigate the various ways in which they are engaging with 292 neoliberalism. This research is principally based on semi-structured interviews with 47 individuals conducted between September and December 2011. 40 interviewees were 293 either owners or managers of PPAs, representing a total of 47 PPAs ranging in size from 50 294 295 to over 300,000 hectares, with a total combined area of over 1,250,000 hectares. This 296 encompasses more than 90% of the total area covered by PPAs in the study region, and 297 includes all types of ownership including corporations, NGOs, cooperatives, and individuals. 298 The remainder worked for a public or private sector organisation which interacted with 299 PPAs without owning one. 41 interviews were conducted in Spanish, translated by the author, 6 in English. Two were telephone interviews and the rest face-to-face. Most 300 301 interviewees opted for anonymity. To select interviewees, I constructed a database of all 302 PPAs in Chile, based on Maldonado and Faundez (2005), supplemented with additional 303 internet searches. These searches also produced contact details for owners and managers of 304 many PPAs for initial interviews, with snowballing producing additional interviewees. 305 Interviews discussed motivations behind PPA creation, their financing and management 306 strategies. Additional interviewees came from searches of relevant ministries and large 307 conservation NGOs. These discussions focused on how and why these organisations 308 interacted with. In addition, I analysed documents and grey literature on PPAs, and observed various meetings relating to PPAs such as campaign launches and policy 309 310 workshops.

312	Private protected areas came to public attention in Chile in the early 1990s with the creation
313	of Parque Pumalin by Douglas Tompkins, a US entrepreneur who had made his money by
314	co-founding two international companies; The North Face (mountaineering clothing) and
315	Esprit (fashion). Upon retiring from business in 1990, he began purchasing property in
316	northern Patagonia, a place with which he had a long acquaintance as a mountaineer and
317	skier, to conserve the area's temperate rainforest. By 1994, he had spent approximately
318	US\$25 million purchasing 270,000 hectares in two non-contiguous segments, and
319	announced the creation of Parque Pumalin (Humes 2009). The park bisected Chile,
320	stretching from the pacific coast to the Argentine border, leading the armed forces to raise
321	national security concerns over the project. Furthermore, whilst Tompkins was inspired by a
322	long US tradition of conservation philanthropy, such activities were unprecedented in Chile
323	and his motives were questioned by politicians, media and the Chilean public. Compounding
324	these concerns was Tompkins strategy of purchasing land quietly through a series of
325	intermediaries to keep his activities secret and avoid vendors raising their prices. Conspiracy
326	theories emerged that the park was a front for a CIA coup, a Zionist plot to turn Patagonia
327	into a new Jewish homeland, a secret site for a goldmine or nuclear waste dump, or a plot
328	to control water resources (Holmes 2014; Humes 2009). More serious concerns saw it as
329	threatening national development, as it locked up natural resources that could otherwise be
330	used for economic growth, and because it might isolate southern Chile from the rest of the
331	country by preventing planned electricity and road infrastructure from crossing the
332	property. Tompkins was also accused of coercing smallholder farmers into selling him their
333	land. The project was widely criticised by politicians including the-then President Eduardo
334	Frei, and in 1997 Tompkins signed an agreement with the Frei government in which he

335 promised to refrain from further land purchases in the region, and to allow nationally important infrastructure to cross his land. This was remarkable and unprecedented, given 336 337 Chile's strong individual private property rights and welcoming attitude to other foreign 338 landowners in the region such as hydroelectricity and forestry companies (Nelson and 339 Geisse, 2001). The agreement has since been annulled and Tompkins has subsequently purchased an additional 330,000 hectares in southern Chile for conservation purposes, 340 341 although no infrastructure has been developed in Pumalin because of its vertiginous terrain. 342 Tompkins has long publically committed to donate all his properties to the state protected 343 area system, but donations to date have been minimal, partly because of legal barriers to 344 donating private land to the state, but also because of lingering mutual mistrust between Chilean politicians and Tompkins. 345

