

1 Relational representation: speaking with and 2 not about Nature

3 Lidia Cano Pecharroman, Massachusetts Institute of Technology, USA

4 Erin O'Donnell, University of Melbourne Law School, Australia

5

6 **Abstract**

7 The transnational movement to recognise the rights of Nature continues to fuel
8 experimentation by a growing number of jurisdictions in legal form, content, powers, and
9 governance arrangements. In this paper, we focus on the mechanisms through which Nature
10 is represented in various ways. There is enormous diversity in representational arrangements,
11 but there is no clarity on precisely who should be representing Nature, or how Nature can be
12 represented in human spaces, or even what the intent of this representation is (or should be).
13 We describe a spectrum of representation that ranges from speaking about, to speaking for,
14 to speaking with the natural entity. We develop a model of relational representation that
15 shows the power of speaking with Nature to not only develop relations between the
16 representatives and the natural entity, but also to enable a broader dialogue of knowledges
17 with a wider pool of participants. By examining four case studies (the Mar Menor in Spain,
18 the Rio Atrato in Colombia, the Birrarung/Yarra River in Australia and Te Awa
19 Tupua/Whanganui River in Aotearoa New Zealand), we show how these diverse
20 representational models are moving towards the relational end of the spectrum, and identify
21 the challenges and opportunities of relational representation of Nature.

22

23 1 Introduction

24 Recognition of the rights of Nature is blooming across the globe, with over 409 rights of Nature initiatives
25 in 39 countries (1). Holders of rights include Nature as a whole (e.g. the Ecuadorian Constitution, Arts 71-
26 74), specific landscape entities (such as rivers, lakes, mountains, and forests, see 2–4), and individual species
27 (such as manoomin (wild rice), see 5). The recognition of Nature as a legal rights holder transitions it from
28 an object, over which humans have dominion, and with no powers to protest its own mistreatment, to a
29 subject, able to claim what Tănăsescu describes as a 'moral debt' (6) and as well as the legal standing to sue
30 on its own behalf (7). This 'alchemical transfiguration [renders Nature] uniquely visible, and legible, to the
31 law in ways that it has not been before' (8).

32 In addition to the wide range of different mechanisms for recognising the rights of Nature (including
33 proclamations, policies, local laws, state and federal legislation, and court rulings, see 1), there is also a
34 multitude of mechanisms for the representation of Nature as a rights holder. In Ecuador, any citizen has
35 standing to demand that public authorities uphold the constitutional rights of Nature (see 6). In Aotearoa

36 New Zealand, on the other hand, representation arrangements are tightly prescribed in the legislation (*Te*
37 *Awa Tupua (Whanganui River Claims Settlement) Act 2017*, sections 18-20). *Te Awa Tupua* (the Whanganui
38 River) has a ‘face and voice’, *Te Pou Tupua*, a position which is held by two people, appointed by the iwi
39 of *Te Awa Tupua* and the Crown (9).

40 The diversity of representation arrangements highlights a major issue for rights of Nature: there is no clarity
41 on precisely who, or how, Nature can be represented in human spaces, or even what the intent of this
42 representation is (or should be). Stone’s original conception of Nature as a legal subject was imagined with
43 the express intent of enabling Nature’s interests to be represented directly in court, so that damage to
44 Nature could be taken into account directly, rather than filtered through the lens of associated damage to
45 human beings (7). This notion had been also applied before to corporations, governments, ships or
46 railroads, legally considered as legal persons (10,11). These basic extensions of traditional representation
47 still rely on conceptions of personhood that are based on an ‘atomistic, isolated, individual making
48 independent choices’ (12) to defend their interests in court. In doing so, this entrenches ‘Nature’ as an
49 adversary, relying on its voice to be heard, and competing for outcomes against other self-interested
50 persons. This can have the unintended consequence of reducing people’s willingness to protect Nature (13)
51 and grossly misrepresents the inextricable relation of humans and human activity with Nature.

52 The Ecuadorian experience demonstrates that although it can take some time to gain genuine traction, there
53 is real power in giving Nature a ‘voice’ in the court system (14). Beyond the courts, legal systems have also
54 granted Nature a voice more broadly, enabling representation of Nature in policy and decision-making
55 spaces. For instance, in both Aotearoa and Australia, the ‘voice’ of the river has a role in both policy-making
56 and ensuring accountability and integrity (9,15).

57 The recognition of this voice in our legal and political systems has rehashed a never-ending theoretical
58 dilemma with great implications in practice: what exactly do we mean by representation? And relatedly,
59 how can Nature be ‘heard’ effectively within human systems for decision-making and dispute resolution?
60 Can just anyone be Nature’s representative? What of those who have a clear conflict of interest, or without
61 adequate power or funding to be effective? How do we know that Nature’s interests are being represented,
62 as opposed to the interests of the person acting as representative? These are questions that have emerged

63 for all sorts of representation arrangements (such as, who and how a legal guardian can represent the
64 interests of its representee, how an individual can represent the interests of a group without letting their
65 own interest permeate their exercise of representation). These questions warrant attention, and similarly
66 understanding what representation means for the rights of Nature is important both for humans and for
67 Nature. The definition of representation is forever evolving and elusive at times. However, the exercise of
68 its definition is imperative for its operationalization in practice. This means first, anticipating the potential
69 consequences of a particular conceptualization of representation as it gets implemented. As Tănăsescu
70 argues ‘the rights of Nature have a strong anti-democratic potential, for several reasons: rights are a forceful
71 representation, which leaves little room for deliberation... [and they can] subordinate the representation of
72 humans to a Nature which is, definitionally, always more important’ (6). Second, it means setting ourselves
73 free from pre-existing assumption of what representation is, and how it should look, and instead to embrace
74 the possibility that this ever evolving concept will yet take another turn as Nature is enabled representation
75 in human spaces.

76 In this paper, we explore Tănăsescu’s relational model of representation as an alternative to the standard
77 model of political representation. Re-evaluating what representation is and how the representation of
78 Nature is conceptualized, Tănăsescu takes this definitional turn to argue that representation as an exercise
79 of "claiming" makes more sense definitionally both for human and more-than-human variants of
80 representation (6). We consider how this definition of representation changes both our understanding of
81 representation and our expectations of the process of representing the interests of natural entities that have
82 been recognized as legal entities (persons, subjects, or living entities). We build on Tănăsescu’s model to
83 identify a relational spectrum of representation of natural entities: (1) speaking about; (2) speaking for; and
84 (3) speaking with. Both speaking about and speaking for are accounted for in the standard model of
85 representation, but speaking *with* requires a relational model of representation. We further propose a
86 definitional extension to Tănăsescu's initial conceptualization by expanding this third category by
87 considering representation as a dialogue of knowledges, with a clear role for the representative in enabling
88 this dialogue. We use four case studies of waterway legal entities to document how these entities are being
89 represented now and bring nuance to the translation of these forms of representation into practice. The
90 cases portray how the recognition of rights to these natural entities is pushing the boundaries of what we

91 have defined and understood as representation in practice and is eliciting new approaches to decision
92 making. We document both the mechanisms of representation and the intent of that representation and
93 assess where these case studies are placed along this relational spectrum of representation. Our analysis
94 identifies common themes, as well as some of the challenges for effective and relational representation.

95 2 Representation

96 Nature now has rights in an ever-growing number of jurisdictions around the world, and '[r]ights... demand
97 representation' (6). But what is representation? What is it attempting to achieve? Representation is as elusive
98 of a concept as it is an evolving one.

99 Pitkin states that representation involves 'making present in some sense of something which is nevertheless
100 not present literally or in fact' (16). Centring the representative-constituent relationship the literature
101 emphasises representation as *delegation* (17) or representation as a *trustee* that will make decisions for the
102 overall good of those being represented (18). Applying a constructivist lens (19) instead defines
103 representation from the *citizen perspective* (20) and a systemic approach brings to light that *representation is a*
104 *process mediated by trust* that must expand traditional legislator-constituent relationships to draw on
105 disenfranchised groups experiences through models of engagement that supersede the current deliberative
106 model (Williams, 2000) .

107 Tănăsescu notes that these concepts of 'principal/agent, trustee/delegate, and authorization/accountability
108 have for a long time been the dominant ones for a theory of representation' (6). Urbinati and Warren
109 describe the 'standard account' of democratic representation as having:

110 'four main features. First, representation is understood as a *principal agent relationship*... thus separating
111 the sources of legitimate power from those who exercise that power. Second, electoral representation
112 identifies a space within which the *sovereignty of the people* is identified with state power. Third, electoral
113 mechanisms ensure some measure of *responsiveness* to the people by representatives and political
114 parties who speak and act in their name. Finally, the universal franchise endows electoral
115 representation with an important element of *political equality*' (21, emphasis added).

116 Tănăsescu argues that the ‘standard model proposes that representation is supposed to realize the interests
117 and wishes of a constituency’ (6). Yet the ‘the standard account has been stretched to the breaking point’
118 (21), due to the increasing complexity of issues and increasing numbers of what Urbinati and Warren term
119 ‘voice entrepreneurs’: nonelectoral representative forms including non-governmental organisations,
120 advocacy groups, transnational organisations, civil society groups, and alternative decision-making forums.
121 More-than-human representation, in particular, ‘has come to question most, if not all, parts of the standard
122 model’ (6). Instead, Saward argues that we ‘need to move away from the idea that representation is first and
123 foremost a given, factual product of elections, [but is rather] a precarious and curious sort of claim about a
124 *dynamic relationship*’ (22, emphasis added).

125 2.1 Representation as relationship

126 In his 2016 book, Tănăsescu develops the concept of representation as relationship, ‘a process whereby
127 political subjects are summoned (intra-subjective) and enter a relation of the generic form ‘us’ doing this
128 on behalf of/speaking for/warning against/fighting against, ‘them’ (inter-subjective)’ (6). He defines
129 representation a ‘relational activity of claim-making’ (6), in which it is not the beings themselves who are
130 represented, but rather the relations, both ‘internal to the subject, as well as inter-subjective’ (6).

131 Representation thus reflects the ‘irreducible multiplicity’ of subjects and emphasises the central importance
132 of relationships both within and between subjects (6). This is an active, dynamic relationship which is
133 constantly being renegotiated between represented and representative (and further, between the
134 representative and the rest of the world).

135 In doing so, this approach to representation challenges the role of the represented as speaking in the
136 interests of the more-than-human entity. Unlike the standard model, which is ‘widely interpreted as relying
137 on previously coalesced interests and identities that representation could ‘access’ (6), understanding
138 representation as inherently relational enables us to accept that ‘we can never gather enough knowledge
139 about a non-human being that would tell us how this being is to be represented’ (6). Rather, it enables
140 representatives to make ‘representative claims ... about preferred relations to the non-human world (‘this
141 is what nature wants/needs/is telling us, and this is what we should do’)’ (6).

