SUPPLEMENTARY MATERIAL

CHAPTER 8

International technology innovation to accelerate energy transitions

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This is the supplementary material to Chapter 8 of the Ph.D. Thesis by Clara Rabelo Caiafa Pereira, entitled "Structural change in a green hydrogen economy: socioeconomic and climate change implications", to be defended at the Eindhoven University of Technology on the 6th of February of 2026.

Contents

SM5.1. Questionnaire from the survey on International Energy Agency (IEA) Technology Collaboration Programmes (TCPs)

A "multilateral energy technology cooperation" is often a driver that leads to multilateral cooperation being successful. IEA TCPs are an interesting case study because they have a long history. For over 40 years, they have worked towards the achievement of energy and climate goals.

The purpose of this survey is to understand the current evidence on the roles and effectiveness of IEA TCPs in energy technology cooperation.

This survey may take about 15 minutes. Your reply will be greatly appreciated!

1. *What is your occupation?
   ☐ Researcher
   ☐ Business (Utilities and industry)
   ☐ Policy-maker
   ☐ Other (   )

2. *How many years have you worked in your TCP?
   (   )

3. *Is the TCP you participate in aligned with international goals? (*i.e.,* increase in energy efficiency and low-carbon energy technology in energy mix, deployment of CO_2 reduction technology, R&D on advanced technology, etc.)
   ☐ Yes
   ☐ No

4. *Is the TCP you participate in aligned with national goals? (*i.e.,* increase in energy efficiency and introduce low-carbon energy technology into energy mix, deployment of CO_2 reduction technology, R&D on advanced technology, etc.)
   ☐ Yes
   ☐ No

5. *Does your TCP have sufficient human resources?
   ☐ Highly sufficient
   ☐ Sufficient
   ☐ Fair
   ☐ Insufficient
   ☐ Highly insufficient

6. *Does your TCP have sufficient financial resources?
   ☐ Highly sufficient

☐ Sufficient
☐ Fair
☐ Insufficient
☐ Highly insufficient

7. *Do your governing bodies such as a Working Party (*i.e.,* EUWP, WPFF, REWP, FPCC) give adequate feedback to help your TCP activities?
☐ Yes
☐ No

8. *Does your TCP have a central management organization such as so-called "Center"?
☐ Yes
☐ No

8.1 *If Yes, how well do you think the central management organization (i.e. Center) is performing?
☐ Very well
☐ Well
☐ Average
☐ Below average
☐ Not well

8.2 *If No, do you think it is necessary to have a central management organization such as a "Center"?
☐ Yes
☐ No

8.2.1 *If Yes, why do you think it is necessary? (Choose the best answer)
☐ For convenient and quick communication among participants
☐ For efficient information and data management
☐ To support activities besides technology development and sharing knowledge
☐ Other (   )

9. *Does political and economic relations among some countries in your TCP affect the activity you participate in?
☐ Yes
☐ No

10. *Does your TCP regularly hold **International conferences and forum, etc.** to share information and knowledge?
☐ Yes
☐ No

10.1. *How are international conferences and forums effective for sharing and understanding of knowledge and information? (five stars for the most effectiveness)
☆ ☆ ☆ ☆ ☆

11. *Does your TCP regularly issue **technical reports and annual reports** to share information and knowledge?
- ☐ Yes
- ☐ No

11.1. *How are technical reports and annual reports effective for sharing and understanding of knowledge and information? (five stars for the most effectiveness)
☆ ☆ ☆ ☆ ☆

12. *Does your TCP regularly issue **newsletters** to share information and knowledge?
- ☐ Yes
- ☐ No

12.1. *How are newsletters effective for sharing and understanding of knowledge and information? (five stars for the most effectiveness)
☆ ☆ ☆ ☆ ☆

13. *Does your TCP regularly hold webinar to share information and knowledge?
- ☐ Yes
- ☐ No

13.1. *How are webinars effective for sharing and understanding of knowledge and information? (five stars for the most effectiveness)
☆ ☆ ☆ ☆ ☆

14. *Does your TCP regularly hold training programmes to share information and knowledge?
- ☐ Yes
- ☐ No

14.1. *How are training programs effective for sharing and understanding of knowledge and information? (five stars for the most effectiveness)
☆ ☆ ☆ ☆ ☆

15. *Are you satisfied with the overall outputs of your TCP?
- ☐ Highly satisfied
- ☐ Satisfied
- ☐ Fair
- ☐ Unsatisfied
- ☐ Highly unsatisfied

16. *Has your TCP output been adopted as policy in your country?
- ☐ Yes
- ☐ No

16.1. *Why has your TCP output been adopted as policy in your country? (Multiple answers allowed)
- ☐ It aligns with the current energy policy situation in my country

☐ It helps to increase the profit for the domestic businesses
☐ It helps to drop the expenses over energy uses
☐ It helps to decrease greenhouse gas emission relieving global warming
☐ Other (   )

17. *Has your TCP output led to the technology deployment in your country?
☐ Yes
☐ No

17.1. *Why has your TCP output led to the technology deployment in your country? (Multiple answers allowed)
☐ It aligns with the current energy policy situation in my country
☐ There are sufficient inter-organizational communication and activities in my country.
☐ It is suitable considering my country's circumstance (*e.g.,* natural resources and energy use)
☐ It helps to increase the profit for the domestic businesses
☐ It does not require high expenses for technology deployment in my country
☐ It helps to decrease greenhouse gas emission relieving global warming
☐ Other (   )

18. *Has your TCP output led to economic benefits in your country?
☐ Yes
☐ No

18.1. *What is the reason that the TCP output you participated in led to economic benefits in your country? (Multiple answers allowed)
☐ It aligns with the current energy policy situation in my country
☐ It is fit to the market circumstance in my country
☐ It is easily commercialized to increase the profit for the domestic businesses
☐ It helps to decrease greenhouse gas emission leading to less payment for environmental cost (*e.g.,* carbon tax)
☐ Other (   )

19. *Has your TCP output led to increase social acceptance of your TCP's technology in your country?
☐ Yes
☐ No

19.1. *What is the reason that your TCP output has led to social acceptance in your country? (Multiple answers allowed)
☐ Sufficient inter-organizational communication and activities in my country contributes to increase social acceptance
☐ It helps to increase the profit for the domestic businesses
☐ It helps to drop the expenses over energy uses
☐ It helps to decrease greenhouse gas emission relieving global warming
☐ Other (   )

20. *Do you think that your TCP activity is sufficient as in good?
    ☐ Yes
    ☐ No

