

University of Massachusetts Amherst

From the Selected Works of Elisabeth M. Hamin

2012

Regional Conservation Partnerships in New England

Elisabeth M. Hamin, *University of Massachusetts - Amherst*



Available at: https://works.bepress.com/elisabeth_hamin/13/

1 ***Regional Conservation Partnerships in New England***

2 ***Abstract***

3

4 Across New England, a new model of regional collaboration is increasingly being used by land
5 conservation trusts, watershed associations, state agencies and others. Regional conservation
6 partnerships (RCPs) serve multiple purposes, such as coordinating among the various active
7 groups in the region and allowing them to leverage funding and staff capacity. However, their
8 essential missions are the same—protect more land from development. We use interviews,
9 geographic information systems (GIS), and statistical analysis on 20 case studies to document
10 RCP growth and characteristics and to analyze which attributes most contribute to their ability to
11 conserve land. Along with well-known factors of organizational development, we find that the
12 RCPs that match the size of the partnership region with the territory and capacity of the host
13 partner organization are better able to achieve measurable conservation gains.

14

15 ***Management and Policy Implications***

16

17 Urbanization and climate change are motivating non-profit conservation land trusts to coordinate
18 their actions at the landscape scale. In large landscapes dominated by family forest ownerships,
19 land conservation trusts are increasingly cultivating regional conservation partnerships (RCPs).
20 RCPs are typically informal networks of people representing non-profit conservation
21 organizations and state and local government agencies that coordinate their activities to plan and
22 conserve connected forested landscapes across town and sometimes state boundaries in regions

23 of between 10,000 acres and 2 million acres. Our study shows that RCPs are increasingly being
24 established and that their success is largely dependent on the organizational capacity and
25 expertise of its partners. Authors encourage foresters in the private and public sectors to consider
26 the role of RCPs in achieving their own forest conservation and management objectives (45
27 percent of RCPs in our study included productive working forests among their conservation
28 priorities).

29

30 ***Introduction***

31

32 In the past century, New England has rapidly reforested following widespread clearance for
33 agriculture, which peaked in the late nineteenth century (Foster and Aber 2004). This
34 reforestation is so thorough that New England is now the country's most forested region, with 33
35 million of its 42 million total acres in forest, even while southern New England is among the
36 most densely settled regions in the country (Foster and Aber 2004). In southern and central New
37 England, parcels tend to be small and privately-owned, creating a complex mosaic of forestland
38 ownerships amidst 1,586 municipalities. These mostly forested parcels are subject to increased
39 parcelization and fragmentation by first and second home development and by roads. Some
40 forecasts suggest that up to 63% of private land throughout New England could be developed by
41 2030 (Stein et al. 2005). With more fragmentation and development, forest connectedness and
42 ecological function will decline.

43

44 In response to this threat and the complexity of ownership, a relatively new and potentially
45 promising model of private-public collaboration has emerged: regional conservation partnerships

46 (RCPs). These are often informal groups of people who represent conservation land trusts,
47 municipalities, state agencies and others who coordinate their activities to advance the protection
48 of land within a region, or to conserve specific natural resources that cross town, county, or state
49 boundaries. In late 2010, there were 26 of these partnerships actively working in New England.

50

51 Our first research goal is to document and describe this model of collaborative conservation,
52 their common characteristics as well as what differentiates them. Our second research goal is to
53 suggest what sorts of actions and characteristics may contribute to their ability to protect land
54 from development.

55

56 ***Literature***

57

58 Conservation at the regional scale, though often pursued, is considered among the most difficult
59 of conservationists' goals to achieve (Innes 2005; McKinney et al. 2010). It is particularly
60 difficult where a large proportion of the region is in private landownership (Williams and
61 Ellefson 1997; Klosowski et al. 2001; Wolf and Hufnagl-Eichiner 2007). Regional collaboration
62 is an emerging approach to these challenges. The concept of collaborations is, of course, quite
63 well known and researched across a variety of fields (Leach et al. 2002; Margerum 2002;
64 Thompson et al. 2005). Working from the broad literature on collaboration, Margerum (2008)
65 describes the essential characteristics of collaborative conservation planning and management.
66 First, these efforts engage a wide variety of stakeholders; second, they use a consensus-building
67 process; third, activities include problem and goal definition as well as actions; and finally, they

68 require a sustained commitment to the process of actually solving the problem.

69

70 In natural resource management, the focus tends to be on collaborations initiated by
71 governmental entities as ways to engage representatives of other agencies, as well as the public
72 in important management decisions for public lands (Schuett and Selin 2002; Thompson et al.
73 2005). In fact, most natural resource researchers find that active governmental involvement and
74 support for collaborative efforts is one of the factors critical for success (Wondolleck and Yaffee
75 2000; Koontz et al. 2004).

76

77 One of the more complex research factors is that collaborations are not easy to pigeonhole; each
78 particular partnership is likely to operate somewhat differently. There is a spectrum among
79 collaborations of level of organization and goals, from more simple networks to partnerships to
80 regional institutions (McKinney et al. 2010). Most cooperative efforts form around a specific
81 project or pressing issue in something more akin to joint ventures, and then when the particular
82 issue is resolved, the venture dissolves (Schaeffer and Loveridge 2002). These shorter-term,
83 cooperative efforts are in contrast to the more open-ended, longer-term regional conservation
84 partnerships that are the topic of this paper.

85

86 There are a number of related explanations for why a natural resource-based collaboration will
87 develop. The fundamental motivation tends to be a threat to common resources such as
88 environmental quality (Lubell et al. 2002). The overriding goal generally is better management
89 of these resources, creating public value that could not be achieved through individual action. In
90 particular, problems associated with a natural resource that no one institution has the capacity or

91 authority to address, can call for a new way for working across boundaries (McKinney and
92 Johnson 2009). Other key characteristics include a relatively homogeneous landscape with
93 significant stocks of human, social, and financial capital to overcome the transaction costs of
94 organizing (Lubell et al. 2002), a strong landscape character and residents' attachment to it, and
95 an activist to give it the catalyzing push (Hamin and Marcucci 2008).

96
97 Collaborations tend to seek goals that include external, on the ground results, as well as internal
98 capacity building for their organization. Genskow (2009), working from a wide variety of
99 sources, sums up the outcomes expected from examples of collaborations focused on natural
100 resource management as: specific accomplishments, increased social and organizational capacity
101 in the region and among the partners, and increased legitimacy for the resulting actions/policies.
102 Investigating forest landowner collaboratives, Wolf and Hufnagl-Eichiner (2007) summed up the
103 benefits for individuals participating in a particularly succinct fashion: money, information, and
104 legitimacy.

