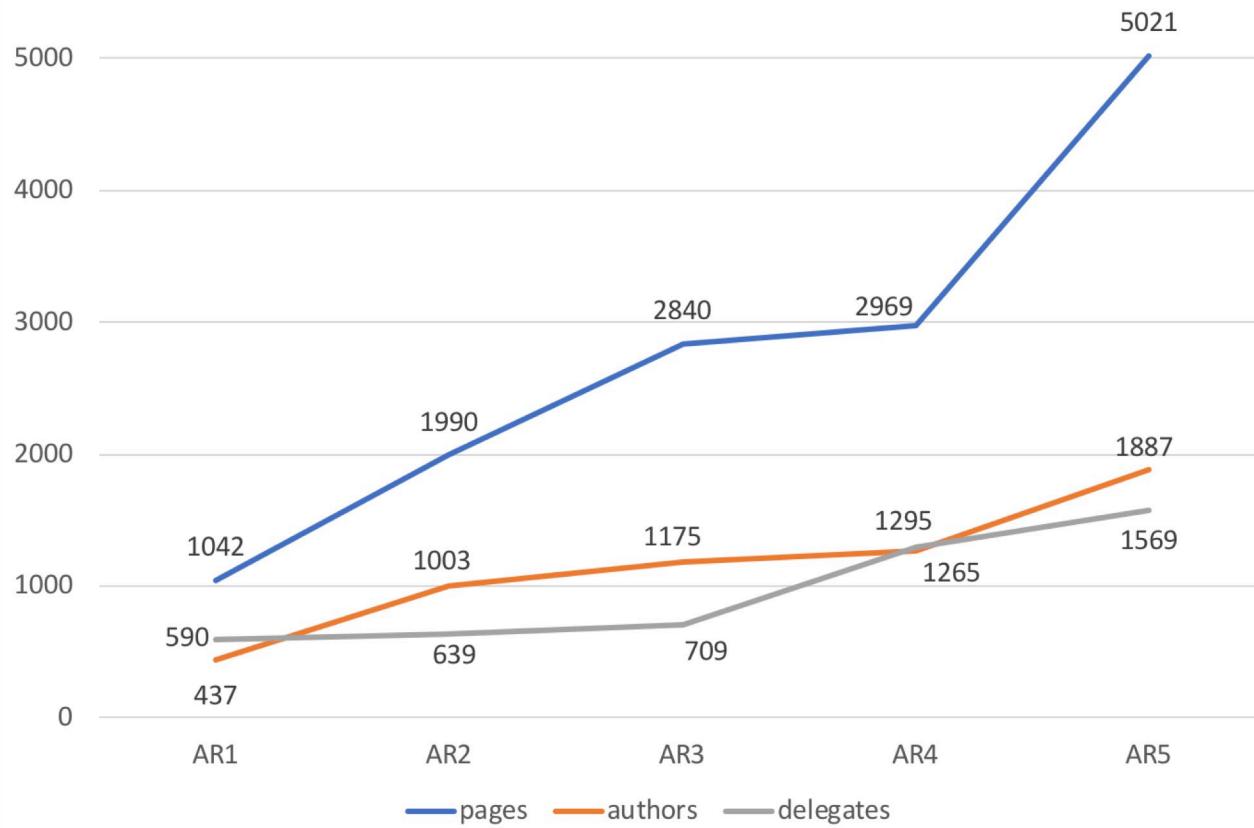


# THE EXPERT NETWORK

QUANTIFYING BRIDGING WORK IN THE IPCC

TOMMASO VENTURINI, INRIA

TOMMASOVENTURINI.IT



A THRIVING GROWTH

# Intergovernmental Panel on Climate Change

5 Assessment Reports	AR1	AR2	AR3	AR4	AR5
3 Working groups	WG1 assesses the physical scientific aspects of the climate system and climate change	WG2 assesses the vulnerability of socio-economic and natural systems to climate change consequences of climate change and options for adapting to it	WG3 assesses options for mitigating climate change through limiting or preventing GHG emissions and enhancing activities removing them		
3 types of role	Selected Authors Leading Authors (LA) Contributing Leading Authors (CLA) Reviewers (RE)	Invited Authors Contributing Authors (CA)		National Delegates	

A COMPLEX ORGANISATION

- No stable bureaucracy
- No permanent institutional organs
- No stable employees (a part a secretariat of a dozen members)

Of the 8.000 persons who contributed to its reports all did it:

- on a voluntary basis
- on the payroll of other institutions
- with no specific professionalization (in terms of hiring or training)