21. Do you think your TCP can produce a better output if you cooperate with other TCPs?
    ☐ Yes
    ☐ No

22. *Does your TCP cooperate with other organizations (*e.g.,* Mission Innovation, Clean Energy Ministerial, etc.)?
    ☐ Yes
    ☐ No

23. *Does your TCP need to cooperate with other organization (e.g., Mission Innovation, Clean Energy Ministerial, etc.)?
    ☐ Yes
    ☐ No

24. *Do you think you have sufficient cooperation with other organizations (*e.g.,* Mission Innovation, Clean Energy Ministerial, etc.)?
    ☐ Yes
    ☐ No

25. *Is your TCP recognized well enough in your country?
    ☐ Yes
    ☐ No

26. *Does your TCP need to be recognized more widely?
    ☐ Yes
    ☐ No

27. Final comments and suggestion.
    (   )

SM5.2. Supplementary material on survey results and analysis

SM5.2.1. Representativeness and missingness

From 173 initial answers, 21 observations could not be considered valid (they did not actually answer the survey). As a result, our sample contained 152 valid answers. SM5.2 Table 1 below summarises survey results by variable.

SM5.2 Table 1: Summary results of survey by variable

a) Categorical variables

Variable	Missing	Complete(%)	n	TopCounts
TCP.Abbreviation	0	100	18	PVP: 18, EBC: 14, SHC: 14, FBC: 12
TCP.Sector	0	100	7	Ren: 54, Bui: 44, Tra: 19, Fos: 15
Category	0	100	3	Adv: 125, Dev: 22, Oth: 5
Occupation	0	100	4	Res: 74, Oth: 34, Pol: 34, Bus: 10
ParisComp	0	100	3	Com: 85, Ena: 64, Not: 3

b) Numeric variables

Variable	Missing	Complete(%)	Mean	sd	p0	p25	p50	p75	p100	Histogram
Years	0	100.00	9.28	8.01	0.5	3	7	13	40	
Membership	0	100.00	0.89	0.32	0.0	1	1	1	1	
InternationalGoals	0	100.00	0.98	0.14	0.0	1	1	1	1	
NationalGoals	0	100.00	0.97	0.16	0.0	1	1	1	1	
HumanRes	1	99.34	3.50	0.73	2.0	3	4	4	5	
FinancialRes	1	99.34	3.38	0.81	1.0	3	4	4	5	
WorkingParty	6	96.05	0.73	0.45	0.0	0	1	1	1	
CentralManagement	0	100.00	0.63	0.48	0.0	0	1	1	1	
CentralManagePerform	56	63.16	4.41	0.72	1.0	4	5	5	5	
CenterNece	92	39.47	0.23	0.43	0.0	0	0	0	1	
PoliticalRelations	3	98.03	0.32	0.47	0.0	0	0	1	1	
InterConf	3	98.03	0.87	0.33	0.0	1	1	1	1	
EffecInterConf	22	85.53	4.20	0.68	2.0	4	4	5	5	
Reports	2	98.68	0.94	0.24	0.0	1	1	1	1	
EffecReports	12	92.11	4.10	0.77	1.0	4	4	5	5	
Newsletters	4	97.37	0.72	0.45	0.0	0	1	1	1	
EffecNewsletters	49	67.76	3.83	0.88	2.0	3	4	4	5	
Webinar	3	98.03	0.48	0.50	0.0	0	0	1	1	
EffecWebinar	80	47.37	4.01	0.83	1.0	3	4	5	5	
Training	5	96.71	0.22	0.41	0.0	0	0	0	1	
EffecTrainings	120	21.05	3.97	1.00	1.0	3	4	5	5	
OutSatisf	5	96.71	4.08	0.69	1.0	4	4	5	5	
PolicyAdop	10	93.42	0.28	0.45	0.0	0	0	1	1	
TechDeploy	11	92.76	0.51	0.50	0.0	0	1	1	1	
EconBen	15	90.13	0.42	0.49	0.0	0	0	1	1	
SocAcc	17	88.82	0.50	0.50	0.0	0	1	1	1	
ActSuff	13	91.45	0.88	0.32	0.0	1	1	1	1	
BetterIfCoop	12	92.11	0.91	0.28	0.0	1	1	1	1	
CoopOther	15	90.13	0.71	0.46	0.0	0	1	1	1	
NeedCoop	112	26.32	0.48	0.51	0.0	0	0	1	1	
CoopSuff	16	89.47	0.55	0.50	0.0	0	1	1	1	
CountryRec	15	90.13	0.53	0.50	0.0	0	1	1	1	
RecMore	16	89.47	0.78	0.42	0.0	1	1	1	1	
CompLevel	0	100.00	2.54	0.54	1.0	2	3	3	3	

In 2019, 20.6% of all entities participating in TCPs were from developing economies and 77.5% from advanced economies (SM5.2, Table 2). In the sample, 75% of emails were from participants from advanced economies and 19% from developing economies. Neverthless, of the 152 valid answers, only 14.5% were from participants from developing countries. This

is even lower for complete observations (13.8%). Therefore, even though the sample was representative in this regard, there was an overrepresentation of advanced economies in the final answers due to a higher response rate for participants from advanced economies (33%) in comparison to participants from countries from "developing" (23%) and "other" categories (15%). When collecting emails of participants from TCPs websites, there was no information available about their occupation that would allow us for assessing the distribution of occupations in the sample.

Reasons for this underrepresentation of developing countries can be a lower availability of human and time resources, or a higher burden for filling in the survey due to lower English language proficiency. The latter was indeed observed during the interviews, where some developing countries interviewees asked for sending written answers first for not feeling comfortable with doing a whole interview in English. To overcome potential bias, results are presented in the paper separating development categories.

SM5.2, Table 2: Distribution of occupation and development category in the population of entities, survey sample and answers

VARIABLE	N° of entities[1]		Population of participants	Sample of participants (emails)		Valid answers		Response rate	Complete observations	
Occupation						n	%		n	%
Business						10	6.6%	-	8	6.5%
Other		*Unknown[2]*	*Unknown[2]*	*Unknown[2]*		34	22.4%	-	26	21.1%
Policy-maker						34	22.4%	-	28	22.8%
Researcher						74	48.7%	-	61	49.6%
Development	n	%		n	%	n	%		n	%
Advanced	421	77.5%		383	75%	125	82.2%	33%	103	83.7%
Developing	112	20.6%	*Unknown[3]*	95	19%	22	14.5%	23%	17	13.8%
Other	10	1.8%		33	6%	5	3.3%	15%	3	2.4%
Total				**511**		**152**			**123**	

[1] Number of entities participating in TCPs in 2019
[2] Unknown because information is available only for whether the entity is designated by the country (contracting parties) or not (sponsors) but not from what type of organization or which occupation their participants have.
[3] Unknown because even though we know the number of entities by country, some entities have more than 1 person assigned to participate in TCPs activities.

