## **Supporting Information**

## Hicks and Cinner 10.1073/pnas.1413473111

## **SI Results**

**Madagascar.** Four ES bundles were evident from the Malagasy coastal communities studied: (*i*) Bequest and sanitation were associated with access to technology and access to knowledge (local ecological knowledge); (*ii*) coastal protection, recreation, and fishery were associated with access to authority and access via the negotiation of social relations (trust in community); (*iii*) education and materials were associated with access through knowledge (years of education); and (*iv*) habitat and culture were associated with a lack of access to technology or through knowledge (local ecological knowledge) (Fig. 3 and Fig. 1*A*).

**Kenya.** Four ES bundles were evident from the Kenyan coastal communities studied: (*i*) Fishery was associated with access via the negotiation of social relations (trust in fishers) and access through social identity (attachment); (*ii*) bequest and education were associated with access through social identity (heritage); (*iii*) sanitation, materials, and habitat were associated with access through knowledge (local ecological knowledge); and (*iv*) recreation of social relations (trust in community), rights-based access (rights), and access through capital (Fig. 3 and Fig. S1B).

**Tanzania.** Four ES bundles were evident from the Tanzanian coastal communities studied: (*i*) Bequest, culture, and fishery were associated with access through social identity (place-based meanings) and access to knowledge (years of education); (*ii*) sanitation, recreation, and materials were associated with a lack of access through social identity (place based meanings) or access to knowledge (years of education); (*iii*) habitat and coastal protection were associated with access to labor or labor opportunities (occupations) and access through social identity (identity); and (*iv*) education was associated with a lack of access through social identity (identity); and *iv*) education sate associated with a lack of access through social identity (identity) (Fig. 3 and Fig. S1C).

**Seychelles.** Four ES bundles were evident from the Seychelles coastal communities studied: (i) Habitat was associated with access via the negotiation of social relations (trust in fishers) and access through social identity (identity); (ii) sanitation and recreation were associated with rights-based access and access to labor or labor opportunities (occupations); (iii) coastal protection was associated with access to authority, to capital, and via the negotiation of social relations (participation); and (iv) bequest, culture, education, fishery, and materials were associated with access through knowledge (local ecological knowledge), access to markets, and access through social identity (place-based meanings) (Fig. 3 and Fig. S1D).

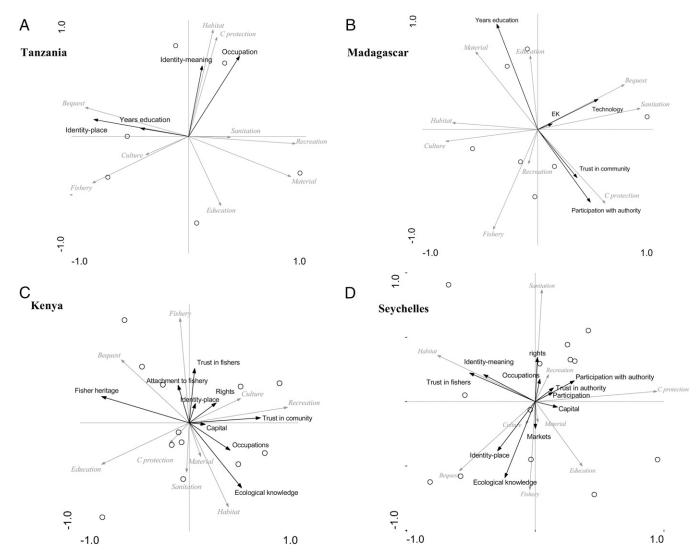


Fig. S1. Country-scale ES entitlements. RDA showing variation in community priorities for ES benefits associated with distinct access mechanisms in (A) Tanzania, (B) Madagascar, (C) Kenya, and (D) Seychelles.

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Туре	Mechanism (1)	Explanatory variables	PCA factor loadings
Social	Authority	Authority, PC1 42%	Trust village leaders, 0.65 Trust religious leaders, 0.66 Trust police, 0.77 Trust local government, 0.78
			Trust nongovernmental organization staff, 0.70
			Trust fisheries/park staff, 0.60
Social	Access through social identity	Attachment, PC1 31%	Connections to marine, 0.68
			Importance of fishing occupation, 0.74
		Place-based meanings, PC1 26%	Attachment to sea, 0.73
			Attachment to job, 0.69
			Identity as a fisher, 0.47
			Attachment to people, 0.53
		Identity, PC 2 20%	Identifying with freedom, 0.75
			Identifying with pride, 0.69
Social	Access via the negotiation of social relations	Trust in community, PC1 25%	Family, 0.56
			Colleagues, 0.72
			Community villagers, 0.73
		Trust in fishers, PC2 18%	Outside fishers, 0.58
			Fishers using other gears, 0.63
		Participation, PCA3 15%	Community celebrations, 0.75
			Meetings, 0.44
Economic	Access to capital	Capital, PC1 59%	Household items, 0.89
			Lighting, 0.85
			Cooking, 0.90
			Roofing, 0.90
			Floor, 0.80
			Wall, 0.40
			Expenditure, 0.80
			Income, –0.30
Economic	Access to labor and labor opportunities	Occupations, PC1 72%	Individual occupations, 0.81
			Household occupations, 0.82
			Different household occupations, 0.92
Knowledge	Access to knowledge	Local ecological knowledge,	Knowledge transfer, 0.61
		PC1 35%	Species and maturity, Siganus sutor, 0.69
			Species and maturity, <i>Leptoscarus</i> vaigensis, 0.51
			Species and maturity, <i>Lutjanus bohar</i> , 0.58 <i>Lutjanus gibbus</i> , 0.73
		Years of education, PC2 16%	Ecological processes, 0.73
			Years of education, 0.61

Factor loadings are shown for the individual items contained within each category of access mechanism.

1. Ribot JC, Peluso NL (2003) A theory of access. Rural Sociol 68:153-181.