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1   **The Landscape of Leadership in Environmental Governance**
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INTRODUCTION

Recognition that current patterns of human behaviour will radically alter the Earth's environment and impact negatively on human wellbeing (Myers 1996, Steffen *et al.* 2015, World Resources Institute 2005) has led to calls to substantially improve or even transform approaches to environmental governance (Kates *et al.* 2012, O'Brien 2012, Brown 2013). In this context, transformation often refers to significant advances towards more integrated approaches at increasingly larger scales (Olsson *et al.* 2008; Westley *et al.* 2011), which in practice requires the merging of objectives around conservation, development and climate change (see also the Sustainable Development Goals 2015).

The literature on environmental governance transformation is converging around a core set of factors that foster change processes, with leaders (or entrepreneurs) identified as one of the main drivers of significant change (Scheffer *et al.* 2003; Olsson *et al.* 2008; Biggs *et al.* 2010; Westley *et al*. 2011). Often key individuals or 'champions' are identified, who by virtue of their positions (e.g., traditional village chief / City Mayor), personalities (e.g., charismatic) or competencies (e.g., networking skills) garner the authority to drive environmental policy change and action (e.g., Manolis *et al.* 2008; Black *et al.* 2011; see review by Evans *et al.* 2015). For example, research on the transformation of the Great Barrier Reef Marine Park, Australia, focused almost exclusively on the leadership role of the Great Barrier Reef Marine Park Authority and its Chairperson (Olsson et al. 2008).

Emphasising the attributes of individual environmental leaders reflects notions of what is referred to in the field of leadership studies as heroic leadership (Case 2013). Such

62 approaches focus on individual agency and can underplay the important institutional

63 contexts that support the emergence of leaders as well as the potential for more

64 distributed forms of leadership (Carroll *et al.* 2008; Westley *et al*. 2011; Denis *et al.*

65 2012). Moreover, environmental research on leadership tends to view leaders in a

66 positive or normative light, as those who are aligned to environmental governance and

67 sustainability initiatives (Evans *et al.* 2015; Case *et al.* 2015). Relatively few studies

68 emphasise the potential of leaders and leadership to intentionally (and legitimately)

69 block, disrupt, or co-opt change processes, or inhibit change in a particular direction (for

70 exceptions see Pahl-Wostl *et al.* 2007; Zulu 2008; Njaya *et al.* 2012). By this, we do not

71 only mean the leadership enacted by environmental activists blocking or stalling the

72 activities of big polluters, logging companies or developers (Houck 2010; Martinez-Alier

73 2014), we mean the leadership shown by community groups, user groups and industry

74 groups, for example, who are involved in negotiating environmental outcomes. Such

75 approaches to understanding the role of leadership in governance transformations

76 arguably misrepresent the complex and potentially contested concepts of environmental

77 governance and sustainable development (Lélé 1991; Redclift 2005).

78

79 We bring new insights to environmental governance research from leadership studies

80 where there is a growing recognition that leadership is a process that is enacted through

81 a "web of interactions incorporating both people and objects" (Hawkins *et al.* 2015: 953).

82 Leadership is broadly defined as a process of influence resulting in shared direction and

83 commitment (following Bolden *et al*. 2012 and Haslam *et al.* 2011). To illustrate what a

84 more nuanced understanding of leadership can look like we employ a deliberately

85 provocative analytical perspective inspired by Actor Network Theory which recognises

86   that societal outcomes are shaped by relations among humans and non-human, including

87   discursive, actants (Latour 2005; Dwiartama and Rosin 2014 and see discussion for

88   detailed examples). We report on an empirical study of Solomon Islands' engagement

89   with the multi-national, multi-objective Coral Triangle Initiative on Coral Reefs,

90   Fisheries and Food Security (CTI), an initiative that is labelled as potentially

91   transformative. We aimed to understand how different actors perceive leadership for

92   improved environmental governance in Solomon Islands in practice. First, we determine

93   whether there are sources of leadership *in addition* to key individuals and organisations.

94   We investigate the potential of organisations, policy and legislative instruments, and

95   ideologies or discourses to enact leadership by influencing governance outcomes.

96   Second, we establish how leadership varies across three different, potentially contested

97   CTI goals – food security, biodiversity conservation and climate change adaptation – that

98   in combination are expected to contribute to improved environmental governance. Third,

99   we determine whether leadership can also disrupt or stall progress towards improved

100   environmental governance outcomes. This paper aims to open up a broader debate about

101   leadership research in environmental sciences – the empirical approach and evidence are

102   illustrative rather than definitive.