Regarding missingness, 82.4% of respondents from advanced economies provided complete answers against 77% from developing economies. SM5.2 Table 3 shows that missingness increased towards the end of the survey for all country categories and participant observations, being however proportionately higher for developing countries and "other"

country categories. One explanation could be that some of these are aspects that relate to outcome in countries (policy adoption, social acceptance, economic benefits, technology adoption) so developing countries may have lower capabilities or less time participating in TCPs to have the knowledge about these results, while this question would be non-applicable to international organizations. One can imagine that not knowing the answer to one question, the survey participant could then stop further answering the survey.

A limitation of the survey design is that since the options were limited to "Yes" and "No" a NA could mean different things, from "I do not know", to "This does not apply to my case", to an unintentionally skipped answer. Since missingness is higher towards the end of the survey, this could also mean that the survey ended up being too long for participants to answer. Moving on with only complete observations would imply removing around 20% of valid answers. Given the already limited sample size, and the multiple meanings a "NA" could have, we decided to move on with all observations (n = 152). For transparency, the share of missingness is reported for every question in SM5.2 Table 3.

SM5.2 Table 3: Missingness by question, according to country category and participant occupation

	Country category						Occupation									TOTAL	
	Developing		Advanced		Other		Business		Policy-Maker		Researcher		Other				
	Valid	NA %	Valid	NA %	Valid	NA %	Valid	NA %	Valid	NA %	Valid	NA %	Valid	NA %		Valid	NA %
Years	22	0%	125	0%	5	0%	10	0%	34	0%	74	0%	34	0%		152	0%
InternationalGoals	22	0%	125	0%	5	0%	10	0%	34	0%	74	0%	34	0%		152	0%
NationalGoals	22	0%	125	0%	5	0%	10	0%	34	0%	74	0%	34	0%		152	0%
HumanRes	22	0%	124	1%	5	0%	10	0%	34	0%	73	1%	34	0%		151	1%
FinancialRes	22	0%	124	1%	5	0%	10	0%	34	0%	73	1%	34	0%		151	1%
WorkingParty	21	5%	120	4%	5	0%	9	10%	34	0%	70	5%	33	3%		146	4%
CentralManagement	22	0%	125	0%	5	0%	10	0%	34	0%	74	0%	34	0%		152	0%
PoliticalRelations	22	0%	122	2%	5	0%	9	10%	33	3%	74	0%	33	3%		149	2%
InterConf	22	0%	122	2%	5	0%	10	0%	33	3%	73	1%	33	3%		149	2%
Reports	21	5%	124	1%	5	0%	10	0%	32	6%	74	0%	34	0%		150	1%
Newsletters	21	5%	122	2%	5	0%	10	0%	31	9%	73	1%	34	0%		148	3%
Webinar	21	5%	123	2%	5	0%	10	0%	32	6%	73	1%	34	0%		149	2%
Training	21	5%	121	3%	5	0%	10	0%	31	9%	73	1%	33	3%		147	3%
OutSatisf	20	9%	122	2%	5	0%	10	0%	32	6%	73	1%	32	6%		147	3%
PolicyAdop	20	9%	117	6%	5	0%	9	10%	31	9%	72	3%	30	12%		142	7%
TechDeploy	19	14%	118	6%	4	20%	10	0%	32	6%	69	7%	30	12%		141	7%
EconBen	19	14%	114	9%	4	20%	10	0%	31	9%	68	8%	28	18%		137	10%
SocAcc	19	14%	112	10%	4	20%	9	10%	31	9%	67	9%	28	18%		135	11%
ActSuff	19	14%	116	7%	4	20%	9	10%	30	12%	71	4%	29	15%		139	9%
BetterIfCoop	19	14%	117	6%	4	20%	9	10%	30	12%	71	4%	30	12%		140	8%
CoopOther	18	18%	115	8%	4	20%	10	0%	31	9%	66	11%	30	12%		137	10%
CoopSuff	18	18%	115	8%	3	40%	9	10%	30	12%	67	9%	30	12%		136	11%
CountryRec	18	18%	115	8%	4	20%	9	10%	31	9%	67	9%	30	12%		137	10%
RecMore	18	18%	114	9%	4	20%	9	10%	31	9%	67	9%	29	15%		136	11%

In terms of potential bias according to 1.5°C Compatibility, we see a similar response rate for all three categories. However, in our sample, there is an overrepresentation of TCPs that are "Compatible" and an underrepresentation of TCPs that are "Not compatible" with 1.5°C pathways. This overrepresentation can therefore be explained by a higher average amount of emails by TCP (SM5.2, Table 4).

SM5.2 Table 4: Distribution of compatibility in the population of entities, survey sample and answers

Compatibility	N of entities[1]	Share total entities[1]	Sample (emails)	Prop Sample	Survey Answers	Prop Answers	Resp Rate
Compatible	250	46.0%	280	55%	85	56%	30%
Enabling, mixed or evolving	232	42.7%	221	43%	64	42%	29%
Not compatible	22	7.2%	10	2%	3	2%	30%
Fusion Power[2]	39	4.1%			*Excluded*		

[1] as of 2019.

[2] Excluded from the analysis as explained in methods section

SM5.2 Table 5 shows the distribution of entities by TCP, as well as in the sample and answers. TCPs that had more emails available, on average, per participating entity, ended up being overrepresented in the sample. Response rates varied greatly across TCPs, ranging from 15-50%. As a result, overrepresentation in the sample did not always translate in overrepresentation in the answers.

SM5.2 Table 5: Distribution of TCP participation in the population of entities, survey sample and answers