AND YET REMARKABLY LIGHT INSTITUTIONAL INFRASTRUCTURE



THE ARCHITECTURE OF A NETWORK

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U				
1	id	sessic	ar	v	wg	chapt	chapter_name	capacity	de	simpliest_rq	simplified_role	exact_rq	author_i	v	last_name	First_Name	Author (INFO) Ol	Author (INFO)	Country (INFO)	Institution (INFO)	Institution Type (INFO)	Development Status	Kyoto Annex	
2	4912	0	2	5	AR2 - WG3 - Ch5	author-AR2-WG3	author	selected	LA	Aahheim, A.	Aahheim, A.	Aahheim, A.	Abbott, M.	M.	Abbott, M.	Abbott, M.	Abbott, M.	Abbott, M.	University of Oslo	Higer Education Institution	Developed Countries	Annex I		
3	4923	0	2	1	10	AR2 - WG1 - Ch10 author-AR2-WG1	author	invited	CA	Abbott, M.	Abbott, M.	Abbott, M.	Abbot, M.	M.	Abbot, M.	Abbot, M.	Abbot, M.	Abbot, M.	Oregon State University	Higer Education Institution	Developed Countries	Annex I		
4	3081	0	3	1	2	AR3 - WG1 - Ch2 author-AR3-WG1	author	invited	CA	Abbott, M.	Abbott, M.	Abbott, M.	Abuchi, Ayako	Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Oregon State University	Higer Education Institution	Developed Countries	Annex I		
5	3080	0	3	1	9	AR3 - WG1 - Ch9 author-AR3-WG1	author	invited	CA	Abuchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abuchi, Ayako	Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	University of Tokyo	Higer Education Institution	Developed Countries	Annex I		
6	5633	0	5	1	5	AR5 - WG1 - Ch5 author-AR5-WG1	author	selected	LA	Abuchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abuchi, Ayako	Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	University of Tokyo	Higer Education Institution	Developed Countries	Annex I		
7	3088	0	3	2	5	AR2 - WG2 - Ch5 author-AR2-WG2	author	invited	CA	Abuchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abuchi, Ayako	Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	Abe-Ouchi, Ayako	London School of Hygiene and Tropical Medicl	London School of Hygiene and Tropical Medicl	Developed Countries	Annex I		
8	3089	0	4	2	8	AR4 - WG1 - Ch8 author-AR4-WG2	author	invited	CA	Abeku, Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	Abeku, Tarekgen	Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	United Kingdom	London School of Hygiene and Tropical Medicl	Higer Education Institution	Developed Countries	Annex I	
9	1430	0	1	1	10	AR1 - WG1 - Ch10 author-AR1-WG1	author	invited	CA	Abeku, Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	Abeku, Tarekgen	Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	Abeke, Tarekgen	University of New Hampshire	Higer Education Institution	Developed Countries	Annex I		
10	5458	0	1	3	6	AR1 - WG3 - Ch6 author-AR1-WG3	author	selected	CLA	Abel, J.	Abel, J.	Abel, J.	Abrol, I.	I.	Abrol, I.	Abrol, I.	Abrol, I.	Abrol, I.	Indian Council of Agriculture Research	Public Research Organisation	Developing Countries	Non Annex I		
11	4934	0	2	2	23	AR2 - WG2 - Ch22 author-AR2-WG2	author	invited	CA	Abrol, I.	Abrol, I.	Abrol, I.	Abroli, L.P.	L.P.	Abroli, L.P.	Abroli, L.P.	Abroli, L.P.	Abroli, L.P.	Indian Council of Agriculture Research	Public Research Organisation	Developing Countries	Non Annex I		
12	3091	0	4	2	6	AR4 - WG2 - Ch6 author-AR4-WG2	author	invited	CA	Abuduhi, Pamela	Abuduhi, Pamela	Abuduhi, Pamela	Abuduhi, Pamela	Pamela	Abuduhi, Pamela	Abuduhi, Pamela	Abuduhi, Pamela	Abuduhi, Pamela	University of Wollongong	Higer Education Institution	Developed Countries	Annex I		
13	4945	0	2	3	6	AR2 - WG3 - Ch6 author-AR2-WG3	author	selected	LA	Achanta, A.N.	Achanta, A.N.	Achanta, A.N.	Achanta, A.N.	Achanta, A.N.	Achanta, A.N.	Achanta, A.N.	Achanta, A.N.	Achanta, A.N.	Tata Energy Research Institute (TERI)	Non-Governmental Organization	Developing Countries	Non Annex I		
14	3092	0	4	3	9	AR4 - WG3 - Ch9 author-AR4-WG3	author	invited	CA	Achard, Frédéric	Achard, Frédéric	Achard, Frédéric	Achard, Frédéric	Frédéric	Achard, Frédéric	Achard, Frédéric	Achard, Frédéric	Achard, Frédéric	European Commission Joint Research Centre	Public Research Organisation	Developed Countries	Annex I		
15	3076	0	3	1	5	AR3 - WG1 - Ch5 author-AR3-WG1	author	invited	CA	Ackerman, A.	Ackerman, A.	Ackerman, A.	Ackerman, A.	Ackerman, A.	Ackerman, A.	Ackerman, A.	Ackerman, A.	Ackerman, A.	National Aeronautics and Space Adminstrative	Government Agency	Developed Countries	Annex I		
16	3077	0	3	3	3	AR3 - WG3 - Ch3 author-AR3-WG3	author	invited	CA	Ackerman, Frank	Ackerman, Frank	Ackerman, Frank	Ackerman, Frank	Frank	Ackerman, Frank	Ackerman, Frank	Ackerman, Frank	Ackerman, Frank	Tufts University	Higer Education Institution	Developed Countries	Annex I		
17	3078	0	3	1	2	AR1 - WG1 - Ch2 author-AR1-WG1	author	invited	CA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	N/A	N/A	Developing Countries	Annex I	
18	4953	0	2	2	2	AR1 - WG2 - Ch2 author-AR1-WG2	author	selected	CLA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	N/A	N/A	Developing Countries	Non Annex I
19	4966	0	2	2	2	TS - AR2 - WG1 - Ch10 author-AR2-WG2	author	selected	LA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	N/A	N/A	Developing Countries	Non Annex I
20	5464	0	2	2	2	SPM - AR2 - WG2 - Ch5 author-AR2-WG2	author	selected	LA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	COMARNA	Government Agency	Developing Countries	Non Annex I
21	8459	0	2	2	SYR	SYR - AR2 - WGnone - Cauthor-AR2-SYR	author	selected	LA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	to be added	to be added	Developing Countries	Non Annex I
22	7245	0	5	3	14	AR5 - WG3 - Ch14 author-AR5-WG3	author	selected	LA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Ministry of Science Technology and the Envir.	Government Agency	Developing Countries	Non Annex I
23	10236	11	2	none	none	none	delegate-AR2	delegate	LA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Ministry of Science & Technology	& Environment	Developing Countries	Non Annex I
24	10467	12	3	none	none	none	delegate-AR3	delegate	LA	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Acosta, Roberto	Ministry of Science		Developing Countries	Non Annex I
25	3075	0	3	1	5	AR3 - WG1 - Ch5 author-AR3-WG1	author	invited	CA	Adams, P.	Adams, P.	Adams, P.	Adams, P.	P.	Adams, P.	Adams, P.	Adams, P.	Adams, P.	Adams, P.	California Institute of Technology	Higer Education Institution	Developed Countries	Annex I	
26	3074	0	3	2	AR3 - WG3 - Ch2 author-AR3-WG3	author	selected	LA	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Obafemi Awolowo University	Higer Education Institution	Developing Countries	Non Annex I	
27	3094	0	4	3	AR3 - WG3 - Ch4 author-AR3-WG3	author	selected	LA	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Adagebuluge, Anthony O.	Centre for Energy Research and Development	Public Research Organisation	Developing Countries	Non Annex I	
28	3073	0	3	2	1	AR3 - WG2 - Ch1 author-AR3-WG2	author	selected	LA	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Obafemi Awolowo University	Higer Education Institution	Developing Countries	Non Annex I
29	8308	0	2	none	none	none	AR2 - WGnone - Ch2 Bureau-A02	bureau	onal representa	LA	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	Adajewson, James O.	N/A	N/A	Developing Countries	Non Annex I
30	3095	0	4	2	9	AR4 - WG1 - Ch9 author-AR4-WG2	author	invited	CA	Adesina, Francis	Adesina, Francis	Adesina, Francis	Adesina, Francis	Francis	Adesina, Francis	Adesina, Francis	Adesina, Francis	Adesina, Francis	Adesina, Francis	Adesina, Francis	Obafemi Awolowo University	Higer Education Institution	Developing Countries	Non Annex I
31	4978	0	2	2	9	AR2 - WG2 - Ch9 author-AR2-WG2	author	invited	CA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of East Anglia	Higer Education Institution	Developed Countries	Annex I
32	3071	0	3	2	11	AR3 - WG2 - Ch11 author-AR3-WG2	author	selected	LA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of East Anglia	Higer Education Institution	Developed Countries	Annex I
33	3072	0	3	2	18	AR3 - WG2 - Ch12 author-AR3-WG2	author	invited	CA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of East Anglia	Higer Education Institution	Developed Countries	Annex I
34	3096	0	4	2	17	AR4 - WG2 - Ch17 author-AR4-WG2	author	selected	CLA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of East Anglia	Higer Education Institution	Developed Countries	Annex I
35	3097	0	4	2	2	SPM - AR4 - WG2 - Ch5 author-AR4-WG2	author	selected	LA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of East Anglia	Higer Education Institution	Developed Countries	Annex I
36	3098	0	4	2	2	TS - AR4 - WG2 - Ch5 author-AR4-WG2	author	selected	LA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of East Anglia	Higer Education Institution	Developed Countries	Annex I
37	7967	0	5	2	12	AR5 - WG2 - Ch12 author-AR5-WG2	author	selected	CLA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of Exeter	Higer Education Institution	Developed Countries	Annex I
38	3068	0	5	2	TS	AR2 - WG2 - Ch2 author-AR2-WG2	author	selected	LA	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	Adeger, W.	University of Exeter	Higer Education Institution	Developed Countries	Annex I
39	5405	0	1	3	6	AR4 - WG2 - Ch6 author-AR4-WG3	author	selected	LA	Adger, R.	Adger, R.	Adger, R.	Adger, R.	R.	Adger, R.	Adger, R.	Adger, R.	Adger, R.	Adger, R.	Adger, R.	University of Exeter	Higer Education Institution	Developed Countries	Annex I
40	4989	0	2	5	AR2 - WG2 - Ch5 author-AR2-WG2	author	selected	LA	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Water and Energy Commission Secretariat	Government Agency	Developing Countries	Non Annex I	
41	5000	0	2	2	2	TS - AR2 - WG2 - Ch5 author-AR2-WG2	author	selected	LA	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Water and Energy Commission Secretariat	Government Agency	Developing Countries	Non Annex I
42	5588	0	2	2	2	SPM - AR2 - WG2 - Ch5 author-AR2-WG2	author	selected	LA	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Water and Energy Commission Secretariat	Government Agency	Developing Countries	Non Annex I
43	3070	0	3	2	11	AR3 - WG2 - Ch11 author-AR3-WG2	author	selected	LA	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Adhikary, Sharad P.	Water and Energy Commission Secretariat	Government Agency	Developing Countries	Non Annex I
44	3099	0	4	1	3	AR4 - WG1 - Ch3 author-AR4-WG1	author	invited	CA	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	National Aeronautics and Space Adminstrative	Government Agency	Developed Countries	Annex I
45	261	0	5	1	2	AR5 - WG1 - Ch2 author-AR5-WG1	author	invited	CA	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	University of Maryland	Higer Education Institution	Developed Countries	Annex I
46	10167	11	2	none	none	delegate-AR2	delegate	LA	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Adler, Robert F.	Ministry of Water Forests and Environmental Protection		Developed Countries	Annex I	
47	5011	0	2	2	27	AR2 - WG2 - Ch2 author-AR2-WG2	author	selected	LA	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	U.S. Environmental Protection Agency (EPA)	Government Agency	Developed Countries	Annex I
48	5023	0	2	2	2	TS - AR2 - WG2 - Ch5 author-AR2-WG2	author	selected	LA	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	U.S. Environmental Protection Agency (EPA)	Government Agency	Developed Countries	Annex I
49	5465	0	2	2	2	SPM - AR2 - WG2 - Ch5 author-AR2-WG2	author	selected	LA	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	Adler, Michael	U.S. Environmental Protection Agency (EPA)	Government Agency	Developed Countries	Annex I
50	3100	0	4	2	16	AR4 - WG2 - Ch16 author-AR4-WG2	author	selected	LA	Agard, John	Agard, John	Agard, John	Agard, John	John	Agard, John	Agard, John	Agard, John	Agard, John	Agard, John	Agard, John	University of the West Indies	Higer Education Institution	Developing Countries	Non Annex I
51	7230	0	5	2	29	AR5 - WG2 - Ch29 author-AR5-WG2	author	selected	LA	Agard, John	Agard, John	Agard, John	Agard, John	John	Agard, John	Agard, John	Agard, John	Agard, John	Agard, John	Agard, John	University of Trinidad and Tobago	Higer Education Institution	Developing Countries	Non Annex I
52	3069	0	3	3	1	AR3 - WG3 - Ch1 author-AR3-WG3	author	invited	CA	Agarwal, Anil	Agarwal, Anil	Agarwal, Anil	Agarwal, Anil	Anil	Agarwal, Anil	Agarwal, Anil	Agarwal, Anil	Agarwal, Anil	Agarwal, Anil	Agarwal, Anil	Indian Institute of Technology Delhi	Higer Education Institution	Developing Countries	Non Annex I
53	13996	28	4	none	none	delegate-AR4	delegate	LA	Agarwal, Shri Satish	Agarwal, Shri Satish	Agarwal, Shri Satish	Agarwal, Shri Satish	Shri Satish	Agarwal, Shri Satish	Agarwal, Shri Satish	Agarwal, Shri Satish	Agarwal, Shri Satish	Agarwal, Shri Satish	Agarwal, Shri Satish	Ministry of Environment and Forests		Developing Countries	Non Annex I	
54	3102	0	2	5	AR4 - WG2 - Ch5 author-AR4-WG2	author	selected	CLA	Agarwal, Pramod	Agarwal, Pramod	Agarwal, Pramod	Agarwal, Pramod	Pramod	Agarwal, Pramod	Agarwal, Pramod	Agarwal, Pramod	Agarwal, Pramod	Agarwal, Pramod	Agarwal, Pramod	Indian Agricultural Research Institute	Public Research Organisation	Developing Countries	Non Annex I	
55	3103	0	4	2	2	SPM - AR2 - WG2 - Ch5 author-AR2-WG2	author																	

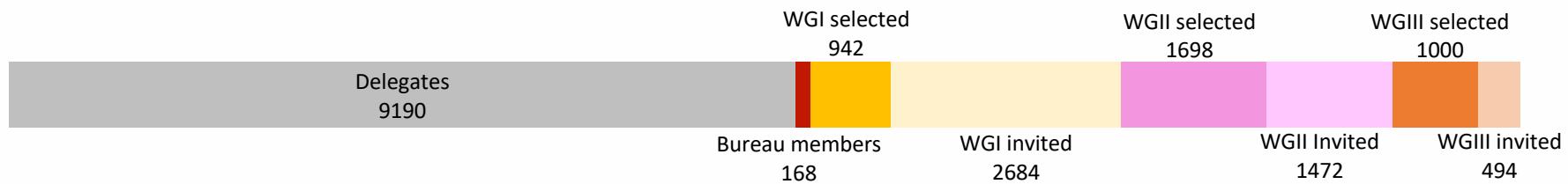
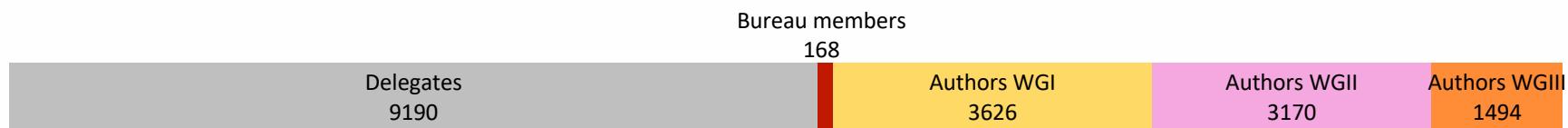
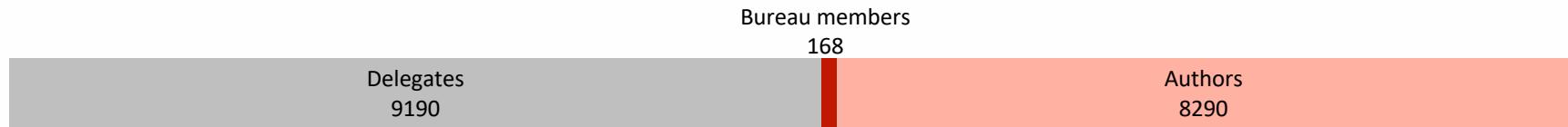
**17,797 rows**

(1 row = 1 participation)