142 In both representing these claims (as a ‘voice’ for Nature), and in responding to them, this process of
143 representation enables a ‘constant re-evaluation of who ‘we’, the group with political power and voice, want
144 to be’ (6). What sort of relationship do we want to create with Nature? In posing this question, we also
145 acknowledge that ‘everyone is already situated within relations with what we call Nature, and that often
146 meaningful relations of respect already exist’ (6). In fact, as Graham has argued, such relationships are
147 inherently human: ‘[t]he land, and how we treat it, is what determines our human-ness’ (23). Humans have
148 always been ‘human-nature hybrids’, and correspondingly, ‘nature is always a humanized hybrid’ (6). The
149 recognition of Nature as the holder of legal rights enables its representation in particularly human spheres
150 (such as courts, policy-making and even markets), but in understanding representation as relational, we do
151 not need to treat Nature as an ‘other’ to whom we are granting (human) representation. It can be seen,
152 rather, as a way of elucidating and re-negotiating these pre-existing, intertwined relationships of mutual
153 interdependency.

154 Tănăsescu’s relational model of representation also aligns with recent developments in the concept of
155 personhood. Rather than reinscribing the idea of personhood as an atomised individual, modelled on the
156 White, wealthy, able-bodied man, personhood is beginning to be seen as relational, both in the wider, moral
157 sense (24) and within the strictly legal framework (12). While accepting of the individual right to
158 personhood, O’Donnell & Arstein-Kerslake (25) highlight the need of legal systems to evolve in a direction
159 that recognizes that individual personhood is inherently relational. In other words, it is the person (or living
160 entity) seeking agency in relation to the individual or group supporting them what is crucial to realize such
161 representation (12).

162 3 A relational spectrum of representation

163 *Kauaka e kōrero mo e awa, engari kōrero ki te awa* [Don’t merely talk about the river, rather speak to and
164 commune with the river].

165 In this section, we use the example of waterways (rivers, lakes, lagoons, wetlands, estuaries, aquifers) to
166 illustrate a relational spectrum of representation. In focusing on one type of natural entity, we enable a
167 richer comparison and deeper understanding, but we believe that this spectrum can be applied to other

168 forms of natural entity as a way of understanding the relationship between represented and representative,
169 as well as between the representative and the wider community.

170 Waterways around the world have been recognised as legal entities of varying kinds: legal persons, legal
171 subjects, living persons, and living entities (26). Of these, only living entities do not include legal rights or
172 powers; but living entities do still raise the status of a waterway from a legal object, and enable both
173 representation and a different kind of relationship between humans and waterways.

174 We begin with the status that most waterways still have, that of legal object in which waterways are spoken
175 *about*, and move through different modes of representation: speaking *about* and *for* (a paternalistic model
176 that assumes we can objectively identify the best interests of the waterway), and speaking *with* (based on
177 relational closeness and an enduring, dynamic relationship in which the representative learns the will and
178 preference of the waterway). Speaking with the waterway can enable a two-way dialogue between the
179 representative and the waterway, but this can also be extended to enable a dialogue of knowledges amongst
180 many participants.

181 3.1 Speaking ‘about’ waterways

182 For water, the dominant paradigm is one of resource management, especially in settler colonial jurisdictions
183 (27). Water is an object over which humans have dominion, and there is an emphasis on ensuring that
184 human use of this resource is efficient (extracting maximum value from each unit of water), equitable (at
185 least for humans), and to a lesser extent, environmentally sustainable (28,29). Notably, this is not the case
186 for Indigenous Peoples, who consider water to be kin, and whose laws embody relational responsibilities
187 to water and waterways (30–33).

188 In the mode of legal object, water is spoken ‘about’ in many ways. Rivers and aquifers are described as
189 water resources for cities, industry and agriculture. The health status of waterways is defined in terms of
190 water quality, hydrology, biodiversity and other ecological values. Waterways are described as ecosystem
191 service providers, delivering recreation, amenity, and other services to humans. Decisions are made about
192 water and waterways without considering their needs beyond those of the ecosystem elements that have
193 been documented, because in this model, the waterway has no holistic needs or agency.

194 Recognising waterways as legal entities is a way to overcome this classification of water as mere legal object.
195 In doing so, we transform the relationship between people and waterscapes from a transactional
196 relationship of exploitation and dominance into an enduring, reciprocal relationship of interdependence.

197 3.2 Speaking ‘for’ waterways

198 As waterways are recognised as legal entities in themselves, it has become possible for their representatives
199 to speak ‘for’ them, and ensure that their interests are represented in the decision-making process. Speaking
200 ‘for’ waterways aligns with the standard account of political representation, in which the representative can
201 be understood as a trustee, speaking on behalf of the waterway. In fact, the mere exercise of granting rights
202 to a natural entity when done through the courts, takes place with a plaintiff that is speaking for Nature.
203 Trustees as defined by (18) perform their representative functions by doing what they think is best for those
204 represented. This approach to representation is embedded in two assumptions: first, that there is such a
205 thing as the “common good” that the representative can identify and aim for; and second, that this
206 representative has the capability to speak for others without having to necessarily communicate with their
207 represented. Mansbridge (34) refers to the latter premise as the ‘gyroscopic’ representation, by which a
208 representative ‘looks within’ to derive from their own experience conceptions of interest or ‘common sense’
209 to serve as a basis for the action. This conception is parallel to Pitkin’s (16) definition of ‘symbolic
210 representation’ by which a representative speaks for, but also ‘stands for’, the represented. This is
211 presumably the premise under which Stone first imagined the rights of natural entities to stand in court, as
212 ‘environmental objects’ (7) to be represented through a guardian that can speak for its interests.

213 This form of representation runs up against the key difficulty identified by Tănăsescu: how do we know
214 what is in the interests of Nature? In Ecuador, the Constitutional Court has articulated the water-related
215 ecosystem rights of the Aquepi River, enabling citizens to speak for the rights of the river (14). Yet in doing
216 so, the Court also constrained the rights of the river to the ‘[physical, chemical and hydrological] structure,
217 functions [as service provision to humans and other ecosystem elements], and evolutionary processes’.
218 Although a significant step in articulating the rights of the river (and demonstrating how those rights could
219 be upheld or contravened), this understanding of the river remains anthropocentric, colonial in its apparent
220 preference for Western science (see 30), and ultimately limited in its ability to see the river holistically.

221 3.3 Speaking ‘with’ waterways

222 In a relational model of legal personhood, representation is a mechanism for giving expression to a person’s
223 will and preference (rather than paternalistically acting in their best interests), which is contingent on a
224 relationship of sufficient closeness that enables the will and preference to be expressed and understood
225 (35). Relational personhood (and the necessary relational closeness) thus also reflects Tănăsescu’s position
226 that representation is less about interests, and more about identities and values, enabling the ‘political
227 person’ to be seen and heard (6).

228 In speaking *with* waterways, the representatives remain open to a growing understanding of the agency of of
229 the waterway. Although waterways may not act in a voluntary manner, they can nonetheless demonstrate a
230 will and preference for particular modes of being, such as being free-flowing, with space to expand in flood
231 and contract again in drier times. Increasing connection with the river, representation is thus a ‘process
232 whereby subjectivities are created in the act of proposing preferred relations’, in which ‘human self-
233 perception and self-understanding are at the centre’ (6)

234 In an extension of speaking *with*, it is possible for the representative to operate to *enable dialogue* between the
235 waterway and many participants, who may then form their own relationship with it. The representative
236 seeks not only to help the waterway communicate its will and preference to others, but also to draw others
237 into conversation, and relationship, with the waterway. In a human context, this both strengthens and
238 dilutes the role of the representative. On the one hand, the representative’s relationship with the waterway
239 is enhanced through its role as enabler of dialogue, but on the other, as more people develop their own
240 relationships with the waterway, they too begin to take on the role of representative, reflecting the
241 ‘irreducible multiplicity’ of the river and its representatives (as multiple versions of the waterway, and its
242 representatives will always exist), and thus a multiplicity of relationships between people and the waterway
243 (6). Through Watson et al’s (35) model of relational closeness, this mode of representation may also help
244 to shift ‘human self-perception’ from the centre (6), and instead bring each of us into relationship with the
245 waterway.

246 In operating on this spectrum, the ‘representative position adopted by the representative signals to the
247 audience a preferred relation to the subject of representation’ (6). In the next sections of the paper, we

248 explore how this spectrum is reflected in four case studies of waterways recognised in law as legal subjects
249 and/or living entities.

250 4 Methods

251 Comparative analysis of four case studies is employed as means for theory exploration and development
252 (36). The use of case studies is guided by the premise that theory development requires from ‘a selection of
253 diverse contexts to explore ideas rather than cases to test ideas’ (36).

254 A mix of purposive and convenience sampling were employed to select the case studies based on the
255 following criteria:

- 256 (1) The recognition of a water-based ecosystem as a natural entity with the status of a living being or
257 as a legal person;
- 258 (2) The recognition of the new status of the natural entity in legal instruments (legislation or case law);
259 and
- 260 (3) A requirement to establish a representative body that speaks on behalf of the natural entity
261 (possibly alongside and complementary to the recognition of any citizen’s ability to represent the
262 natural entity in court).

263 These criteria were chosen to ensure that comparative analysis would be possible across a limited number
264 of case studies. We recognise that the nature and geography of the natural entity may affect the way it is
265 represented, so we have focused on waterways, limiting our case studies to three rivers and a lagoon.
266 Recognition of rights in law is also crucial, to ensure that representation is focused on legal mechanisms
267 rather than the rights of the entity as a moral subject.

268 Data were collected across the four countries during 2022-2023 using interviews with key informants,
269 observation, and non-structured discussions with stakeholders during workshops. Furthermore, a literature
270 review of case specific documents was performed to encompass laws, regulations, policies, and strategies
271 derived from each case study, as well as contextual documentation that was necessary to understand how
272 those policies and regulations relate to a broader cosmology of policies and plans. Key informant semi-
273 structured interviews were conducted in the context of a broader research project that aims at

274 understanding the implications that the recognition of Nature as a living entity has for land-use planning
275 and policy making. Interviews and focus groups were conducted with a total of 56 stakeholders across the
276 four case studies. The stakeholders interviewed include policymakers, council members, river guardians and
277 representatives, and environmental activists. One of us is also a situated knower, in that they are a member
278 of the Birrarung Council, which acts as a voice for the Birrarung/Yarra River.