105
106 Prescriptive advice to partnerships is widely available in the form of lessons learned, usually
107 developed through case study, polling, or interviewing collaboration leaders. One of the most
108 helpful and rigorous applications of this is by Williams and Ellefson (1997), who reviewed 30
109 natural resource collaborations, and had activists identify 'keys to success.' Based on these, they
110 developed this list of attributes of self-defined successful collaborations:

- 111 • Development – have specific purpose, goals, and representation from all affected parties;
- 112 • Information – exchange research, inform stakeholders, etc.;
- 113 • Organizational support – regular meetings, staff, internal and external support;

- 114 • Interpersonal communication – clear decision making mechanism and culture of open
115 listening;
- 116 • Trust, honesty, respect; and,
- 117 • Accomplishments – some specific outcome, even if it is just a final report.

118

119 An important point here is that these assessments of effectiveness tend to be made by giving
120 surveys to organizations and asking them what is most effective. Helpful as this is, there is also a
121 benefit to an external evaluation of achievement, and then looking for shared traits among those
122 with and without a particular indicator of success, in this case the protection of land as a
123 partnership. This, as further explained below, is our approach.

124

125 ***Methods***

126

127 To document the spread and characteristics of regional conservation partnerships (RCPs),
128 encompassing 56 variables, we drew from interviews with RCP leaders, the literature, public
129 documents, and geographic information systems (GIS). For our second research goal, we used
130 grounded theory and statistics to identify 12 important variables. We then modeled a subset of
131 this data within a regression analysis to determine which of these variables best explained why
132 ten RCPs had protected land by 2009 and ten had not. Each is described in more detail below.

133

134 *Growth and characteristics of RCPs*

135

136 In 2009, we used the snowball sampling technique to identify 20 regional conservation

137 partnerships in New England (see Table 1). Conservation professionals were asked whether they
138 knew of one or more ongoing and informal, multi-stakeholder collaboration(s) organized to
139 advance conservation efforts in a particular region. We interviewed the coordinator or other
140 leader for each of these. Interviews took place between October 2009 and April 2010 and lasted
141 between 60 and 120 minutes each. Seventy-four questions focused on partnership history,
142 activities, partners/partnership, conservation vision/planning, funding, communication, and
143 needs. We categorized all of the interview responses using the constant comparative technique
144 (Glaser 1965) and generated data for 45 variables (this data can be viewed on the Harvard Forest
145 Online Data Archive at <http://harvardforest.fas.harvard.edu/data-archive>). These data were then
146 drawn from in order to describe the RCPs' key characteristics in the areas of partnership
147 initiation, establishment and growth, organization and design, membership, host partner capacity,
148 partnerships' regions and conservation activities. Interview responses were cross-referenced
149 when possible. For instance, we checked publicly accessible sources such as annual reports and
150 websites to assure that the values reported in interviews for number of acres protected were
151 accounted for.

152

153 To more fully document the growth and characteristics of RCPs and their regions, we collected
154 additional data on eleven variables including: number of the host partner's full-time equivalent
155 positions, size of the partnership region, size of the "host" partner territory, and percentage of the
156 partnership region protected from development (for a complete list of the attributes/variables see
157 Harvard Forest Online Data Archive). The organization providing critical financial support to the
158 RCP, which might include employing the current coordinator, is considered the "host" partner in
159 our study. Staffing figures were acquired from phone calls to the host partner organization. The

160 extent of the partnership's region was derived from maps submitted to the researchers by the
161 partnership coordinators, or leaders. The host partner's territory was determined by its
162 geography, found on the organization's website (e.g. the towns of a, b, and c). The percentage of
163 a partnership's region that was protected from development was found using GIS and publicly
164 available datasets.

165

166 *Ability of RCPs to protect land*

167

168 We used two separate methods to identify which of the 56 variables (45 derived from interviews
169 and 11 from GIS and other sources) were most common to RCPs that had protected land. We
170 found that by late 2009, of the 20 RCPs participating in our study, 10 had protected land as a
171 partnership and 10 had not. We applied grounded theory to the categorical data generated by the
172 interviews and found seven attributes most common to RCPs that protected land (1-7 in Table 2).
173 For each of the eleven continuous variables identified using GIS and other sources, we compared
174 the median values for RCPs that had protected land with those that had not and selected five
175 variables that appeared to be most important (variables 8-12 in Table 2) in explaining the ability
176 of an RCP in our study to have protected land by late 2009.

177

178 To test whether these twelve attributes, or variables, explained a significant amount of the
179 variation in the success of partnerships as measured by their protection of land, we ran a logistic
180 regression analysis. With the regression modeling, we chose to model a binary response (*i.e.*,
181 protection or no protection of land) as opposed to a continuous response (*i.e.*, number of acres
182 protected) because half of the partnerships had not protected any land.

183

184 A logistic regression model assumes that the predictor variables are not correlated. To check for
185 collinearity between predictor variables, we ran a log-linear model for comparisons between two
186 categorical predictors, calculated point bi-serial correlation coefficients for comparisons between
187 continuous and categorical predictors, and calculated Pearson correlation coefficients for
188 comparisons between continuous predictors. We excluded correlated predictors that had
189 correlation coefficients > 0.4 .

190

191 The ratio of host territory to partnership region, size of the partnership's region in acres, age of
192 the partnership, having partners with access to staffing and funding, having a shared conservation
193 vision and map and the number of full-time equivalent positions were correlated according to
194 these criteria. We chose to include host territory to partnership region because a) the authors were
195 interested in whether the size of the host partner's territory could be a measure of its
196 organizational capacity, b) Williams and Ellefson (1997) suggest that organizational support is an
197 important attribute of successful RCPs, and c) because these variables are all highly correlated,
198 the host territory to partnership region may be viewed as a substitute for the size of the host
199 partner's territory, size of the partnership region, the number of FTEs of the host partner, and the
200 number of municipalities in the partnership region. We also wanted to represent some aspect of
201 the conservation vision in the regression model, so we chose to include "just a shared
202 conservation vision" as it was not correlated with host partner territory to partnership region as
203 was "conservation vision and map." We chose to exclude numbers of municipalities in the
204 partnership region and the size of the partnership region because they were too closely correlated
205 with the seven aforementioned variables that were derived from grounded theory. We chose to

206 exclude age as a predictor because the data suggested that just because a partnership existed over
207 time, this was itself not a predictor of whether the RCP would protect land. In sum, our
208 regression model included seven of the twelve variables: 1) the ratio of the host partner territory
209 to the size of the partnership region (“host territory to partnership region”), 2) meeting regularly
210 and in-person vs. by phone, or on an ad hoc basis, 3) having two or more governance structures,
211 4) having partners that represent municipalities, 5) involving municipalities in conservation
212 planning, 6) having a shared conservation vision, and 7) coordinating individual actions to raise
213 money instead of through a joint capital campaign. Our study does not describe the activities
214 that would have occurred without the partnerships, nor does it compare the pace of conservation
215 before and after the partnerships became established.