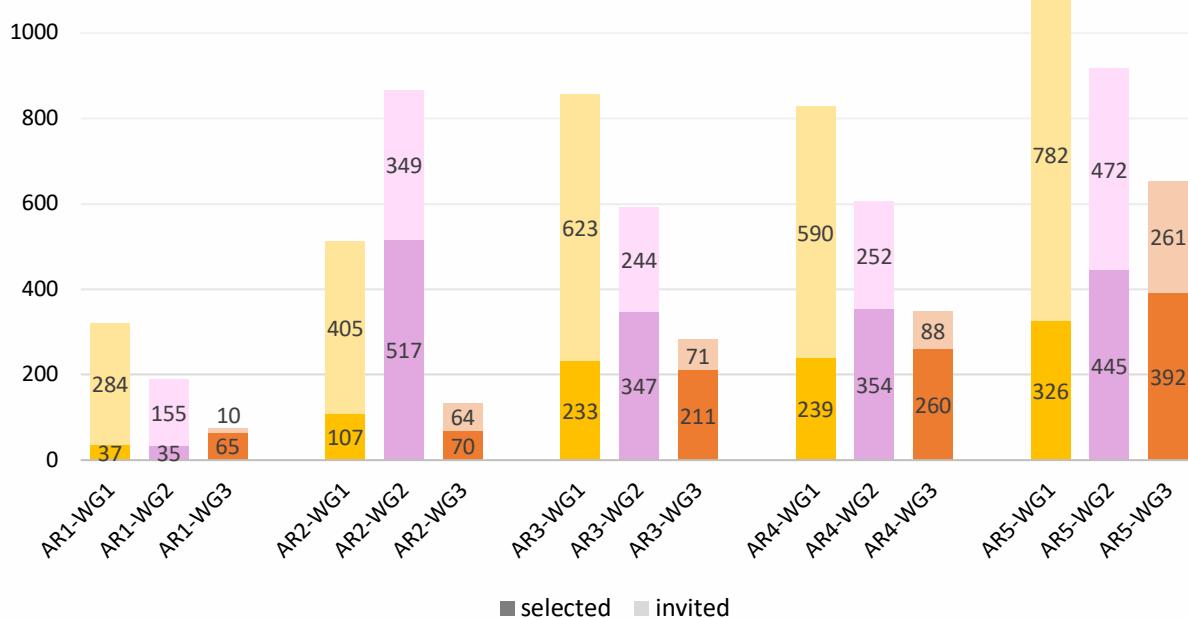
**19 columns:**

ID	Author ID
Session	Last name
AR	First name
WG	Country
Chapter	Institution
Chapter name	Institution Type
Capacity	Development Status
Simplified role	Kyoto Annex
Exact role	WMO Regions
	UNFCCC negotiating groups

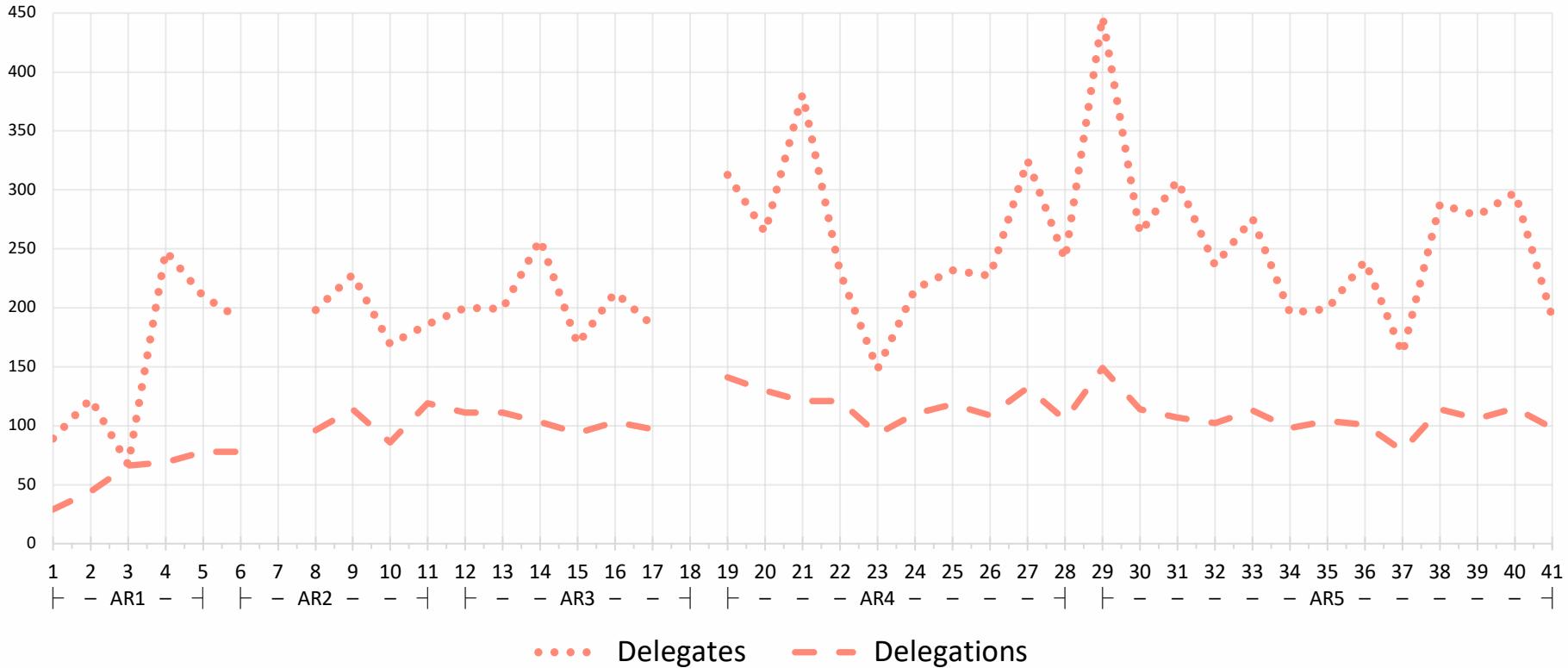
THE DATASET



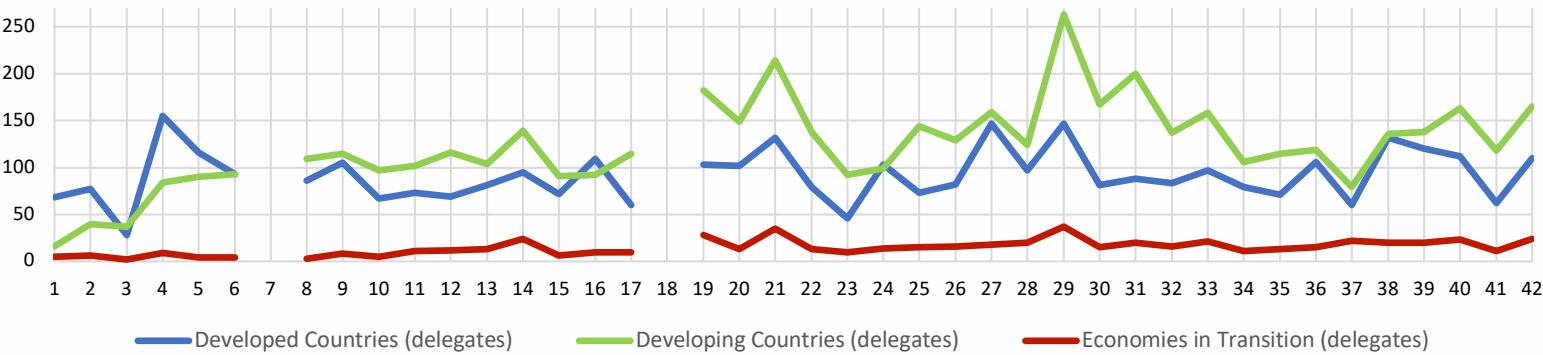
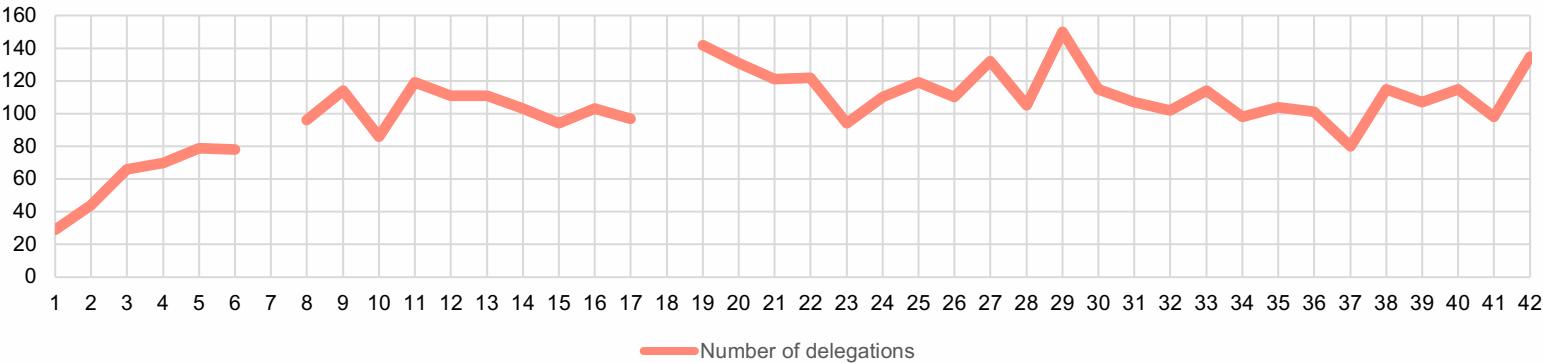
# CONTRIBUTION COMPOSITION