279 Ethics Statement: The research was subjected to MIT's institutional review board, COUHES (Committee
280 on the Use of Humans as Experimental Subjects). Due to the subject and content of the study IRB approval
281 was waived by Protocol ID: E-5034 and Protocol ID: E-4632. Consent for the interviews was obtained
282 verbally following the prompt recommended by the MIT COUHES Investigator Responsibilities for
283 Exempt Research protocol. A Spanish translation of such prompt was used with Spanish speakers. The
284 data and findings from the interviews are kept anonymous unless the interviewee explicitly requested to be
285 quoted.

286 4.1 Rights and representation of waterways: case studies

287 Mar Menor, Spain

288 The Mar Menor is a saltwater lagoon. This lagoon is separated from the Mediterranean Sea by only a narrow
289 strip of sand that is about 22 km long and between 100 and 800 meters wide. Freshwater mixes with water
290 from the sea, creating special conditions to host a unique ecosystem. The Mar Menor is the considered the
291 largest saltwater lagoon in Europe, and the lagoon together with its surrounding wetlands, were declared as
292 a specially protected area of importance for the Mediterranean. These are areas that guarantee the survival
293 of the values and biological resources of the Mediterranean; they contain ecosystems typical of the
294 Mediterranean area or habitat of endangered species that have a special scientific, aesthetic or cultural
295 interest (37). They are declared under the *Convention for the Protection of the Barcelona Marine Environment and the*
296 *Coastal Region of the Mediterranean 1976*. In 2020, a report by the Spanish Oceanographic Institute described
297 the situation of this lagoon and ecosystem as an 'ecological crisis' (38). This and other studies signaled that
298 the health of the lagoon has been compromised by multiple sources. Pollution by heavy metals and
299 metalloids and pollution from organic chemicals derived from industrial and agricultural runoff; as well as
300 the construction of tourism infrastructure and housing developments by the shore, were identified as the

301 main culprits. The pollutants poured into the lagoon cause eutrophication which has resulted in episodes
302 of anoxia (dangerously low levels of oxygen in the water). In severe episodes like the ones that took place
303 in 2019 and 2021, anoxia killed millions of fish and other species in a matter of hours.

304 The case of the Mar Menor lagoon is the first case in Europe where a Natural entity has been granted rights.
305 It is also the first case in the world in which Nature was granted rights through Popular Legislative Initiative.
306 This way of legislating allows for citizens to present a legislative proposal to Congress. If the proposal has
307 enough signatures supporting it, the Congress will take it into consideration and negotiate any amendments.
308 The law then passes or fails following the conventional democratic process. The initiative advanced and
309 succeeded in the midst of the pandemic and without institutional support (39).

310 The rights of the Mar Menor were recognized through Law 19/2022 on September 30, 2022. The law
311 establishes the 'legal personality of the Mar Menor lagoon and its basin (...) which is recognized as a subject
312 of rights' (Art.1). The recognized rights include: the right to exist and naturally evolve, which means
313 ensuring the balance and regulation capacity of the ecosystem in the face of the imbalance caused by
314 anthropogenic pressures coming mostly from the catchment basin; the right to protection, understood as
315 the limiting, stopping and not authorizing those activities that pose a risk or damage to the ecosystem; the
316 rights to conservation, which requires actions to preserve terrestrial and marine species and habitats and
317 the management of associated protected natural spaces; and the right to restoration, which requires, if
318 damage has already occurred the need to repair and restore (Art.2). Further details on the management,
319 including specific governance and representation mechanisms, are being crafted as part of an upcoming
320 regulation that further expands on the extent of the law.

321 The declaration of the legal personhood of this lagoon has led to the establishment of a series of institutional
322 arrangements that aim at both recognising and representing its interests (Table 1). The Tutoria del Mar
323 Menor, as its main representative, is formed by spokespersons from three committees. These committees
324 represent three perspectives: the scientific, the political and the citizens. These committees are responsible
325 for the establishment of monitoring indicators, information dissemination about the law, and the proposal
326 of new actions to protect the lagoon, amongst others (Table 1). Furthermore, individual citizens are also
327 entitled by law to bring to court any potential breach of the legislation that may be endangering the lagoon.

328 The recognition of the rights of the lagoon has prompted the establishment of a series of committees to
 329 represent the lagoon. Legal experts that worked closely with the initiative have pointed out that the law is
 330 already being used as a basis to defend the integrity and health of the lagoon in the courts with pending
 331 court cases. Institutionally and socially the law is bringing a new perspective into the relationship of the
 332 lagoon with the communities that inhabit its basin.

333 *Table 1 Representation for Mar Menor*

Representative/s	Role
<i>Governmental Committee</i>	<p>It will be made up of thirteen members, three from the General State Administration, three from the Autonomous Community and seven from the citizens, who will initially be the members of the Promotion Group of the Popular Legislative Initiative. The Committee of Representatives has among its functions that of proposing actions for the protection, conservation, maintenance and restoration of the lagoon, and also that of surveillance and control of compliance with the rights of the lagoon and its basin. This committee takes into account the contributions of the Monitoring Commission and the Scientific Committee, and works in cooperation with them.</p>
Scientific Committee	<p>The Scientific Committee will be made up of independent scientists and experts specialized in the study of the Mar Menor, proposed by the Universities of Murcia and Alicante, by the Spanish Institute of Oceanography (Centro Oceanográfico de Murcia), by the Iberian Ecology Society and by the Council Superior of Scientific Investigations, for a period of four years (with renewable terms). The Scientific Committee will have among its functions that of advising the Committee of Representatives and the Monitoring Commission, and identification of indicators on the ecological state of the ecosystem, its risks and the appropriate restoration measures, which it will communicate to the Monitoring Commission.</p> <p>The legislator's intention is to establish an independent Scientific Committee. Such independence is intended by requiring that all members appointed have recognized</p>

Representative/s	Role
	scientific prestige, and by providing no remuneration for their work (which relies on the members retaining their existing research roles with their current employer).
Monitoring Committee	The Monitoring Commission (guardians) will be made up of a regular person and a substitute representing each of the riverside or basin municipalities (Cartagena, Los Alcázares, San Javier, San Pedro del Pinatar, Fuente Álamo, La Unión, Murcia and Torre Pacheco) designated by the respective Town Halls, which will be renewed after each municipal election period. As well as by a regular person and a substitute representing each of the following economic, social and environmental defense sectors: business, union, neighborhood, fishing, agricultural, and livestock associations – with representation of ecological agriculture and livestock and/or or traditional–, environmental defense, the fight for gender equality and youth. The Monitoring Commission has among its own activities the dissemination of information on this law, monitoring and control of respect for the rights of the lagoon and its basin, and periodic information on compliance with this law, taking into account the indicators defined by the Scientific Committee to analyze the ecological status of the Mar Menor in their reports. The members, who must have a previous career in the defense of the Mar Menor ecosystem, will be appointed by agreement of the most representative organizations of each of the aforementioned sectors, under the call and supervision of the Promotion Commission, and for a renewable period of four years.

334

335 4.2 Río Atrato/Atrato River, Colombia

336 The Atrato River is one of Colombia’s longest rivers, spanning almost 800km. The Atrato River is the
337 largest in Colombia and also the third most navigable in the country. The Atrato rises to the west of the
338 Andes mountain range, specifically in the Cerro Plateado at 3,900 meters above sea level and empties into
339 the Gulf of Urabá, in the Caribbean Sea. Its extension is 750 kilometers, of which 500 are navigable. The
340 widest part of the river is 500 meters long and the deepest part is estimated to be close to 40 meters. It

341 receives more than 15 rivers and 300 streams. The Atrato River is located in the Chocó region (Chocó
342 biogeográfico), one of the most biodiverse regions on the planet, with 90% of the territory deemed as a
343 special conservation area and has several national parks such as “Los Katíos”, “Ensenada de Utría” and
344 “Tatamá”. The Atrato River basin with 40,000 square kilometers represents just over 60% of the
345 department's area and is considered one of the areas with the highest water yield in the world (40).

346 The river was afforded rights by Colombia’s Constitutional Court in 2016 (Sentencia T-622 de 2016 de la
347 Corte Constitucional de la República de Colombia, del 10 de Noviembre de 2016, hereafter ruling T-
348 622/16). This ruling was the result of years of environmental and social impacts and ecosystem depletion
349 derived from illegal and legal mining activity in the region. The Colombian Constitutional Court ruled in
350 favour of the claimant communities, recognizing the government’s failure to address these environmental
351 and social concerns and to enforce the law. In particular, the ruling stated that the Atrato River, its basin
352 and tributaries will be recognized as an entity subject of rights to protection, conservation, maintenance
353 and restoration by the State and ethnic communities (ST-622/16, order 1, p.156) The court ruling also
354 ordered the creation of and implementation of a plan to decontaminate the water sources of Chocó, starting
355 with the Atrato River basin and its tributaries, the riverside territories, recover their ecosystems and avoid
356 additional damage to the environment in the region (ST-622/16, order 2, p.157); and the creation of action
357 plans to recover traditional forms of subsistence and nourishment (ST-622/16, order 5, p.157).

358 The ruling was underpinned in the country’s 1991 constitution that boosted the concept of Ecological
359 Constitution (Constitución Ecológica), which sees the protection of the cultural and natural wealth of the
360 nation, the primacy of the general interest, the social and ecological function of property, the right to a
361 healthy environment (ST-622/16, p.85) as intertwined. By declaring the river as a subject of rights the court
362 took a leap forward in the interpretation of these rights to protect what the court coined as ‘biocultural
363 rights’, which center on the ‘relationship of profound unity and interdependence between nature and the
364 human species, and which results in a new socio-legal understanding in which nature and its environment
365 must be taken seriously and with full rights. That is, as subjects of rights’ (ST-622/16, p.140).

366 As formulated in the court ruling, the representation was to be carried out by two guardians (Table 2): a
367 state representative appointed by the President and that could be the Ministry of Environment, and one

368 representative from the community. Additionally, the court requested that a commission of guardians of
 369 the Atrato River be formed. This commission would be comprised of the two aforementioned
 370 representatives and an advisory team that would include the Humboldt Institute and WWF Colombia. (ST-
 371 622/16, order 1 p.157, see also Decree 1148 of 2017). In debating however who would become the
 372 representative from the community, the community reinterpreted the court ruling’s words to divide the
 373 responsibility of such representative into 14 guardians that together would represent the river on behalf of
 374 the community. Community representatives noted in interviews that ‘a sole guardian would have not known
 375 the entirety of the river’, as the river and its landscapes change from its place of birth towards the river
 376 mouth by the sea. After a process of consultation the river guardians were appointed together with the
 377 other representatives as described in Table 2.