216

217

218 ***Findings—Growth and Characteristics of RCPs in New England***

219

220 Partnership Initiation and Growth

221

222 Overall, 70% (14) of the 20 regional conservation partnerships in our study were established by
223 individuals who normally work within the region, rather than outside the region. In 14 (of the 20)
224 partnerships, the initiators were paid staff of non-governmental organizations, in one, a federal
225 agency, while four were established by volunteers. In all of these, the initiators were already
226 working in the region and invariably became the designated coordinator for the partnership. In
227 two cases in which partnerships were initiated by individuals, the groups later became tax-

228 exempt, nonprofit corporations under Section 501(c) 3 of the United States Internal Revenue
229 Code.

230

231 The first RCP was formed by fourteen organizations in 1994 (see Fig. 1) including: The Nature
232 Conservancy, New Hampshire Chapter; Society for the Protection of New Hampshire Forests;
233 Trout Unlimited, Inc.; New Hampshire Fish and Game Department. The second partnership
234 started in 1997. Twelve years later, there were 20 active partnerships engaging 214 individuals
235 representing an equal number of organizations (see Figure 2). Some organizations belong to
236 more than one RCP. More specifically, 12 organizations and agencies have participated in at least
237 three partnerships between 1994 and 2009. The Nature Conservancy has participated in 11 of the
238 20 partnerships in our study. The Trust for Public Land (TPL) has been a member of eight
239 partnerships and one statewide conservation organization, The Trustees of Reservations, has
240 participated in five of the partnerships.

241

242 The number of acres followed a similar trajectory. In 2009, the combined territories of
243 partnerships in our study totaled 10,685,783 acres, representing 32% of the land area in forest
244 cover in New England.

245

246 Partnership Organization and Design

247

248 The organization providing critical financial support to the RCP, which might include employing
249 the current coordinator, is considered the “host” partner in our study. Fifteen of the partnerships

250 had conservation land trusts as their host partners. Other partnerships had coordinators that were
251 employed by watershed associations, foundations, or they were individuals.

252

253 Host partners identified the importance of two or more “strong partners” in the partnership.
254 Strong partners are characterized as bringing value to the partnership. The most commonly-
255 identified value is “expertise” in the subjects of conservation, natural resources, land planning,
256 and business. A close second is “Money/staffing capacity” (see Table 3).

257

258 Although only two partnerships are incorporated, half of the more informal partnerships use a
259 variety of nested organizational structures including a steering committee and working groups to
260 make decisions (see Figure 4). Most of the partnerships’ members meet in person and at
261 regularly scheduled meetings, though others meet by phone and use email to communicate and
262 on an ad hoc basis (see Table 3).

263

264 Partnership Membership

265

266 The number of partner groups and agencies range from 3 to 41, with an average of 13 and a
267 median of 10 partners. Ten RCPs include individuals representing municipalities, including local
268 land trusts. Regional conservation partnerships have a wide range of member affiliations though
269 there are a few common partner types. For example, 80% of the twenty partnerships in our study
270 include regional land conservation trusts and 75% include statewide conservation organizations
271 (see Figure 5).

272

273 At least half of the partnerships include national organizations, state chapters of international
274 organizations, and watershed/river associations. Local land conservation trusts are members of
275 only 40% of the RCPs and fewer still include people representing state agencies. However, in
276 terms of people participating, the top four partner categories are, in order: regional land
277 conservation trusts, local land conservation trusts, statewide conservation organizations (e.g.
278 Vermont Land Trust and Massachusetts Audubon), and watershed/river associations.

279

280 Host Partner Capacity

281

282 We were interested in the host partners' total number of full-time equivalent positions and the
283 ratio of the host partner's territory to the partnership region. FTE values range from zero to
284 41.83, with a median of 2.50 (see Table 4).

285

286 The ratio of the host partner territory to partnership region ranged from 0.0 to 90.0 with a median
287 of 1.18. The "0" values resulted in one case from having a volunteer as host partner, and in the
288 other from a host organization with a very small territory compared to the partnership region,
289 while the "89.99" ratio represented an RCP with a statewide land trust as host partner.

290

291 Partnerships' Regions

292

293 The twenty partnerships' regions range in size from 11,944 acres to 1,896,689 acres, with a
294 median of 540,403 acres (see Figure 6). These areas are most typically found in one state versus
295 two and comprise portions of from 2 to 85 municipalities, with a median of 25. Researchers

296 identified the north-south center of each partnership called the NSCentroid and split the
297 latitudinal difference between the most southern and the most northern. Eight partnerships exist
298 in the southern two quarters and twelve in the more northern ones. They vary in the share of the
299 land that is protected from development (2.5% to 40% with a median of 23%) (see Figure 7).

300

301 Partnership Conservation Activities

302

303 The three main functions that partnerships provided to their partners were (and in order of
304 frequency of occurrence): 1) fundraising; 2) coordinating conservation planning and larger,
305 multi-stakeholder, and/or multi-parcel land protection projects; 3) providing conservation
306 services to municipalities (e.g. municipal open space planning and grant writing) and landowners
307 (e.g. assisting with their estate planning and conservation needs). One hundred percent of the
308 partnerships in our study include one or more land conservation organizations. Seventy-five
309 percent of the partnerships in our study with a stated mission (12/16) include conservation as one
310 of its main elements.

311

312 Seventeen partnerships have a shared vision for their region (see Table 3). Fewer (12) have a
313 map of their vision and even fewer (9) have conservation targets. The top three outcomes sought
314 by these partnerships are, in order: large forested areas, protecting a lot of land, and greater
315 connectivity of protected lands.

316

317 As is mentioned in the methods section, among the twenty partnerships in this study, ten had
318 protected land by 2009. We define “protecting land as a partnership” to include land that was

319 protected through actions: 1) of the coordinator of the partnership in collaboration with other
320 partners and 2) of partners working in coordination. These ten partnerships protected from 600
321 acres to 26,500 acres, representing between 0.5% and 19.2% of the partnerships' regions.
322 Though two partnerships began protecting land within their first year, on average it took them
323 3.1 years before they began to protect land (see Table 5). The median acreage per year protected
324 is 1,337 acres.