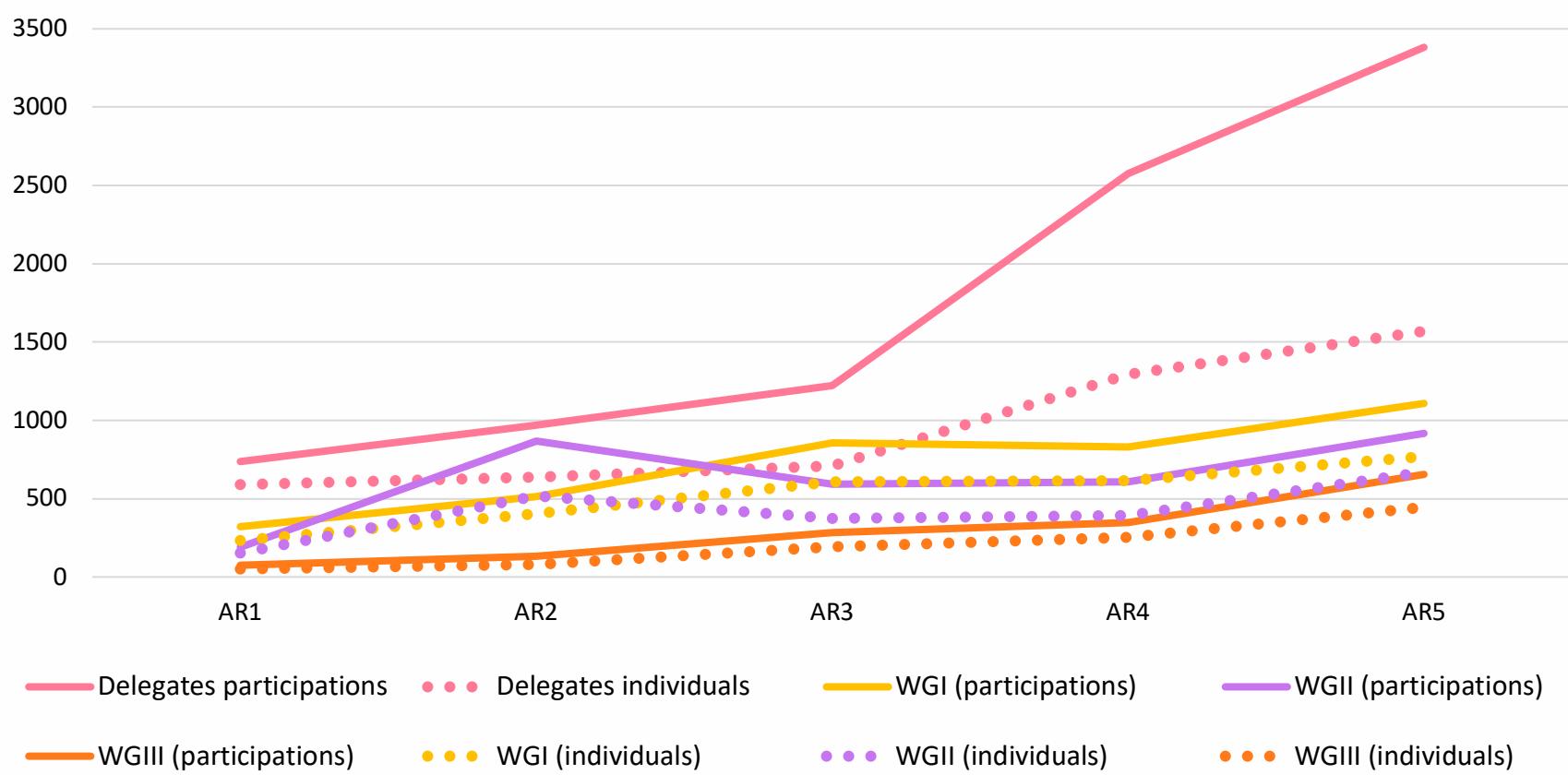
- Increase in the number of participations
- WG1 > WG2 > WG3 (except AR2)
- For WG1, invited > selected
- For WG2 and WG3, selected > invited