TCP	Name	Sector	Compatibility with 1.5C	Number of Entities	Prop from total Entities	Sample (emails)	Emails/Entity	PropSample	Answers	PropAnswers	RespRate	Mean(OutputSatisf)
Users	User-Centred Energy Systems	Electricity	Enabling, mixed or evolving	16	3%	34	2.13	7%	5	3%	15%	3.4
ETSAP	Energy Technology Systems Analysis	Cross-Cutting	Enabling, mixed or evolving	24	4%	11	0.46	2%	3	2%	27%	3.7
IETS	Industrial Technologies and Systems	Industry	Enabling, mixed or evolving	10	2%	18	1.80	4%	9	6%	50%	3.7
BioEnergy	Bioenergy	Renewables And H2	Compatible	24	4%	42	1.75	8%	10	7%	24%	3.9
DHC	District Heating and Cooling	Buildings	Compatible	13	2%	22	1.69	4%	11	7%	50%	4
SHC	Solar Heating and Cooling	Renewables And H2	Compatible	19	3%	40	2.11	8%	14	9%	35%	4
HEV	Hybrid and Electric Vehicles	Transport	Compatible	18	3%	13	0.72	3%	4	3%	31%	4
HPT	Heat Pumping Technologies	Buildings	Compatible	20	4%	37	1.85	7%	8	5%	22%	4.1
H2	Hydrogen	Renewables And H2	Enabling, mixed or evolving	23	4%	44	1.91	9%	12	8%	27%	4.1
PVPS	Photovoltaic Power Systems	Renewables And H2	Compatible	27	5%	66	2.44	13%	18	12%	27%	4.1
AMF	Advanced Motor Fuels	Transport	Enabling, mixed or evolving	17	3%	31	1.82	6%	9	6%	29%	4.1
EBC	Buildings and Communities	Buildings	Compatible	28	5%	33	1.18	6%	14	9%	42%	4.2
4E	Energy Efficient End-use Equipment	Buildings	Enabling, mixed or evolving	14	3%	15	1.07	3%	3	2%	20%	4.3
ECES	Energy Storage	Buildings	Enabling, mixed or evolving	19	3%	23	1.21	5%	8	5%	35%	4.3
HTS	High-Temperature Superconductivity	Electricity	Enabling, mixed or evolving	10	2%	16	1.60	3%	3	2%	19%	4.3
AFC	Advanced Fuel Cells	Transport	Compatible	15	3%	27	1.80	5%	6	4%	22%	4.3
EOR	Enhanced Oil Recovery	Fossil Fuels	Not compatible	15	3%	10	0.67	2%	3	2%	30%	4.5
FBC	Fluidised Bed Conversion	Fossil Fuels	Enabling, mixed or evolving	17	3%	29	1.71	6%	12	8%	41%	4.5

The tables below present some key results from the survey aggregated by TCP. That is, when responses for each survey participant are grouped according to the TCP that they participate in.

SM5.2 Table 6 – Summary of survey answers when grouping at TCP level (n=18)

Variable	Missing	Mean	sd	p0	p25	p50	p75	p100	hist
Deve	0	0.1116	0.11603	0.00	0.0000	0.110	0.2025	0.33	
Membership	0	0.9428	0.10442	0.71	0.9325	1.000	1.0000	1.00	
InternationalGoals	0	0.9956	0.04006	0.83	1.0000	1.000	1.0000	1.00	
NationalGoals	0	0.9667	0.08096	0.67	1.0000	1.000	1.0000	1.00	
HumanRes	0	3.5639	0.40828	2.50	3.3250	3.620	3.9500	4.00	
FinancialRes	0	3.4861	0.43648	2.50	3.3000	3.500	3.9175	4.00	
WorkingParty	0	0.7550	0.20379	0.44	0.6000	0.710	1.0000	1.00	
CentralManagement	0	0.6038	0.24729	0.00	0.5000	0.670	0.7400	1.00	
InterConf	0	0.8927	0.12091	0.67	0.8000	0.920	1.0000	1.00	
Reports	0	0.9455	0.12462	0.50	0.9475	1.000	1.0000	1.00	
Newsletters	0	0.6905	0.33470	0.00	0.5000	0.845	1.0000	1.00	
Webinar	0	0.4744	0.35818	0.00	0.1850	0.415	0.8400	1.00	
Training	0	0.2061	0.27435	0.00	0.0000	0.140	0.2375	1.00	
OutSatisf	0	4.0388	0.35424	3.00	4.0000	4.090	4.2675	4.50	
PolicyAdop	0	0.2955	0.20745	0.00	0.1775	0.290	0.4325	0.67	
TechDeploy	0	0.5044	0.27811	0.00	0.3550	0.500	0.6700	1.00	
EconBen	0	0.4166	0.27188	0.00	0.3000	0.360	0.5925	1.00	
SocAcc	0	0.4400	0.27291	0.00	0.2325	0.470	0.7000	0.79	
ActSuff	0	0.8950	0.15018	0.50	0.8600	0.955	1.0000	1.00	
BetterIfCoop	0	0.8744	0.14622	0.50	0.8075	0.910	1.0000	1.00	
CoopOther	0	0.6817	0.27024	0.14	0.5000	0.730	0.8825	1.00	
CoopSuff	0	0.5422	0.27119	0.00	0.3300	0.580	0.7000	1.00	
CountryRec	0	0.5411	0.25930	0.00	0.3475	0.555	0.7000	1.00	
RecMore	0	0.7633	0.24608	0.00	0.6700	0.790	0.9225	1.00	

Tables 7-9 summarise the survey results at TCP level disaggregating by TCP. That is, they show the average answer for each variable and each TCP. As it can be seen from Table 7, there were no answers from developing countries for some TCPs, and share of IEA members was also substantially high. Given the small sample size (n=18) and the relatively high number of variables of interest (n=25), any regression analysis on TCP level was found to be difficult.

SM5.2 Table 7 – Percentage of answers of developing countries and IEA members by TCP

#	TCP	% Developing country in total answers	% IEA members in total answers
1	4E	0	100
2	AFC	0	100
3	AMF	33	100
4	BioEnergy	0	100
5	DHC	1	100
6	EBC	12	100
7	ECES	29	71
8	EOR	0	100
9	ETSAP	0	100
10	FBC	18	91