103

104

105   **METHODS**

106

107   **Case-study**

108   We selected the Solomon Islands' engagement with the Coral Triangle Initiative on Coral

109   Reefs, Fisheries and Food Security as our illustrative case-study. The CTI is a regional

110 partnership between Malaysia, Philippines, Indonesia, Timor-Leste, Papua New Guinea

111 and Solomon Islands launched in 2009. It is funded by USAID in collaboration with

112 WWF, The Nature Conservancy and Conservation International, the Global Environment

113 Facility through the Asian Development Bank, and Australian Aid. The CTI member

114 states have committed to five goals with the explicit ambition of transforming coastal

115 and marine governance in the region (see Fidelman et al. 2012; Fidelman et al. 2014 for

116 more detailed information). The CTI is now established and supports many new

117 investments and activities aimed at integrating multiple objectives around conservation,

118 development and climate change. It, therefore, provides a rich context to examine

119 processes of influence and integration, in order to highlight the multiple facets of

120 leadership, broadly defined.

121

122 We conducted our research in Solomon Islands, one of the six CTI member states in

123 which we have established research connections. In Solomon Islands a multi-agency

124 National Coordinating Committee (NCC) has responsibilities for monitoring,

125 implementing and coordinating the CTI activities in-country. It is co-chaired by the

126 Environment, Conservation, Disaster Management and Meteorology and the Ministry of

127 Fisheries of Marine Resources. The NCC can be considered as a governance network

128 (*sensu* Newig *et al.* 2010), or a field-policy or organizational leadership network (*sensu*

129 Hoppe and Reinelt 2010), in that it was deliberately formed (rather than emergent) to

130 align resources and co-ordinate activities to address the common goals of the CTI.

131

132 **Data collection**

We conducted face-to-face expert interviews with the named representatives of organisations that are members of the Solomon Islands National Co-ordinating Committee (NCC). We aimed to survey all NCC member organisations. The Chair of the Solomon Islands NCC provided the names of the 17 experts who were the regular attendees of NCC meetings who act as representatives of the NCC member organisations. In 2013 we interviewed 12 of these experts; five were unavailable for interview. We asked each respondent to represent the experiences of their organisation. Our sampling approach is consistent with other research employing expert elicitation, network and participatory approaches (e.g., Cohen *et al.* 2012; Game *et al.* 2013) and it aligns with methodological approaches in leadership studies (e.g., Mailhot et al. 2016)

The face-to-face expert interview involved a participatory network mapping activity to map leadership influences on the respondents' organizations. First we asked respondents to identify "*Who* and *what* provides leadership in the work that your organisation does (e.g., activities on the ground, policies your organisation develops, research your organisation undertakes, etc.) related to the three core goals of the Coral Triangle Initiative in Solomon Islands?". The three core goals were food security, biodiversity conservation and climate change adaptation. Following accepted definitions in leadership studies, respondents were asked to consider leadership broadly as influence. To encourage respondents to openly consider the influence of conventional (human) and non-conventional (material and discursive) actants on the activities of their organisations, we asked them to consider four overarching categories of 'actants' that could constitute potential sources of leadership, and we described each in lay terms; a) organisations and networks (i.e., described to respondents as any group of social entities working together),

157   b) donors and funding (i.e., sources of finance), c) policies and strategies (i.e., a

158   document that articulates how actions should or must be taken), and d) beliefs and

159   discourses (i.e.,the over-arching views that people or organisations hold). In each of these

160   four categories we provided a few broad and specific, but standardised, examples to

161   clarify our meaning (Table 1). The specific examples we provided were those

162   organisations, donors, policies and discourses that were frequently mentioned in key CTI

163   documents. *Importantly*, respondents could include or *exclude* the example provided in

164   their network map, and then were encouraged to list any further actants in any of the four

165   categories (Figure 1A). Note, respondents could not nominate themselves/their own

166   organisation. Thus, the leadership influence of any organisation was determined by

167   others. In the network diagrams, responses were recorded as binary figures: a one (i.e.,

168   presence of influence) or a zero (i.e., absence of influence) against the list of actants.