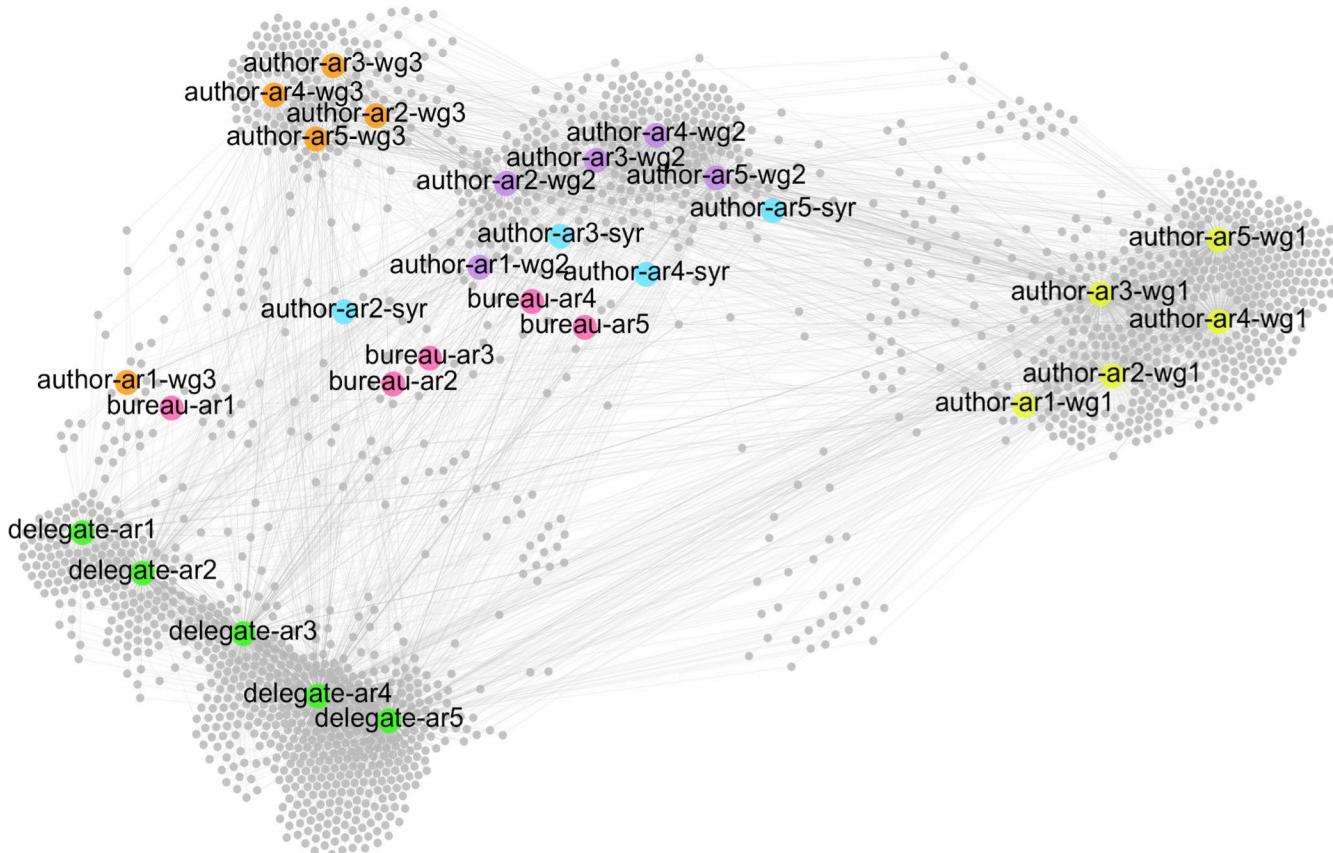
DELEGATES EVOLUTION



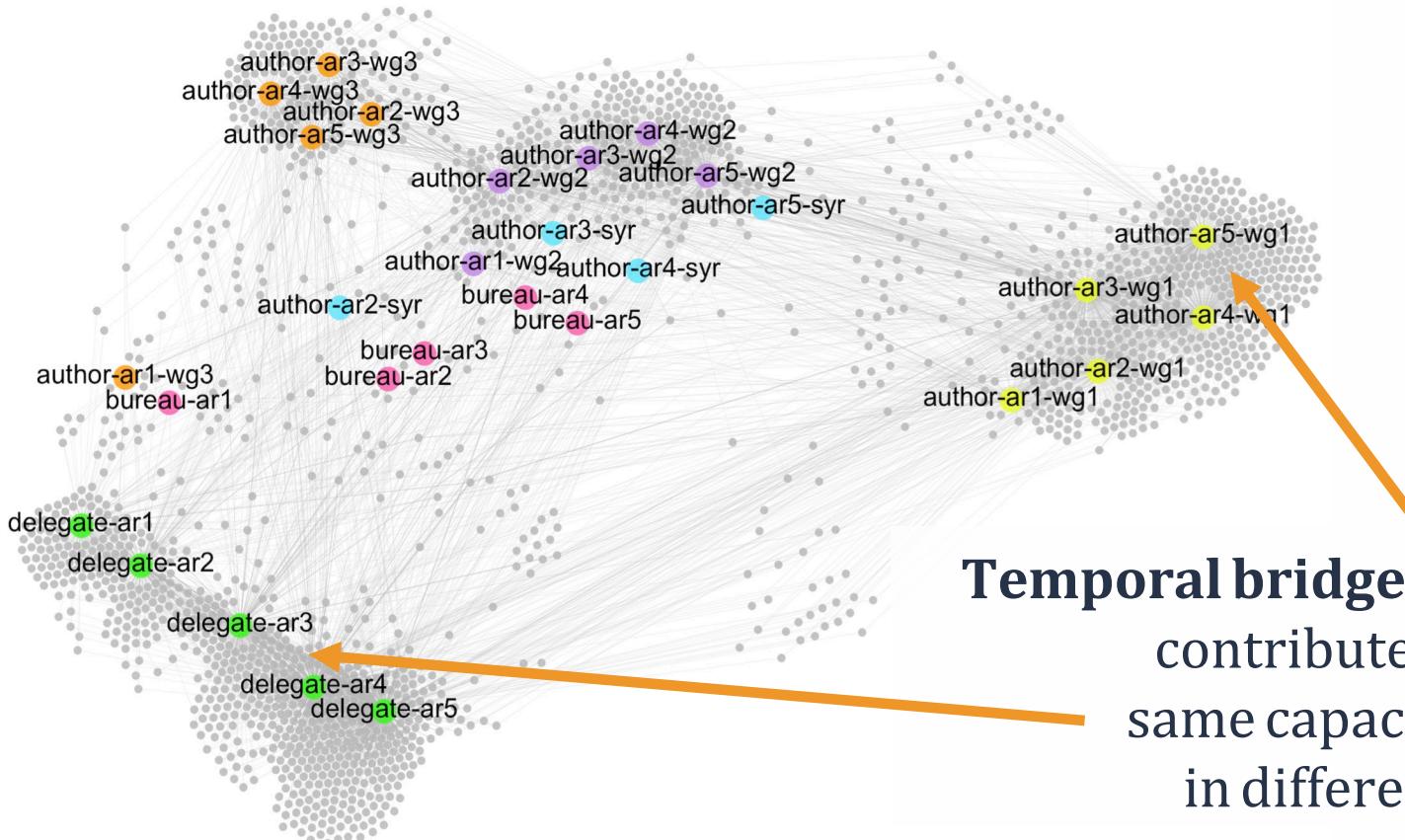
DELEGATES EVOLUTION



# EVOLUTION OF CONTRIBUTIONS AND CONTRIBUTORS

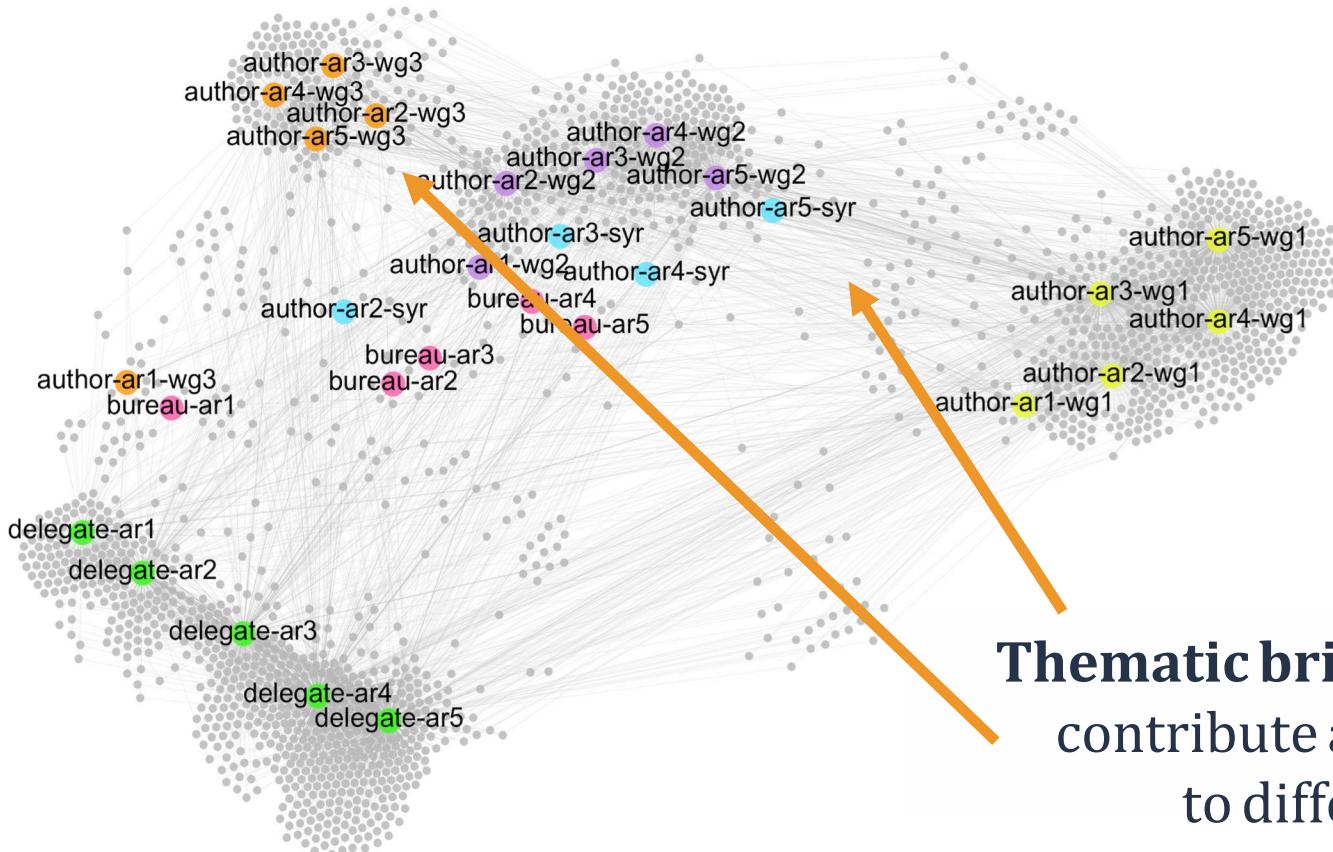


BRIDGES



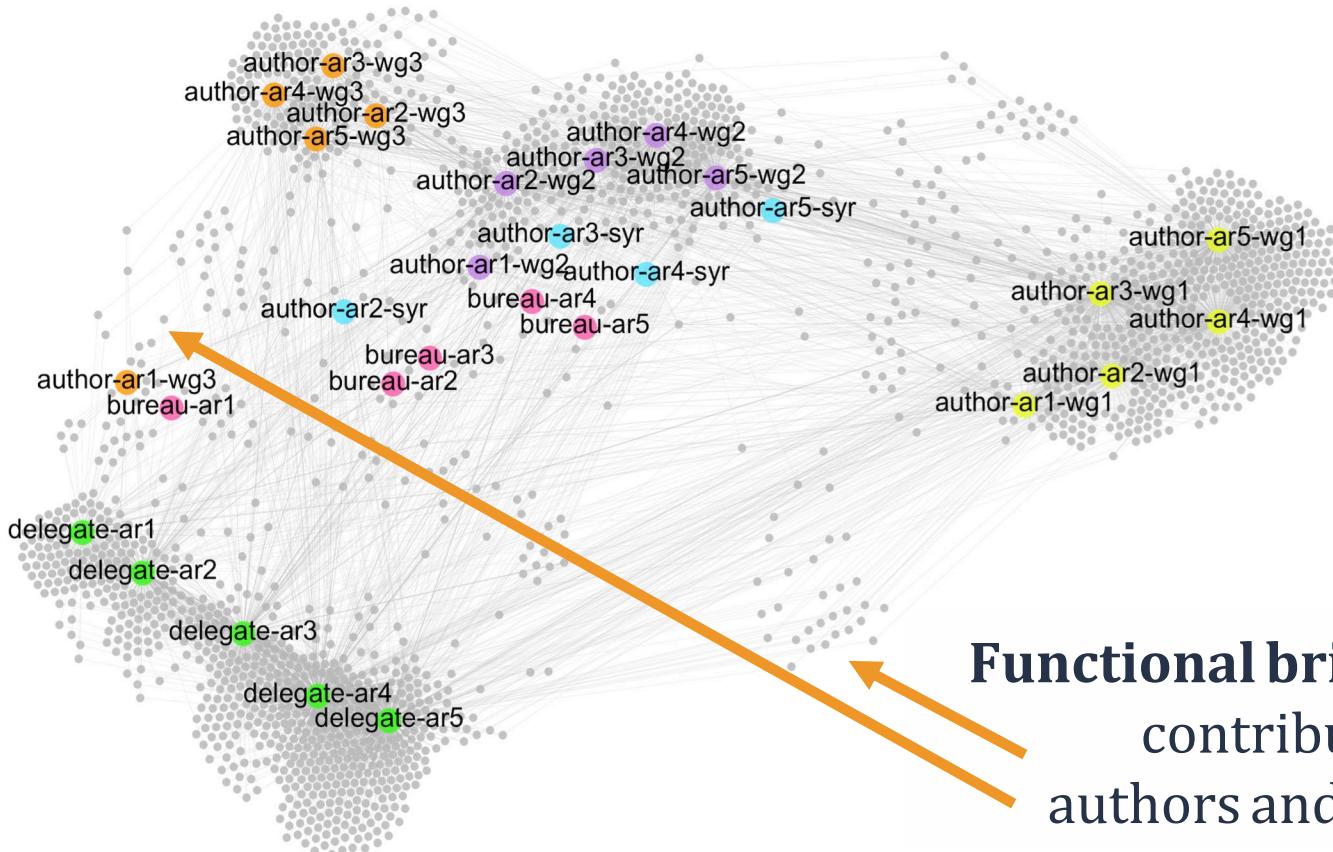
**Temporal bridges (3148)**  
contribute to the  
same capacity but  
in different ARs

4 TYPES OF BRIDGES



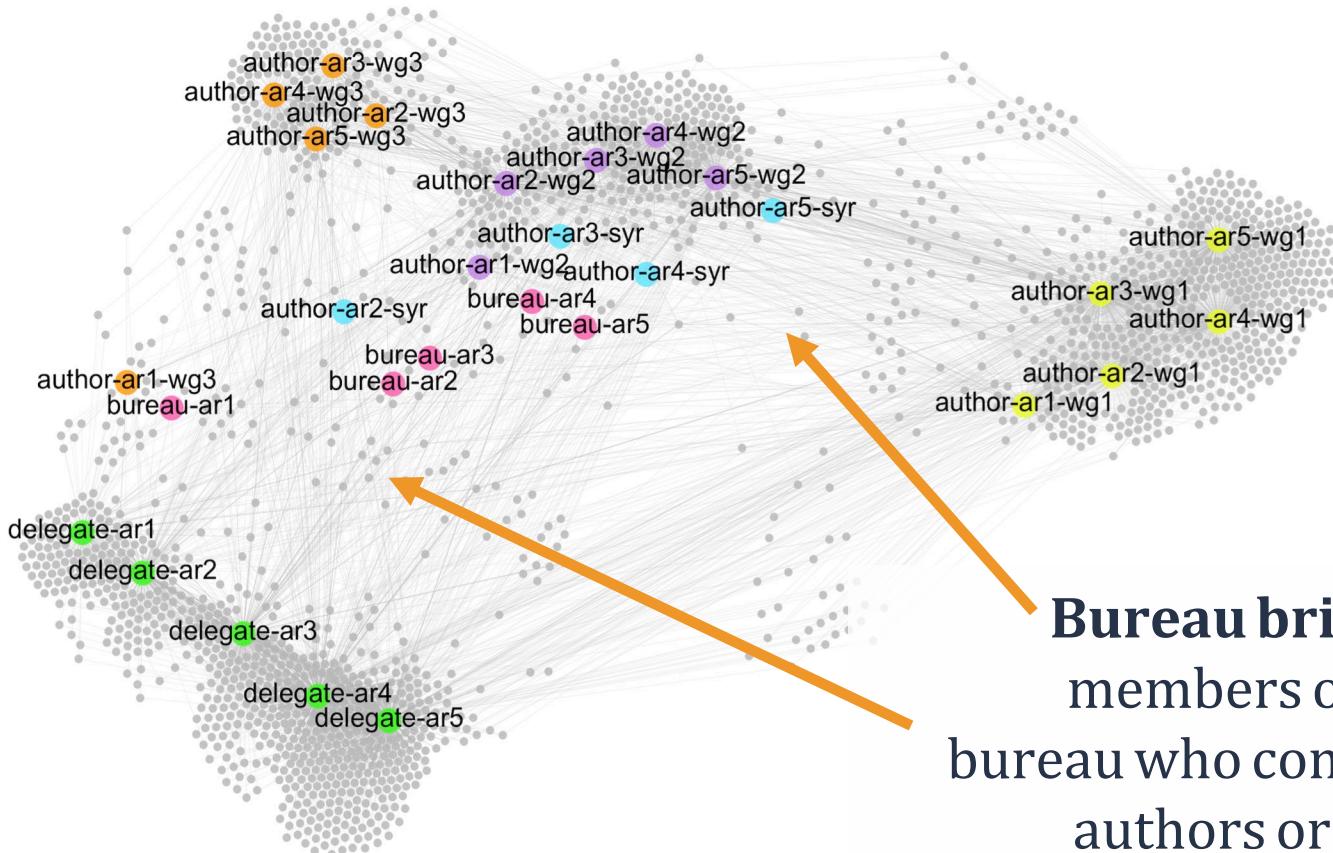
**Thematic bridges (1198)**  
contribute as authors  
to different WGs

