

Supplemental Materials

Title: “Using social network analysis to track the evolution of Pacific food systems research collaborations over time”

Author Information: Rachel S. Friedman*, Ellis McKenzie, Asenati L. Chan-Tung, Matthew G. Allen, Steven Crimp

* rachel.friedman@anu.edu.au

Table S1. Summary of focus group and workshop participants by organisation type and the focal location (not necessarily where the organisation is based).

Organisation Type	Fiji	Kiribati	Samoa	Vanuatu
Academic/Research	3	---	1	---
Government	---	---	1	1
Consultancy/Private	1	---	1	---
Regional/Multilateral	---	---	2	1
Non-governmental	---	2	---	1

Table S2. Full list of organisations included in the co-authorship network, along with the type and location of the organisation. Organisation types: academic (e.g. universities), government (local, sub-national, and national levels), consultancy (private research or advising institution), regional and multilateral organisations (institutions that transcend national borders, but involve national governments), bilateral donor (funder or agency, but not a development bank), research institution (non-academic organisation focused on research), non-governmental organisation (not-for-profit organisation not affiliated with a government), and other organisations.

Organisation Name	Organisation Type	Country
Addis Ababa Science and Technology University	Academic	Ethiopia
Agence des Aires Marines Protegees	Government	French Polynesia
Asconit Consultants	Consultancy	France
Asian Development Bank	Regional or Multilateral	Philippines
Auburn University	Academic	United States of America
Auckland University of Technology	Academic	New Zealand
Australian Academy of Science	Academic	Australia
Australian Aid	Bilateral Donor	Australia
Australian Centre for International Agricultural Research	Government	Australia
Australian Centre for Pacific Islands Research	Research Institution	Australia
Australian Government Department of Climate Change and Energy Efficiency	Government	Australia
Australian Institute of Marine Science	Research Institution	Australia
Beacon College	Academic	United States of America
Bioeko Consultants	Consultancy	New Caledonia
Brock university	Academic	Canada
C2O Consulting	Consultancy	Australia

C2O Pacific	Consultancy	Vanuatu
CCAFS	Research Institution	Netherlands
Centers for Disease Control and Prevention	Government	United States of America
Chittagong Veterinary and Animal Sciences University	Academic	Bangladesh
Climate Planning	Consultancy	Australia
CLIMsystems	Consultancy	New Zealand
Collecte Localisation Satellites	Other	France
Conservation International	Non-governmental	United States of America
Creocean Pacifique	Consultancy	French Polynesia
CSIRO	Research Institution	Australia
Curtin University	Academic	Australia
Department of Agriculture and Rural Development and Vanuatu Agriculture	Government	Vanuatu
Department of Agriculture and Rural Development on Santo	Government	Vanuatu
Duke University	Academic	United States of America
East Carolina University	Academic	United States of America
East-West Center	Non-governmental	United States of America
ERE Consulting Group	Consultancy	Malaysia
European Union	Government	Europe
Federation University	Academic	Australia
Fiji Meteorological Services	Government	Fiji
Fiji National University	Academic	Fiji
French Geological Survey	Government	France
FSM national Office of Environment and Emergency Management (OEEM)	Government	Federated States of Micronesia
Government of the Republic of Fiji	Government	Fiji
Government of the Republic of Nauru	Government	Nauru
Government of Yap Historic Preservation Office	Government	Federated States of Micronesia
Griffin NRM	Government	Australia
Griffith University	Academic	Australia
Helmholtz Centre for Environmental Research - UFZ	Academic	Germany

IFPRI	Research Institution	United States of America
Institut de Recherche pour le Developpement	Research Institution	France
Institute for Advanced Sustainability Studies	Research Institution	Germany
International Commission for the Conservation of Atlantic Tunas	Regional or Multilateral	Spain
International Institute for Applied Systems Analysis	Research Institution	Austria
International Union for Conservation of Nature	Non-governmental	Switzerland
James Cook University	Academic	Australia
Johns Hopkins University	Academic	United States of America
Kagoshima University	Academic	Japan
Komugabe-Dixon Consulting	Consultancy	New Zealand
La Rochelle University	Academic	France
Lancaster University	Academic	United Kingdom
London School of Economics	Academic	United Kingdom
Marshall Islands Marine Resource Authority (MIMRA)	Government	Marshall Islands
McGill University	Academic	Canada
Nagasaki University	Academic	Japan
National University of Singapore	Academic	Singapore
Nawairuku Village	Other	Fiji
NdV Consulting	Consultancy	Canada
New Zealand Aid Programme	Bilateral Donor	New Zealand
Nippon Foundation	Non-governmental	Japan
Nishi Trading Ltd.	Other	Tonga
Office National des Forets International	Non-governmental	France
Pacific Consulting Limited	Consultancy	Vanuatu
Pacific Islands Forum Fisheries Agency	Regional or Multilateral	Solomon Islands
Paekakariki	Other	New Zealand
Parties to the Nauru Agreement Office	Government	Nauru
PIRCA	Other	United States of America
PNG NWS	Government	Papua New Guinea
Princeton University	Academic	United States of America
Queen's University	Academic	Canada

Queen's University Belfast	Academic	United Kingdom
Queens University of Charlotte	Academic	United States of America
Queensland University of Technology	Academic	Australia
Republic of Kiribati Ministry of Health and Medical Services	Government	Kiribati
Republic of the Marshall Islands	Government	Marshall Islands
Rhodes University	Academic	South Africa
RMIT University	Academic	Australia
Samoa Meteorology Division	Government	Samoa
Sciences-Po	Academic	France
Sekolah Tinggi Pariwisata	Academic	Indonesia
Seoul National University	Academic	South Korea
SMEC Australia Pty Ltd	Consultancy	Australia
Solomon Islands Meteorological Services	Government	Solomon Islands
Sorbonne Universita	Academic	France
Southern Cross University	Academic	Australia
Secretariat of the Pacific Community (SPC)	Regional or Multilateral	New Caledonia
South Pacific Regional Environment Programme (SPREP)	Regional or Multilateral	Samoa
Stanford University	Academic	United States of America
State Herbarium of South Australia	Government	Australia
Stockholm Environment Institute	Research Institution	Sweden
Stockholm University	Academic	Sweden
Technical Centre for Agricultural and Rural Co-operation	Non-governmental	Netherlands
The Australian National University	Academic	Australia
The Climate Institute	Non-governmental	Australia
The Nature Conservancy	Non-governmental	United States of America
The Pew Charitable Trusts	Non-governmental	United States of America
The Rockefeller Foundation	Non-governmental	United States of America
Tonga Meteorological Services	Government	Tonga
Tonga Trust	Non-governmental	Tonga
Tuvalu Meteorological Services	Government	Tuvalu

UN Food and Agriculture Organization	Regional or Multilateral	Italy
UNDP Tuvalu Coastal Adaptation Project (TCAP)	Regional or Multilateral	Fiji
UNICEF	Regional or Multilateral	United States of America
United Nations Economic and Social Commission for Asia and the Pacific	Regional or Multilateral	Thailand
Universite de Bretagne Occidentale	Academic	France
Universite de la Polynesie Francaise	Academic	French Polynesia
Universite de la Reunion	Academic	Reunion
Universite de Nouvelle-Caledonie	Academic	New Caledonia
Universite Montpellier	Academic	France
Universite Paris-Saclay	Academic	France
Universite Toulouse	Academic	France
University of Adelaide	Academic	Australia
University of Arkansas at Pine Bluff	Academic	United States of America
University of Auckland	Academic	New Zealand
University of Bern	Academic	Sweden
University of Brest	Academic	France
University of British Columbia	Academic	Canada
University of California Santa Cruz	Academic	United States of America
University of Cambridge	Academic	United Kingdom
University of Canberra	Academic	Australia
University of Exeter	Academic	United Kingdom
University of Guelph	Academic	Canada
University of Hawai'i	Academic	United States of America
University of Leeds	Academic	United Kingdom
University of Manchester	Academic	United Kingdom
University of Mataram	Academic	Indonesia
University of Melbourne	Academic	Australia
University of New South Wales	Academic	Australia
University of Newcastle	Academic	Australia
University of Oslo	Academic	Norway
University of Otago	Academic	New Zealand

University of Oxford	Academic	United Kingdom
University of Porto	Academic	Portugal
University of Queensland	Academic	Australia
University of Sao Paulo	Academic	Brazil
University of Sydney	Academic	Australia
University of Tasmania	Academic	Australia
University of the South Pacific	Academic	Fiji
University of the Sunshine Coast	Academic	Australia
University of Tsukuba	Academic	Japan
University of Waikato	Academic	New Zealand
University of Washington	Academic	United States of America
University of Western Sydney	Academic	Australia
University of Wollongong	Academic	Australia
University of York	Academic	United Kingdom
US Agency for International Development (USAID)	Bilateral Donor	United States of America
Vertigo Lab	Consultancy	France
West New Britain Provincial Administration	Government	Papua New Guinea
World Bank	Regional or Multilateral	United States of America
World Health Organization	Regional or Multilateral	Switzerland
WorldFish	Research Institution	Malaysia
Yap Institute of Natural Science	Non-governmental	Federated States of Micronesia

Table S3. Degree centrality and weighted betweenness centrality scores for the whole network. Organisations are ordered highest to lowest by betweenness centrality score.