169

170   TABLE 1

171

172   To address our second objective of establishing whether leadership varied across the

173   three CTI goals, respondents ranked the relative influence of different actants in their

174   network for each goal. First, we asked respondents to allocate 100 counters across the

175   three goals according to where the most progress had been made by the CTI in Solomon

176   Islands since it started in 2009. We then asked respondents to consider one CTI goal at a

177   time and to distribute the allocated number of counters across the actants they felt were

178   influential for that particular goal, i.e., placing more counters on the more influential

179   actant (Figure 1B). For example, if the respondent had indicated relative progress by

180   assigning 60 percentage points to food security, 30 to biodiversity conservation, and 10

181 to climate change adaptation, they then had 60 counters to distribute across the specific

182 actants influential on food security, 30 across actants influential on biodiversity

183 conservation and 10 on influential climate change adaptation actants. We then asked

184 respondents to discuss why they had identified particular actants as the most influential

185 in each of the three rounds of scoring.

186

187 FIGURE 1

188

189 To address our third objective on whether leadership might also inhibit progress towards

190 environmental governance outcomes, we asked the respondent to identify "Who and

191 what hinders, stalls or halts the work that your organisation does?" across all three CTI

192 goals combined. We recorded responses against the established list of actants again using

193 a binary code: one to indicate the presence of influence or zero to indicate the absence of

194 influence. We then asked respondents to discuss why they had identified particular

195 actants as the most influential in hindering, stalling or halting CTI progress.

196

197

198 **Data Analysis**

199 Using Ucinet version 6.288, we created two network visualisations representing: a) all

200 identified sources of positive influence on progress of NCC organisations towards the

201 CTI goals combined; and b) all identified sources of negative influence on progress

202 towards the CTI goals combined. In each network, the actant (i.e., source of influence)

203 is the node. In total, respondents identified 122 actants as influential on CTI progress.

204 Therefore, to create networks in Ucinet we produced 7 x 122 cell matrices (one matrix

205   for positive, and a separate matrix for negative influences), where cells contained either

206   a one or a zero indicating the presence or absence of influence. If we had interviewed

207   more than one respondent from a particular NCC member organisation, their responses

208   were aggregated, therefore, the responses of the 12 respondents were incorporated into

209   seven rows; one for each organisation. The size of the nodes represents the frequency

210   with which respondents identified a particular actant as influential, i.e., in-degree

211   (Degenne and Forsé 1999). To examine the different levels of influence for each CTI

212   goal, we summed and sorted (from highest to lowest) total scores from each of the three

213   rounds of scoring with counters. In Microsoft Excel we organised and analysed

214   supporting qualitative data on why respondents ranked particular actants as the most

215   influential. Qualitative responses were analysed to determine patterns in explanations

216   of the participatory network data (i.e., why particularly actants were highly influential).

217   Given the small size of the NCC network, we do not apply statistics to our network

218   data. Instead, we present this empirical study as illustrative of the potential for a

219   broader approach to environmental leadership research.

220

221

222   **RESULTS**

223

224   **Multiple sources of influence on CTI progress**

225   In the participatory network mapping activity respondents identified a total of 54

226   organisations, 18 donors, 32 policies and 18 discourses (represented as the nodes in the

227   network diagram) as being influential (indicated by the lines in the network diagram,

228   Figure 2A) in progressing the three main goals of the CTI in Solomon Islands. The five

229 most frequently cited actants, in descending order of frequency, were: the National Plan

230 of Action (NPOA), Equality, the Ministry of Environment, Conservation, Disaster

231 Management and Meteorology (MECDM), the Ministry of Fisheries of Marine

232 Resources (MFMR) and The Nature Conservancy (TNC).

233

234 The actants ranked as the most influential by respondents (as indicated by the highest

235 number of counters summed) across all three CTI goals combined were: MECDM,

236 NPOA, Poverty, The Nature Conservancy (TNC), and WorldFish (Table 2). The

237 MECDM emerged as the most influential actant with a score almost twice that of other

238 potential sources of influence. Poverty was the most influential discourse overall. It was

239 identified as important in less than 25% of responses but where it was identified it was

240 felt to be highly influential over CTI progress. Similarly, equality was felt to be a very

241 influential discourse by those that identified it.