4 TYPES OF BRIDGES



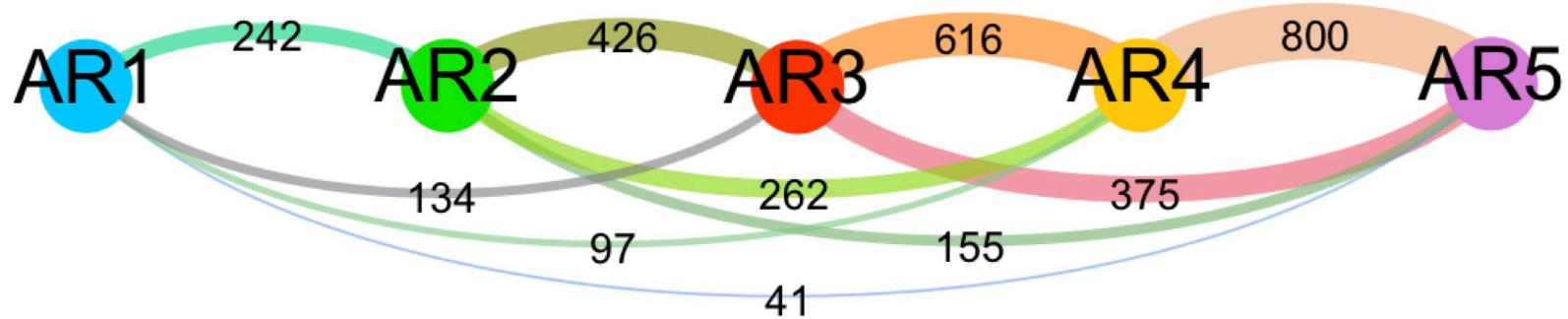
**Functional bridges (1152)**  
contribute as both  
authors and delegates

4 TYPES OF BRIDGES



**Bureau bridges (448)**  
members of the IPCC  
bureau who contribute as  
authors or delegates

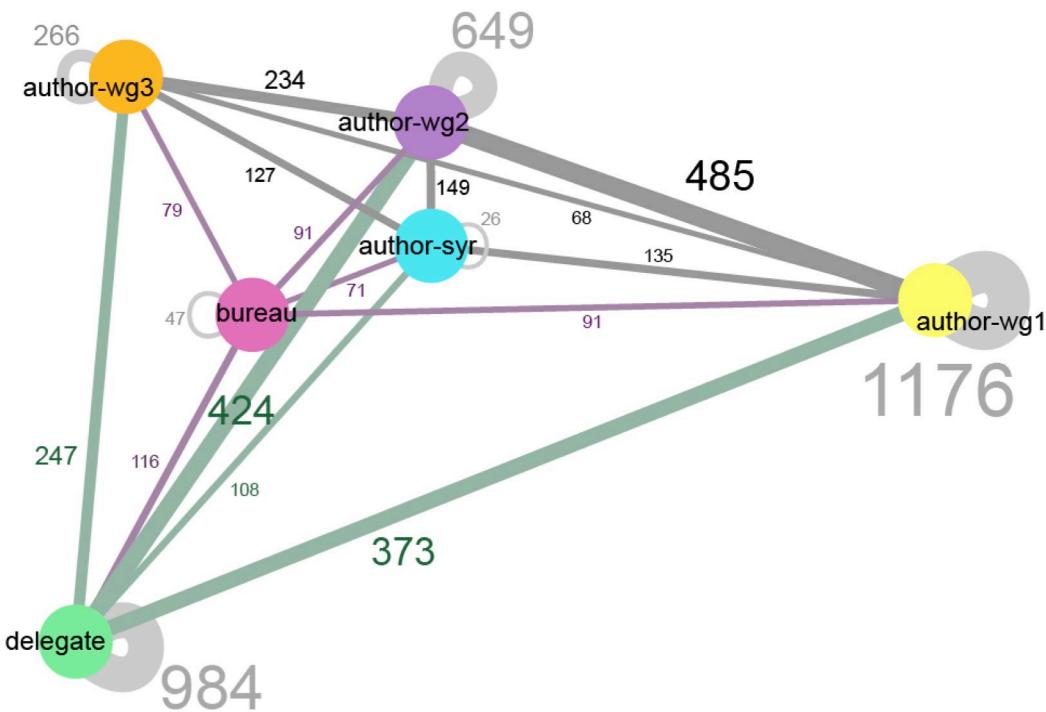
4 TYPES OF BRIDGES



TEMPORAL BRIDGES

### Temporal bridges (3148)

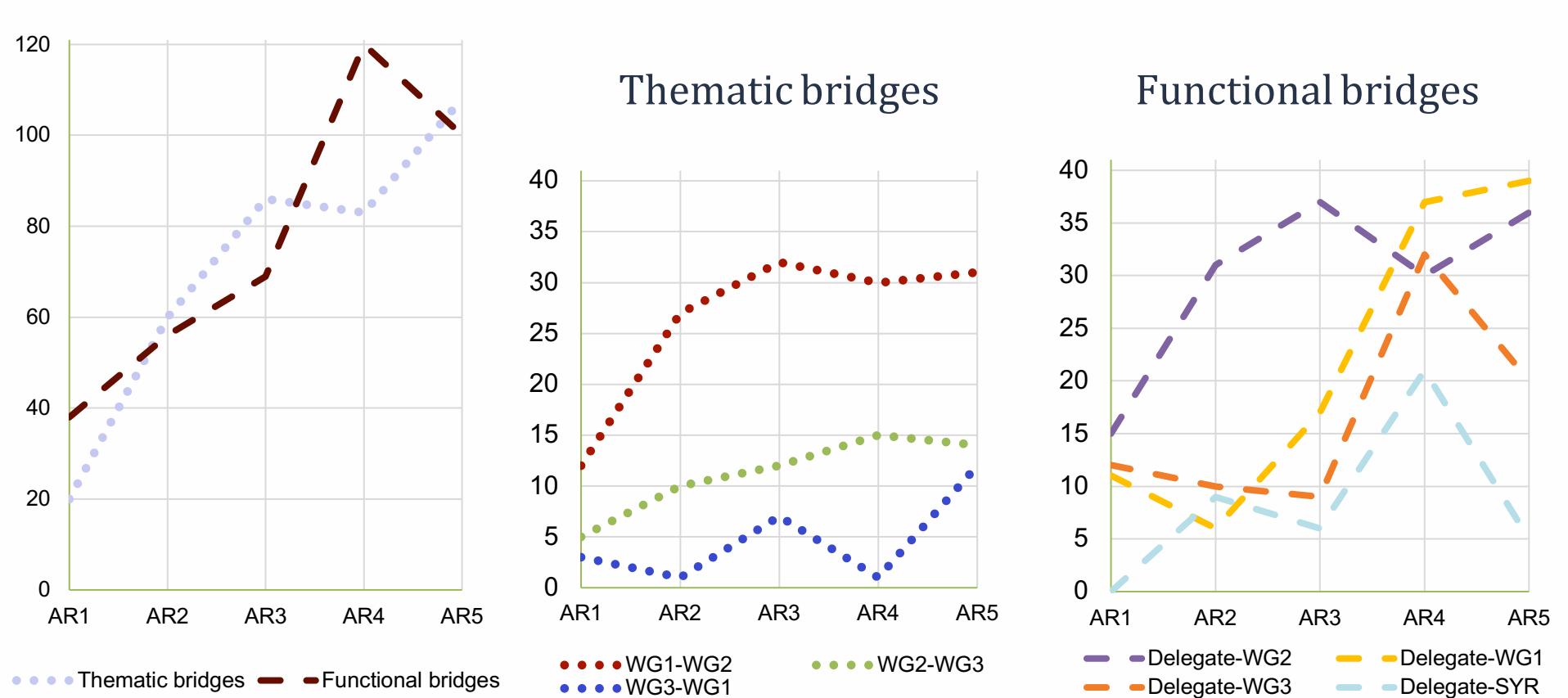
WG1-WG1	1176
Delegate-Delegate	984
WG2-WG2	649
WG3-WG3	266
Bureau-Bureau	47
SYR-SYR	26
<b>Thematic bridges (1198)</b>	
WG1-WG2	485
WG2-WG3	234
WG2-SYR	149
SYR-WG1	135
WG3-SYR	127
WG3-WG1	68



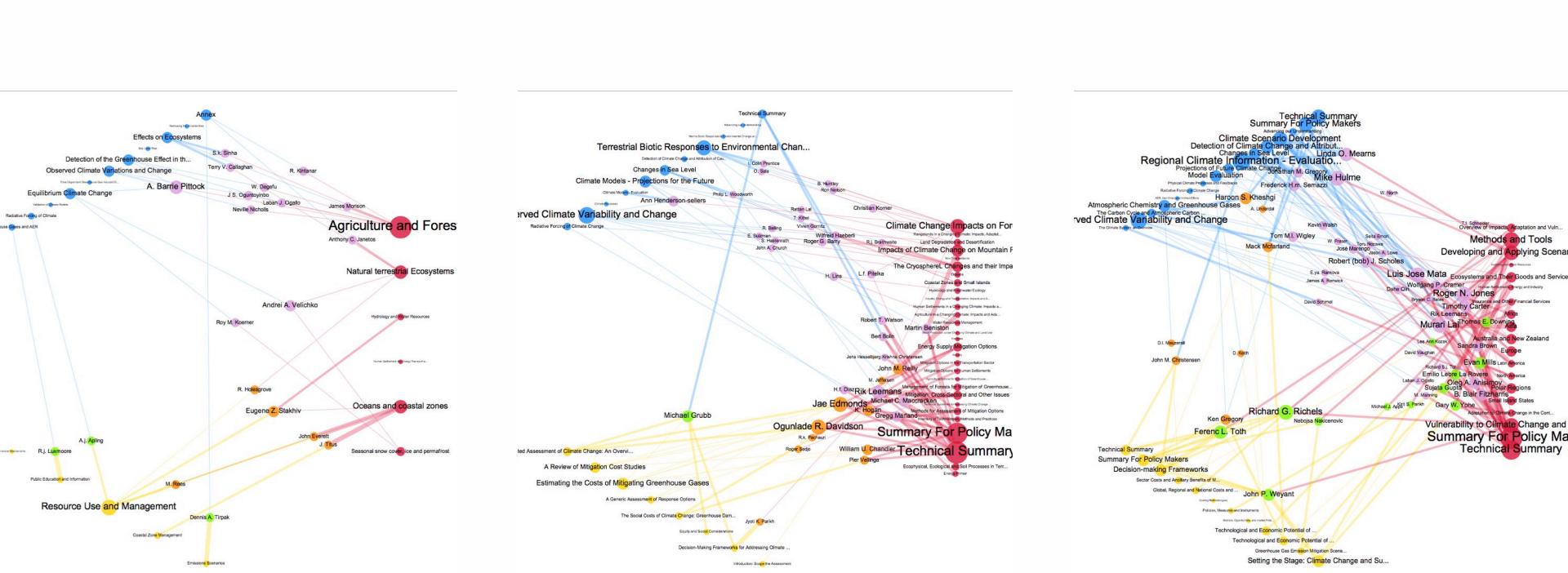
### Functional bridges (1152)