346

347 PPAs have continued to expand. There are approximately 312 PPAs in Chile, covering 348 1,607,195 hectares, equivalent to 2.12% of the total surface area of Chile, compared to the 18% covered by the state system (Holmes 2014). This study focuses southern Chile, defined 349 350 here as the 10th, 11th, 12th and 14th regions, as 87% of the area contained within PPAs (1,393,331 hectares) is located here. As described below, Chilean PPAs can be characterised 351 by their heterogeneity of size, types of owner, and attitudes towards markets. There are 352 353 several factors which have driven their emergence in southern Chile. Firstly, 354 conservationists had fewer avenues for saving nature compared with other countries. Despite the return of democracy, civil society remains weak following suppression under the 355 356 dictatorship, industry has captured environmental regulations, whilst Chile's neoliberalisation has created a culture which emphasises the role of individual over 357 358 collective actions (Carruthers, 2001; Tecklin, Bauer and Prieto 2011). The creation of PPAs

fits into this idea of individual rather than civil society action. Although PPAs began 359 expanding in the 1990s, there was no national scale coordination amongst Chilean PPAs 360 until the establishment in 2009 of Asi Conserva Chile, a national association for community 361 362 and private protected areas. Secondly, as demonstrated below, the potential for profits from PPAs through land price speculation, ecotourism, carbon trading, real estate 363 development or other opportunities has attracted many actors. Profit seeking through 364 365 conservation in southern Chile is part of the opening up of the region's natural resources to 366 global markets, with parallel speculation by forestry, hydroelectricity and aquaculture companies. Specialist real estate brokers have emerged to facilitate and profit from 367 368 increased interest in conservation land (Holmes, 2014). The region has seen a rise in land investment in the last decade, much of which is speculative and driven by rising land prices. 369 370 Though reliable figures are scarce, some interviewees indicated that average prices were 371 rising at 20% per year, and Jose Tapia and Muñoz (2012) indicate that prices rose 115% 372 between 2006 and 2011. One such specialist broker explained the origins of their business: "When there was the global crisis [in 2008], people were scared and brought 373 374 their money which was abroad back into Chile, to invest in secure areas. And we thought, what is more secure than buying land. It doesn't lose value, you can live 375 there, you can develop a project there over 10 years, etc." 376 377 Even where owners do not seek maximum profits from their PPAs, buying land is seen as a 378 safe haven for savings whilst saving the environment. One interviewee noted that "to invest in a property is something which is valued in Chile, that although you 379 hardly have anything, buy something, a house, anything. A title for a tiny bit of 380 381 land is part of our culture. It has to do with economic security for the people, the 382 families, so this concept, which is translated into conservation terms, attracts

383 lots of people....They see this as an investment, with the possibility of selling to recuperate their money" 384

Thirdly, whilst land prices have seen recent rapid increases, prior to this large and 385 386 untouched tracts of land could be acquired cheaply, making it more attractive than other 387 areas of Chile or other countries. One foreigner commented that "why there are so many areas in Patagonia is that there is the possibility, I 388 389 would love to have an area in [European country] mountains that I can protect. It 390 is just impossible. Price, everything is built upon. Let's face it, in Europe there is 391 not too much to protect". Chilean interviewees commented that whilst other areas of Chile are highly biodiverse 392 393 and highly threatened, these have fewer private or state protected areas partly because land is much more expensive. Fourthly, Chile's legalistic culture and strong 394 395 individual property rights, a product of neoliberal reforms, make it straightforward for 396 individuals to purchase land for any purpose, including conservation. Reflecting this 397 ease of buying land, some interviewees commented that their purchase was partly 398 impulsive. "[I bought it] because it cropped up. An opportunity. It was a decent price 399 at the time, it was there, a unique situation. The opportunity came up, it 400 401 was a whim." (owner of PPA of approximately 2000 hectares) 402 "We just travelled through Patagonia and then one day... visited the area, we liked it, and it turned out that not only the little plot that we visited was 403 404 for sale but the family around was also interested to sell, and we bought