325

326 Although sixteen of the twenty partnerships in our study had raised at least \$10,000 for
327 conservation purposes, eight raised at least one million. Five raised at least 0.5 million dollars for
328 every year they had been in existence (see Figure 8).

329

330 ***Findings—Ability of an RCP to Protect Land***

331

332 Our second research goal is to identify the statistically significant variables that would predict
333 the difference between RCPs that protected land or not within the time frame of our study. Table
334 6 shows our preliminary model for twelve variables identified while researching our first
335 research question that are potentially important to explaining why one of the 20 RCPs in our
336 study would have protected land or not.

337

338 We ran a logistic regression analysis to test whether these twelve attributes explained a
339 significant amount of the variation in whether the RCP protected land by 2009. As is described in
340 Methods, of the twelve attributes listed in Table 6, seven were included in the final analysis (see

341 Table 7 below). Of the seven attributes included in the final logistic regression analysis, the ratio
342 of the host partner territory to the partnership region and whether or not the partnership had
343 regularly scheduled meetings were significant predictors of land protection by partnerships (see
344 Table 7).

345

346 *Discussion and Conclusion*

347

348 The literature suggests that regional conservation planning is very difficult, given the many
349 different owners and different jurisdictions involved (Wolf and Hufnagl-Eichiner 2007;
350 McKinney and Johnson 2009; McKinney et al. 2010). Our study supports this, but finds that
351 regional conservation partnerships, at least in New England, are growing in numbers and can be
352 effective at conserving land. They serve multiple purposes, such as coordinating among the
353 various active groups in the region and allowing them to leverage funding and staff capacity.
354 However, their essential missions are the same—protect more land from development.

355

356 In this research, we sought to learn more about these RCPs and find out what best enables land
357 protection. There is no guarantee that what organizers think contributes to their success is the
358 same as what external observation will suggest mattered. Most studies of regional cooperation
359 have taken the perspective of those who do the cooperating. In our study, we investigated their
360 perspectives but also tested organizational design for statistically significant influences on land
361 protection. We generally find that external and internal evaluations are consistent, but that for
362 RCPs, geography matters.

363

364 Our study supports previous research findings (Williams and Ellefson 1997) that organizational
365 support is essential to success. Partnerships that meet regularly and in-person, and that take
366 advantage of the governing bodies like steering committees are more likely to protect land within
367 six years than those which do not. Both of these organizational design attributes require staffing
368 capacity. Presumably these attributes also help RCPs coordinate their conservation-related
369 activities more effectively than those partnerships that are less well-organized.

370

371 However, when it comes to the twenty regional conservation partnerships in our study,
372 geography combines with capacity in perhaps unique ways. In particular, the findings point to
373 the importance of matching the size of the partnership region (PR) with the size of the host
374 partner organization's territory (HT). HT:PR is shown to be a statistically important metric for
375 the capacity of an RCP to protect land. One explanation for this is that host partner organizations
376 with territories smaller than that of the partnership region (or those short of staff) will require
377 more time in order to develop the capacity for effective coordination of both fundraising and land
378 protection activities across a region larger than their own territory.

379

380 Conversely, an RCP is more apt to protect land sooner if their host partner organization's
381 territory is equal to if not larger than that of the partnership region. In this case, the host partner
382 organization and the partnership have a shared geography. As such the host partner has much to
383 gain from fostering activities throughout the entire partnership region including the potential for
384 engaging and attracting state and federal personnel and resources and in leveraging local, private
385 and municipal investments in activities that support their mission and the mission of the RCP.
386 Such an arrangement will mean conservation outcomes earlier in the life of the partnership and

387 potentially a more sustained effort over time.

388

389 It will be helpful to track these partnerships over the next five to ten years. For instance, it
390 remains unclear whether well-staffed host partner organizations with territories much larger than
391 their partnership regions will result, over time, in the greatest conservation gains. The one RCP
392 in our study that ceased to function in 2010 (and before it was six years old) was hosted by an
393 organization with 18 full-time equivalent positions and with a territory 1.4 times that of the
394 partnership region. Another RCP that had chosen not to participate in our study, and which also
395 terminated in 2010 (and also before its sixth year), had a host partner with a territory 15 times
396 that of the RCP's region. Perhaps the partnerships that are built slowly by host partners that lack
397 the capacity to move more quickly will turn out to be the most productive over time.

398

399

400

401

402

403

404

405

406

407

408

409

410 References

- 411
- 412 Foster, D.R., and J.D. Aber. 2004. *Forests in time: The environmental consequences of 1,000*
413 *years of change in New England*. Yale University Press, New Haven.
- 414 Genskow, K. 2009. Catalyzing collaboration: Wisconsin's agency-initiated basin partnerships.
415 *Environmental Management* 43:411-424.
- 416 Glaser, B.G. 1965. The constant comparative method of qualitative analysis. *Social Problems*
417 12(4):436-445.
- 418 Hamin, E.M., and D.J. Marcucci. 2008. Ad hoc rural regionalism. *J Rural Stud* 24 –477:467-477.
- 419 Innes, J.E. 2005. *Insight: Collaborative regional initiatives*. The James Irving Foundation,
420 Berkeley, CA.
- 421 Klosowski, R., T. Stevens, D. Kittredge, and D. Dennis. 2001. Economic incentives for
422 coordinated management of forest land: A case study of southern New England. *Forest*
423 *Policy and Economics* 2(1):29-38.
- 424 Koontz, T.M., T.A. Steelman, J. Carmin, K.S. Korimacher, C. Moseley, and C.W. Thomas. 2004.
425 *Collaborative environmental management: What roles for government? Resources for*
426 *the Future*, Washington, D.C.
- 427 Leach, W.D., N.W. Pelkey, and P.A. Sabatier. 2002. Stakeholder partnerships as collaborative
428 policymaking: Evaluation criteria applied to watershed management in California and
429 Washington. *Journal of Policy Analysis and Management* 21(4):645-670.
- 430 Lubell, M., M. Schneide, J. Scholz, and M. Mete. 2002. Watershed partnerships and the
431 emergence of collective action institutions. *American Journal of Political Science*
432 46(1):148-163.

433 Margerum, R. 2008. A typology of collaboration efforts in environmental management.
434 *Environmental Management* 41(4):487-500.

435 Margerum, R.D. 2002. Collaborative planning: Building a consensus and building a distinct
436 model for practice. *J Plan Educ Res* 21(3):237-253.