378 *Table 2 Representation for the Río Atrato*

Representative/s	Role
Commission of Guardians	The Commission of Guardians of the Atrato River is formed by The Ministry of Environment and a Collegiate body of guardians. The main functions are to monitor compliance with the orders of the sentence, propose articulation mechanism and coordinate actions, lead pedagogy, socialization and awareness processes on the problem that is the object of the Constitutional Court Ruling.
Ministry of Environment and Sustainable Development	The Ministry of Environment is the legal representative of the river rights, its basin and tributaries (Decree 1148). This role expands the Ministries role set out by previous legislation (Law 3570 of 2011) that already established that the Ministry is in charge of promoting a relationship of respect and harmony between humans and Nature and defining the policies and regulations to which the recovery, conservation, protection, ordering, management, use and exploitation of renewable natural resources and the environment of the Nation, in order to ensure sustainable development.
Collegiate body of Guardians	The collegiate body of Guardians is intended to represent the “Consejos Comunitarios” (or community councils) across the river. The body is constituted by a woman and a man from each of the 7 consejos whose territory are by the river or its tributaries. The

Representative/s	Role
	<p>functions of the body are multifold: (1) they link the public entities responsible for compliance with the ruling and the Atrato riverside communities; (2) they represent the regional ethnic authorities and social organizations; (3) they socialize the court ruling by ensuring that the messages of protection of the river is appropriated by all the inhabitants of the basin; and (4) they advocate for the rights of the river to decision makers and other stakeholders to promote the proper implementation of the ruling.</p> <p>The river and its tributaries were recognized as a legal subject, so the Collegiate Body includes consejos comunitarios that are located on tributaries to the Atrato River.</p>
Advisory Group	<p>The advisory group is comprised by WWF Colombia and the Humboldt Institute and can receive help from any public entity, research institution, environmental organization and civil society organization that wishes to partake of the river protection. The advisory's group role is to ensure the protection, recovery, and conservation of the river by advising the legal representatives for the river.</p> <p>Besides the advisory group, there is a panel of experts that monitors and evaluates the court ruling's compliance and that can also advise the guardians of the river.</p>

379

380 4.3 Birrarung/Yarra River, Australia

381 Located in the south-eastern state of Victoria, the Birrarung/Yarra River is the first and so far only river in
382 Australia to be recognised in settler colonial law as a living entity (41). The river flows for 242km, beginning
383 in forested catchment of the mountains, flowing through agricultural land and eventually through the heart
384 of Melbourne, the capital city of Victoria (42). The river supplies approximately 70% of Melbourne's
385 drinking water, and is a major source of biodiversity, recreation, and amenity in the city. The Birrarung is
386 known to the Wurundjeri Woi Wurrung, the Traditional Owners of the majority of the river catchment, as
387 the Birrarung, the 'river of mists and shadows' (43). Wurundjeri Woi Wurrung have always recognised that
388 'the river and its environs are a living, breathing entity that follows Wurundjeri songlines and forms a central
389 part of the Dreaming of the Wurundjeri' (43).

390 In 2017, the settler state of Victoria passed the *Yarra River Protection (Wilip-gin Birrarung murrn) Act* (the
391 Birrarung Act), which recognised the Birrarung and its lands as a ‘one living and integrated natural entity’
392 (section 1(a)). Notably, the Birrarung is not a legal subject and does not have rights and powers of its own
393 in settler state law. This legislation was also the first statute in Victoria to include the language of Wurundjeri
394 Woi Wurrung in the title and the preamble of the legislation. The Birrarung Act established new institutional
395 arrangements for the care and management of the river, including:

- 396 • the Yarra River Protection Principles,
- 397 • the fifty year community vision (44),
- 398 • the Yarra Strategic Plan to give effect to the vision (42),
- 399 • identification of ‘responsible public entities’ who would be bound by the Yarra Strategic Plan (now
400 known as *Burndap Birrarung Burndap Umarkoo*) and the Principles,
- 401 • a lead agency (Melbourne Water) to coordinate development and implementation of the Yarra
402 Strategic Plan, and
- 403 • the Birrarung Council, an independent voice of the river to advise the Minister on the adequacy of
404 implementation and advocate for the interests of the river (15).

405 Each year, the Birrarung Council prepares an annual report on the implementation, operation and
406 effectiveness of *Burndap Birrarung Burndap Umarkoo*, which is tabled in Parliament (unedited) by the
407 Minister for Water within seven parliamentary sitting days (section 57 Birrarung Act).

408 The Birrarung Act formally acknowledges the role of Wurundjeri Woi Wurrung, as the Traditional Owners,
409 in the care and management of the river (45), and in 2023, following a formalisation of land claims, the
410 Bunurong were also acknowledged as Traditional Owners of the mouth of the river (Table 3). Australia has
411 no treaty with Indigenous Peoples, and the Traditional Owners of the Birrarung have not ceded their
412 sovereignty over the river (42). The Birrarung Act is the first settler state legislation that begins to
413 acknowledge the legally pluralist nature of water law in the Birrarung (45,46).

414 In response to the Birrarung Act, the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation
415 developed *Nhanbu narrun bba nargunin twarn Birrarung* (Ancient Spirit & Lore of the Yarra), which was
416 launched alongside the fifty-year community vision in 2018 (43). In this document, the Wurundjeri Woi

417 Wurrung set out several representative claims to the Birrarung. They establish their connection to the river
418 ‘through spirit, culture and nature’, and their long history with the river, as they have ‘lived with and known
419 the Birrarung since the beginning’ (43). The Wurundjeri Woi Wurrung hold the creation stories for the
420 Birrarung, which mirror the Western geological findings (47). They articulate their ‘deep cultural obligation
421 and a birthright to look after the river’, drawing on their own laws as well as their status as Indigenous
422 People (43). They position themselves as partners in the future care and management of the river, noting
423 that in ‘sharing in the benefits that the river provides, we must also share responsibility for preserving and
424 restoring the wellbeing of the Birrarung’ (43).

425 In addition to the representative role of the Traditional Owners, the Birrarung Council operates as an
426 independent voice of the river established in the settler state law (Table 3). The Birrarung Council explains
427 that it speaks ‘for the river... so that the river can be heard by all’, but also identifies a ‘more profound
428 obligation [to] enable and support others to communicate with the river’ (48). The Birrarung Council
429 identifies the interests of the river as those ‘reflected in the Yarra River 50-year Community Vision and
430 *Nhanbu narrun bha nargunin twarn Birrarung*’ (49). In this way, the interests of the river are understood through
431 the lens of the river’s relationships with people. In doing so, the work of the Birrarung Council also enables
432 a dialogue of knowledges around the river, as the settler colonial ways of being and knowing are brought
433 into conversation with Indigenous ways of being with and knowing the river.

434 The Birrarung Act has limited (if any) impact on water management (26), so other forms of representation
435 remain in place. The legal rights to hold and manage water for the environment in the Birrarung continue
436 to be held by the Victorian Environmental Water Holder (Table 3), which has decision-making powers on
437 where, when and how the water will be used to improve the health of the Birrarung water ecosystem (26,50).

438 *Table 3 Representation for the Birrarung*

Representative/s	Role
Traditional Owners	There are two Traditional Owner groups that have been formally acknowledged by the settler state: Wurundjeri Woi Wurrung and Bunurong. Each Traditional Owner group has the ability to speak for the lands and waters within a geographically defined area

	(established under the <i>Aboriginal Heritage Act 2006</i>). Each Traditional Owner group upholds their own laws and cultural obligations to care for the river, and each recognizes the river as alive.
Birrarung Council	<p>The Birrarung Council is the voice of the river. It is independent statutory body established under the Birrarung Act. Members are appointed by the Victorian Minister for Water and include a minimum of two Traditional Owner representatives. Other members must include at least one representative of an environment group, an agriculture industry group, a local community group and at least two members with relevant skills (see section 49 of the Birrarung Act).</p> <p>The Birrarung Council has statutory obligations to advise the Minister for Water on the implementation and effectiveness of <i>Burndap Birrarung Burndap Umarkeoo</i> and to advocate for the interests of the river (section 48 of the Birrarung Act).</p>
Victorian Environmental Water Holder (VEWH)	<p>The VEWH is a statutory corporation established under the <i>Water Act 1989</i>. It holds all environmental water entitlements in Victoria on behalf water ecosystems, and it holds an environmental entitlement to 17,000 megalitres of water that flows into the Upper Yarra Reservoir (a large onstream dam in the upper catchment of the river), as well as 55 ML (flowing in from Olinda Creek, a tributary of the Birrarung) and minimum flows maintained in the river. The VEWH works with Melbourne Water and Traditional Owners to determine where and how water available under the entitlement can be used, both in-stream and by pumping water into wetlands. The VEWH thus represents the interests of the Birrarung in the water on which it relies for health.</p>

439

440 4.4 Te Awa Tupua/Whanganui River, Aotearoa New Zealand

441 Te Awa Tupua (the Whanganui River), flows through the north island of Aotearoa New Zealand, from
442 Mount Tongariro through forested hills and denuded plains before meeting the ocean at the town of
443 Whanganui. The river is ‘of utmost importance to Whanganui iwi [tribes] and hapū [sub-tribes] who depend
444 on it for their physical and spiritual sustenance and see it as an indivisible and living whole and revered
445 ancestor’ (51).

446 In 2017, the settler state of Aotearoa New Zealand passed the *Te Awa Tupua (Whanganui River Claims*
447 *Settlement) Act* (Te Awa Tupua Act), which attempts to settle historical claims that Whanganui iwi have made
448 based on their rights to the river under Te Tiriti o Waitangi/Treaty of Waitangi (see, for example, 52). The
449 legislation established the river as an ‘indivisible and living whole... from the mountains to the sea,
450 incorporating all its physical and metaphysical elements’ (section 12) and a legal person (section 14). The
451 river is a legal person who now owns itself, but this does not include any rights to water, and up to 80% of
452 the river flows can be diverted for hydropower production (26,53).

453 There is a new governance framework, Te Pā Auroa, which comprises the legal status of Te Awa Tupua,
454 Kia Matara Rawa (vesting of Crown land, including the river bed, in Te Awa Tupua), Tupua te Kawa (the
455 intrinsic values of the river), Te Pou Tupua (the human voice of the river), Te Karewao (advisory body to
456 Te Pou Tupua), Te Kōpuka (strategy body), and Te Heke Ngahuru (the Te Awa Tupua Strategy). This
457 ‘complex collaborative governance regime for the river’ is supported by a ‘NZD 30 million fund (called Te
458 Korotete) in furtherance of the river’s health and well-being’ (41).