Delegate-WG2	424
Delegate-WG1	373
Delegate-WG3	247
Delegate-SYR	108
<b>Bureau bridges (448)</b>	
Bureau-Delegate	116
Bureau-WG1	91
Bureau-WG2	91
Bureau-WG3	79
Bureau-SYR	71

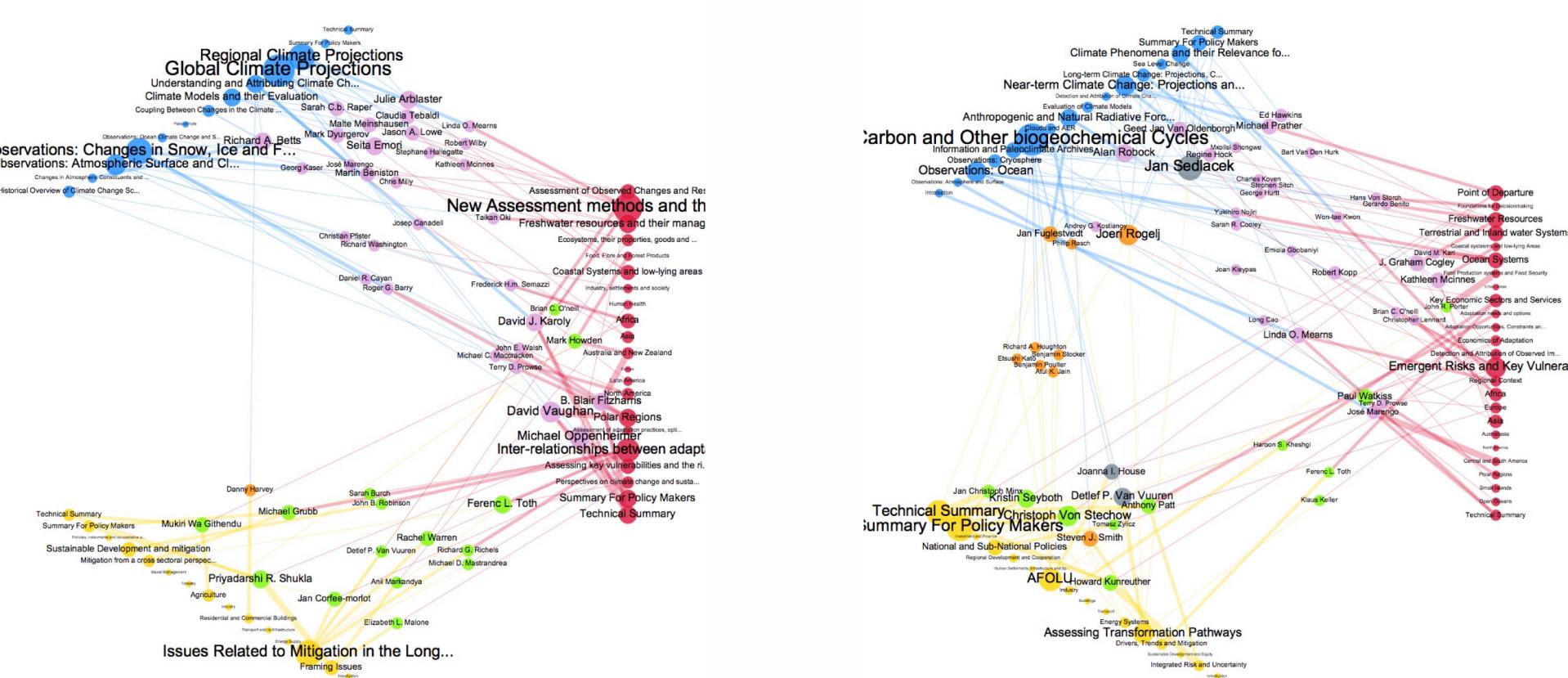
OTHER BRIDGES



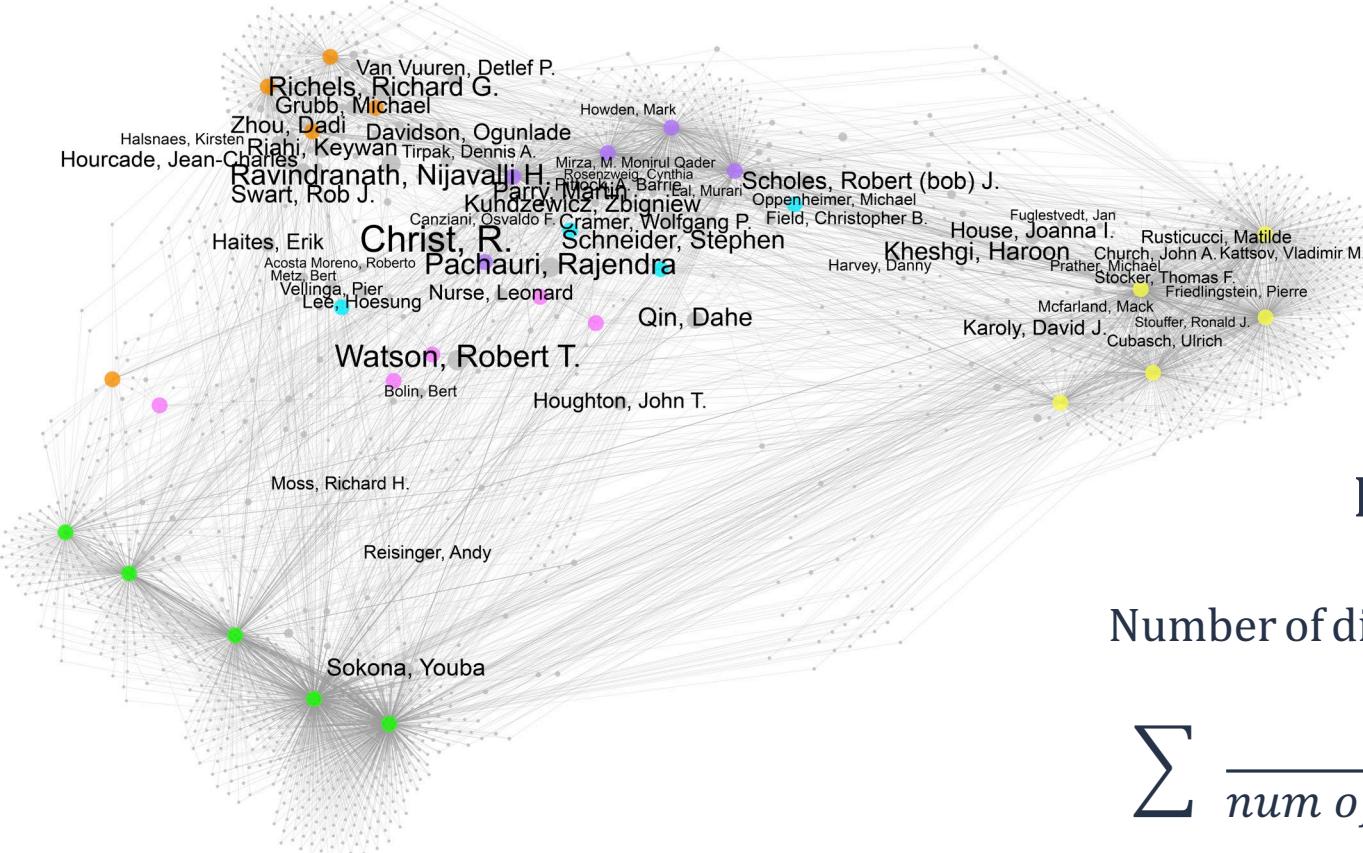
# BRIDGING EVOLUTION



# THEMATIC BRIDGES (AR1/2/3)



# THEMATIC BRIDGES (AR1/2/3)



## Bridgeness

Number of different capacities (degree)

$$\sum \frac{1}{\text{num of bridges } capA - capB}$$

WHO ARE THE BRIDGES

# Graph Recipes

...based on Graphology

Safely load your networks, they do not leave your computer.

Pick and edit a recipe, or copy-paste it from anywhere.

Enjoy the outcome: processed network, image, or anything javascript

Try this sample network to take a look!

Also, some [documentation](#).

+ more tools  
**SciencesPo**  
MÉDIALAB

[tools.medialab.sciences-po.fr  
/graph-recipes](http://tools.medialab.sciences-po.fr/graph-recipes)

```
114 // Computing the different bridging scores
115 shownText = ""
116 var counter = 0
117 g.nodes().forEach(function(nid1){
118   var neighborhood1 = g.neighbors(nid1)
119   if ( (g.getNodeAttribute(nid1, settings.partitionsAttribute) == settings.partitionToBridge ) {
120     g.nodes().forEach(function(nid2){
121       if ( (g.getNodeAttribute(nid2, settings.partitionsAttribute) == settings.partitionToBridge ) {
122         if (nid1==nid2) {
123           var neighborhood2 = g.neighbors(nid2)
124           var commonNeighborhood = neighborhood1.filter(function(d1){ return neighborhood2.some(function(d2){ return d1==d2 }) })
125           var numOfBridgesBetweenCouple_AB = (typesCouples[g.getNodeAttribute(nid1, settings.partitionType) + g.getNodeAttribute(nid2, settings.partitionType)])
126           var numOfBridgesBetweenCouple_BA = (typesCouples[g.getNodeAttribute(nid2, settings.partitionType) + g.getNodeAttribute(nid1, settings.partitionType)])
127           var numOfBridgesBetweenCouple = numOfBridgesBetweenCouple_AB + numOfBridgesBetweenCouple_BA
128
129           shownText += "\n\n-----\nCONSIDERING THE COUPLE: " + g.getNodeAttribute(nid1, settings.partitionType) + " (" + g.getNodeAttribute(nid2, settings.partitionType) + ")"
130           shownText += " BRIDGED BY " + numOfBridgesBetweenCouple_AB + " + " + numOfBridgesBetweenCouple_BA + " = " + numOfBridgesBetweenCouple + "\n"
131           //shownText += g.getNodeAttribute(nid1, settings.partitionType) + "-" + g.getNodeAttribute(nid2, settings.partitionType) + ";" + numOfBridgesBetweenCouple_AB +
132
133           var increasingBridgness = 1 / numOfBridgesBetweenCouple
134           shownText += "Thus accounting for an increase in bridgeness of: " + increasingBridgness
135
136           // Considering all the nodes bridging a couple of capacities and increasing their bridges measures
137           commonNeighborhood.forEach(function(commonNeighbor){
138
139             shownText += "\n\nConsidering contributor: " + g.getNodeAttribute(commonNeighbor, settings.labelsAttribute)
140
141             if ( (g.getNodeAttribute(nid1, settings.partitionType) != "Bureau") && (g.getNodeAttribute(nid2, settings.partitionType) != "Bureau") )
142             {
143               shownText += "\nGlobal bridgeness score was: " + g.getNodeAttribute(commonNeighbor, "bridgeness")
144               g.setNodeAttribute(commonNeighbor, "bridgeness", (g.getNodeAttribute(commonNeighbor, "bridgeness") + increasingBridgness) )
145               shownText += " and now is: " + g.getNodeAttribute(commonNeighbor, "bridgeness")
146             }
147
148             if ( (g.getNodeAttribute(nid1, settings.partitionType) == g.getNodeAttribute(nid2, settings.partitionType)) && ( g.getNodeAttribute(nid1, settings.partitionType) != "Bureau" ) )
149             {
150               shownText += "\nTemporal bridgeness was: " + g.getNodeAttribute(commonNeighbor, "temporal_bridgeness")
151               g.setNodeAttribute(commonNeighbor, "temporal_bridgeness", (g.getNodeAttribute(commonNeighbor, "temporal_bridgeness") + increasingBridgness) )
152               shownText += " and now is: " + g.getNodeAttribute(commonNeighbor, "temporal_bridgeness")
153             }
154
155             if ( (g.getNodeAttribute(nid1, settings.partitionUberType1) == "Author" && g.getNodeAttribute(nid2, settings.partitionUberType1) == "Author") && ( g.getNodeAttribute(nid1, settings.partitionUberType1) != "Delegate" ) || (g.getNodeAttribute(nid1, settings.partitionUberType1) == "Delegate" && g.getNodeAttribute(nid2, settings.partitionUberType1) == "Author" ) )
156             {
157               shownText += "\nThematic bridgeness was: " + g.getNodeAttribute(commonNeighbor, "thematic_bridgeness")
158               g.setNodeAttribute(commonNeighbor, "thematic_bridgeness", (g.getNodeAttribute(commonNeighbor, "thematic_bridgeness") + increasingBridgness) )
159               shownText += " and now is: " + g.getNodeAttribute(commonNeighbor, "thematic_bridgeness")
160             }
161
162             if ( (g.getNodeAttribute(nid1, settings.partitionUberType1) == "Author" && g.getNodeAttribute(nid2, settings.partitionUberType1) == "Delegate") || (g.getNodeAttribute(nid1, settings.partitionUberType1) == "Delegate" && g.getNodeAttribute(nid2, settings.partitionUberType1) == "Author" ) )
163             {
164               shownText += "\nFunctional bridgeness was: " + g.getNodeAttribute(commonNeighbor, "functional_bridgeness")
165               g.setNodeAttribute(commonNeighbor, "functional_bridgeness", (g.getNodeAttribute(commonNeighbor, "functional_bridgeness") + increasingBridgness) )
166               shownText += " and now is: " + g.getNodeAttribute(commonNeighbor, "functional_bridgeness")
167             }
168           }
```