Organisation	Bipartite Degree Centrality	One-Mode Weighted Betweenness
SPC	0.230769231	2.16E-01
CSIRO	0.144230769	1.14E-01
The Australian National University	0.086538462	9.66E-02
University of the Sunshine Coast	0.096153846	7.22E-02
University of Oxford	0.028846154	6.19E-02
SPREP	0.076923077	9.01E-02
University of the South Pacific	0.086538462	2.77E-02
University of Queensland	0.038461538	6.04E-02

IFPRI	0.048076923	3.15E-02
University of Wollongong	0.067307692	1.83E-02
University of British Columbia	0.048076923	4.35E-02
University of Washington	0.028846154	6.25E-02
James Cook University	0.048076923	1.84E-02
Fiji National University	0.028846154	2.11E-02
Griffith University	0.019230769	3.14E-02
Conservation International	0.048076923	4.02E-02
WorldFish	0.038461538	2.49E-02
University of New South Wales	0.057692308	2.57E-02
University of Newcastle	0.019230769	2.24E-02
University of Exeter	0.019230769	2.53E-02
Queensland University of Technology	0.038461538	3.17E-04
The Nature Conservancy	0.019230769	1.06E-02
Collecte Localisation Satellites	0.048076923	7.80E-03
World Health Organization	0.028846154	7.73E-04
Sorbonne Universita	0.019230769	2.28E-02
Institut de Recherche pour le Developpement	0.028846154	8.54E-03
World Bank	0.125	0.00E+00
McGill University	0.019230769	8.50E-03
Stanford University	0.019230769	1.06E-02
Pacific Islands Forum Fisheries Agency	0.019230769	6.54E-03
University of Canberra	0.019230769	1.12E-03
Tonga Trust	0.028846154	0.00E+00
RMIT University	0.019230769	4.90E-04
University of Auckland	0.019230769	7.73E-04
Southern Cross University	0.019230769	5.68E-04
University of Guelph	0.019230769	3.67E-04
C2O Consulting	0.019230769	1.20E-03
East-West Center	0.038461538	0.00E+00
Solomon Islands Meteorological Services	0.019230769	0.00E+00
University of Arkansas at Pine Bluff	0.028846154	0.00E+00
Federation University	0.038461538	0.00E+00
PIRCA	0.019230769	0.00E+00

Marshall Islands Marine Resource Authority (MIMRA)	0.009615385	0.00E+00
Universite Toulouse	0.009615385	3.16E-03
SMEC Australia Pty Ltd	0.009615385	3.16E-03
Australian Institute of Marine Science	0.009615385	3.16E-03
University of Adelaide	0.009615385	3.16E-03
State Herbarium of South Australia	0.009615385	3.16E-03
Chittagong Veterinary and Animal Sciences University	0.009615385	0.00E+00
Nawairuku Village	0.009615385	1.00E-03
University of Leeds	0.009615385	1.00E-03
Brock university	0.009615385	6.88E-05
University of Bern	0.009615385	6.88E-05
University of Sao Paulo	0.009615385	6.88E-05
Nippon Foundation	0.009615385	6.88E-05
International Institute for Applied Systems Analysis	0.009615385	0.00E+00
London School of Economics	0.009615385	0.00E+00
Stockholm Environment Institute	0.009615385	0.00E+00
University of York	0.009615385	0.00E+00
Rhodes University	0.009615385	0.00E+00
ERE Consulting Group	0.009615385	0.00E+00
International Commission for the Conservation of Atlantic Tunas	0.009615385	0.00E+00
Queen's University	0.009615385	1.00E-03
PNG NWS	0.009615385	1.31E-03
Samoa Meteorology Division	0.009615385	1.31E-03
Fiji Meteorological Services	0.009615385	1.31E-03
Tonga Meteorological Services	0.009615385	1.31E-03
Tuvalu Meteorological Services	0.009615385	1.31E-03
Asian Development Bank	0.009615385	0.00E+00
Government of the Republic of Nauru	0.009615385	0.00E+00
Helmholtz Centre for Environmental Research - UFZ	0.009615385	0.00E+00
University of Hawai'i	0.009615385	0.00E+00
Queens University of Charlotte	0.009615385	0.00E+00
Beacon College	0.009615385	0.00E+00

Auckland University of Technology	0.009615385	0.00E+00
Institute for Advanced Sustainability Studies	0.009615385	0.00E+00
Australian Centre for Pacific Islands Research	0.009615385	0.00E+00
Kagoshima University	0.009615385	0.00E+00
Queen's University Belfast	0.009615385	0.00E+00
University of Mataram	0.009615385	0.00E+00
Sekolah Tinggi Pariwisata	0.009615385	0.00E+00
West New Britain Provincial Administration	0.009615385	0.00E+00
Griffin NRM	0.009615385	0.00E+00
La Rochelle University	0.009615385	5.04E-04
Sciences-Po	0.009615385	5.04E-04
University of Cambridge	0.009615385	5.04E-04
Stockholm University	0.009615385	5.04E-04
UNDP Tuvalu Coastal Adaptation Project (TCAP)	0.009615385	5.04E-04
Lancaster University	0.009615385	5.04E-04
French Geological Survey	0.009615385	5.04E-04
Auburn University	0.009615385	1.06E-02
Duke University	0.009615385	2.12E-03
University of Porto	0.009615385	2.01E-04
C20 Pacific	0.009615385	2.01E-04
University of Oslo	0.009615385	2.01E-04
Government of Yap Historic Preservation Office	0.009615385	5.51E-04
Yap Institute of Natural Science	0.009615385	5.51E-04
University of Waikato	0.009615385	0.00E+00
Asconit Consultants	0.009615385	0.00E+00
Bioeko Consultants	0.009615385	0.00E+00
Vertigo Lab	0.009615385	0.00E+00
Office National des Forets International	0.009615385	0.00E+00
University of Sydney	0.009615385	0.00E+00
Climate Planning	0.009615385	0.00E+00
CLIMsystems	0.009615385	0.00E+00
UNICEF	0.009615385	0.00E+00

Komugabe-Dixon Consulting	0.009615385	0.00E+00
NdV Consulting	0.009615385	0.00E+00
University of Melbourne	0.009615385	0.00E+00
The Climate Institute	0.009615385	0.00E+00
Princeton University	0.009615385	0.00E+00
East Carolina University	0.009615385	0.00E+00
Parties to the Nauru Agreement Office	0.009615385	8.01E-04
University of Brest	0.009615385	8.01E-04
Universite de Bretagne Occidentale	0.009615385	8.01E-04
Universite Paris-Saclay	0.009615385	8.01E-04
The Pew Charitable Trusts	0.009615385	8.01E-04
Universite Montpellier	0.009615385	8.01E-04
Paekakariki	0.009615385	8.01E-04
Universite de la Reunion	0.009615385	8.01E-04
Universite de Nouvelle-Caledonie	0.009615385	8.01E-04
University of California Santa Cruz	0.009615385	8.01E-04
United Nations Economic and Social Commission for Asia and the Pacific	0.009615385	5.75E-04
Pacific Consulting Limited	0.009615385	0.00E+00
Centers for Disease Control and Prevention	0.009615385	0.00E+00
Addis Ababa Science and Technology University	0.009615385	0.00E+00
National University of Singapore	0.009615385	0.00E+00
Australian Aid	0.009615385	0.00E+00
International Union for Conservation of Nature	0.009615385	0.00E+00
Nishi Trading Ltd.	0.009615385	6.29E-03
Technical Centre for Agricultural and Rural Co-operation	0.009615385	0.00E+00
CCAFS	0.009615385	0.00E+00
Australian Academy of Science	0.009615385	0.00E+00
New Zealand Aid Programme	0.009615385	0.00E+00
Australian Centre for International Agricultural Research	0.009615385	0.00E+00
USAID	0.009615385	0.00E+00
Universite de la Polynesie Francaise	0.009615385	0.00E+00
Agence des Aires Marines Protegees	0.009615385	0.00E+00

Creocean Pacifique	0.009615385	0.00E+00
University of Tasmania	0.009615385	4.33E-03
University of Manchester	0.009615385	4.33E-03
European Union	0.009615385	0.00E+00
FSM national Office of Environment and Emergency Management (OEEM)	0.009615385	0.00E+00
The Rockefeller Foundation	0.009615385	0.00E+00
Johns Hopkins University	0.009615385	0.00E+00
Republic of the Marshall Islands	0.009615385	0.00E+00
Government of the Republic of Fiji	0.009615385	0.00E+00
Australian Government Department of Climate Change and Energy Efficiency	0.009615385	1.54E-03
Department of Agriculture and Rural Development and Vanuatu Agriculture	0.009615385	0.00E+00
Department of Agriculture and Rural Development on Santo	0.009615385	0.00E+00
UN Food and Agriculture Organization	0.009615385	0.00E+00
Republic of Kiribati Ministry of Health and Medical Services	0.009615385	5.65E-04
University of Otago	0.009615385	5.65E-04
Curtin University	0.009615385	5.65E-04
Nagasaki University	0.009615385	5.65E-04
University of Tsukuba	0.009615385	5.65E-04
Seoul National University	0.009615385	5.65E-04
University of Western Sydney	0.009615385	5.65E-04
Edge Density		0.05982424
Centralization		0.2323807