242

243 **Different sources of influence on three overarching CTI goals**

244 We disaggregated perceptions of influence by the three overarching goals of the CTI in

245 Solomon Islands. Proportionate ranking by respondents indicated that they perceived that

246 relatively equal progress had been made across the three goals in Solomon Islands as a

247 whole, with slightly higher emphasis on climate change adaptation (37% of total points),

248 than biodiversity conservation (34%), or food security (29%). Importantly, respondents

249 perceived that different actants had been influential for different goals (Table 2). Overall,

250 *organisations* feature as the most important category of actants accounting for 45% of

251 the total points. The MECDM emerged as the most influential actant on all three CTI

252 goals. The NPOA and RPOA were among the top five sources of influence for all three

253   goals. Discourses around poverty, equality and food security were among the most highly

254   ranked influences on progress under the food security and climate change adaptation

255   goals of the CTI.

256

257   TABLE 2

258

259   The MECDM and MFMR hold formal leadership roles as co-chairs of the National Co-

260   ordinating Committee for the CTI, and both are among the four most important

261   organisations influencing CTI objectives overall. MECDM is the most influential

262   organisation for each of the three goals when they are considered separately, whereas

263   MFMR was among the four most influential actants under the biodiversity conservation

264   objective, but was substantially less influential under the climate change adaptation

265   objective (ranked 12th). For both food security and climate change adaptation objectives

266   WorldFish is considered by respondents to be more influential on their on-ground

267   activities than MFMR. For both biodiversity conservation and climate change adaptation

268   TNC is also perceived to be more influential on organisations' implementation practices

269   than MFMR.

270

271   Two other trends to note in these data are, first, the identification of customary rights as

272   a source of influence on food security and biodiversity conservation objectives. Second,

273   the presence of donors in the top sources of influence under climate change adaptation;

274   the objective for which data suggested most progress (37%) had been made over the last

275   five years. Several respondents' comments noted the intense donor focus on climate

276 change, with one respondent suggesting that: "*there are enough* [externally funded]

277 *projects on climate change for everyone*".

278

279 **Blocking or stalling influences on CTI progress**

280 Actants viewed to be influential in the progress of CTI goals were, in some cases, also

281 considered to be influential in stalling or hindering progress (Figure 2B). Tradition was

282 the most influential factor stalling progress. Respondents related tradition to customary

283 rights and identified land disputes, in particular, as a challenge to progress. One

284 respondent explained that "*When customary rights issues, such as disputes, arise we*

285 *leave people to sort it out and we walk away. We don't have the capacity to address or*

286 *solve these issues. That is the responsibility of the community or a mediator. It's*

287 *frustrating but you have to respect and understand this*". Respondents explained that

288 while these cultural factors were important for guiding the implementation of CTI

289 objectives (i.e., particularly through community-based approaches) they could also

290 significantly stall action.

291

292 Despite their formal position as the co-chairs of the NCC, both MECDM and MFMR

293 also feature highly as actants that hindered progress. One respondent suggested that the

294 NCC co-chairs can't fulfil their leadership roles, "[they] *can't implement what they talk*

295 *about and so stall progress on the ground*". Finally, donors and the government financing

296 department were identified as influences that stalled or blocked progress under CTI

297 objectives. In particular, respondents perceived that donor agencies impose conditions

298 around the provision of finances that stalled progress resulting in, what respondents

299 viewed as, an administrative burden on management resources. For example, donor

300 funding was viewed as a hindrance to progress because it is often difficult to access,

301 distribution is delayed and it comes with (excessively) high expectations. They used

302 words such as *rigid*, *time-consuming* and *unrealistic* to describe the funding and

303 reporting requirements of certain donors. Some respondents also argued that donors

304 pursued their own priorities not the country's priority needs.

305

306   FIGURE 2A AND B

307
308
309   **DISCUSSION**

310

311 Our participatory analysis of a governance network uncovered a landscape comprising

312 multiple human and non-human sources of leadership that are objective specific and

313 operate in ways that can both facilitate and hinder progress. Our data show that over

314 122 actants have influenced the direction and progress of the CTI in Solomon Islands.

315 Organisations were the most often identified sources of leadership influence, and the

316 NCC co-chairs – MECDM and MFMR – were, as expected, ranked among the most

317 influential actants alongside key supporting NGOs and donors. Nevertheless, more than

318 a third of the sources of leadership identified were not agents or actors in the

319 conventional sense, but non-human material and discursive entities. Four of the most

320 influential sources of leadership overall were discourses, including 'Centre of

321 Biodiversity' – which is an emerging motif of the CTI (CTI Secretariat 2009; Veron *et*

322 *al.* 2009) – 'poverty', 'equality' and 'customary tenure rights'. In Solomon Islands

323 customary tenure is the main form of property right, it is enshrined in the Constitution

324 and, as our data indicate, it both facilitates and hinders progress towards CTI goals.