it." (owner of PPA of approximately 2000 hectares) 405

406	"it wasn't a group of people looking for somewhere to conserve, but the
407	opposite. The owners put it up for sale, and there were people who had
408	come across it previously and what is more guessed that whoever bought it
409	would buy it for purposes not very like conservation. So they decided to
410	act" (representative of PPA of approximately 1000 hectares)
411	Unlike other countries, there are almost no restrictions on foreign investment in land, which
412	made the accord between Tompkins and the Frei government so unusual (Nelson and
413	Geisse, 2001). Whilst this situation was intended to attract foreign investment in industry, it
414	has also attracted conservation investment – one representative of a for-profit PPA
415	explained that they work in Chile because
416	"you have really strong rule of law, you have really good private property rights,
417	you don't have massive title problems And so it is not an accident that if you
418	are going to try and test something like this [our strategy], testing it in a place
419	like this, as opposed to testing it in Brazil, it is obvious."
420	Fifthly, the beautiful landscapes of southern Chile have attracted both foreign and Chilean
421	conservationists. Whilst most Chileans, including owners of PPAs in southern Chile, live in
422	the arid centre of the country, they prefer to establish PPAs in the south partly for aesthetic
423	reasons. One Santiago-based PPA owner commented
424	for the average person [central Chile] is not as pretty as the south. You have
425	more cactuses, it is drier, you don't have volcanoes, glaciers, waterfalls like you
426	do in the south, lakes. So the average person that is looking for something
427	fantastic, and this is one of the motivations for why private protected areas are
428	created, people look for beauty

Finally, Chile has a large middle class who have sufficient disposable income to purchase land for conservation, as well as richer individuals who are willing and able to purchase larger properties. A number of interviewees commented on the "fashion" for rich Chileans to purchase land for conservation in recent years. In addition to cases included in this study, there are a number of very wealthy Chileans who have purchased large areas for land in southern Chile (de la Fuente, 2010), but they are not included here because their motives and land management objectives are opaque, so they are difficult to class as PPAs.

436

Importantly, PPAs are neither incentivised nor legally recognised by the Chilean state. Whilst
the Environmental Framework Law states that:

The state will encourage and incentivise the creation of protected areas on private 439 property, which will be subject to the same taxes, legal rights, liabilities and charges of 440 441 those belonging to the state National System of Protected Areas. These areas will be 442 overseen by the Biodiversity and Protected Areas service (Republic of Chile, 1994) private conservation has been a low political priority and the state has not legislated to 443 444 encourage or incentivise PPAs. Giving legal status to PPAs has been seen as an impediment to natural-resource based economic growth and important infrastructure development, and 445 446 the Tompkins controversy has made it politically toxic. Campaigners promoting PPAs stated 447 they work hard to emphasise their heterogeneity, partly to disassociate them from the 448 Pumalin controversy. In 2012, a law allowing the creation of US-style conservation easements, albeit without any tax or other incentives, was brought to parliament, which 449 would give limited legal recognition for private conservation. The campaign to create 450 451 easements was led by The Nature Conservancy (TNC), who successfully promoted the law as 452 relatively uncontroversial, non-partisan and unthreatening to powerful interests such as the

mining industry, and it has received broad political backing. At an event to launch the law, 453 politicians from the two largest parties praised it for showing how economic growth and 454 environmental protection could be reconciled. It is worth noting that such win-win 455 sentiments, a key argument within neoliberal conservation, are expressed by campaigners 456 for PPAs because they are necessary to gain political support in Chile, where neoliberal 457 paradigms dominate, and not because they believe them. One noted that 458 459 "you speak to politicians, who generally assess things as economists, you have to compete directly with these values. So a forestry company will say, "listen, I can 460 support GDP with so many millions of dollars, or the local economy with so many 461 millions of dollars", and the conservationists say "I support three little frogs by 462 conserving them". So sadly you need to enter this logic of saying "I conserve 463 water worth so many millions of dollars".... So for sure one thing is entering the 464 dynamics of what can be valued in pesos, and other thing is entering the 465 dynamics of what is valuable" 466 467 The next session explores PPAs in more detail, the rationales behind their establishment and 468 their management and financing strategies¹. It categorises them by their attitude towards 469 470 profit, and this allows a fuller exploration of their engagement with the wider neoliberalisation of nature. 471

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473 For-profit PPAs

¹ Unless stated otherwise, all data comes from interviews with owners and managers of the PPAs concerned. Due to confidentiality and anonymity concerns, I have generally refrained from direct quotations regarding specific, named PPAs.