437 Mason, R.J. 2008. *Collaborative land use management: The quieter revolution in place-based*
438 *planning*. Rowman and Littlefield, Lanham, MD.

439 McKinney, M., L. Scarlett, and D. Kemmis. 2010. Large landscape conservation: A strategic
440 framework for policy and action. Lincoln Institute of Land Policy Policy Focus Report.

441 McKinney, M.J., and S. Johnson. 2009. *Working across boundaries: People, nature, and regions*.
442 Lincoln Institute of Land Policy, Cambridge, Mass.

443 Schaeffer, P.V., and S. Loveridge. 2002. Toward an understanding of types of public-private
444 cooperation. *Public Performance & Management Review* 26(2):169-189.

445 Schuett, M.A., and S. Selin. 2002. Profiling collaborative natural resource initiatives and active
446 participants. *Northern Journal of Applied Forestry* 19:155-160.

447 Stein, S.M., R.E. McRoberts, R.J. Alig, M.D. Nelson, D. M. Theobald, M. Eley, M. Dechter, and
448 M. Carr. 2005. Forests on the edge: Housing development on America's private forests.
449 USDA Forest Service General Technical Report No PNW-GTR-636.

450 Thompson, J.R., W.F. Elmendorf, M.H. McDonough, and L.L. Burban. 2005. Participation and
451 conflict: Lessons learned from community forestry. *Journal of Forestry* 103:174-178.

452 Williams, E.M., and P.V. Ellefson. 1997. Going into partnership to manage a landscape. *Journal*
453 *of Forestry* 95(5):29-33.

454 Wolf, S.A., and S. Hufnagl-Eichiner. 2007. External resources and development of forest
455 landowner collaboratives. *Society & Natural Resources* 20(8):675-688.

456

457 Wondolleck, J.M., and S.L. Yaffee. 2000. *Making collaboration work: Lessons from innovation*

458 *in natural resource management*. Island Press, Washington, D.C.

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499 **Table 1: Names of the twenty regional conservation partnerships included in our research.**

500

501 **Table 2: Potentially Important Attributes Relating to Protecting Land as an RCP.**

502

503 **Figure 1. Emergence of regional conservation partnerships in New England (1994 – 2009).**

504

505 **Figure 2. Growth in the number of organizations working within regional conservation**
506 **partnerships (1994 - 2009).**

507

508 **Figure 3. Distribution of regional conservation partnerships by host partner type.**

509

510 **Table 3: Organizational attributes: number of partners, most common contributions of**
511 **strong partners, meeting practices, shared conservation vision.**

512

513 **Figure 4. Distribution of regional conservation partnerships by the type(s) of governance**
514 **structures used for making decisions.**

515

516 **Figure 5. Most common partner categories and the percentage of regional conservation**
517 **partnerships with members in each.**

518

519 **Table 4: Capacity of host partners to sustain the partnership: ratio of host partner territory**
520 **size to partnership region, average full-time equivalent positions of the host partner during**
521 **the life of the partnership.**

522

523 **Figure 6. Distribution of regional conservation partnerships by size of their region.**

524

525 **Figure 7. Distribution of regional conservation partnerships by the percentage of their region**
526 **permanently protected from development (2009).**

527

528 **Table 5: Land protection activities: size of region, number of acres protected by the**
529 **partnership, percentage of partnership region protected by the partnership, years of activity,**
530 **average acres protected/year.**

531

532 **Figure 8. Distribution of regional conservation partnerships by the average annual funding**
533 **they raised as RCPs by 2009.**

534

535 **Table 6: Potentially important attributes of regional conservation partnerships that had, and**
536 **had not, protected land by 2009.**

537

538 **Table 7. Results of logistic regression analysis. Significant predictors of whether or not a**
539 **partnership protected land are indicated with an asterisk (*).**

Table 1: Names of the twenty regional conservation partnerships included in our research.

12 Rivers Group	Mt. Agamenticus to the Sea Conservation Initiative
Borderlands Project	North Quabbin Regional Landscape Partnership
Chateauguay-No Town Conservation Project	Orange County Headwaters Project
Chittenden County Uplands Conservation Project	Pioneer Valley Land Trust Group
Great Bay Resource Protection Partnership	Portland North Land Trust Collaborative
High Peaks Initiative	Quabbin to Cardigan Partnership
Litchfield Hills Greenprint Collaborative	Rensselaer Plateau Alliance, Inc.
Lower Penobscot Watershed Coalition	River Link
Mahoosuc Initiative	Taunton River Coalition
MassConn Sustainable Forest Partnership	Upland Headwaters Alliance

Table 2: Potentially Important Attributes Relating to Protecting Land as an RCP.

1. Partnerships with two or more governance structures
 2. Partnerships that have partners that represent municipalities
 3. Partnerships that have partners with access to staffing and funding
 4. Partnerships that involve municipalities in conservation planning
 5. Partnerships that have a mapped conservation vision
 6. Partnerships that meet regularly and in-person vs. by phone, or on an ad hoc basis
 7. Partnerships that coordinate individual actions to raise money instead of through a joint capital campaign
 8. Age in 2009
 9. Size of the partnership region in acres
 10. Ratio of host partner territory: partnership region
 11. Number of full-time equivalent positions of the host partner
 12. Number of municipalities in the partnership region
-

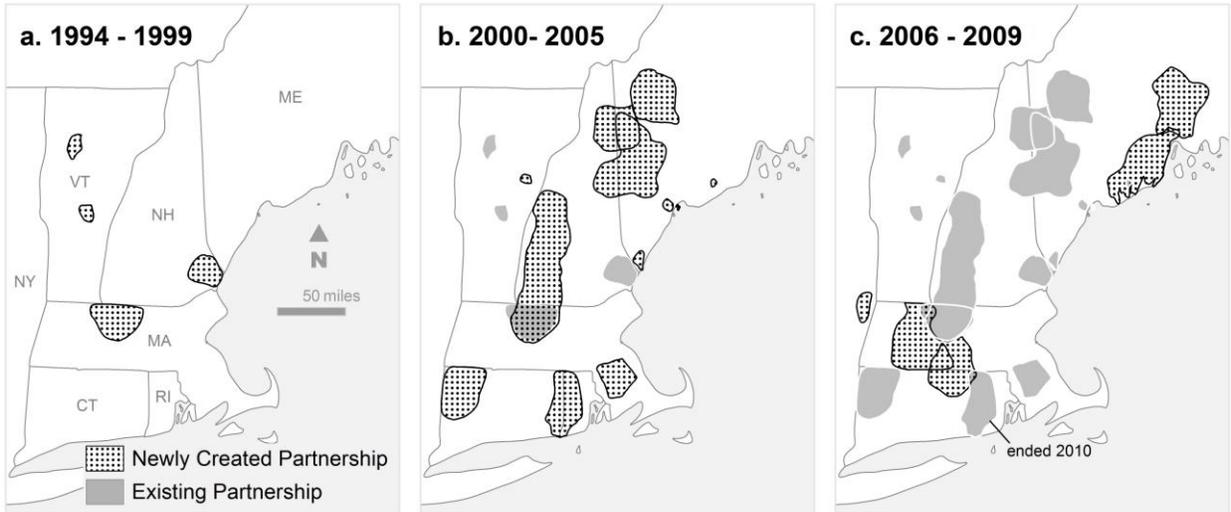


Figure 1. Emergence of regional conservation partnerships in New England (1994 – 2009).