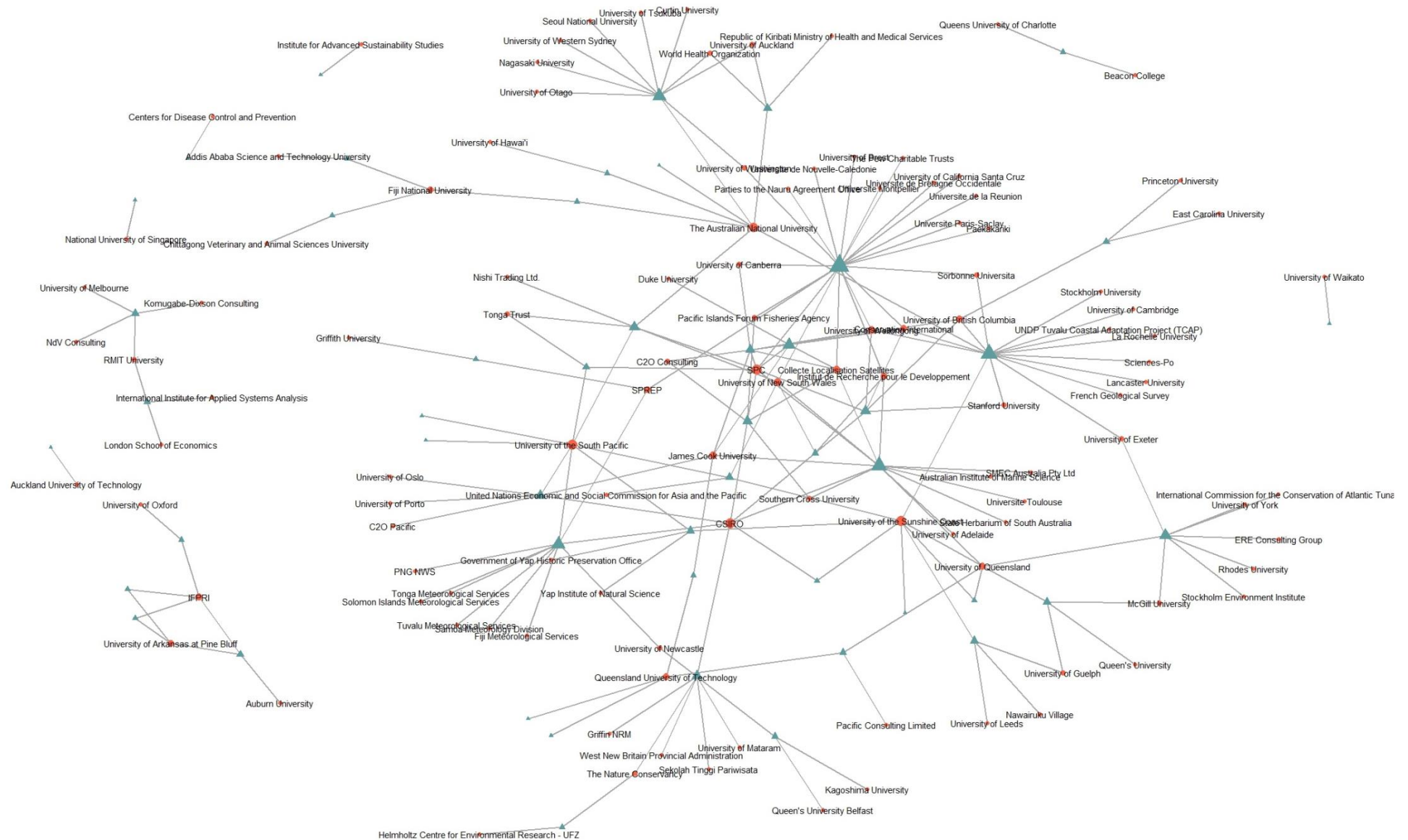


Figure S1a. Two-mode network of co-authors and peer-reviewed publications. Nodes are coloured by type (blue = peer-reviewed publication; red = organisational node). Nodes are scaled by degree centrality. It is clear that academic institutions dominate the peer-reviewed literature, with some central non-academic institutions like SPREP, SPC, and CSIRO. Because there are so many actors, there are not substantial differences in the centrality of any given one.

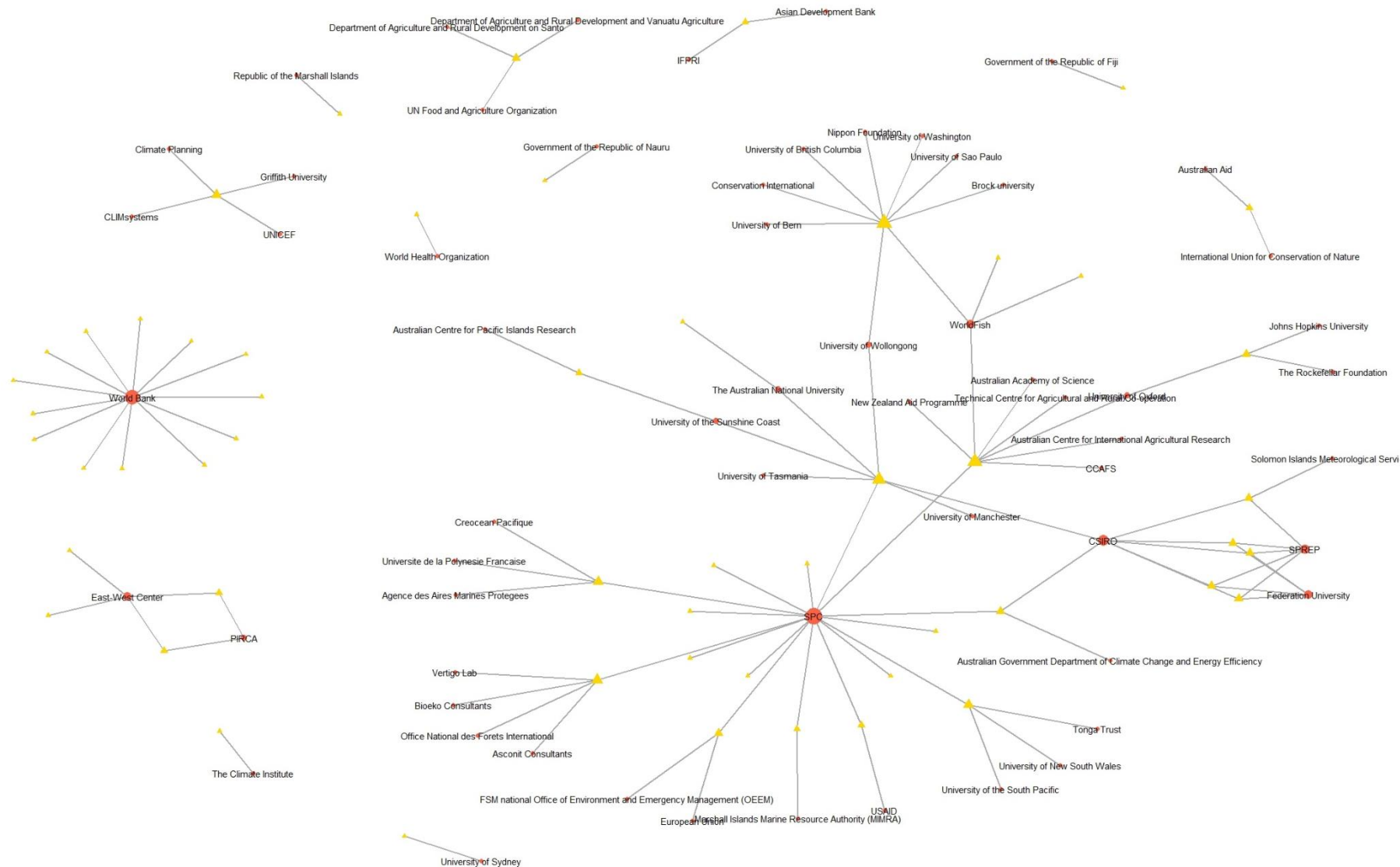


Figure S1b. Two-mode network of co-authors and grey literature. Nodes are coloured by type (gold = grey literature; red = organisational node). Nodes are scaled by degree centrality. There are several clearly prolific grey literature producers (e.g. SPC, CSIRO, World Bank, SPREP, and World Fish). Few actors produce most of the grey literature, resulting in the conspicuous divergence of centrality scores.