475 A number of entrepreneurs have established PPAs in southern Chile as for-profit businesses. The Cliffs Preserve is a 5,000 hectare luxury eco-resort on the coast of northern Patagonia 476 477 catering to very wealthy clients who spend a minimum of US\$1,000 per person per night. It 478 was established by Jim Anthony, a US real estate and golf resort entrepreneur, and is 479 managed by a team with experience in high end adventure tourism. The 60,000 hectare Huilo Huilo property in the northern part of the study area was originally a forestry 480 481 enterprise, but following declining returns the owners have included other sources of 482 income, with limited real estate development alongside tourism ventures. The owners see 483 more profit in businesses based on conserving the forest than on cutting it down. Chile has 484 various such 'conservation communities', where limited housing lots are developed for second or retirement homes, set within a larger protected landscape, offering developers an 485 486 opportunity to combine profit and conservation (Sepulveda and Villaroel, 2006). Patagonia 487 Sur, established by US social networking entrepreneur Warren Adams alongside Chilean 488 partners, operate a network of 6 PPAs throughout southern Chile, totalling 36,000 hectares. 489 These properties generate income from complimentary streams including luxury tourism, 490 limited real estate development, carbon credits from re-afforesting the properties with native species, alongside a real estate brokerage for other people looking to buy land in the 491 492 area. Patagonia Sur see themselves as a normal business, albeit one with ethical, 493 conservationist principles, and consider that business involvement makes for better 494 conservation. Their corporate slogan is "for-profit conservationists", and their website declares that the company "presents an innovative business model that merges 495 conservation and capitalism seamlessly and symbiotically" (www.patagoniasur.com). Adams 496 497 considers that the profit motive brings more investment for conservation than other means: 498 "in place of donating a million dollars to a good cause, and the donor receiving a tax

499 deduction, we put the investors' money to good use, and in 10 years, give them back two 500 million dollars" (Warren Adams, quoted in San Cristobal, 2012) with demonstrable effects -"Our capitalism-conservation is absolutely protecting places that wouldn't be protected 501 otherwise" because of a lack of resources or will from NGOs and governments (Pitts, 2012). 502 503 Adams argues that business techniques bring innovation and efficiency intro conservation, and that the Patagonia Sur model can conserve similar places that have cheap land, stable 504 505 politics, and good business opportunities (Pitts, 2012). At the time of fieldwork, no PPA was 506 yet generating a profit.

507

Rising property prices may allow PPAs to generate profits through property speculation, 508 509 although interviews with property brokers and PPA owners indicate there is little evidence 510 that land speculators are currently interested in conservation, and vice versa. All 511 representatives of PPAs interviewed indicated that although increasing prices might make 512 their property investment more secure, they had no plans to sell their land. One brokerage, Patagon Land, was established to take advantage of rising interest amongst wealthy 513 514 Chileans for investments in the south. Although it promotes environmentalism, encouraging clients to incorporate conservation planning into their properties, purchasers are more 515 interested in owning a vacation home or profiting from price increases than conservation. It 516 517 also operates an investment fund promising annual returns of 12% from its portfolio of 518 ecotourism, conservation and real estate projects, and from selling carbon credits generated 519 by reforesting the properties in which it deals on the recently established Santiago carbon exchange. 520