11	H2	22	78
12	HEV	25	100
13	HPT	17	100
14	HTS	0	100
15	IETS	0	100
16	PVPS	14	86
17	SHC	21	71
18	Users	0	100

SM5.2 Table 8 – Means of answers for mobilization of resources by TCP

#	TCP	InterConf	Reports	Newsletters	Webinar	Training	OutSatisf	PolicyAdop	TechDeploy	EconBen	SocAcc	ActSuff	HumanRes	FinancialRes
1	4E	1	1	1	1	0	4.33	0.67	0.33	0.33	0	1	4	4
2	AFC	1	1	1	0.4	0.2	4.2	0	0.2	0	0.2	0.8	3.6	4
3	AMF	0.67	1	0.83	0.33	0	4	0.33	0.5	0.33	0.33	0.83	3.67	3.5
4	BioEnergy	0.89	1	1	0.78	0.11	3.89	0.22	0.67	0.67	0.44	0.89	3.56	3.44
5	DHC	1	0.8	0.2	0.2	0	4	0.2	0.5	0.6	0.1	0.9	3.8	3.6
6	EBC	0.75	0.88	1	0.88	0	4.12	0.38	0.5	0.25	0.5	1	4	3.5
7	ECES	1	1	0.86	0.14	0.14	4.29	0.29	0.57	0.57	0.71	1	3.29	3.29
8	EOR	1	1	0	0	0	4.5	0	1	1	0.5	1	4	4
9	ETSAP	1	1	0.33	0	1	3.67	0.67	0.33	0.67	0.33	1	4	4
10	FBC	0.91	0.91	0.18	0.18	0.18	4.45	0.45	0.73	0.55	0.64	0.91	3.64	3.09
11	H2	0.78	1	0.67	0.56	0.11	4.11	0.11	0.44	0.44	0.78	0.56	3.56	3.33
12	HEV	0.75	1	0.5	0.25	0.25	4	0.5	1	0.75	0.75	1	4	4
13	HPT	1	1	1	0	0.17	4.17	0.17	0.67	0.33	0.67	1	3	2.83
14	HTS	0.67	1	1	0.67	0.33	4.33	0.33	0	0	0.33	1	3.67	3.67
15	IETS	0.86	1	0.57	0.43	0.14	3.57	0	0.43	0.29	0.14	1	3.29	3.57
16	PVPS	0.86	0.93	0.86	0.86	0.29	4.07	0.21	0.5	0.36	0.71	0.86	3.43	3.43
17	SHC	0.93	1	0.93	0.86	0.79	4	0.29	0.71	0.36	0.79	0.86	3.14	3
18	Users	1	0.5	0.5	1	0	3	0.5	0	0	0	0.5	2.5	2.5

SM5.2 Table 9 – Means of answers for coordination by TCP

#	TCP	InternationalGoals	NationalGoals	WorkingParty	CentralManagement	BetterIfCoop	CoopOther	CoopSuff	CountryRec	RecMore
1	4E	1	1	1	0.33	0.67	1	1	0.33	0.67
2	AFC	1	1	0.6	0.8	0.8	0.4	0.2	0.4	0.8
3	AMF	1	1	0.83	0.83	0.83	0.67	0.33	0.67	0.67

4	BioEnergy	1	1	1	0.89	0.89	0.78	0.67	0.56	0.78
5	DHC	1	1	0.6	0.5	1	0.8	0.6	0.5	0.9
6	EBC	1	1	0.5	0.5	0.88	0.75	0.38	0.62	0.75
7	ECES	1	1	0.71	0.71	1	1	0.71	0.71	1
8	EOR	1	1	1	0	0.5	0.5	1	1	0
9	ETSAP	1	1	0.67	0.67	1	0.33	0.33	1	1
10	FBC	1	1	0.82	0.27	1	0.27	0.64	0.55	0.64
11	H2	1	0.89	0.44	0.67	0.89	0.89	0.56	0.22	0.89
12	HEV	1	1	1	0.75	0.75	1	0.75	0.75	0.75
13	HPT	0.83	1	0.5	1	1	1	0.83	0.67	1
14	HTS	1	0.67	1	0.67	0.67	0.67	0.33	0.33	0.67
15	IETS	1	1	0.57	0.71	1	0.14	0.29	0.29	0.86
16	PVPS	1	1	0.64	0.71	0.93	0.71	0.64	0.71	0.43
17	SHC	1	0.93	0.71	0.36	0.93	0.86	0.5	0.43	0.93
18	Users	1	1	1	0.5	1	0.5	0	0	1

SM5.2.3. Survey results and representativeness according to TCPs characteristics

As explained, only 18 out of the 30 TCPs analysed in this study (38 total excluding 8 from Fusion Power) had an email available on their website at the moment of this survey. In order to understand whether there was a systematic reason behind it, we look at whether a TCP being in the sample or not was correlated with any of the characteristics such as compatibility level and share of developing countries (see Table below). There seems to be a positive (low) correlation with years since TCP creation and total participation, and a negative (low) correlation with percentage of non-IEA members.

Appendix II Table 10 – Correlation between TCPs characteristics and being or not in the survey sample

Variable	EnvSust	SustDeveObjt	CompLevel	PercNonMember	YearsCreation	PercSP	TotalParticipation	ShareDeveloping	SurveySample	Interview.Sample	ResearchSample
EnvSust	1.000	0.237	0.076	-0.130	-0.239	0.074	0.121	-0.299	-0.120	0.170	0.049
SustDeveObjt	0.237	1.000	-0.116	0.052	-0.067	0.226	0.039	-0.326	0.031	0.040	0.113
CompLevel	0.076	-0.116	1.000	-0.222	0.105	-0.290	0.410	0.104	0.045	-0.125	-0.110
PercNonMember	-0.130	0.052	-0.222	1.000	0.118	0.251	-0.154	0.684	-0.365	0.310	-0.032
YearsCreation	-0.239	-0.067	0.105	0.118	1.000	0.005	0.314	0.155	0.304	0.098	0.237
PercSP	0.074	0.226	-0.290	0.251	0.005	1.000	-0.245	-0.168	-0.070	0.191	0.212
TotalParticipation	0.121	0.039	0.410	-0.154	0.314	-0.245	1.000	0.123	0.348	0.225	0.351
ShareDeveloping	-0.299	-0.326	0.104	0.684	0.155	-0.168	0.123	1.000	-0.250	0.228	-0.077
SurveySample	-0.120	0.031	0.045	-0.365	0.304	-0.070	0.348	-0.250	1.000	-0.055	0.612
Interview.Sample	0.170	0.040	-0.125	0.310	0.098	0.191	0.225	0.228	-0.055	1.000	0.468
ResearchSample	0.049	0.113	-0.110	-0.032	0.237	0.212	0.351	-0.077	0.612	0.468	1.000

We do a regression to see if any of these TCP characteristics would be correlated with TCPs being included (1) or not (0) in the survey sample, when controlling for other variables. Results suggest that TCPs with larger number of participants were more likely to be included in the survey, ceteris paribus. Models 3-6 suggest that TCPs with lower diversity of contexts were more likely to be included in the sample, holding other characteristics constant.