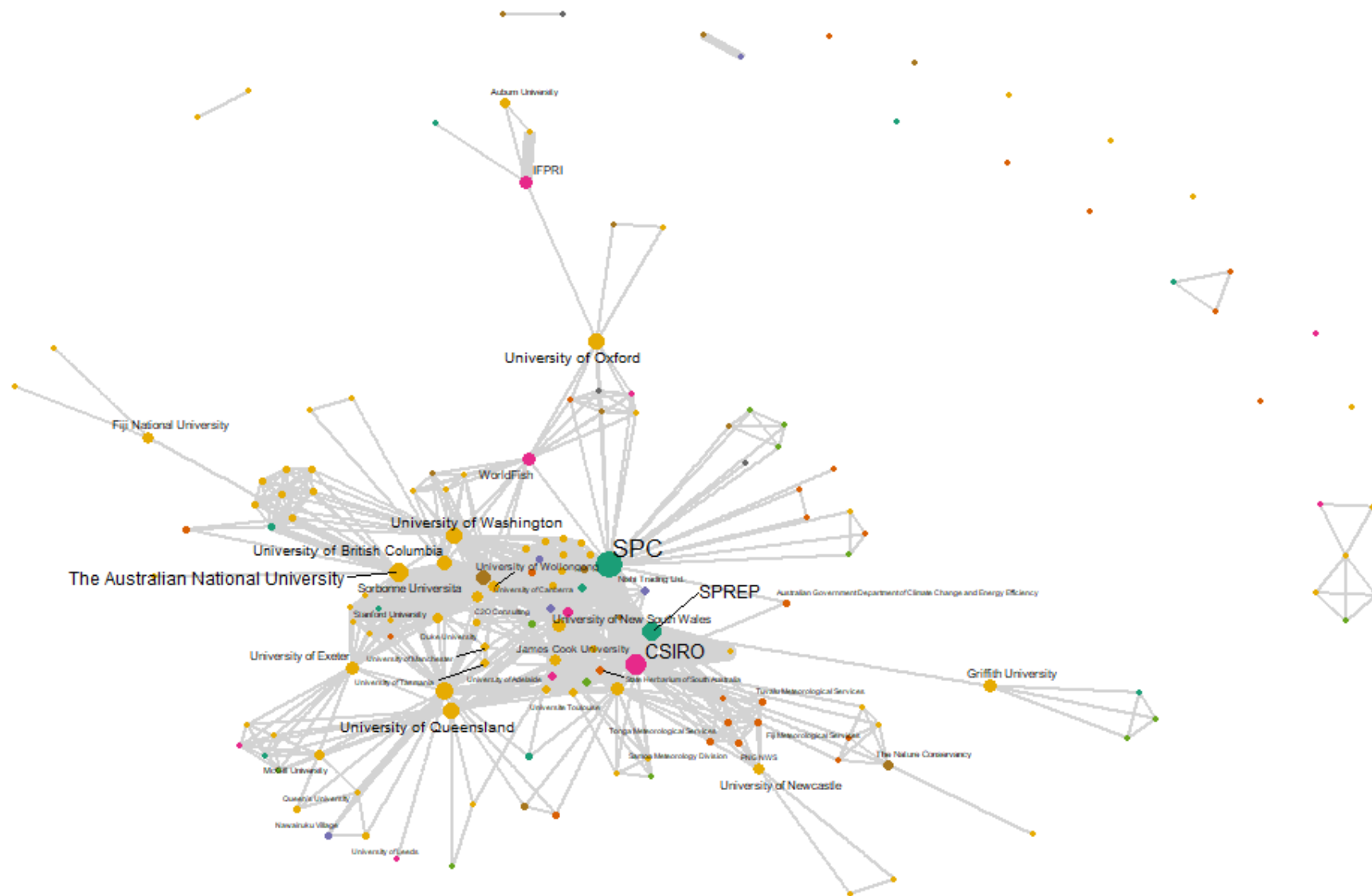


Figure S2. One-mode network of all organisational actors. Nodes are scaled based on weighted betweenness centrality. Nodes are coloured by organisation type (gold = university; green = regional/multilateral; orange = government; pink = research institution; brown = NGO; blue = private/consultancy; light green = other).

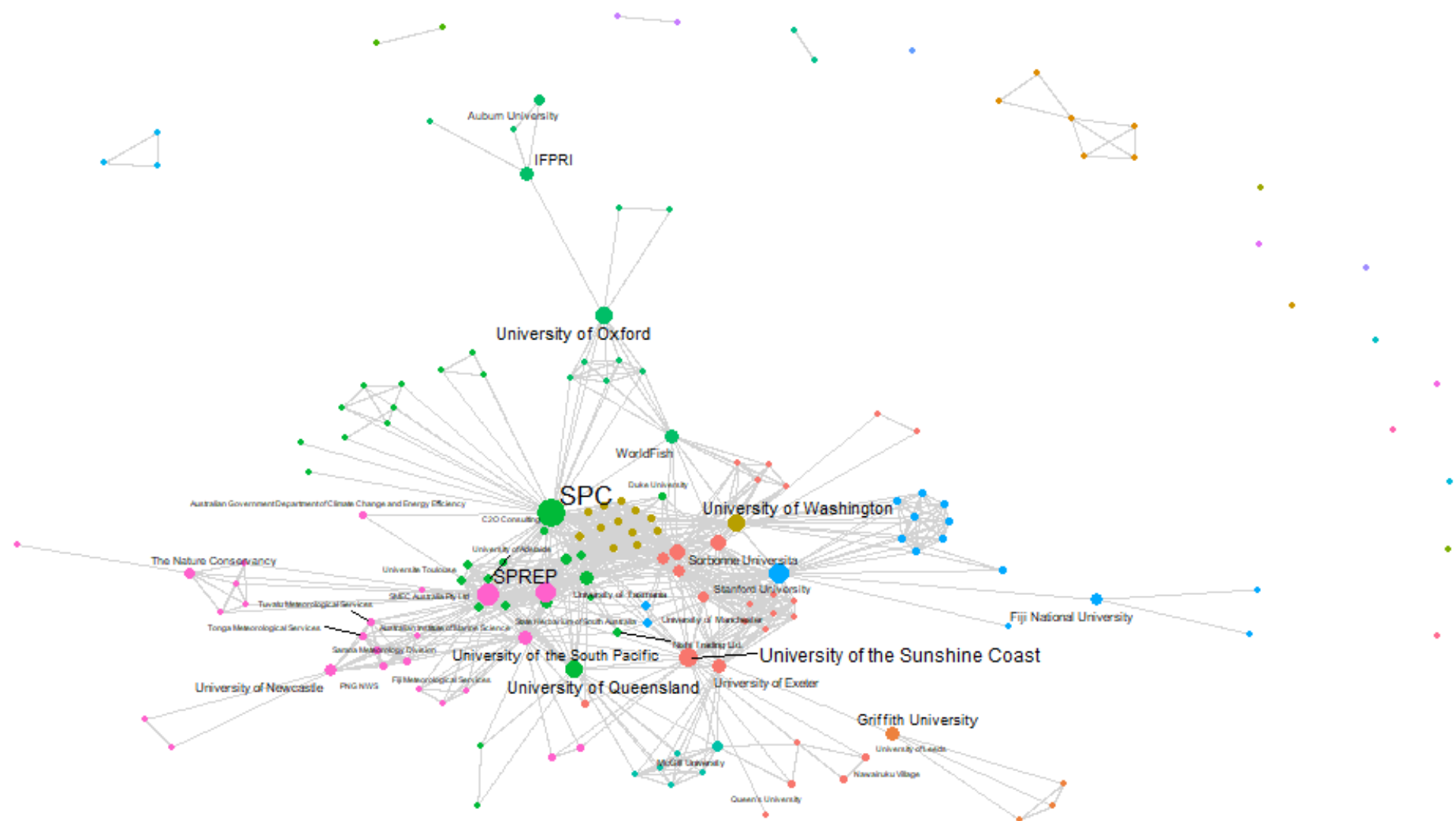


Figure S3. One-mode network with actors coloured based on their community, identified using the Louvain Community Detection Algorithm. Nodes are scaled based on the weighted betweenness centrality. Network with actors coloured based on the Label Propagation Algorithm clustering is available as Figure 2 in the main text.

Table S4. Most important actors in each cluster based on betweenness centrality scores.