- 522 Market based, but not for profit, private protected areas
- 523

524 Other PPAs use markets to finance part of their operations, but without any intention to 525 make an overall profit. The largest of these are two NGO owned properties. The first, 526 Karukinka (272,000ha), located on Tierra del Fuego, was originally purchased in 1994 by Trillium, a US forestry company who aimed to develop a sustainable logging project (Klepeis 527 and Laris, 2006). Logistical difficulties and poor management meant that the project 528 529 struggled and eventually defaulted on its loans. The property passed to its creditors, 530 Goldman Sachs (GS), who donated it to the New York-based Wildlife Conservation Society (WCS), stipulating that it remains a private protected area. GS seeded a trust fund for 531 Karukinka with US\$1.5 million, supplemented with US\$6.5 million from Hank Paulson, GS's 532 chairman. WCS intend for Karukinka to self-finance through the trust fund and commercial 533 activities, principally trading carbon credits based on the property's extensive peat reserves. 534 535 This decision should be seen alongside GS's decision to establish a Centre for Environmental Markets in 2005. Whilst WCS's strategy for Karukinka is consistent with many aspects of 536 neoliberal conservation, Kent Redford (WCS's vice-president of conservation strategy) was 537 538 clear that it was not based on an evaluation of the best way to do conservation: 539 "There was no process of critically evaluating what options where available and deciding that this model was best launched with that programme. That was just the 540 541 nature of the gift and the opportunity that was available to us, both through the gift, 542 through financing and through the nature of the Chilean government and what have you." 543 544 Redford was lead author of an essay criticising conservationists' hubris towards payments

for ecosystems services (Redford and Adams, 2009).

547	The 65,000ha Reserva Costera Valdiviana (Valdivian Coastal Reserve) in the northern part of
548	the study area was similarly a forestry property that entered bankruptcy. A coalition of
549	NGOs formed to purchase it, led by the Worldwide Fund for Nature (WWF), alongside TNC
550	and Conservation International (the three biggest conservation NGOs in the world). The
551	reserve was established in 2005 and is managed by TNC, partly because WWF's charter
552	prevents it from owning land for conservation. 10% of the property is covered in eucalyptus
553	plantation, which upon maturation will be harvested and proceeds used to seed a trust fund
554	for the property. The reserve aims to self-finance, as part of TNC's aim to make its Chilean
555	operations self-financing.
556	
557	Many PPAs owned by middle class families have some market based activities to offset
558	running costs. For example, one owner of a 75 hectare PPA in northern Patagonia described
559	how her family originally purchased the property as a holiday home and to conserve the
560	forest, but the cost of her children's education meant they now aim to cover running costs
561	by renting out the property for part of the year. Although the owners had substantial
562	relevant business expertise, they do not intend to run the PPA to maximise profits.
563	"in reality you have to look for ways for it to self-sustain, so that the income that
564	comes into this park can be used for its conservation and maintenance I will feel
565	satisfied and content if it also self-finances and gives some benefits, but it is not the
566	goal"
567	Some corporate-owned PPAs also include market activities but are not profit-seeking.
568	Parque Oncol (754 hectares), established in 1989 by Chilean forestry company Arauco,
569	contains some commercial activities such as camping sites and a small entrance fee, but

these cover only 30% of the running costs, excluding investments. Although there are plans
for future commercial activities such as payments for ecosystem services, Arauco do not
seek to make a profit from Oncol. Instead, the value to the company comes from its
marketing and social responsibility value, and because it allows Arauco to gain sustainable
forestry certification.

575

576 A parallel to PPAs are indigenous protected areas, where indigenous communities manage part of their land for biodiversity conservation. For example, Mapu Lahual (approximately 577 578 5500 hectares) is a network of small, connected protected areas of temperate coastal 579 rainforest within a Huilliche indigenous territory. The creation of Mapu Lahual was a joint initiative of WWF and the communities – the former were looking for partners in conserving 580 581 the forests, and the latter engaged with conservationists to strengthen their petition for 582 land titles under indigenous land restitution projects. There are some ecotourism and 583 sustainable forestry enterprises generating some income for communities, though these are expected to provide employment for only a small part of the territories' population. 584 585 Indigenous leaders interviewed stressed that such areas are indigenous community protected areas, distinct from PPAs because they are not just about conservation, but are 586 587 part of an indigenous strategy to reclaim ancestral lands and create an autonomous space 588 for interlinked goals of maintaining indigenous sovereignty, culture, and livelihoods 589 (Holmes, 2014). They contrasted PPAs, with their emphasis on non-consumptive uses such as tourism, with indigenous protected areas, which can have resident populations of up to 590 591 hundreds of families, either holding private or communal land titles, with limited extractive 592 activities alongside non-consumptive uses. One noted that