325

326 Our analysis can be interpreted in different ways. The data could be understood in terms

327 of organisations and donors exhibiting leadership influence within a context of other

328 influential, non-human discursive (e.g., equality) and institutional (e.g., Regional Plan of

329 Action) contextual factors. This would reflect a body of work in leadership studies that

330 argues for more attention to the dialectic relationship between leadership and context i.e.,

331 to understand what type of leadership is effective in particular situations and how

332 leadership itself shapes context (Pettigrew 1992; Denis *et al.* 2010; Endrissat and von

333 Anx 2013). Some authors further posit that leaders can lead *through* context as well as

334 through other more direct leadership actions (Endrissat and von Anx 2013). In our case,

335 this would mean that discourses and policies are created deliberately by lead agencies to

336 enact more indirect influence over actors within a broad governance context in which

337 direct influence or leadership is not possible (i.e. actors work for different organisations

338 and are not accountable to particular lead agencies).

339

340 Alternatively, our data can be seen to reflect a distributed form of leadership. In this

341 paper, we took a provocative stance to argue that both human and non-human actants

342 can enact leadership influence within a distributed leadership network. This is a

343 reaction to the over-emphasis on individual and charismatic people or single

344 organisations as leaders in much of the environmental sciences literature. We defined

345 leadership broadly as a process of influence resulting in shared direction and

346 commitment (Haslam *et al.* 2011; Bolden *et al*. 2012) and suggest that influential

347 discourses and policies can engender as much of a shared vision as organisations or

348 charismatic individuals can. We show that actants, in addition to conventional agents,

349 can direct and motivate the activities of the key CTI implementing organisations (i.e.,

350 the NCC) and influence processes and outcomes in different ways, thereby enacting

351 leadership broadly defined.

352

353 Our approach follows an emerging stream of research in leadership studies on the role

354 of people *and* objects/artefacts in distributed leadership (Spillane *et al*. 2004; Bryson *et*

355 *al.* 2009; Oborn *et al.* 2013; Mailhot *et al.* 2016). Some scholars analyse how human

356 agents employ objects (i.e., concepts, committees or technologies) to achieve outcomes

357 through their leadership practice (Mailhot *et al.* 2016). Other scholars take a slightly

358 more 'radical' approach which views the objects themselves as *performative*, meaning

359 the objects have their own agency and can frame interactions and recruit other actors to

360 their 'cause', even in the absence of particular human agents who created, mobilised or

361 utilise the object (Mailhot *et al.* 2016). Spillane et al. (2004: 27) state that "the practice

362 of leadership is stretched over leaders, followers, and the material and symbolic

363 artefacts in the situation". Similarly, Bryson *et al*. (2009: 200) identify artefacts or

364 objects including strategy maps "that changed the minds of their producers and guided

365 subsequent action across time and space" as influential actants in inter-organisational

366 collaboration. In the context of public policy making, Oborn *et al.* (2013) highlight that

367 socio-material configurations of human agents and objects (such as data and

368 communication technologies) can resolve conflicts and legitimise re-thinking of

369 leadership outcomes. They too emphasise that "these materials are not passive

370 mediators or neutral channels for leadership but are consequential". Yet, the agency of

371 these objects emerges in relation to different actors and specific practices or activities,

372 rather than being inherent in a material's properties (Oborn *et al*. 2013). In our case,

373   agency emerges through the interactions between the NCC organisations and the

374   human and non-human actants they identify as influential on their policy and

375   implementation practices.

376

377   This approach to leadership research falls within the pluralist tradition of the leadership

378   studies literature which focuses on the "combined influence of multiple leaders in

379   specific organisational situations" or, in our case, inter-organisational situations (Denis

380   *et al.* 2012: 211). The pluralist approach is at the forefront of leadership studies and

381   informs numerous strands of enquiry into how leadership emerges and plays out in group

382   settings and through group processes (Hoppe and Reinelt 2010; Haslam *et al.* 2011;

383   Denis *et al.* 2012). As Oborn and colleagues (2013) argue, taking an inclusive view of

384   distributed leadership is appropriate for understanding how leadership emerges in

385   complex policy contexts involving diverse stakeholder groups with multiple conflicting

386   interests, as is characteristic of environmental governance transitions.