SM5.2 Table 11 – Influence of TCPs characteristics on being or not in the survey sample

	Dependent variable:					
	SurveySample					
	logistic (1)	*probit* (2)	*logistic* (3)	*probit* (4)	*logistic* (5)	*probit* (6)
EnvSust	-1.772 (1.739)	-1.136 (1.002)	-1.920 (1.739)	-1.209 (1.000)	-1.691 (1.712)	-1.062 (0.977)
SustDeveObjt	0.143 (1.403)	-0.056 (0.783)	-0.429 (1.255)	-0.348 (0.703)	0.365 (1.205)	0.106 (0.671)
CompLevel	-0.750 (0.991)	-0.487 (0.570)	-0.546 (0.946)	-0.368 (0.545)	-0.787 (0.977)	-0.519 (0.561)
PercNonMember	-8.070 (10.530)	-4.152 (5.391)			-11.027* (6.298)	-6.264* (3.413)
YearsCreation	0.047 (0.042)	0.025 (0.024)	0.043 (0.041)	0.025 (0.023)	0.047 (0.042)	0.025 (0.024)
PercSP	0.444 (3.559)	0.369 (2.157)	-0.511 (3.330)	-0.239 (2.007)	0.621 (3.539)	0.512 (2.149)
TotalParticipation	0.172* (0.102)	0.107* (0.059)	0.186* (0.097)	0.115** (0.056)	0.168 (0.104)	0.104* (0.059)
ShareDeveloping	-3.310 (10.486)	-2.497 (5.807)	-10.969* (5.664)	-6.603** (3.207)		
Constant	1.340 (3.143)	0.971 (1.762)	1.415 (3.089)	0.988 (1.746)	1.116 (3.049)	0.804 (1.706)
Observations	30	30	30	30	30	30
Log Likelihood	-13.996	-14.005	-14.441	-14.390	-14.043	-14.087
Akaike Inf. Crit.	45.992	46.009	44.882	44.781	44.086	44.174

Note: *p**p***p<0.01

As explained in the methods section, the interview sampling strategy also aimed at reducing potential biases from the survey sample. Tables 10 and 12 shows that, indeed, when considering the entire research sample (survey + interviews), correlations with diversity disappear. Here, only the total participation seems to be positively correlated, indicating that TCPs with a larger number of participants were more likely to have emails available on their websites and hence be included in our sample.

SM5.2 Table 12 – Influence of TCPs characteristics on being or not in the research sample

	logistic	*probit*	*logistic*	*probit*	*logistic*	*probit*
	(1)	(2)	(3)	(4)	(5)	(6)
EnvSust	0.111	0.087	0.141	0.097	0.216	0.140
	(1.708)	(1.029)	(1.695)	(1.020)	(1.665)	(0.998)
SustDeveObjt	-0.080	-0.014	-0.038	0.0004	0.039	0.043
	(2.022)	(1.108)	(1.971)	(1.085)	(1.918)	(1.048)
CompLevel	-2.188	-1.247	-2.073	-1.210	-2.020	-1.179
	(1.883)	(1.007)	(1.645)	(0.906)	(1.624)	(0.893)
PercNonMember	2.366	0.874			-1.505	-1.013
	(14.802)	(8.408)			(5.293)	(3.146)
YearsCreation	0.027	0.017	0.024	0.015	0.021	0.014
	(0.060)	(0.033)	(0.056)	(0.032)	(0.056)	(0.031)
PercSP	14.473	8.054	13.934	7.849	14.028	7.822
	(15.554)	(8.845)	(14.511)	(8.456)	(14.267)	(8.287)
TotalParticipation	0.318[*]	0.179[*]	0.308[*]	0.176[*]	0.301[*]	0.171[*]
	(0.188)	(0.100)	(0.172)	(0.093)	(0.168)	(0.091)
ShareDeveloping	-4.302	-2.107	-2.008	-1.262		
	(15.387)	(8.760)	(5.444)	(3.253)		
Constant	0.871	0.492	0.666	0.427	0.426	0.300
	(4.047)	(2.244)	(3.745)	(2.101)	(3.591)	(1.992)
Observations	30	30	30	30	30	30
Log Likelihood	-9.651	-9.543	-9.664	-9.548	-9.691	-9.570
Akaike Inf. Crit.	37.302	37.087	35.328	35.096	35.381	35.140

Dependent variable:

ResearchSample

Note: *p**p***p<0.01

SM5.2.4. *Comparison of populations*

We conducted a Kruskall-Wallis test for comparison of populations on all response variables to the survey to test whether there were any statistically significant differences in survey responses for mobilization of resources and coordination according to diversity of actors (Occupation) and context (Category), as well as to 1.5^{o}C compatibility (ParisComp). We opted for a non-parametric test since the data is not normally distributed and has a small sample size, especially for some groups (see SM5.2 Table 1). The computed p-values from the Kruskal-Wallis test are presented in the table below.

SM5.2, Table 13: Results for p-values from Kruskal-Wallis test

Variable	pVal(Category)	pVal(Occupation)	pVal(ParisComp)

Years	0.305	0.028**	0.555
Membership	0.000***	0.851	0.397
InternationalGoals	0.007***	0.231	0.000***
NationalGoals	0.790	0.621	0.003***
HumanRes	0.011***	0.908	0.414
FinancialRes	0.387	0.603	0.930
WorkingParty	0.059*	0.220	0.964
CentralManagement	0.374	0.766	0.068*
CentralManagePerform	0.914	0.693	0.303
CenterNece	0.135	0.651	0.254
PoliticalRelations	0.036**	0.836	0.625
InterConf	0.112	0.504	0.301
EffecInterConf	0.542	0.694	0.184
Reports	0.001***	0.821	0.125
EffecReports	0.026**	0.207	0.743
Newsletters	0.455	0.407	0.001***
EffecNewsletters	0.100*	0.188	0.874
Webinar	0.573	0.094*	0.031**
EffecWebinar	0.648	0.236	0.640
Training	0.101	0.119	0.202
EffecTrainings	0.083*	0.658	0.621
OutSatisf	0.187	0.491	0.668
PolicyAdop	0.618	0.362	0.599
TechDeploy	0.816	0.212	0.171
EconBen	0.699	0.027**	0.228
SocAcc	0.027**	0.403	0.742
ActSuff	0.000***	0.209**	0.761
BetterIfCoop	0.455	0.577	0.110
CoopOther	0.971	0.284	0.033**
NeedCoop	0.584	0.133	0.575
CoopSuff	0.130	0.577	0.334
CountryRec	0.062*	0.560	0.120
RecMore	0.449	0.787	0.023**

Levels of significance: ***<= 0.01, ** <=0.05, *<=0.10

Table 14 below shows survey results for all variables according to country category, including p-values from the Kruskal-Wallis test.