"This sustainable use, it is a right as well, that you have to maintain it, or else it will 593 disappear, the Huilliche culture. If we say that you can't exploit anything, not even 594 medicinal plants, you lose culture. This is our fight, for our culture and dignity." 595 596 Within international conservation, community protected areas are recognised as distinct 597 from private and state protected areas, although only state areas are legally recognised in Chile (Dudley 2008). The full title of Asi Conserva Chile (Asociación de Iniciativas de 598 599 Conservación en Áreas Privadas y de Pueblos Originarios de Chile) translates as 'the Chilean 600 Association of Conservation Initiatives on Private and Native Peoples' Land', reflecting indigenous leaders' insistence that their lands be recognised as distinct. 601

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603 Private protected areas with minimal market involvement

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605 Private protected areas which have a minimum of market-based activity are the most 606 extensive of the three types. This is due to Douglas Tompkins, whose foundations control 6 607 PPAs covering 634,000 hectares, or 45.5% of the total amount of PPAs in the study area. Tompkins's properties have almost no market activities, with only a token charge for 608 609 camping. There is deliberately minimal accommodation within Pumalin as part of their 610 outreach and community engagement policies, with visitors instead encouraged to stay within neighbouring villages. Doug Tompkins is an outspoken critic of the environmental 611 impacts of Chile's policies for economic growth, and an advocate for a steady-state 612 economy. His PPAs focus on conservation for its own sakes, and market activities are seen 613 614 as at best a distraction from this wilderness focus. Pumalin's operations director described 615 the idea of making the park financially self-sustaining as "absurd, because in order to selffinance a national park it would have to be Disney world". Instead they are funded through 616

617 donations, principally from the Tompkins family. Other large PPAs are similarly financed almost exclusively through their owners' largesse. Sebastian Piñera, a billionaire who later 618 became president of Chile, created Tantauco park (118,000ha) on Chiloé Island, in 2005. It 619 620 charges a minimal entry fee, but is otherwise dependent on donations from Piñera's foundations. Futangue park (13,000 ha) was established in 1997 by Gabriel Ruiz-Tagle, an 621 entrepreneur who became minister of sport in the Piñera government. It generates no 622 623 income. In addition, many of the small properties owned by middle class families have no 624 income generating activities. An interesting variant is Ahuenco (850 ha) on Chiloé island, 625 purchased in 1994 by a group of middle class environmentalists to prevent the property 626 becoming bought by a forestry company, which is now owned and managed by a 627 cooperative of 45 individuals whose subscriptions finance the project.

628

629 Social and environmental impacts of PPAs

630

631 PPAs have had a mixed impact on making the broader neoliberalisation of southern Chile's resources more socially just and environmentally sustainable. There have been conflicts 632 633 between PPAs and local smallholders – Tompkins was accused of intimidating smallholders 634 into selling him their land around Pumalin, Tantauco is accused of both restricting traditional livelihoods and occupying ancestral territory claimed by indigenous groups, and 635 the Cliffs and Ahuenco have entered into formal agreements with neighbouring fishing 636 communities following concerns that they would restrict locals' access to the shoreline 637 638 (Holmes, 2014; Meza, 2009). Such conflicts between large landowners, smallholders and 639 indigenous communities are common in southern Chile, particularly the forestry sector, and there is no indication that they are worse around PPAs (Holmes, 2014; Meza, 2009). The 640