459 Whanganui iwi and iwi with interests in the Whanganui (see sections 7 and 8 of the Te Awa Tupua Act)
460 have consistently rejected and disputed the rights of the settler state government to own and control the
461 river (52). Under their own laws (tikanga), they continue to have obligations to care for the river and act in
462 its interests (Table 4). The framework for the negotiated settlement with the settler state government was
463 underpinned by two principles:

- 464 • ‘Te Mana o Te Awa - recognising, promoting and protecting the health and wellbeing of the River
465 and its status as Te Awa Tupua; and
- 466 • Te Mana o Te Iwi - recognising and providing for the mana of the Whanganui Iwi and its
467 relationship with the River’ (54).

468 Te Kōpuka has further stated that ‘the primary voice of the Awa [river] comes from the iwi and hapū’ and
469 that Te Pou Tupua must respect this and uphold this relationship of responsibility (9).

470 Te Pou Tupua provides a human face and voice for the river, and must act in the interests of the river,
471 consistently with Tupua te Kawa (Table 4). Te Pou Tupua is currently comprised of Turama Hawira and
472 Keria Pongo, jointly appointed by Whanganui iwi and the settler state government. Both have strong

473 connects to Whanganui iwi, which Macpherson argues indicates that their ‘authority, expertise as
 474 [I]ndigenous knowledge holders, and contextual familiarity are important markers of their perceived
 475 legitimacy’ as representatives of the river (51). Te Pou Tupua does not have a veto power for any resource
 476 consents made under the *Resource Management Act 1991*, although decision-makers may consider the status
 477 of the river and the values of Te Kawa in determining whether a consent will be given.

478 Both Te Karewao and Te Kōpuka have an attenuated representative status for the river, secondary to Te
 479 Pou Tupua, but in fulfilling their functions, they must act in the interests of the river (Te Karewao) and to
 480 advance river health and wellbeing (Te Kōpuka) (Table 4).

481 *Table 4 Representation for Te Awa Tupua*

Representative/s	Role
Whanganui iwi (tribes) and hapū (sub-tribes)	Te Awa Tupua Act defines Whanganui iwi (section 8) and iwi with interests in the river (section 7). Whanganui iwi have specific roles under tikanga (Māori law) and continue to represent the river in multiple ways.
Te Pou Tupua	Te Pou Tupua acts as the face and voice of Te Awa Tupua (Whanganui River). It is comprised of two people, jointly appointed by the iwi (tribe) of the Whanganui River and the settler government of Aotearoa New Zealand. They must act in the interests of Te Awa Tupua and consistently with Tupua te Kawa. Te Pou Tupua has responsibility to act and speak on behalf of the river and its wellbeing, uphold its legal status as a living entity and legal person, administer the Te Awa Tupua fund, and exercise any landholder functions for any land vested in Te Awa Tupua.
Te Karewao	Te Karewao is an advisory body to support Te Pou Tupua (especially in relation to the expenditure of the fund), and must act in the interests of Te Awa Tupua and consistently with Tupua te Kawa. Te Karewao has three members, one appointed by Whanganui Iwi, one appointed by other iwi

Representative/s	Role
	with interests in the Whanganui River and one appointed by local authorities.
Te Kōpuka	Te Kōpuka is a strategy body, comprised of representatives of persons and organisations with interests in the Whanganui River, including iwi, relevant local authorities, departments of State, commercial and recreational users, and environmental groups. It is responsible for development and approve Te Heke Ngahuru (the vision for the river), and then to monitor and assess the implementation of Te Heke Ngahuru. In undertaking its functions, including establishing the vision for the care and management of the river, Te Kōpuka must act collaboratively to advance the health and well-being of the river.

482

483 5 Discussion

484 Through the exploration of these case studies we discuss the main characteristics of the form of
485 representation that emerges when the recognition of Nature as a living entity/legal subject is imagined and
486 implemented. Like the definition of representation in itself, the ways in which representation is realized in
487 these cases is not clear cut, and the full spectrum of representation (speaking about, to speaking for, and
488 speaking with) can be found across cases. However, these case studies show that the exercise of representing
489 waterways within what are still settler colonial state institutions and processes, has pushed the limits of what
490 felt possible under those institutions, kindling the re-imagining of representation in practice. Speaking *with*
491 the waterways is relational, intimate, and placed-based. These characteristics, we argue, are what distinguish
492 speaking *about* and *for* as forms of representation.

493 In this section, we illustrate how relationality is understood and materialized; we offer a reflection on how
494 speaking *with* waterways necessitates a place-based approach where there is no room for universalizations
495 of the meaning and practice of the representation of Natural entities; and finally we emphasize the
496 idiosyncrasies and challenges that have so far emerged in performing these forms of representation.

497 5.1 Relational representation of waterways

498 In each case, there is evidence of elements of a more relational way of understanding and performing
499 representation. This relationality can be observed in the emergence of new forms of horizontal dialogue
500 and collaboration amongst communities who have traditionally worked in silos. For example, even within
501 the umbrella of settler-colonial states, we can observe dialogues between Indigenous and settler knowledges
502 and an emerging emphasis on knowledge co-production. By enabling different actors to relate to and speak
503 with these water bodies, and because rivers and lagoons must be understood holistically as living entities
504 and/or legal subjects, the representation process kindles new relationships between actors that had
505 traditionally not spoken to each other. Land and water managers are brought into relation through their
506 mutual relations with the waterway and its representatives.

507 For instance, in the case of the Mar Menor, the scientific committee is expected to be in continuous dialogue
508 with the monitoring committee, composed of citizens representing different parts of the lagoon's basin and
509 different sectors of society. What is more, the functions that correspond to the Tutoria del Mar Menor, the
510 overarching decision-making body for the lagoon, are exercised jointly by the delegate representatives of
511 the committee of representatives, the monitoring committee, and the scientific committee (see, Proyecto
512 de Real Decreto de desarrollo de la Ley 19/2022, which is still awaiting final approval). In the
513 Birrarung/Yarra River case, interviewees report that the establishment of the Birrarung Council has eased
514 communication and collaboration between Melbourne Water and the local government authorities in the
515 river basin. In the Atrato River, the action plans were the result of collaboration between several ministries
516 (such as the Ministry of Environment, Ministry of Agriculture and Rural Development, and Ministry of
517 Interior), scientists and specialists from the Instituto de Investigaciones Ambientales del Pacífico, Academia,
518 Regional Corporations (Chocó and Antioquia), Civil Society, and other actors (Plan de Acción de la Orden
519 Séptima). In each case, we can also begin to observe a dialogue not just between people, but also between
520 knowledge systems.

521 This relational mode of representation is also supporting inter-institutional cooperation. For instance, in
522 the Atrato River, interviewees reveal that the need to implement the court ruling has stirred inter-ministerial
523 dialogue and cooperation in areas where before they operated in silos. In the Birrarung River, the Yarra

524 Implementation Plan mandates that RPEs (Responsible Public Entities) ‘will collaborate in delivering the
525 Yarra Strategic Plan (YSP) actions and priority projects where they relate to their remit and function’ (55).
526 What is more, representatives are able to connect vertically across governance levels, linking high and lower
527 instances of governance with each other, and with the bodies of water themselves. These new forms of
528 representation are enabling a wide range of actors and civil society to access levels of government to which
529 they had limited access before. For instance, in the case of the Atrato River, the river guardians who
530 represent communities along the river basin, hold meetings with the Ministry of Environment every six
531 months; a level of access to higher instances that was previously unthinkable. Similarly, the Birrarung
532 Council remains in direct contact with the Minister of Water, and the Victorian Parliament, through a yearly
533 reporting system. The Mar Menor regional offices, such as the Oficina Técnica del Mar Menor, are in direct
534 report with the Ministry for the Ecological Transition and Demographic Challenge (MITECO by its
535 Spanish acronym) elevating local voices to the highest instances of governance. This rich, multi-layered,
536 relational representation is enabling multiple forms of dialogue, exchange, and relationship building, with
537 the waterway at the centre.

538 But the differences in representation with respect to previous ways in which representation was envisioned
539 and actualized go beyond changes in institutional collaboration and access. There is no denying that
540 regardless of efforts to make the process inclusive, representation will always be a limited reproduction of
541 the entity represented, hence it is crucial to pay particular attention to what may be left unrepresented (56).
542 A relational form of representation rejects sameness and contests the homogenization and universalization
543 of civic life and the understanding of what is the “general good”. Such reckoning enables the inclusion of
544 voices that had been historically neglected in environmental planning processes to have a voice at the
545 decision-making table. For instance, in the case of the Mar Menor, in considering which the stakeholders
546 would form the monitoring commission (Comisión de Seguimiento) it was established that members (or
547 guardians, as the legislation calls them) would need to not only represent the lagoon’s basin geographically,
548 but also acknowledge diversity in the citizens’ concerns and viewpoints regarding the lagoon. Hence, the
549 legislation includes the participation of representatives from a great variety of backgrounds ranging from
550 unions, to gender equality organizations, to fishing groups, amongst others (Proyecto de real decreto de
551 desarrollo de la ley 19/2022, art 7). In the Atrato case, the Action Plan derived from the court’s fifth order

552 (Plan de Acción de la orden 5) also included a great variety of stakeholders, acknowledging the importance
553 of territorial representation as well as the inclusion of other related actors including Afro-Colombian
554 communities, resguardos indígenas [Indigenous reservations], representatives of comunidades campesinas
555 [local communities], mestizos , mulattos, fishermen in the area and other related communities even beyond
556 those pointed at in the court ruling (Plan de Accion Orden Quinta, F-E-SIG-26-V3). In the case of the
557 Birrarung River, there is also a clear acknowledgement of the plurality existing within First Nations. The
558 Birrarung Council ‘walking together’ statement includes an acknowledgement of the Wurundjeri Woi-
559 Wurrung as the peoples of the river, and the Bunurong as the people of the river mouth. Although initially
560 only Wurundjeri Woi-wurrung were included in the Birrarung Council, both are now represented, enabling
561 the contribution of knowledges from different parts of the river and that represent different cultures, laws,
562 and experiences.

563 In none of the cases is the “guardian” one person, but rather a plurality of perspectives and the result
564 horizontal and vertical collaboration and dialogue. In sum, this form of relational representation reflects
565 the role of the representative as a plurality of voices that relate differently to the waterways and that together
566 work out forms of representation in consensus when speaking sometimes *for*, but most often *with*, the
567 waterways.