Louvain Community Detection			Label Propagation Algorithm		
Cluster	Membership	Top Actors	Cluster	Membership	Top Actors
17	29	SPC	1	79	SPC
13	13	Pacific Islands Forum Fisheries Agency	2	3	Fiji National University
13	13	University of Washington	3	6	RMIT University
13	13	Parties to the Nauru Agreement Office	4	4	IFPRI
13	13	University of Brest	4	4	Auburn University
13	13	Universite de Bretagne Occidentale	5	6	Stockholm Environment Institute
13	13	Universite Paris-Saclay	5	6	University of York
13	13	The Pew Charitable Trusts	5	6	Rhodes University
13	13	Universite Montpellier	5	6	McGill University
13	13	Paekakariki	5	6	ERE Consulting Group
13	13	Universite de la Reunion	5	6	International Commission for the Conservation of Atlantic Tunas
13	13	Universite de Nouvelle-Caledonie	6	9	University of Newcastle
13	13	University of Canberra	7	9	World Health Organization
13	13	University of California Santa Cruz	7	9	University of Auckland
7	25	CSIRO	8	1	Government of the Republic of Nauru
23	16	The Australian National University	9	6	The Nature Conservancy
1	26	University of the Sunshine Coast	10	2	Queens University of Charlotte
18	13	University of Oxford	10	2	Beacon College
11	6	RMIT University	11	1	Auckland University of Technology
2	6	Stockholm Environment Institute	12	1	Institute for Advanced Sustainability Studies
2	6	University of York	13	4	Griffith University
2	6	Rhodes University	13	4	Climate Planning
2	6	McGill University	13	4	CLIMsystems
2	6	ERE Consulting Group	13	4	UNICEF
2	6	International Commission for the Conservation of Atlantic Tunas	14	1	University of Waikato

Louvain Community Detection			Label Propagation Algorithm		
3	1	Government of the Republic of Nauru	15	4	Asconit Consultants
4	2	Queens University of Charlotte	15	4	Bioeko Consultants
4	2	Beacon College	15	4	Vertigo Lab
5	1	Auckland University of Technology	15	4	Office National des Forets International
6	1	Institute for Advanced Sustainability Studies	16	1	University of Sydney
10	4	Griffith University	17	1	The Climate Institute
10	4	Climate Planning	18	1	Centers for Disease Control and Prevention
10	4	CLIMsystems	19	1	National University of Singapore
10	4	UNICEF	20	2	Australian Aid
8	1	University of Waikato	20	2	International Union for Conservation of Nature
9	1	University of Sydney	21	8	University of Oxford
12	1	The Climate Institute	22	2	PIRCA
14	1	Centers for Disease Control and Prevention	22	2	East-West Center
15	1	National University of Singapore	23	1	Republic of the Marshall Islands
16	2	Australian Aid	24	1	Government of the Republic of Fiji
16	2	International Union for Conservation of Nature	25	3	Department of Agriculture and Rural Development and Vanuatu Agriculture
19	2	PIRCA	25	3	Department of Agriculture and Rural Development on Santo
19	2	East-West Center	25	3	UN Food and Agriculture Organization
20	1	Republic of the Marshall Islands	26	1	World Bank
21	1	Government of the Republic of Fiji			
22	3	Department of Agriculture and Rural Development and Vanuatu Agriculture			
22	3	Department of Agriculture and Rural Development on Santo			
22	3	UN Food and Agriculture Organization			
24	1	World Bank			

Table S5. Top five actors in communities with more than five members.

Louvain	First	Second	Third	Fourth	Fifth
17	SPC	James Cook University	Collecte Localisation Satellites	University of Queensland	University of New South Wales
13	Pacific Islands Forum Fisheries Agency	University of Washington	Parties to the Nauru Agreement Office	University of Brest	Universite de Bretagne Occidentale
7	CSIRO	University of the South Pacific	University of Newcastle	SPREP	PNG NWS
23	The Australian National University	World Health Organization	University of Auckland	University of Otago	Curtin University
1	University of the Sunshine Coast	University of British Columbia	Conservation International	University of Wollongong	University of Exeter
18	University of Oxford	WorldFish	Technical Centre for Agricultural and Rural Co-operation	CCAFS	Australian Academy of Science
11	RMIT University	Komugabe-Dixon Consulting	NdV Consulting	University of Melbourne	International Institute for Applied Systems Analysis
2	Stockholm Environment Institute	University of York	Rhodes University	McGill University	ERE Consulting Group
LPA	First	Second	Third	Fourth	Fifth
1	SPC	University of Wollongong	Conservation International	University of New South Wales	Collecte Localisation Satellites
3	RMIT University	Komugabe-Dixon Consulting	NdV Consulting	University of Melbourne	International Institute for Applied Systems Analysis
5	Stockholm Environment Institute	University of York	Rhodes University	McGill University	ERE Consulting Group
6	University of Newcastle	PNG NWS	Samoa Meteorology Division	Solomon Islands Meteorological Services	Fiji Meteorological Services
7	World Health Organization	University of Auckland	University of Otago	Curtin University	Nagasaki University
9	The Nature Conservancy	University of Mataram	Sekolah Tinggi Pariwisata	West New Britain Provincial Administration	Griffin NRM
21	University of Oxford	Technical Centre for Agricultural and Rural Co-operation	CCAFS	Australian Academy of Science	New Zealand Aid Programme

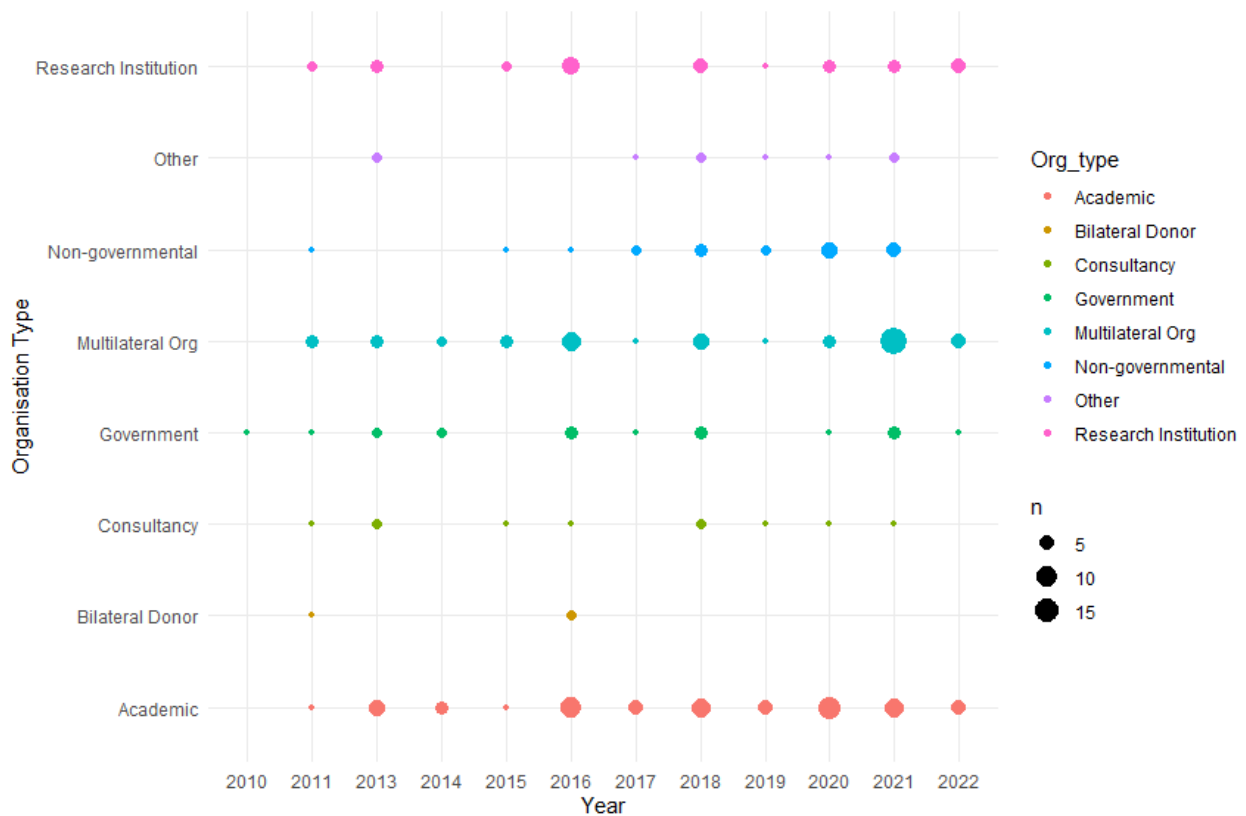


Figure S4. The number of studies with representation by different organisation types mapped out by year. Dots size corresponds to the number of individual studies with the specific actor type. While academic and non-academic research institutions appear to be represented in a relatively stable fashion since 2016, multilateral and non-governmental organisations have increased their representation.