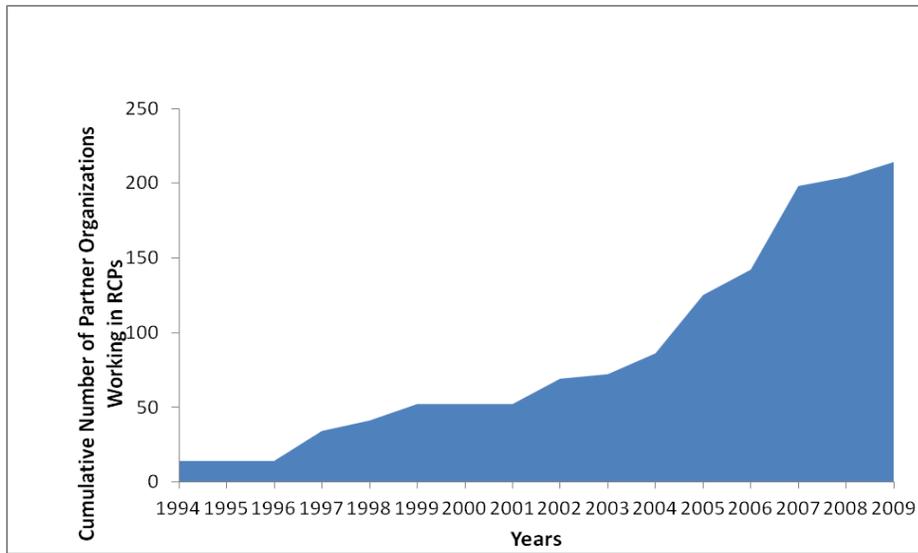


Figure 2. Growth in the number of organizations working within regional conservation partnerships (1994 - 2009).

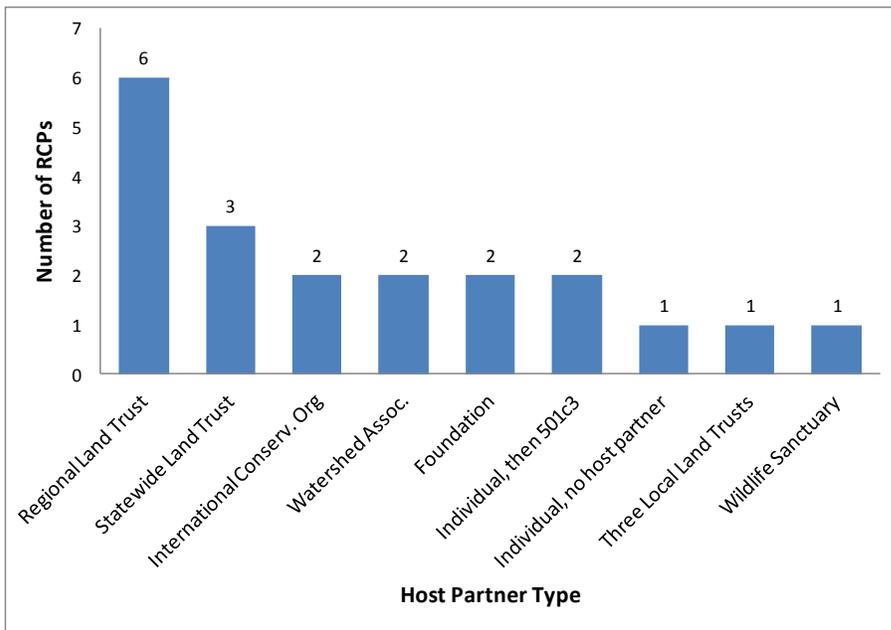


Figure 3. Distribution of regional conservation partnerships by host partner type.

Table 3: Organizational attributes: number of partners, most common contributions of strong partners, meeting practices, shared conservation vision.

RCP	Number of partners/org.	Most common contribution of strong partners	How do partners meet?	Shared conservation vision, map targets?
A1	13	Money/ Staffing	Phone/Email, Ad hoc	Vision, Map, Targets
A2	7	Money/ Staffing	In-person, Regularly Scheduled	Vision, Map
A3	14	Money/ Staffing	In-person, Regularly Scheduled	Vision, Map
A4	12	Expertise	In-person, Regularly Scheduled	Vision, Map
A5	9	Expertise	In-person, Regularly Scheduled	Vision, Map, Targets
A6	19	Money/ Staffing	In-person, Regularly Scheduled.	Vision, Map, Targets
A7	4	Expertise	In-person, Regularly Scheduled	Vision, Targets
A8	10	Expertise	In-person, Regularly Scheduled	Vision, Map, Targets
A9	22	Money/ Staffing	In-person, Regularly Scheduled	Vision, Map
A10	5	Money/ Staffing	In-person, Regularly Scheduled	Vision, Map, Targets
B1	10	Expertise	In-person, Ad hoc	Vision, Map
B2	6	Expertise	Phone/Email, Ad hoc	None
B3	3	Expertise	Phone/Email, Ad hoc	Vision, Map, Targets
B4	26	Expertise	In-person, Regularly Scheduled	Vision, Map, Targets
B5	41	Local Buy-in	In-person, Regularly Scheduled	None
B6	28	Expertise	In-person, Regularly Scheduled	Vision
B7	13	Expertise	In-person, Ad hoc	None
B8	3	Expertise	In-person, Ad hoc	Vision
B9	10	Money/ Staffing	In-person, Regularly Scheduled	Vision, Targets
B10	4	Expertise	In-person, Regularly Scheduled	None

Source: All information derived from the case study interviews of 20 partnerships. Note: Partnerships A1-10 Protected land by 2009; B1-10 had not.