568 5.2 Representation as intimate and place-based

569 Rather than recognising the rights of Nature as a whole, each of these case studies focuses on a specific
570 waterway, such as a lagoon or a river. The task of representing the waterway entity is thus specific to the
571 named waterway, acknowledging the embodied history of relationships between the waterway and the world
572 around it, including relationships with humans. This place-based identity shapes the way the representatives
573 undertake their task. All four case studies, to varying degrees, evidence an interest in speaking with the
574 waterways, not merely speaking for them. This is made possible by the closeness of the relationship between
575 the representatives and the waterways. Rather than emphasising the collation of ‘objective’ facts about the
576 waterways (or even, as Mansbridge advocates, taking a *gyroscopic* look at the representee) that could enable a
577 determination of what is in their ‘best’ interests, the place-based approach centres and strengthens the
578 relationship between the representatives and the waterway. Effective representation is enabled through

579 intimacy with the context, geography, ecology, hydrology, and culture(s) of the waterway and the people
580 who live in and near it. This closeness allows for the representatives to speak with and through an entity
581 that can express itself in many ways but not through human language.

582 In these case studies, representation is shaped by the representatives' closeness to the waterway entity,
583 geographically and otherwise. For instance, in the Atrato River case, the initial court ruling requested that
584 two representatives be named, one on behalf of the government and one of behalf of the communities.
585 However, this single community representative became 14 guardians/representatives as a result of a
586 participatory process (the first inter-institutional and community meeting of Guardians of Atrato, held in
587 Quibdo in 2017) that determined that the geography of the river is so vast and varied, from the mountains
588 to the sea, that one sole local representative could not make justice for the River. These 14 representatives
589 come from seven ethnic authorities and community organizations along the river basin. Together with
590 those 14 representatives, the Ministry of Environment and Sustainable Development was co-designated as
591 the other representative on behalf of the government (Decree 1148 2017, Art 1). Similarly, the Mar Menor
592 body of representatives includes a member from each basin municipality, rather than a single representative
593 for the entire basin. In Te Awa Tupua/Whanganui River, Te Kōpuka is comprised of iwi with interests in
594 Te Awa Tupua (via Te Ripo), the mayors of three district councils, government agencies (Fish and Game
595 and Department of Conservation), Genesis Energy, and four people representing tourism, environmental,
596 recreation and primary industry interests. This blend of geographic representation as well as sectoral
597 representation ensures inclusion of many different relationships with the river. Finally, the Birrarung
598 Council also requires a combination of Traditional Owners, interest groups (community, environmental,
599 and agricultural), and specific skills (such as aquatic ecology, landscape architecture, and urban planning,
600 see Birrarung Act section 49(2)). None of the cases are contingent on establishing the 'objective facts'
601 relating to the waterway and its health in order to enable effective representation. Instead, they prioritise
602 the multiple relationships and ways of knowing the waterway, supporting dialogues between knowledges,
603 between people, and with the waterway.

604 Understanding representation as intimate and place based has also challenged procedural notions of what
605 representation should look like under the standard model. Across the case studies, elements of place are
606 inserted in the way representation is envisioned and performed. For instance, in the case of the Birrarung

607 River, decision-making processes are moulded for representations to be more attuned to place. The river
608 must be present, either physically or virtually during meetings of the Birrarung Council. Dialogues in the
609 Council are organized to allow for the Elders to speak first, and yarning circles led by Elders have become
610 part of the representation of the river. In the case of the Atrato River, the action plans proposed the opening
611 of specific physical spaces of engagement geared towards women, acknowledging that the design of
612 traditional forums where men and women are simultaneously present is not conducive to women's free
613 participation.

614 The institutionalization of representation finds ways for cultural expression and embeddedness in the social,
615 political and legal context that contribute to a reciprocal relationship between the representative and the
616 community and further legitimize the representative's role. For instance, in the Atrato River case, the court
617 ruling implementation included a campaign called "Todos y todas somos Guardianes del Atrato" (we are
618 all guardians of the Atrato river). Through the use of coplas [couplets], alabaos [traditional songs], and
619 poems the campaign aimed at the community's appropriation of the role of Guardians, a role that is not
620 exclusive to the Collegiate Body (57). What is more, the action plans highlight the importance of ancestral
621 knowledge and traditional ways of relating to the river and identify particular places with traditional and
622 spiritual value. Biocultural rights take the centre stage in this new approach. In the case of the Birrarung
623 River, there is a particular emphasis on learning from and adopting the ways in which First Nations have
624 cared for country for millennia. Dialogues in the Council are organized to allow for the Elders to speak
625 first, and yarning circles, which include smoking ceremonies and are led by Elders, have become part of the
626 representation of the river.

627 The Te Awa Tupua legal framework supporting and enabling its representation amongst other things is
628 referred to as Te Pā Auroa nā Te Awa Tupua. This means 'the broad eel weir built to withstand the autumn,
629 winter and spring floods', symbolizing an extensive, well-constructed framework that 'represents a
630 comprehensive and resilient structure [that] symbolises our collective responsibility and commitment to
631 this endeavour' (9). Freshwater eels are of great significance to Maori culturally, and historically, as a source
632 of sustenance, and treasured caretaker of waterways. What is more, in the case of the Mar Menor, a
633 collaboration between artists and scientists was born to depict the 'signature' of the Mar Menor. In their
634 words, such stroke, which represents the lagoons currents, was 'a poetic way of claiming that the sea is alive

635 and can be protected if we give it the rights to do so' (Joan Quirós in 58). A signature also carries great
636 significance in the civil law system of Spain.

637 5.3 Materializing enabling forms of representing waterways

638 To fully realize the representation of waterways, many of the challenges and needs are akin to those faced
639 by other forms of representation: the need for resources, economic and otherwise; being granted a real
640 (powerful) voice in the political arena; and proper channels and processes to realize the expected functions
641 of a representative. Beyond these, the enabling forms of representation that become part of the spectrum
642 of representation for waterways, also wrestle with distinctive practicalities.

643 Firstly, waterways are being recognised on human terms as a legal person/subject or living entity. Thus, the
644 performance of representation is already constrained by the anthropocentric system in which it is operating
645 (59). Within this system, the waterway entity often, and simultaneously, continues to be treated as a resource
646 (a legal object) and the rules and regulations governing it are often disconnected from the specific powers
647 of the representative. For instance, in none of the case studies do the representatives have the ability to
648 directly affect water resource management, and the waterway entities have no rights to the water that defines
649 their identities. This issue is compounded by one of scale: too often, national or state laws and policies
650 define outcomes for a waterway, and there may be little that local or regional representative bodies can do
651 to alter them (see also 26). This can set in the representatives and their functions up for failure. For instance,
652 when crafting implementation plans that consider the rights of the River, representatives may advocate for
653 a water pollution monitoring system that safeguards ecosystem as well as human health. However, water
654 quality regulations are usually established at the national level and may not be modifiable, curtailing the
655 exercise of representation.

656 What is more, because the representation of waterways reflects a dynamic relationship, and must be
657 responsive to changes in the waterway entity over time, it requires a flexible governance structure. However,
658 this way of operating can generate frictions in a legal system that only looks at the implementation of a firm
659 court ruling that took place at a point in time. For instance, the Atrato River case court ruling established a
660 series of requirements that multiple interviewees (from the ministerial level to the local level, including

661 community representatives) consider to be unattainable in the pre-established time frame given the
662 idiosyncrasies of politics and place.

663 What is more, giving voice to waterways through a multiplicity of actors or guardians complicates the issue
664 of accountability to 'limit(s) the inherent hazards of political subjection' (60). Such accountability is key to
665 ensuring that representatives are liable for their actions in the exercise of their powers, and sanctionable for
666 the acts performed (60). When representatives are both speaking for and with the waterway, but also
667 simultaneously representing other interest groups, to whom are they ultimately accountable? For example,
668 the Birrarung Council must include members who are also representatives of environmental and agricultural
669 groups (Birrarung Act, section 49). Te Kōpuka must include representatives of interests in tourism,
670 environment, recreation and primary industries (Te Awa Tupua Act, section 32). In Mar Menor,
671 representatives of fishing, private sector, and local interests, as well as community leaders are included in
672 the commissions. The Atrato River case is no different, as the 14 river guardians come from different
673 geographical areas of the river, and who also continue in their roles as local leaders and workers as the
674 guardian positions are not remunerated.

675 Relational representation of waterways complicates this further. How can the actions of the representative
676 be interrogated when they are based on relational closeness but not necessarily 'objective facts'?
677 Representation of waterways should be accompanied by measures of process and outcome that enable the
678 actions of the representatives to be assessed and held to account for the efficacy of their representation.
679 The adoption of knowledge co-production procedures is increasingly enabling these processes, although
680 not without friction. These representatives, in giving voice to the waterway, and in enabling others to build
681 their own relationships with the waterway, can be immensely powerful in shaping the future health and
682 wellbeing of the waterway.

683 In sum, representing waterways offers new opportunities for relational and place-based representation, but
684 these may also find challenges within the legal and political systems in which they are created.

685 6 Conclusion

686 In this paper, we have developed a model of *relational representation* for Nature, by analysing four case studies
687 of waterways that have been recognised as legal or living entities. We show how the exercise of
688 representation for the waterway entity in these case studies expands traditional models of representation.
689 Representation in these cases is exercised within a spectrum of representation that moves from speaking
690 *about* these waterways towards speaking *for* and *with*, and ultimately, enabling dialogues with the waterway.

691 We argue that undertaking this exercise both timely and important, as the recognition of the rights of natural
692 entities is increasingly expanding across jurisdictions, and there is no real clarity or consensus on what
693 representation is intended to achieve, what it should look like, or how it should operate. This paper expands
694 the theoretical grounds regarding the notion of representation, and by grounding this in four case studies,
695 we show how these theoretical foundations can operate in a myriad of ways in reality. Representation has
696 always been an ever-evolving concept, adapted to its times and to the legal and contextual needs. The
697 representation of Nature, and waterways in particular, is no different. It offers an opportunity to expand
698 and reimagine what representation can mean and how its imaginary can be materialized.

699 The relational representation model is place-based and intimate, reflecting the dynamic, constantly
700 renegotiated relationship between Nature and the representatives. We demonstrate a shift away from the
701 paternalistic model of speaking *for* Nature, and instead, we show how a relational approach emphasises
702 speaking *with* Nature. Importantly, we also show how this relational representation can *enable dialogues* in
703 multiple ways. The waterway is in dialogue with its representatives, and this is an essential element of
704 developing the required relational closeness and intimacy to enable expression of the waterway's agency.
705 The representatives are in dialogue with each other, each learning and sharing knowledge and perspectives
706 on the waterway based on their own relationships with it. Further, dialogues between knowledge systems
707 become possible, as the multiple ways of knowing the waterway require representatives to weave these
708 knowledges together to create a holistic understanding of the waterway. In doing all this, the representatives
709 bring other members of the community into their own relationships with the waterway. In the case of Te
710 Awa Tupua/Whanganui River, Te Kawa Tuatahi [the first Kawa] acknowledges that 'Ko te Awa te
711 Mātāpuna o te Ora [the river is the source of physical and spiritual sustenance], which is interpreted to

712 mean that ‘all communities of the River share an emotional attachment with the River [and this] connection
713 drives our duty of care toward the River’ (9). What is more, representation becomes more attuned to place,
714 both through a more granular characterization of who needs to have a seat at the table given the
715 complexities of geography and place; and through the recognition and uplifting of cultural values and
716 decision making processes that are akin to place.