SM5.2, Table 14: Survey results according to country category, including p-values from Kruskal-Wallis test

Variable	Category	Missing	Complete	Mean	sd	pVal	Hist
Mobilization of resources							
ActSuff****	Advanced	9	92.80	0.92	0.27	0.000	
	Developing	3	86.36	0.79	0.42	0.000	
	Other	1	80.00	0.25	0.50	0.000	
OutSatisf	Advanced	3	97.60	4.10	0.64	0.187	
	Developing	2	90.91	4.10	0.97	0.187	
	Other	0	100.00	3.60	0.55	0.187	
HumanRes***	Advanced	1	99.20	3.50	0.70	0.010	
	Developing	0	100.00	3.68	0.78	0.010	
	Other	0	100.00	2.60	0.55	0.010	
FinancialRes	Advanced	1	99.20	3.40	0.80	0.387	
	Developing	0	100.00	3.41	0.85	0.387	
	Other	0	100.00	3.00	0.71	0.387	
InterConf	Advanced	3	97.60	0.89	0.31	0.112	
	Developing	0	100.00	0.82	0.39	0.112	
	Other	0	100.00	0.60	0.55	0.112	
EffecInterConf	Advanced	16	87.20	4.18	0.65	0.542	
	Developing	4	81.82	4.33	0.77	0.542	
	Other	2	60.00	4.00	1.00	0.542	
Reports***	Advanced	1	99.20	0.97	0.18	0.001	
	Developing	1	95.45	0.86	0.36	0.001	
	Other	0	100.00	0.60	0.55	0.001	
EffecReports**	Advanced	6	95.20	4.07	0.79	0.026	
	Developing	4	81.82	4.44	0.51	0.026	
	Other	2	60.00	3.33	0.58	0.026	
Newsletters	Advanced	3	97.60	0.74	0.44	0.455	
	Developing	1	95.45	0.62	0.50	0.455	
	Other	0	100.00	0.60	0.55	0.455	
EffecNewsletters*	Advanced	37	70.40	3.77	0.91	0.100	
	Developing	10	54.55	4.33	0.49	0.100	
	Other	2	60.00	3.67	0.58	0.100	
Webinar	Advanced	2	98.40	0.46	0.50	0.573	
	Developing	1	95.45	0.57	0.51	0.573	
	Other	0	100.00	0.60	0.55	0.573	
EffecWebinar	Advanced	69	44.80	3.96	0.87	0.648	
	Developing	9	59.09	4.15	0.69	0.648	
	Other	2	60.00	4.33	0.58	0.648	
Training	Advanced	4	96.80	0.20	0.40	0.101	
	Developing	1	95.45	0.24	0.44	0.101	
	Other	0	100.00	0.60	0.55	0.101	
EffecTrainings*	Advanced	101	19.20	3.75	1.03	0.083	
	Developing	17	22.73	4.60	0.55	0.083	
	Other	2	60.00	4.67	0.58	0.083	
PolicyAdop	Advanced	8	93.60	0.26	0.44	0.618	
	Developing	2	90.91	0.35	0.49	0.618	
	Other	0	100.00	0.40	0.55	0.618	
TechDeploy	Advanced	7	94.40	0.50	0.50	0.816	
	Developing	3	86.36	0.58	0.51	0.816	
	Other	1	80.00	0.50	0.58	0.816	
EconBen	Advanced	11	91.20	0.43	0.50	0.699	
	Developing	3	86.36	0.37	0.50	0.699	
	Other	1	80.00	0.25	0.50	0.699	
SocAcc**	Advanced	13	89.60	0.46	0.50	0.027	
	Developing	3	86.36	0.79	0.42	0.027	
	Other	1	80.00	0.50	0.58	0.027	

Coordination

WorkingParty**	Advanced	5	96.00	0.77	0.42	0.059	
	Developing	1	95.45	0.52	0.51	0.059	
	Other	0	100.00	0.60	0.55	0.059	
CentralManagement	Advanced	0	100.00	0.66	0.48	0.374	
	Developing	0	100.00	0.50	0.51	0.374	
	Other	0	100.00	0.60	0.55	0.374	
CentralManagePerform	Advanced	43	65.60	4.40	0.75	0.914	
	Developing	11	50.00	4.45	0.52	0.914	
	Other	2	60.00	4.33	0.58	0.914	
CenterNece	Advanced	78	37.60	0.19	0.40	0.135	
	Developing	11	50.00	0.45	0.52	0.135	
	Other	3	40.00	0.00	0.00	0.135	
BetterIfCoop	Advanced	8	93.60	0.92	0.27	0.455	
	Developing	3	86.36	0.89	0.32	0.455	
	Other	1	80.00	0.75	0.50	0.455	
InternationalGoals***	Advanced	0	100.00	0.99	0.09	0.007	
	Developing	0	100.00	0.95	0.21	0.007	
	Other	0	100.00	0.80	0.45	0.007	
CoopOther	Advanced	10	92.00	0.70	0.46	0.971	
	Developing	4	81.82	0.72	0.46	0.971	
	Other	1	80.00	0.75	0.50	0.971	
NeedCoop	Advanced	91	27.20	0.50	0.51	0.584	
	Developing	17	22.73	0.40	0.55	0.584	
	Other	4	20.00	0.00		0.584	
CoopSuff	Advanced	10	92.00	0.57	0.50	0.130	
	Developing	4	81.82	0.50	0.51	0.130	
	Other	2	60.00	0.00	0.00	0.130	
NationalGoals	Advanced	0	100.00	0.98	0.15	0.790	
	Developing	0	100.00	0.95	0.21	0.790	
	Other	0	100.00	1.00	0.00	0.790	
CountryRec**	Advanced	10	92.00	0.57	0.50	0.062	
	Developing	4	81.82	0.44	0.51	0.062	
	Other	1	80.00	0.00	0.00	0.062	
RecMore	Advanced	11	91.20	0.76	0.43	0.449	
	Developing	4	81.82	0.83	0.38	0.449	
	Other	1	80.00	1.00	0.00	0.449	

Levels of significance: ***<= 0.01, ** <=0.05, *<=0.10

Table 15 below shows survey results for all variables according to participant occupation, including p-values from the Kruskal-Wallis test.

SM5.2, Table 15: Survey results according to participant occupation, including p-values from Kruskal-Wallis test
A – Binary variables