641 transition from forestry to less labour-intensive conservation around the Reserva Costera Valdiviana and Huilo Huilo has decreased the number of local people employed at each. 642 643 PPAs are also accused of landgrabbing, a problematic accusation given that far greater 644 amounts of land and resources are being grabbed by forestry, aquaculture and hydroelectricity companies, and because land acquisitions happen not through illegal 645 process but through an open and transparent, if unplanned, property market (Holmes, 646 647 2014). Indeed, conservation could bring socially positive outcomes when they support 648 marginalised people, such as through indigenous protected areas, or when land is managed 649 for the public benefit or donated to public ownership, as is Tompkins' intent. PPAs protect a 650 large amount of land, 4.54% of the case study area, although state protected areas cover 43% of the same area. The latter largely cover remote areas, high mountains and ice caps 651 652 with low biodiversity value, whilst PPAs are more likely to be located in places of higher 653 conservation value - a larger proportion of Chile's three most threatened biomes is 654 contained within PPAs than in state protected areas (Pliscoff and Fuentes-Castillo, 2011). 655 This is similar to other studies which found that because state protected areas are located 656 on low value marginal land, PPAs tend to be in places of higher conservation value (Gallo et al, 2009). Yet PPAs lack any legal status, so their contribution to conservation depends on 657 658 their owners will and abilities, potentially undermining their permanence, and as with state 659 protected areas, they are vulnerable to prospectors claiming subsoil mining rights. Crucially, 660 there is no evidence that PPAs challenge the broader paradigms of natural resource use outside of their boundaries - indeed, campaigners for PPAs are unwilling to openly criticise 661 662 broader resource use paradigms lest it reduce political support for their cause. PPAs 663 function as islands of conservation, disconnected from biodiversity beyond their boundaries.

- 665 **Conclusion**
- 666

This paper set out to explore three questions: how conservation is engaging with
neoliberalism, why it might be doing so, and what effect this has on both people and the
environment.

670

Answering the first question, the heterogeneity within Chilean PPAs belies any simple 671 672 attempt to understand them as a simply neoliberal phenomenon. PPAs have been described 673 as neoliberal because they can facilitate the integration of market mechanisms, logics and discourses into conservation, alongside civil society and market actors replacing a shrinking 674 state's role in conserving biodiversity (Büscher and Wande, 2007; Fletcher, 2010) Chilean 675 676 PPAs demonstrate very diverse attitudes to integrating market mechanisms into 677 conservation, from Patagonia Sur where markets are seen in triumphalist terms, to Pumalin 678 where markets are seen as threats which crowd out other values. Although emerging 679 payments for ecosystem service schemes in carbon or water may create new market opportunities and attract more profit-seekers, at present much more land is contained 680 within PPAs which have a minimal role for markets than within for-profit PPAs. This is similar 681 682 to other cases, such as the Little Karoo in South Africa (Gallo et al, 2009). Likewise, whilst markets and civil society have replaced state regulation of other natural resources, notably 683 water (Budds, 2004) it has not occurred in protected areas, despite the declarations of the 684 685 1994 Environmental Framework Law. The proposed easement law is limited in intent, and has not passed into statute. Measures to encourage private enterprise within state 686 687 protected areas are limited, and they remain strongly under state governance (Pauchard 688 and Villaroel, 2002). This contrasts with other countries where states create legal structures

and incentives to increase land conservation by private and civil society actors (Hodge and
Adams, 2012; Snijders, 2012).

691

Despite this, the emergence and form of Chilean PPAs derives from the wider 692 693 neoliberalisation of natural resources started under the Pinochet dictatorship and which has continued since. With counterfactuals in mind, it is clear that there would be fewer PPAs 694 695 had Chile not taken a neoliberal turn. The reforms which greatly liberalised land markets 696 and strengthened individual property rights allowed conservationists to purchase land with 697 the same ease and freedom as forestry, mining and agriculture corporations, the intended 698 beneficiaries of the reforms. Chile does not restrict foreign land ownership, unlike other 699 Latin American countries, and the acquisition of large estates by foreign conservationists 700 such as Tompkins has generated accusations of landgrabbing, although the even more 701 extensive acquisitions by primary industry has not attracted the same criticisms (Holmes, 702 2014). Indeed, Tompkins' difficulties show that property laws prioritising strict private 703 property rights over community or state rights make it much easier to operate a protected 704 area privately than to donate land to the state. Chile's neoliberalisation also created an individualistic culture and a weak civil society which favours PPAs over other forms of 705 706 action. PPAs have also benefitted from failures within the neoliberalisation of Chile's natural 707 resources, particularly where forestry projects have entered bankruptcy (e.g. Reserva 708 Costera Valdiviana, Karukinka). Rapidly rising land prices resulting from capital speculation may have prompted further investment in PPAs. More broadly, one could consider that the 709 710 rise of neoliberalism has allowed a global super-rich to emerge, including people such as 711 Tompkins, Adams and Piñera, who can then purchase large PPAs. Thus whilst only a few 712 Chilean PPAs are engaging with neoliberalism by seeking profit through conservation, and