387

388   Recognising leadership as distributed and contested is rare in environmental leadership

389   research and our study took this broad approach to distributed leadership to respond

390   directly to these critiques. In doing so we consider leadership broadly, we unpack

391   environmental governance into component and potentially contested objectives, and we

392   explicitly examine forms of leadership that may block or stall particular trajectories. In

393   addition to showcasing how leadership influence can be widely distributed among the

394   human and non-human, we also show that actants that may block and stall progress are

395   not necessarily "devious" but can be limited by the mandates that guide them,

396   competing priorities, limited capacity to act or indeed active disagreement with the

397 direction a particular initiative is taking. We hope that our study has highlighted why

398 these different aspects of leadership must be considered in future efforts that seek to

399 explain the function and performance of leadership in environmental change processes.

400

401 We recognise that our inclusive approach may be too broad for some analysts. While

402 Grint (2005, pace Gallie, 1955/56) notes that leadership is an 'essentially contested

403 concept' which will frustrate any attempt by researchers to nail-it-down in definitional

404 terms, he also attempts to articulate what is 'sacred' about the leadership concept. Grint

405 (2010: 89) observes that "in attempting to escape from the clutches of heroic leadership

406 we now seem enthralled by its apparent opposite—distributed leadership: in this post-

407 heroic era we will all be leaders so that none are". Grint refers to a spectrum of distributed

408 leadership from leadership as moderately shared to more radical interpretations where

409 leadership is unnecessary or so widely shared it dissipates altogether. Even with its broad

410 focus on human and non-human agents we suggest that our study falls into the former

411 category: it does not preclude the role of individuals and organisations, but aims to

412 highlight a much broader platform on which to situate further environmental leadership

413 research.

414

415 Moreover, we acknowledge several key limitations to our empirical study. First, the NCC

416 network we analysed gave a small sample size that precludes statistical analysis of the

417 data. Nevertheless, we suggest that the relative ranking of actants (i.e., to the extent that

418 several non-human actants feature in the top ten sources of leadership overall and that

419 some new actants are recognised in the top ten sources of leadership for particular

420 objectives) is important and sufficient to illustrate the potential of broader approaches.

421 Second, by defining leadership as influence we facilitate a more open view of leadership

422 processes than may result from using more specific terms such as leader. Third, we did

423 not comprehensively assess *how* the different human and non-human actants *actively*

424 influence, stall or alter trajectories of progress in the CTI over time. Our network data

425 provide the foundations for an interesting extension of this research. For example, further

426 research could use longitudinal and ethnographic methods to investigate in more depth

427 how different actants influence the concepts, mandates, approaches and actions of the

428 NCC organisations; in particular, how non-human entities like policies and discourses

429 act as sources of influence independently of the human actors and organisations that

430 formulate or construct them.

431

432

433 # CONCLUSION

434

435 Environmental governance needs to be transformed to address resource over-

436 exploitation, poverty and inequality, and climate change. Our study shows that there are

437 subtly different sources of influence underpinning multiple objectives communicated

438 under the rubric of regional conservation and development initiatives. This is a challenge

439 for governance but also indicates multiple potential entry points for bolstering Coral

440 Triangle Initiative outcomes and similar global initiatives that seek to be transformative.

441 As such, strengthening leadership may not be limited to a focus on key individuals, which

442 can make system change and progress vulnerable to loss of these individuals, but may

443 consider investment in a web of reinforcing actants that, in combination, constitute

444 'leadership' and both facilitate and direct collective action.

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Acknowledgements

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601

602   **Figure 1.** A schematic of the participatory method use with respondents to identify

603   different sources of leadership and their relative influence on the three CTI goals; (A)

604   illustrates the initial map of actants considered to be influential (data used for the

605   quantitative network diagrams), and (B) depicts how respondents ranked the relative

606   influence of actants on the three different CTI goals (data in table 2).

607

608   **Figure 2.** Network diagrams illustrating the relative frequency (indicated by the size of

609   the point) that different actants (individual points) were identified by respondents as

610   being influential on (indicated by lines) CTI goals: (A) positive influences and (B)

611   negative influence. Respondents' organisations are indicated by triangles; the arrows

612   point towards the actants that respondents identified. Categories of leadership are

613   indicated by different colours; black = organisations and networks, blue = donors and

614   funding, red = policies and fora, and green = beliefs and discourses.

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