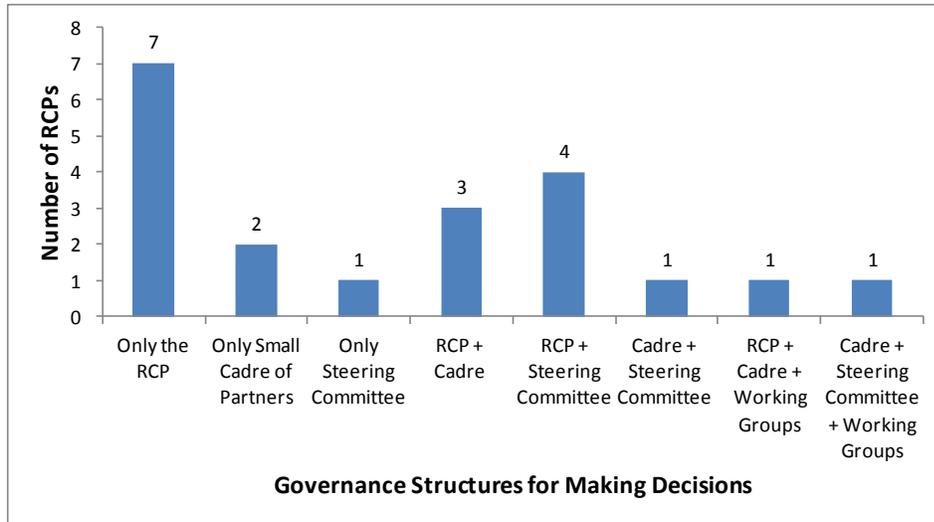


Figure 4. Distribution of regional conservation partnerships by the type(s) of governance structures used for making decisions.

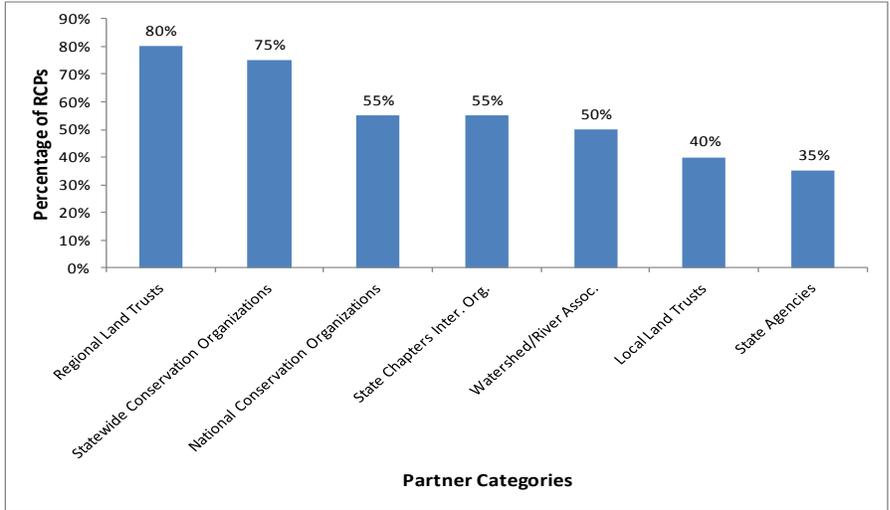


Figure 5. Most common partner categories and the percentage of regional conservation partnerships with members in each.

Table 4: Capacity of host partners to sustain the partnership: ratio of host partner territory size to partnership region, average full-time equivalent positions of the host partner during the life of the partnership.

RCP	Ratio of host partner territory acreage to partnership region acreage	Average full-time equivalent positions of the host partner during the life of the partnership
A1	72.3	38.25
A2	90.0	38.25
A3	20.4	26.43
A4	37.8	2.5
A5	0.7	2
A6	3.0	41.83
A7	5.7	3
A8	5.2	0.5
A9	0.9	14.8
A10	53.8	1
B1	0.2	2.5
B2	1.4	18
B3	0.3	1
B4	1.9	10.75
B5	0.0	0
B6	0.0	10
B7	0.2	0.5
B8	1.0	1.0
B9	1.0	0
B10	0.1	1.0

Source: Acreages determined from geographic information systems analysis and from publicly-accessible sources. Full-time equivalents were determined through personal communication with the host partner staff, if applicable. Note: Partnerships A1-10 protected land by 2009; B1-10 had not.

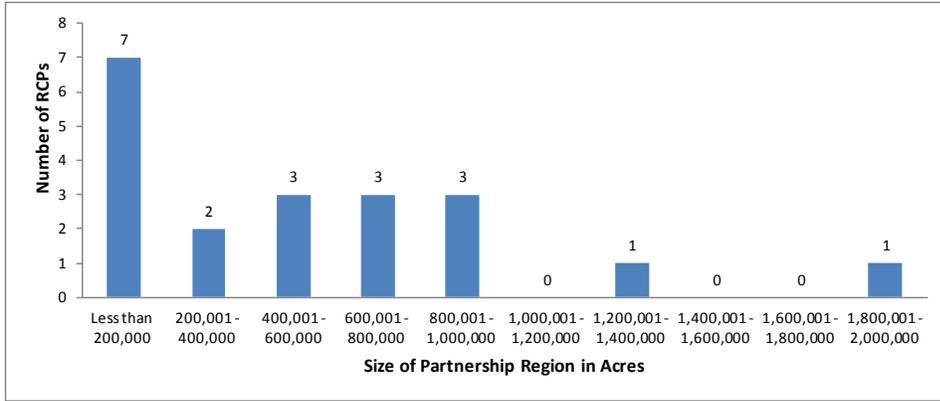


Figure 6. Distribution of regional conservation partnerships by size of their region.

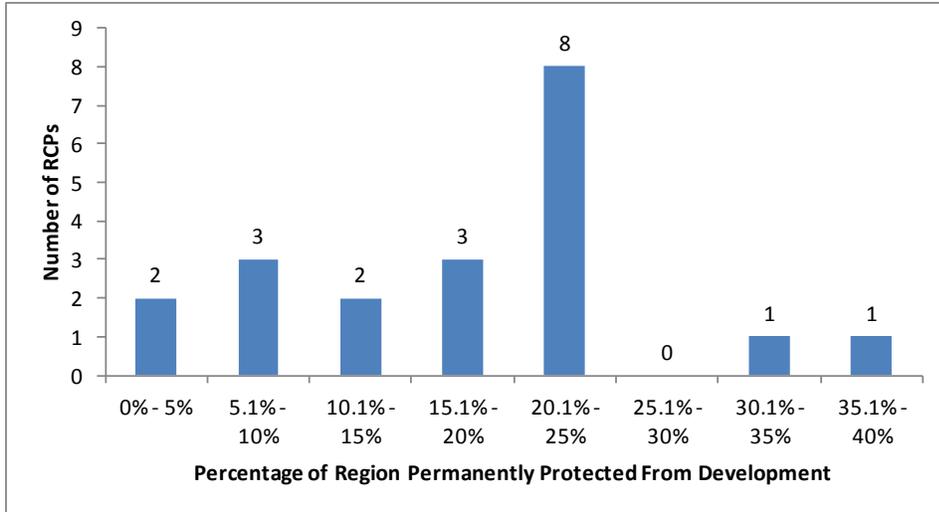


Figure 7. Distribution of regional conservation partnerships by the percentage of their region permanently protected from development (2009).