# GRAPH RECIPES

Top degree bridging		Top weighted bridging		Top temporal bridging		Top thematic bridging		Top functional bridging	
Watson, Robert T.	10	Christ, R.	175	Pachauri, Rajendra	91	Kheshqi, Haroon	105	Christ, R.	68
Pachauri, Rajendra	9	Watson, Robert T.	143	Izrael, Yuri	64	House, Joanna I.	91	Watson, Robert T.	58
Qin, Dahe	9	Pachauri, Rajendra	135	Christ, R.	58	Van Vuuren, Detlef	87	Nurse, Leonard	56
Houghton, John T.	9	Ravindranath, Nijavalli H.	131	Canziani, Osvaldo F.	53	Scholes, Robert	85	Swart, Rob J.	53
Richels, Richard G.	8	Richels, Richard G.	121	Houghton, John T.	52	Richels, Richard G.	79	Hourcade, Jean-Charles	51
Davidson, Ogunlade	8	Schneider, Stephen	114	Pichs-Madruga, Ramon	38	Pachauri, Rajendra	76	Haites, Erik	51
Karoly, David J.	8	Qin, Dahe	113	Davidson, Ogunlade R.	36	Davidson,	73	Moss, Richard H.	49
Parry, Martin	8	Kheshqi, Haroon S.	111	Calvo Buendia, Eduardo	34	Ravindranath,	73	Halsnaes, Kirsten	49
Field, Christopher B.	8	Swart, Rob J.	106	Watson, Robert T.	32	Tirpak, Dennis A.	70	Cramer, Wolfgang P.	43
Vellinga, Pier	8	Parry, Martin	105	Lee, Hoesung	32	Schneider,	65	Reisinger, Andy	42
Cramer, Wolfgang P.	8	Scholes, Robert (bob) J.	105	Odingo, Richard	32	Watson, Robert T.	64	Meyer, Leo	40
Canziani, Osvaldo F.	8	Kundzewicz, Zbigniew	105	Qin, Dahe	31	Qin, Dahe	64	Friedlingstein, Pierre	35
Nurse, Leonard	8	Riahi, Keywan	103	Sokona, Youba	25	Oppenheimer,	61	Metz, Bert	35
Bolin, Bert	8	Sokona, Youba	103	Ravindranath, Nijavalli H.	25	Karoly, David J.	60	Grubb, Michael	34
Mearns, Linda O.	8	Zhou, Dadi	103	Riahi, Keywan	25	Grubb, Michael	59	Bolin, Bert	34
Fitzharris, B. Blair	8	Grubb, Michael	100	Zhou, Dadi	25	McFarland, Mack	59	Ravindranath, Nijavalli H.	33
Zillman, John	8	Davidson, Ogunlade R.	98	Parry, Martin	24	Harvey, Danny	59	Mirza, M. Monirul Qader	33
Semenov, Serguei M.	8	Hourcade, Jean-Charles	94	Kundzewicz, Zbigniew	24	Parry, Martin	54	Sokona, Youba	31
Ravindranath, Nijavalli	7	Haites, Erik	94	Swart, Rob J.	22	Kundzewicz,	54	Riahi, Keywan	31
Schneider, Stephen	7	House, Joanna I.	93	Stocker, Thomas F.	21	Prather, Michael	54	Zhou, Dadi	31
Oppenheimer, Michael	7	Houghton, John T.	92	Kattsov, Vladimir M.	21	Howden, Mark	52	Acosta Moreno, Roberto	31
Grubb, Michael	7	Cramer, Wolfgang P.	90	Schneider, Stephen	20	Fuglestvedt, Jan	52	Richels, Richard G.	30
Kundzewicz, Zbigniew	7	Van Vuuren, Detlef P.	90	Scholes, Robert (bob) J.	20	Christ, R.	48	Schneider, Stephen	29
Prather, Michael	7	Nurse, Leonard	89	Reisinger, Andy	20	Field, Christopher	48	Qin, Dahe	29
Christ, R.	7	Karoly, David J.	88	Rusticucci, Matilde	20	Sokona, Youba	47	Parry, Martin	28
Sokona, Youba	7	Lee, Hoesung	79	Sundaraman, N.	19	Riahi, Keywan	47	Kundzewicz, Zbigniew	28
Church, John A.	7	Reisinger, Andy	75	Vellinga, Pier	13	Zhou, Dadi	47	Semenov, Serguei M.	28
Pittock, A. Barrie	7	Rusticucci, Matilde	73	Metz, Bert	13	Vellinga, Pier	46	Nishioka, Shuzo	28
Cubasch, Ulrich	7	Moss, Richard H.	73	Van Ypersele, Jean-	13	O'Neill, Brian C.	46	Quennet-Thielen, Cornelia	28
Lee, Hoesung	7	Field, Christopher B.	72	Zillman, John	13	Lowe, Jason A.	46	Houghton, John T.	27
Hourcade, Jean-	7	Hourcade, Jean-	72	Munasinghe, Mohan	13	Church, John A.	45	Lee, Hoesung	27
Haites, Erik	7	Reisinger, Andy	71	Sutamihardja, R.T.M.	13	Houghton, John T.	44	Karoly, David J.	25
Marengo, José	7	Vellinga, Pier	71	Elgizouli, Ismail	13	Stocker, Thomas	44	Rusticucci, Matilde	24
Pichs-Madruga,	7	Church, John A.	69	Jouzel, Jean	13	Kattsov, Vladimir	44	Meira Filho, Gylvan	24
Van Ypersele, Jean-	7	Pittock, A. Barrie	68	Halsnaes, Kirsten	13	Jain, Atul K.	44	Tanaka, Kanako	24
Moss, Richard H.	7	Kattsov, Vladimir M.	65	Bolin, Bert	12	Rasch, Philip	44	Pan, Jiahua	24
Metz, Bert	7	Stocker, Thomas F.	65	Wratt, David	12	Houghton, Richard	44	Verbruggen, Aviel	24
Beniston, Martin	7	Oppenheimer, Michael	64	Ding, Yihui	12	Sathaye, Jayant	43	Pershing, Jonathan	24
Ogallo, Laban J.	7	Cubasch, Ulrich	64	Richels, Richard G.	12	Robinson, John B.	43	Baede, Alphonsus	24
Wratt, David	7	Canziani, Osvaldo F.	62	Petit, Michel	12	Cramer, Wolfgang	43	Cubasch, Ulrich	23
Ding, Yihui	7	McFarland, Mack	61	Hourcade, Jean-Charles	12	Pittock, A. Barrie	43	Perdomo, Martha	23
Joos, Fortunat	7	Bolin, Bert	61	Haites, Erik	12	Yohé, Gary W.	41	Zinyowera, M.C.	23
Halsnaes, Kirsten	7	Halsnaes, Kirsten	61	Canziani, Osvaldo	40	Olivier, Jos G.J.	40	Zillman, John	23
Nishioka, Shuzo	7	Harvey, Danny	61	Gruel, Arnulf	40				

WHO ARE THE BRIDGES

Top degree bridging		Top weighted bridging		Top temporal bridging		Top thematic bridging		Top functional bridging	
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Qin, Dahe	9	Pachauri, Rajendra	135	Christ, R.	58	Van Vuuren, Detlef	87	Nurse, Leonard	56
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Karoly, David J.	8	Qin, Dahe	113	Davidson, Ogunlade R.	36	Davidson,	73	Moss, Richard H.	49
Parry, Martin	8	Kheshqi, Haroon S.	111	Calvo Buendia, Eduardo	34	Ravindranath,	73	Halsnaes, Kirsten	49
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Vellinga, Pier	8	Parry, Martin	105	Lee, Hoesung	32	Schneider,	65	Reisinger, Andy	42
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Canziani, Osvaldo F.	8	Kundzewicz, Zbigniew	105	Qin, Dahe	31	Qin, Dahe	64	Friedlingstein, Pierre	35
Nurse, Leonard	8	Riahi, Keywan	103	Sokona, Youba	25	Oppenheimer,	61	Metz, Bert	35
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Ravindranath, Nijavalli	7	Haites, Erik	94	Swart, Rob J.	22	Kundzewicz,	54	Riahi, Keywan	31
Schneider, Stephen	7	House, Joanna I.	93	Stocker, Thomas F.	21	Prather, Michael	54	Zhou, Dadi	31

WHO ARE THE BRIDGES

THANKS !

TOMMASOVENTURINI.IT