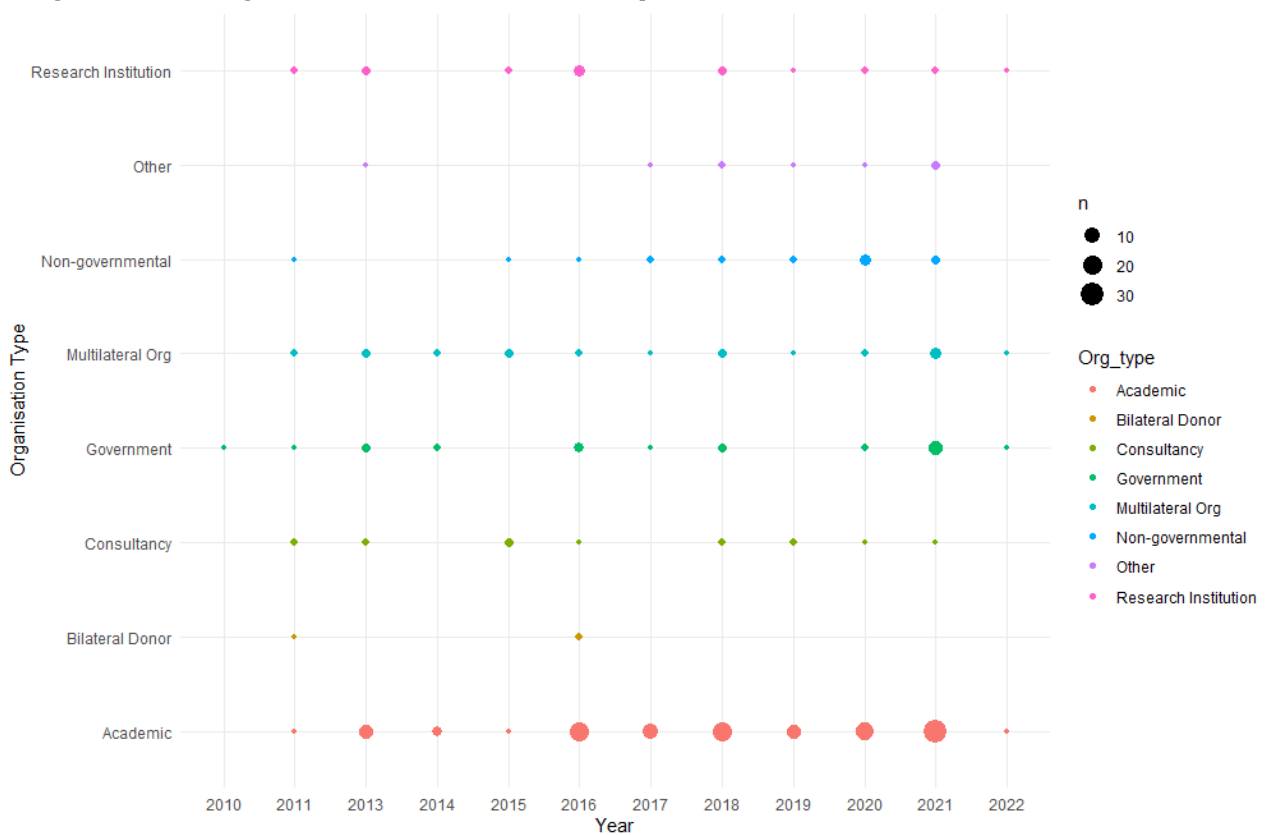
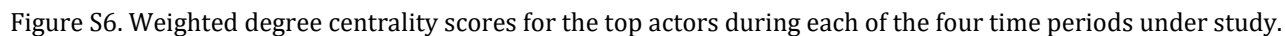


Figure S5. The number of unique organisations mapped out by type and year. Dots size corresponds to the number of unique actors with the specific actor type. Figure S3 and S4 highlight how certain types of organisation might be well-represented in studies, but are dominated by a small number of individual organisations.



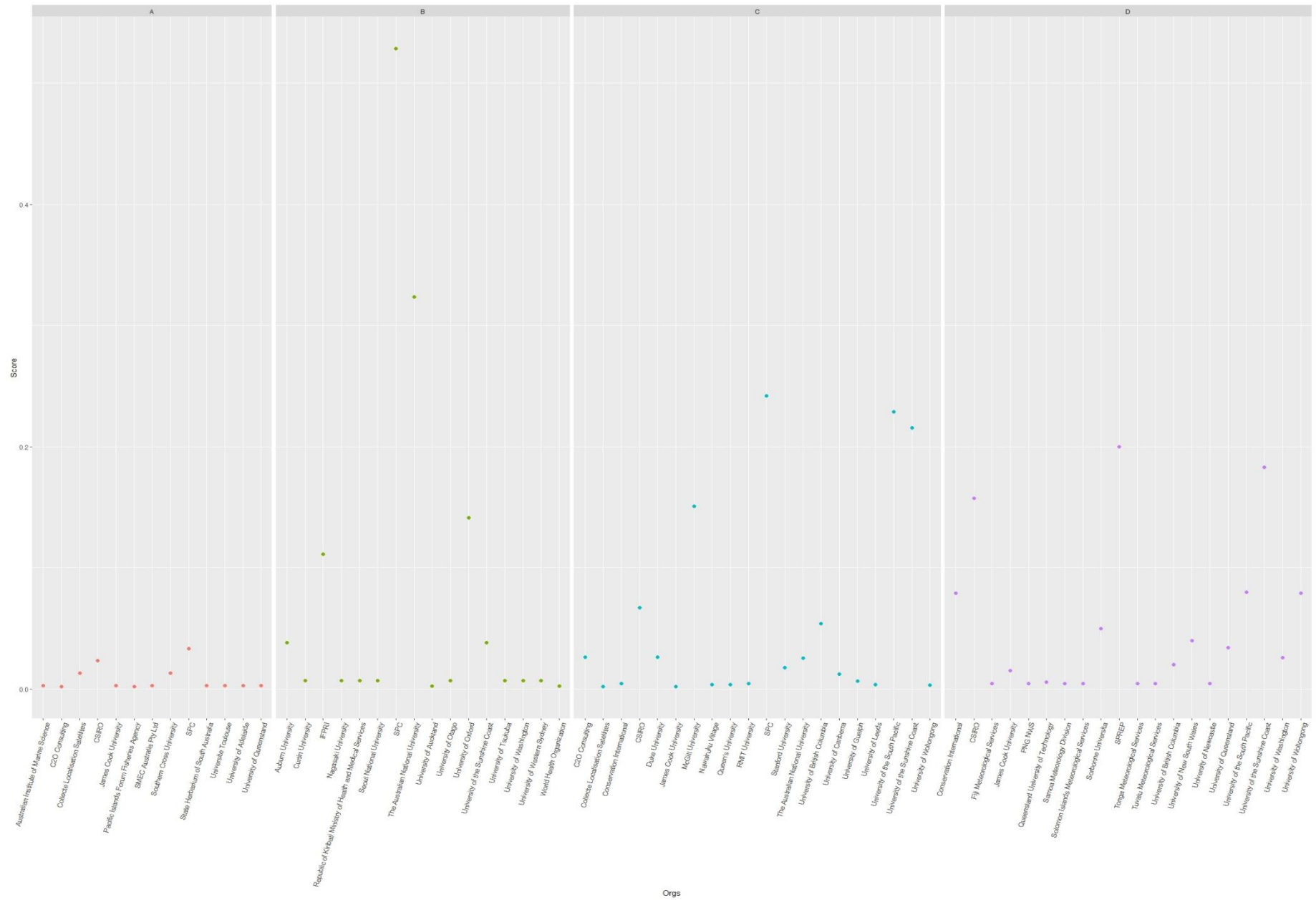


Figure S7. Weighted betweenness centrality scores for the top actors during each of the four time periods under study.

Table S6. One-mode network-level metrics for the four time periods of the study.

	A (2010-2013)	B (2014-2016)	C (2017-2019)	D (2020-2022)
Degree Centralisation	0.2918719	0.3884058	0.2159329	0.3519115
Density	0.24384236	0.12270531	0.08595388	0.17665996
Homophily - Org	0.5757576	0.1023622	0.3333333	0.1708428
Homophily - Region	0.05050505	0.30708661	0.33333333	0.40774487