Table 5: Land protection activities: size of region, number of acres protected by the partnership, percentage of partnership region protected by the partnership, years of activity, average acres protected/year.

RCP	Size of RCP region (acres)	Number of acres protected in RCP region	Number of acres protected by the RCP by 2009	Percentage of the region protected by RCP	Percentage of the region's protected acreage protected by RCP	Age of partnership when conservation effort began (years)	Years of land protection activity	Average number of Acres protected/year
A1	85,800	34,252	8,000	9.3%	23%	4	6	1,333
A2	68,900	11,344	9,807	14.2%	86%	3	8	1,226
A3	280,100	46,163	5000	1.8%	11%	1	14	357
A4	598,800	123,814	26,500	4.4%	21%	4	2	13,250
A5	49,900	10,399	2,600	5.2%	25%	3	5	520
A6	1,896,700	431,391	15,960	0.8%	4%	6	1	15,960
A7	11,900	647	600	5.0%	93%	2	4	150
A8	332,600	40,051	1500	0.5%	4%	4	<1	1,500
A9	504,500	163,008	14,755	2.9%	9%	1	11	1,341
A10	28,100	5,400	5,400	19.2%	100%	3	3	1,800
	Average			6.3%	38%	3.1		3,744
	Median			4.7%	22%	3.0		1,337

Source: All acreage figures except number of acres protected by the RCP were determined using geographic information systems and data sets that included data layers from three sources: The Nature Conservancy's SA2009 protected lands layer; PAD-US 1.1 developed by The Conservation Biology Institute, May 2010; and, Harvard Forest, Harvard University's database for New England. Note: RCPs B1-B10 had not protected land as a partnership by 2009.

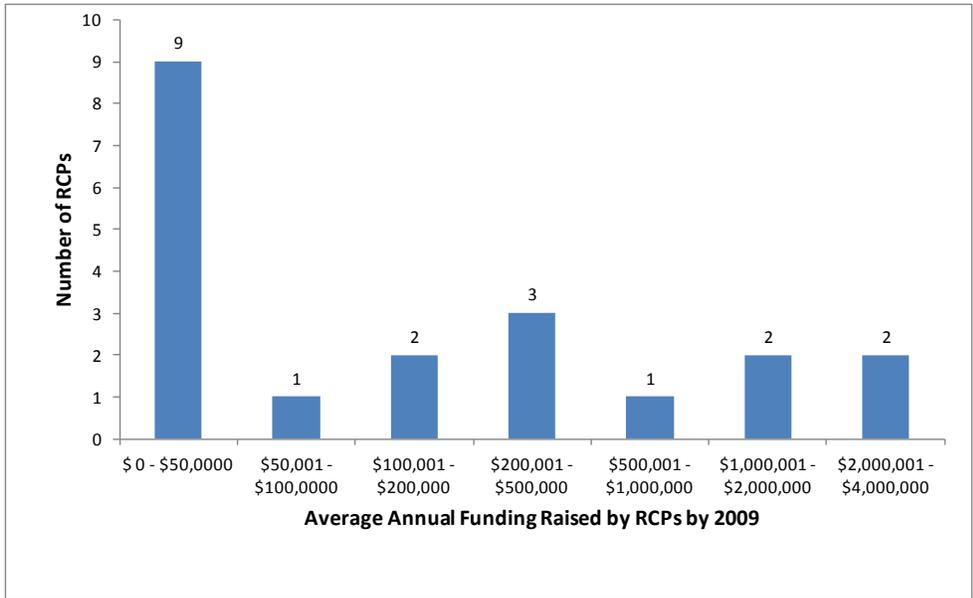


Figure 8. Distribution of regional conservation partnerships by the average annual funding they raised as RCPs by 2009.

Table 6: Potentially important attributes of regional conservation partnerships that had, and had not, protected land by 2009.

	Regional conservation partnerships that had protected land by 2009	Regional conservation partnerships that had not protected land by 2009
Percentage of partnerships with two or more governance structures*	60%	40%
Percentage of partnerships that have partners that represent municipalities	60%	40%
Percentage of partnerships that have partners that have access to staffing and funding	60%	10%
Percentage of partnerships that involve municipalities in conservation planning	40%	10%
Percentage of partnerships that have a mapped conservation vision	90%	30%
Percentage of partnerships that meet regularly and in-person vs. by phone, or on an ad hoc basis	90%	40%
Percentage of partnerships that coordinate individual actions to raise money instead of through a joint capital campaign	50%	10%
Median age in 2009	7.5 years	4.5 years
Median size of the partnership region in acres	182,950	704,850
Median ratio of host partner territory: partnership region	13.05:1	0.26:1
Median number of full-time equivalent positions of the host partner	14.8	1.00
Median number of municipalities in the partnership region	10.5	31.5

*Note: See Figure 4 for a list of the different governance structures used by RCPs.

Table 7. Results of logistic regression analysis. Significant predictors of whether or not a partnership protected land are indicated with an asterisk (*).

Variable	<i>d.f.</i>	<i>S.S.</i>	<i>M.S.</i>	<i>F</i>	<i>P</i>
Ratio of the host partner territory to partnership region	1	1.4635	1.4635	10.415	0.00726**
Partnership involved towns in conservation planning	1	0.2067	0.2067	1.471	0.24848
Two or more governance structures	1	0.1625	0.1625	1.156	0.30337
Shared conservation vision	1	0.01761	0.01761	1.253	0.28480
Partners represent municipalities	1	0.0198	0.0198	0.141	0.71409
Regularly scheduled meetings	1	1.0855	1.0855	7.725	0.01667*
Coordinate individual actions to raise money to protect land	1	0.1996	0.1996	1.420	0.25642
Residuals	12	1.6863	0.1405		