717 As more natural entities gain recognition as legal/living entities, there is the possibility and opportunity for
718 dialogue between natural entities. The isolated nature of most legal/living entities so far has limited this
719 possibility to date, but there are commitments to recognise all waterways in Victoria as living entities
720 (Targeted outcome 1, 61), and in Bangladesh, all rivers are currently recognised as legal and living persons
721 (62), creating the opportunity to support dialogue between river persons. A recent example of this is the
722 relationship between the Birrarung/Yarra River and the Burramatta/Parramatta River. In 2022, water from
723 the Birrarung was introduced to the Burramatta River, as the opening of a dialogue between rivers at the
724 Sydney Biennale. In 2023, water from the Burramatta River was then introduced to the Birrarung, bringing
725 the rivers into conversation. This was directly facilitated by the Birrarung Council (whose members
726 physically transported the water) and Wurundjeri Woi-Wurrung as Traditional Owners, but also reflects the
727 ongoing conversation between these rivers through their mutual connection to the ocean. Each provides
728 habitat for migratory eel species, whose populations may mingle in the Coral Sea before returning to the
729 rivers of their birth.

730 The relational model of representation faces the usual challenges of other forms of representation, but also
731 unique issues relating to the multiple, intersecting responsibilities of representatives, and the difficulties of
732 holding them to account. Establishing and supporting a dynamic, place-based, relationship driven process
733 within systems of governance that favour stability and are tied to historical precedent is likewise challenging.

734 The blossoming of the rights of Nature across the world could be transformative in repairing the
735 relationship between people and Nature, but achieving this lofty goal requires clarity in what we hope to
736 achieve in representing Nature within human systems. We see the relational model of representation widely
737 reflected in the representative models for Nature, even though there is significant diversity in the precise
738 form and composition of these entities and their representatives. As more cases arise, we hope that in

739 recognising the common thread of relationality, and showcasing the importance of the place-based nature
740 of representation in contrast with a one-size-fits-all approach, we can more effectively inform the creation
741 of future representation arrangements that go beyond the standard model. Re-imagining representation in
742 these terms will allow for a more pertinent design of institutions, will enable processes that hold Nature's
743 representatives to account, and will allow for the design of decision making processes that are more in tune
744 with Nature and its inhabiting communities.

745

746

747 7 References

- 748 1. Putzer A, Lambooy T, Jeurissen R, Kim E. Putting the rights of nature on the map. A quantitative
749 analysis of rights of nature initiatives across the world. *Journal of Maps*. 2022;
- 750 2. Cano Pecharroman L. Rights of Nature: Rivers That Can Stand in Court. *Resources*.
751 2018;7(1):10.3390/resources7010013.
- 752 3. O'Donnell E. At the Intersection of the Sacred and the Legal: Rights for Nature in Uttarakhand, India.
753 *Journal of Environmental Law*. 2018;30(1):135–44.
- 754 4. Tanasescu M. *Understanding the Rights of Nature: A Critical Introduction*. transcript Verlag; 2022.
755 169 p.
- 756 5. O'Donnell E, Poelina A, Pelizzon A, Clark C. Stop burying the lede: the essential role of Indigenous
757 law(s) in creating rights for nature. *Transnational Environmental Law*. 2020;9(3):403–27.
- 758 6. Tănăsescu M. *Environment, Political Representation, and the Challenge of Rights* [Internet]. London:
759 Palgrave Macmillan UK; 2016 [cited 2023 Dec 14]. Available from:
760 <http://link.springer.com/10.1057/9781137538956>
- 761 7. Stone CD. Should Trees Have Standing? Towards Legal Rights for Natural Objects. *Southern*
762 *California Law Review*. 1972;45:450–501.

- 763 8. O'Donnell E. Repairing our relationship with rivers: water law and legal personhood. In: Larson R,
764 Casado Pérez V, editors. *Research Agenda for Water Law*. Cheltenham, UK: Edward Elgar; 2023. p.
765 113–38.
- 766 9. Te Kōpuka. *Te Heke Ngahuru Ki te Awa Tupua - Te Awa Tupua Strategy (Discussion Document)*
767 [Internet]. Aotearoa New Zealand: Te Kōpuka [The Strategy Group]; 2023. Available from:
768 https://www.tekopuka.co.nz/_files/ugd/0523ac_ff32b5345af448cea2c27a5261164c40.pdf
- 769 10. Stone CD. *Should Trees Have Standing? Law, Morality and the Environment*. 3rd ed. New York:
770 Oxford University Press; 2010. 248 p.
- 771 11. Zelle AR, Wilson G, Adam R, Greene HF. *Earth Law: Emerging Ecocentric Law--A Guide for*
772 *Practitioners*. New York: Aspen Publishing; 2021. 776 p.
- 773 12. Arstein-Kerslake A, O'Donnell E, Kayess R, Watson J. Relational personhood: a conception of legal
774 personhood with insights from disability rights and environmental law. *Griffith Law Review*.
775 2021;30(3):530–55.
- 776 13. O'Donnell E. *Legal Rights for Rivers: Competition, Collaboration and Water Governance*. London:
777 Routledge; 2018.
- 778 14. Kauffman CM, Martin PL. How Ecuador's Courts Are Giving Form and Force to Rights of Nature
779 Norms. *TEL*. 2023;1–30.
- 780 15. Birrarung Council. *Birrarung Council Annual Report to Parliament on the Implementation of Burndap*
781 *Birrarung Burndap Umarkoo (Yarra Strategic Plan)*. Department of Environment, Land, Water and
782 Planning (Vic); 2022.
- 783 16. Pitkin HF. *The Concept of Representation*. 1972. p. 8-9.
- 784 17. Madison J, Hamilton A, Jay J. *The Federalist Papers* [Internet]. CALI eLangdell Press; 1905 [cited 2024
785 Feb 29]. Available from: [https://openresearchlibrary.org/viewer/b202fcb0-a7eb-4546-9a66-](https://openresearchlibrary.org/viewer/b202fcb0-a7eb-4546-9a66-993f74419196)
786 [993f74419196](https://openresearchlibrary.org/viewer/b202fcb0-a7eb-4546-9a66-993f74419196)

- 787 18. Burke E. *Reflections on the Revolution in France* (Penguin Classics): 9780140432046: Burke, Edmund,
788 O'Brien, Conor Cruise: Libros. London: Penguin Classics; 1968.
- 789 19. Malpas J. The Stanford Encyclopedia of Philosophy. In: Zalta EN, editor. *The Stanford Encyclopedia*
790 *of Philosophy* [Internet]. Winter 2012. Metaphysics Research Lab, Stanford University; 2012 [cited
791 2024 Feb 19]. (Edward N. Zalta and Uri Nodelman (eds.)). Available from:
792 <https://plato.stanford.edu/archives/win2012/entries/davidson/>
- 793 20. Disch L. The “Constructivist Turn” in Democratic Representation: A Normative Dead-End?
794 *Constellations*. 2015;22(4):487–99.
- 795 21. Urbinati N, Warren ME. The Concept of Representation in Contemporary Democratic Theory.
796 *Annual Review of Political Science*. 2008;11:387–412.
- 797 22. Saward M. The Representative Claim. *Contemporary Political Theory*. 2006;5:297–318.
- 798 23. Graham M. Some Thoughts about the Philosophical Underpinnings of Aboriginal Worldviews.
799 *Australian Humanities Review*. 2008;45:181–94.
- 800 24. Watts F, Dorobantu M. The Relational Turn in Understanding Personhood: Psychological,
801 Theological, and Computational Perspectives. *Zygon: Journal of Religion & Science*. 2023;58(4):1029–
802 44.
- 803 25. O'Donnell E, Arstein-Kerslake A. Recognising personhood: the evolving relationship between the
804 legal person and the state. *null*. 2021;30(3):339–47.
- 805 26. O'Donnell E. Rivers as living beings: rights in law, but no rights to water? *Griffith Law Review*.
806 2020;29(4):643–68.
- 807 27. McGee WJ. Water as a Resource. *The Annals of the American Academy of Political and Social Science*.
808 1909;33(3):37–50.

- 809 28. OECD. *Water Resources Allocation: Sharing Risks and Opportunities*. Paris, France: OECD
810 Publishing; 2015.
- 811 29. OECD. *OECD Principles on Water Governance: welcomed by Ministers at the OECD Ministerial*
812 *Council Meeting on 4 June 2015* [Internet]. Online: Directorate for Public Governance and Territorial
813 Development; 2015. Available from: [http://www.oecd.org/governance/oecd-principles-on-water-](http://www.oecd.org/governance/oecd-principles-on-water-governance.htm)
814 [governance.htm](http://www.oecd.org/governance/oecd-principles-on-water-governance.htm)
- 815 30. Laborde S, Jackson S. Living Waters or Resource? Ontological differences and the governance of
816 waters and rivers. *Local Environment*. 2022;27(3):357–74.
- 817 31. Leonard K, David-Chavez D, Smiles D, Jennings L, Tsinnajinnie L, Manitowabi J, et al. Water Back:
818 A Review Centering Rematriation and Indigenous Water Research Sovereignty. *Water Alternatives*.
819 2023;16(2):374–428.
- 820 32. Martuwarra RiverOfLife, Taylor KS, Poelina A. Living Waters, Law First: Nyikina and Mangala water
821 governance in the Kimberley, Western Australia. *Australasian Journal of Water Resources*.
822 2021;25(1):40–56.
- 823 33. Taylor KS, Longboat S, Grafton RQ. Whose Rules? A Water Justice Critique of the OECD’s 12
824 Principles on Water Governance. *Water*. 2019;11:809.
- 825 34. Mansbridge J. Rethinking Representation. *The American Political Science Review*. 2003;97(4):515–28.
- 826 35. Watson J, Wilson E, Hagiliassis N. Supporting end of life decision making: Case studies of relational
827 closeness in supported decision making for people with severe or profound intellectual disability’.
828 *Journal of Applied Research on Intellectual Disabilities*. 2017;30(6):1022–34.
- 829 36. Htun M, Jensenius FR. Comparative Analysis for Theory Development. In: Simmons ES, Rush Smith
830 N, editors. *Rethinking Comparison: Innovative Methods for Qualitative Political Inquiry* [Internet].
831 Cambridge: Cambridge University Press; 2021 [cited 2024 Feb 19]. p. 190–207. Available from:

- 832 <https://www.cambridge.org/core/books/rethinking-comparison/comparative-analysis-for-theory->
833 [development/19CDFE837FD2396E3F4E9817276590A6](https://www.cambridge.org/core/books/rethinking-comparison/comparative-analysis-for-theory-development/19CDFE837FD2396E3F4E9817276590A6)
- 834 37. Specially Protected Areas of Importance for the Mediterranean (ZEPIM_ES) - Data Europa EU
835 [Internet]. [cited 2024 Feb 19]. Available from: [https://data.europa.eu/data/datasets/21abb560-8bc2-](https://data.europa.eu/data/datasets/21abb560-8bc2-43c9-a80b-53e18ebca559?locale=en)
836 [43c9-a80b-53e18ebca559?locale=en](https://data.europa.eu/data/datasets/21abb560-8bc2-43c9-a80b-53e18ebca559?locale=en)
- 837 38. IEO. Informe de asesoramiento técnico del IEO sobre el Mar Menor [Internet]. Spain: Ministerio para
838 la Transición Ecológica y el Reto Demográfico; 2020 [cited 2024 Feb 19]. Available from:
839 <https://www.miteco.gob.es/es/prensa/informe-ieo-mar-menor.html>
- 840 39. Cárdenas YV, Turp D. A Legal Personality for the St. Lawrence River and other Rivers of the World.
841 Editions JFD; 2023. 544 p.
- 842 40. Vásquez-Salazar R, Cardona-Mesa A, Valdés-Quintero J, Olmos-Severiche C, Gómez L, Travieso-
843 González C, et al. Detection of Coastal Erosion and Progradation in the Colombian 'Atrato River'
844 Delta by Using Sentinel-1 Synthetic Aperture Radar Data. *Remote Sensing*. 2024;16(3):552.
- 845 41. O'Donnell E, Macpherson E. Environmental and Cultural Flows in Aotearoa and Australia. Oxford
846 Research Encyclopedia of Environmental Science. 2023;Online.
- 847 42. Melbourne Water Corporation. Burndap Birrarung burndap umarkoo: Yarra Strategic Plan 2022-2032
848 [Internet]. Melbourne, Victoria: Melbourne Water Corporation; 2022. Available from:
849 [https://www.melbournewater.com.au/about/what-we-do/publications/yarra-strategic-plan-](https://www.melbournewater.com.au/about/what-we-do/publications/yarra-strategic-plan-burndap-birrarung-burndap-umarkoo)
850 [burndap-birrarung-burndap-umarkoo](https://www.melbournewater.com.au/about/what-we-do/publications/yarra-strategic-plan-burndap-birrarung-burndap-umarkoo)
- 851 43. WWCHAC. Nhanbu narrun bha nargunin twarn Birrarung: Ancient Spirit & Lore of the Yarra
852 [Internet]. Naarm/Melbourne, Australia: Wurundjeri Woi-Wurrung Cultural Heritage Aboriginal
853 Corporation; 2018. Available from: [https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.mw-](https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.mw-yoursay.files/2315/8984/4614/Wurundjeri_Woi_Wurrung_Birrarung_Water_Policy.pdf)
854 [yoursay.files/2315/8984/4614/Wurundjeri_Woi_Wurrung_Birrarung_Water_Policy.pdf](https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.mw-yoursay.files/2315/8984/4614/Wurundjeri_Woi_Wurrung_Birrarung_Water_Policy.pdf)

- 855 44. Yarra River Community Assembly. Yarra River 50-year Community Vision: Wilip-gin Birrarung
856 Murron. Melbourne, Victoria: Melbourne Water; 2018.
- 857 45. O'Bryan K. The changing face of river management in Victoria: The Yarra River Protection (Wilip-gin
858 Birrarung murron) Act 2017 (Vic). *Water International*. 2019;44(6–7):769–85.
- 859 46. O'Donnell E. Water sovereignty for Indigenous Peoples: Pathways to pluralist, legitimate and
860 sustainable water laws in settler colonial states. *PLOS Water*. 2023;2(11):e0000144.
- 861 47. Otto K. Yarra: a diverting history of Melbourne's murky river. Melbourne, Australia: Text Publishing;
862 2005.
- 863 48. Birrarung Council. Birrarung Council Annual Report to Parliament on the Implementation of Burndap
864 Birrarung Burndap Umarkoo (Yarra Strategic Plan) 2023. Melbourne, Australia: Department of
865 Environment, Land, Water and Planning (Vic); 2023.
- 866 49. Birrarung Council. Birrarung Council First Year Report [Internet]. Melbourne, Australia: Department
867 of Environment, Land, Water and Planning (Vic); 2019. Available from:
868 [https://www.water.vic.gov.au/__data/assets/pdf_file/0021/464160/BC-First-Year-Report-Final-](https://www.water.vic.gov.au/__data/assets/pdf_file/0021/464160/BC-First-Year-Report-Final-8April2020.pdf)
869 [8April2020.pdf](https://www.water.vic.gov.au/__data/assets/pdf_file/0021/464160/BC-First-Year-Report-Final-8April2020.pdf)
- 870 50. O'Donnell E. Institutional Reform in Environmental Water Management: the New Victorian
871 Environmental Water Holder. *Journal of Water Law*. 2012;22:73–84.
- 872 51. Macpherson EJ. Indigenous Water Rights in Law and Regulation: Lessons from Comparative
873 Experience. UK: Cambridge University Press; 2019.
- 874 52. Waitangi Tribunal. Whanganui River Report (Wai 167). Waitangi Tribunal; 1999.
- 875 53. Talbot-Jones J. The Institutional Economics of Granting a River Legal Standing. Vol. PhD, Crawford
876 School of Public Policy. Australian National University; 2017.

- 877 54. Ngā Tāngata Tiaki o Whanganui. Ruruku Whakatupua - the Deed of Settlement [Internet]. Ngā
878 Tāngata Tiaki o Whanganui. 2023 [cited 2024 Jan 25]. Available from:
879 <https://www.ngatangatatiaki.co.nz/our-story/ruruku-whakatupua/>
- 880 55. Melbourne Water. Burndap Birrarung Burndap Umarkoo Yarra Strategic Plan: Implementation Plan
881 2023-2025 [Internet]. Melbourne: State of Victoria; 2023. Available from:
882 [https://www.melbournewater.com.au/about/what-we-do/publications/burndap-birraung-burndap-](https://www.melbournewater.com.au/about/what-we-do/publications/burndap-birraung-burndap-umarkoo-yarra-strategic-plan)
883 [umarkoo-yarra-strategic-plan](https://www.melbournewater.com.au/about/what-we-do/publications/burndap-birraung-burndap-umarkoo-yarra-strategic-plan)
- 884 56. Schweber H. The Limits of Political Representation. *American Political Science Review*. 2016
885 May;110(2):382–96.
- 886 57. Tierra Digna. Majestuoso Atrato [Internet]. Colombia: Tierra Digna; 2021. Available from:
887 [https://assets-global.website-](https://assets-global.website-files.com/5f620bf140e177a24773cf0a/5f64d0e60a81563cdd08d2d5_MAJESTUOSO_ATRATO_1.pdf)
888 [files.com/5f620bf140e177a24773cf0a/5f64d0e60a81563cdd08d2d5_MAJESTUOSO_ATRATO_1.p](https://assets-global.website-files.com/5f620bf140e177a24773cf0a/5f64d0e60a81563cdd08d2d5_MAJESTUOSO_ATRATO_1.pdf)
889 [df](https://assets-global.website-files.com/5f620bf140e177a24773cf0a/5f64d0e60a81563cdd08d2d5_MAJESTUOSO_ATRATO_1.pdf)
- 890 58. Ruiz MÁ. La Verdad. 2021 [cited 2024 Feb 19]. El Mar Menor escribe su propia firma. Available from:
891 [https://www.laverdad.es/lospiesenlatierra/noticias/menor-escribe-propia-20210524223141-](https://www.laverdad.es/lospiesenlatierra/noticias/menor-escribe-propia-20210524223141-nt.html?ref=https%3A%2F%2Fwww.laverdad.es%2Flospiesenlatierra%2Fnoticias%2Fmenor-escribe-propia-20210524223141-nt.html)
892 [nt.html?ref=https%3A%2F%2Fwww.laverdad.es%2Flospiesenlatierra%2Fnoticias%2Fmenor-](https://www.laverdad.es/lospiesenlatierra/noticias/menor-escribe-propia-20210524223141-nt.html?ref=https%3A%2F%2Fwww.laverdad.es%2Flospiesenlatierra%2Fnoticias%2Fmenor-escribe-propia-20210524223141-nt.html)
893 [escribe-propia-20210524223141-nt.html](https://www.laverdad.es/lospiesenlatierra/noticias/menor-escribe-propia-20210524223141-nt.html?ref=https%3A%2F%2Fwww.laverdad.es%2Flospiesenlatierra%2Fnoticias%2Fmenor-escribe-propia-20210524223141-nt.html)
- 894 59. Reeves JA, Peters T. Responding to Anthropocentrism With Anthropocentrism: The Biopolitics of
895 Environmental Personhood. *Griffith Law Review*. 2021;30(3):474–504.
- 896 60. Dunn J. Situating Democratic Political Accountability. In: Przeworski A, Manin B, Stokes SC, editors.
897 Democracy, Accountability, and Representation [Internet]. Cambridge: Cambridge University Press;
898 1999 [cited 2024 Feb 19]. p. 329–44. (Cambridge Studies in the Theory of Democracy). Available from:
899 [https://www.cambridge.org/core/books/democracy-accountability-and-representation/situating-](https://www.cambridge.org/core/books/democracy-accountability-and-representation/situating-democratic-political-accountability/BE6C744EBD656A9EED158F20542BABB5)
900 [democratic-political-accountability/BE6C744EBD656A9EED158F20542BABB5](https://www.cambridge.org/core/books/democracy-accountability-and-representation/situating-democratic-political-accountability/BE6C744EBD656A9EED158F20542BABB5)

901 61. Department of Environment, Land, Water and Planning. Water is Life: Traditional Owner Access to
902 Water Roadmap [Internet]. State Government of Victoria; 2022 [cited 2023 May 1]. Available from:
903 <https://www.water.vic.gov.au/aboriginal-values/the-aboriginal-water-program>

904 62. Islam MS, O'Donnell E. Legal rights for the Turag: rivers as living entities in Bangladesh. Asia Pacific
905 Journal of Environmental Law. 2020;23(2):160–77.

906