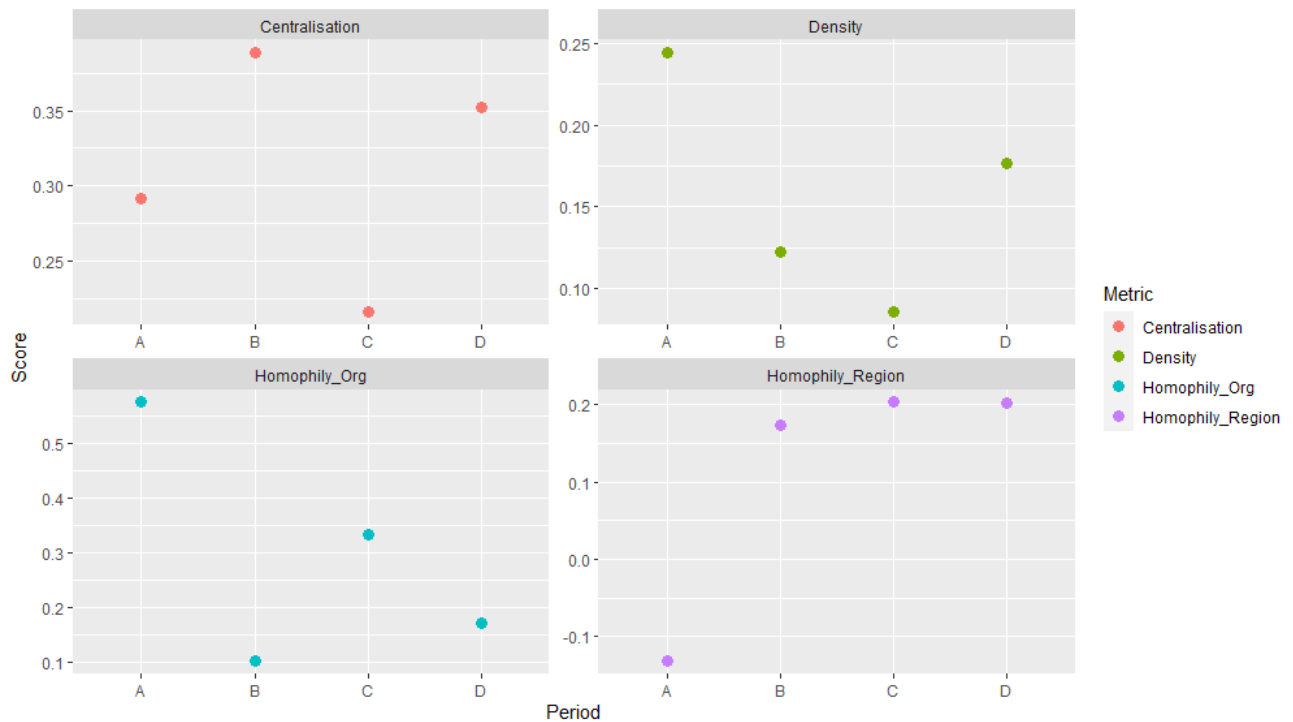


Figure S8. Network-level metrics for the four different time periods—A (2010-2013), B (2014-2016), C (2017-2019), and D (2020-2022). Higher centralisation values indicate more uneven distributions of node centrality scores. Higher density values indicate a greater proportion of existing ties to possible ties. More positive homophily values indicates greater heterogeneity of the attributes (organisation type and region) between linked nodes.

2010-2013

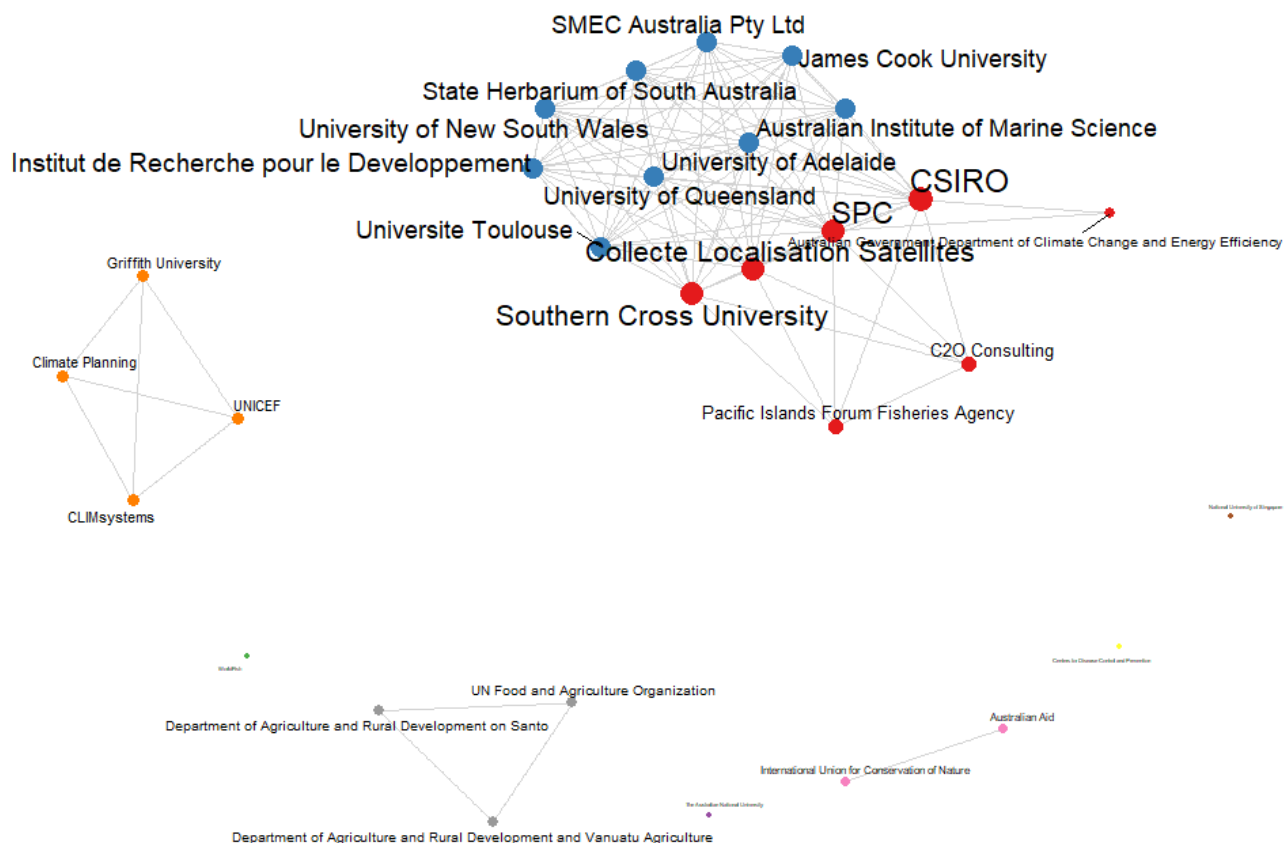


Figure S9. Communities for time period A clustered using the Louvain Community Detection algorithm.

2014-2016

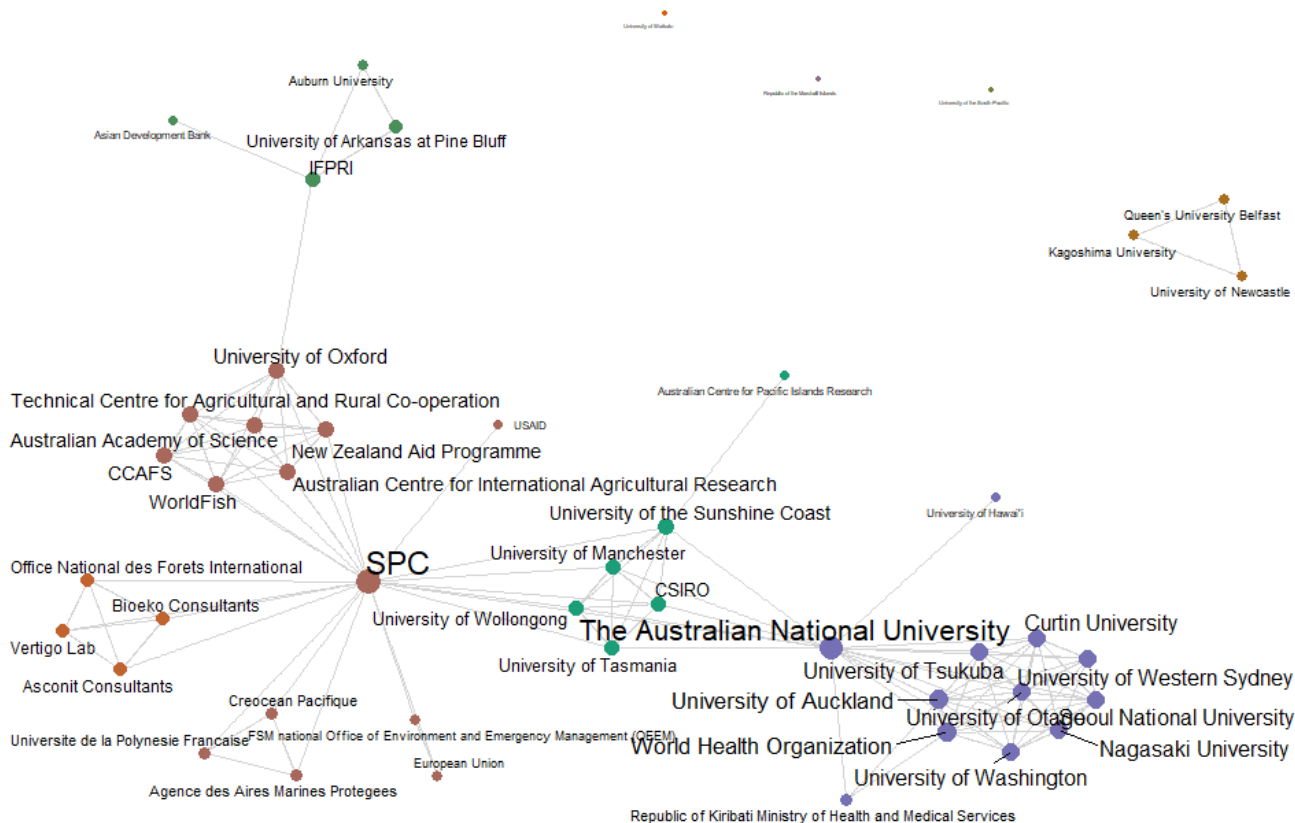


Figure S10. Communities for time period B clustered using the Louvain Community Detection algorithm.