none are facilitating state rollback, all are engaging with it by taking advantage of the
outcomes of Chile's neoliberalisation to further conservation. This case demonstrates that
conservation's engagement with neoliberalism is not just about the extent to which
individual conservation projects reflect the archetypal features of neoliberal conservation
identified at the start of this paper, but also about the context that allows particular
strategies to emerge and flourish.

719

720 PPAs reinforce Chile's neoliberal turn by legitimising the private property system, 721 particularly the existence of very large estates in the hands of a few wealthy individuals, the 722 slimmed state and role of private actors in providing public goods such as biodiversity 723 conservation, often using market mechanisms, as well as the compatibility between Chile's 724 resource-led economic growth and environmental health. Some PPAs provide a partial 725 challenge to the neoliberal model of natural resource-led growth, notably the Tompkins 726 properties, as whilst they are products of liberalised property markets and strict private 727 property rights, they aim to remove land and resources from the market and potential 728 extractive use, and donate it to the state as public property. Tompkins promotes wilderness conservation as an inherent public good and a deep ecology approach whilst frequently and 729 730 publically criticising the ecological impacts of the resource extraction economy and the 731 pursuit of economic growth.

732

Answering the second question, thinking about how conservation is engaging with
neoliberalism provides insights into why it is doing so. Two broad rationales have been used
to explain the integration of conservation and neoliberal capitalism – either because
capitalists see conservation as a new frontier for generating capital (Büscher and Fletcher,

737 2014), or because conservationists chose to engage with neoliberalism as the best way to 738 save biodiversity because it is the dominant global paradigm (Corson 2010; Holmes, 2011; 739 2012). Some Chilean PPAs, such as Patagonia Sur and the Cliffs Preserve, reflect the first 740 rationale. Capital has flooded into southern Chile in recent years, seeking profit from natural 741 resources through forestry, hydro-electricity and aquaculture, and conservation is another 742 method of extracting value from nature through ecotourism, payments for ecosystem 743 services or property speculation. National and international capital is accelerating and 744 expanding its grabbing of the region's land and resources, and conservation is a small part of this (Holmes, 2014). Chilean PPAs strongly reflect the second rationale. Chile's neoliberal 745 746 reforms made establishing PPAs an easy solution for those seeking to conserve land. 747 Campaigners for PPAs highlight the compatibility of economic growth and conservation not 748 necessarily because they subscribe to such arguments, but because engaging with such 749 dominant paradigms is essential for political success. The relative importance of these 750 rationales indicates that the sizeable literature exploring neoliberal conservation through 751 the logics of capitalism should be complimented by further studies exploring conservation 752 organisations' strategies and the rationale behind these.

753

Answering the third question, whilst PPAs may be more environmentally sustainable and socially just than other land uses dominating southern Chile, there is a contradiction in their engagement with neoliberalism. PPAs have expanded, and have been able to attempt to conserve biodiversity within their own boundaries, because they have embraced neoliberalism, taking advantage of property markets largely without presenting an explicit challenge to dominant political paradigms of economic growth and resource use. Yet this embrace might restrict their abilities to be transformative of this wider paradigm. This

761	reflects a broader criticism of conservation's embrace of neoliberal capitalism – the
762	challenges it provides to dominant systems of resource use are relatively minor, and it may
763	support these systems more than challenging them (Robinson, 2012, Holmes, 2012).
764	
765	It is a curious oversight that PPAs have been neglected not just within debates about
766	neoliberal conservation, but within social science studies of conservation more broadly,
767	given that they can be locally extensive and that they engage with diverse debates within
768	these fields. More work is needed to explore how their emergence and forms fits with
769	histories of land use and conservation in different parts of the world. Such work, as with
770	other research on neoliberal conservation, should explore how they are a response to the

broader trajectories of land use, conservation and economic development in which they findthemselves.

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