2017-2019

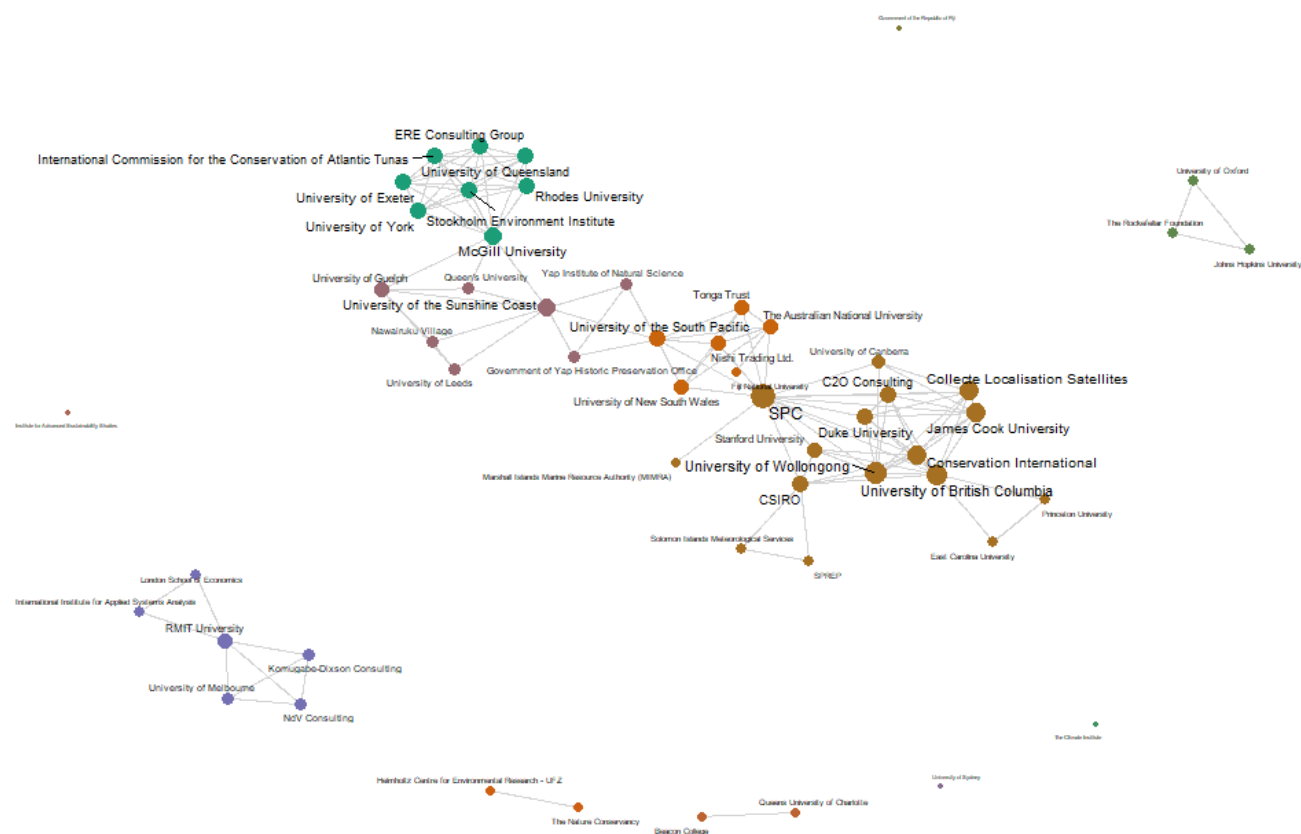


Figure S11. Communities for time period C clustered using the Louvain Community Detection algorithm.
2020-2022

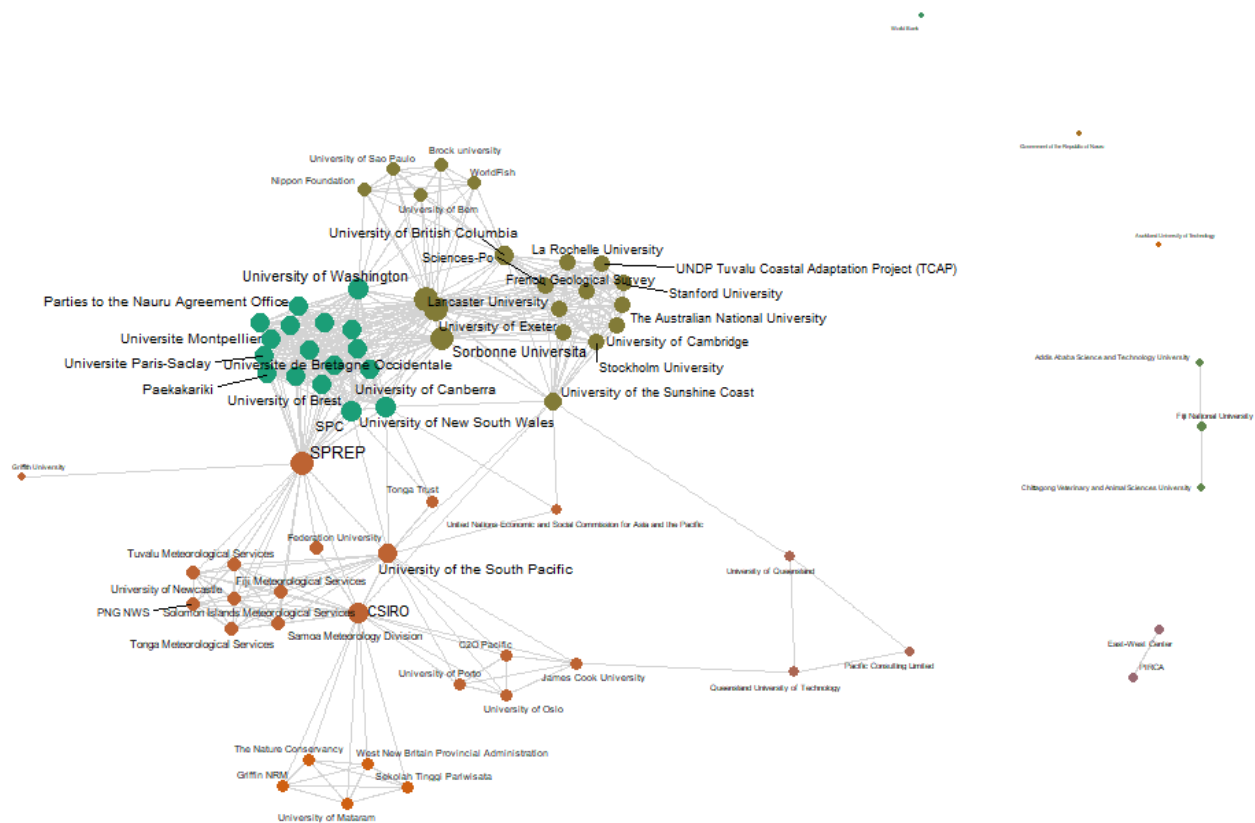


Figure S12. Communities for time period D clustered using the Louvain Community Detection algorithm.

Table S7. Main communities detected, highlighting the top five actors in each Louvain cluster.

Period A		Period B		Period C		Period D	
Cluster	Member	Cluster	Member	Cluster	Member	Cluster	Member
1	SPC	7	SPC	2	SPC	1	SPC
1	CSIRO	7	WorldFish	2	University of British Columbia	1	Pacific Islands Forum Fisheries Agency
1	Pacific Islands Forum Fisheries Agency	7	Technical Centre for Agricultural and Rural Co-operation	2	University of Wollongong	1	Collecte Localisation Satellites
1	Collecte Localisation Satellites	7	CCAFS	2	Conservation International	1	Institut de Recherche pour le Developpement
1	C2O Consulting	7	Australian Academy of Science	2	Collecte Localisation Satellites	1	University of New South Wales
2	Institut de Recherche pour le Developpement	1	University of the Sunshine Coast	1	University of Queensland	7	University of the South Pacific
2	Universite Toulouse	1	CSIRO	1	Stockholm Environment Institute	7	CSIRO
2	SMEC Australia Pty Ltd	1	University of Wollongong	1	University of York	7	SPREP
2	University of Queensland	1	University of Tasmania	1	University of Exeter	7	University of Newcastle
2	Australian Institute of Marine Science	1	University of Manchester	1	Rhodes University	7	PNG NWS
5	Griffith University	9	The Australian National University	3	The Australian National University	3	University of British Columbia
5	Climate Planning	9	World Health Organization	3	University of New South Wales	3	Conservation International
5	CLIMsystems	9	University of Auckland	3	University of the South Pacific	3	University of Wollongong
5	UNICEF	9	University of Washington	3	Tonga Trust	3	University of the Sunshine Coast
		9	University of Otago	3	Nishi Trading Ltd.	3	University of Exeter
				7	University of the Sunshine Coast		
				7	University of		

					Guelph		
				7	Nawairuku Village		
				7	University of Leeds		
				7	Queen's University		
				9	RMIT University		
				9	Komugabe-Dixson Consulting		
				9	NdV Consulting		
				9	University of Melbourne		
				9	International Institute for Applied Systems Analysis		