Variable	Occupation	Missing	Complete	Perc(== Yes)	sd	pVal	p100	Hist
Membership	Business(Utilitiesandindustry)	0	100.00	90.00	0.316	0.851	1	
	Other	0	100.00	91.18	0.288	0.851	1	
	Policy-Maker	0	100.00	91.18	0.288	0.851	1	
	Researcher	0	100.00	86.49	0.344	0.851	1	
InternationalGoals	Business(Utilitiesandindustry)	0	100.00	90.00	0.316	0.231	1	
	Other	0	100.00	97.06	0.171	0.231	1	
	Policy-Maker	0	100.00	100.00	0.000	0.231	1	
	Researcher	0	100.00	98.65	0.116	0.231	1	
NationalGoals	Business(Utilitiesandindustry)	0	100.00	100.00	0.000	0.620	1	
	Other	0	100.00	97.06	0.171	0.620	1	
	Policy-Maker	0	100.00	100.00	0.000	0.620	1	
	Researcher	0	100.00	95.95	0.199	0.620	1	
WorkingParty	Business(Utilitiesandindustry)	1	90.00	55.56	0.527	0.220	1	
	Other	1	97.06	69.70	0.467	0.220	1	
	Policy-Maker	0	100.00	85.29	0.359	0.220	1	
	Researcher	4	94.59	70.00	0.462	0.220	1	
CentralManagement	Business(Utilitiesandindustry)	0	100.00	60.00	0.516	0.765	1	
	Other	0	100.00	70.59	0.462	0.765	1	
	Policy-Maker	0	100.00	58.82	0.500	0.765	1	
	Researcher	0	100.00	62.16	0.488	0.765	1	
CenterNece	Business(Utilitiesandindustry)	6	40.00	0.00	0.000	0.651	0	
	Other	24	29.41	30.00	0.483	0.651	1	
	Policy-Maker	19	44.12	20.00	0.414	0.651	1	
	Researcher	43	41.89	25.81	0.445	0.651	1	
PoliticalRelations	Business(Utilitiesandindustry)	1	90.00	44.44	0.527	0.836	1	
	Other	1	97.06	33.33	0.479	0.836	1	
	Policy-Maker	1	97.06	33.33	0.479	0.836	1	
	Researcher	0	100.00	29.73	0.460	0.836	1	
InterConf	Business(Utilitiesandindustry)	0	100.00	100.00	0.000	0.504	1	
	Other	1	97.06	81.82	0.392	0.504	1	
	Policy-Maker	1	97.06	87.88	0.331	0.504	1	
	Researcher	1	98.65	87.67	0.331	0.504	1	
Reports	Business(Utilitiesandindustry)	0	100.00	90.00	0.316	0.821	1	
	Other	0	100.00	97.06	0.171	0.821	1	
	Policy-Maker	2	94.12	93.75	0.246	0.821	1	
	Researcher	0	100.00	93.24	0.253	0.821	1	
Newsletters	Business(Utilitiesandindustry)	0	100.00	90.00	0.316	0.407	1	
	Other	0	100.00	70.59	0.462	0.407	1	
	Policy-Maker	3	91.18	77.42	0.425	0.407	1	
	Researcher	1	98.65	67.12	0.473	0.407	1	
Webinar*	Business(Utilitiesandindustry)	0	100.00	70.00	0.483	0.094	1	
	Other	0	100.00	38.24	0.493	0.094	1	
	Policy-Maker	2	94.12	62.50	0.492	0.094	1	
	Researcher	1	98.65	43.84	0.500	0.094	1	

Training	Business(Utilitiesandindustry)	0	100.00	50.00	0.527	0.119	1
	Other	1	97.06	18.18	0.392	0.119	1
	Policy-Maker	3	91.18	25.81	0.445	0.119	1
	Researcher	1	98.65	17.81	0.385	0.119	1
PolicyAdop	Business(Utilitiesandindustry)	1	90.00	44.44	0.527	0.362	1
	Other	4	88.24	23.33	0.430	0.362	1
	Policy-Maker	3	91.18	19.35	0.402	0.362	1
	Researcher	2	97.30	31.94	0.470	0.362	1
TechDeploy	Business(Utilitiesandindustry)	0	100.00	70.00	0.483	0.212	1
	Other	4	88.24	63.33	0.490	0.212	1
	Policy-Maker	2	94.12	43.75	0.504	0.212	1
	Researcher	5	93.24	46.38	0.502	0.212	1
EconBen**	Business(Utilitiesandindustry)	0	100.00	80.00	0.422	0.027	1
	Other	6	82.35	50.00	0.509	0.027	1
	Policy-Maker	3	91.18	41.94	0.502	0.027	1
	Researcher	6	91.89	32.35	0.471	0.027	1
SocAcc	Business(Utilitiesandindustry)	1	90.00	66.67	0.500	0.403	1
	Other	6	82.35	50.00	0.509	0.403	1
	Policy-Maker	3	91.18	38.71	0.495	0.403	1
	Researcher	7	90.54	53.73	0.502	0.403	1
ActSuff	Business(Utilitiesandindustry)	1	90.00	77.78	0.441	0.209	1
	Other	5	85.29	89.66	0.310	0.209	1
	Policy-Maker	4	88.24	80.00	0.407	0.209	1
	Researcher	3	95.95	92.96	0.258	0.209	1
BetterIfCoop	Business(Utilitiesandindustry)	1	90.00	88.89	0.333	0.577	1
	Other	4	88.24	96.67	0.183	0.577	1
	Policy-Maker	4	88.24	86.67	0.346	0.577	1
	Researcher	3	95.95	91.55	0.280	0.577	1
CoopOther	Business(Utilitiesandindustry)	0	100.00	80.00	0.422	0.284	1
	Other	4	88.24	83.33	0.379	0.284	1
	Policy-Maker	3	91.18	64.52	0.486	0.284	1
	Researcher	8	89.19	66.67	0.475	0.284	1
NeedCoop	Business(Utilitiesandindustry)	8	20.00	50.00	0.707	0.133	1
	Other	29	14.71	0.00	0.000	0.133	0
	Policy-Maker	23	32.35	45.45	0.522	0.133	1
	Researcher	52	29.73	59.09	0.503	0.133	1
CoopSuff	Business(Utilitiesandindustry)	1	90.00	66.67	0.500	0.577	1
	Other	4	88.24	60.00	0.498	0.577	1
	Policy-Maker	4	88.24	60.00	0.498	0.577	1
	Researcher	7	90.54	49.25	0.504	0.577	1
CountryRec	Business(Utilitiesandindustry)	1	90.00	55.56	0.527	0.560	1
	Other	4	88.24	56.67	0.504	0.560	1
	Policy-Maker	3	91.18	41.94	0.502	0.560	1
	Researcher	7	90.54	56.72	0.499	0.560	1
RecMore	Business(Utilitiesandindustry)	1	90.00	66.67	0.500	0.787	1
	Other	5	85.29	82.76	0.384	0.787	1
	Policy-Maker	3	91.18	77.42	0.425	0.787	1
	Researcher	7	90.54	77.61	0.420	0.787	1
CompLevel	Business(Utilitiesandindustry)	0	100.00	270.00	0.483		3
	Other	0	100.00	258.82	0.557		3
	Policy-Maker	0	100.00	252.94	0.563		3
	Researcher	0	100.00	250.00	0.530		3

B – Ordinary variables

Variable	Occupation	Missing	Complete	Mean	sd	pVal(	Histogram
Years	Business(Utilitiesandindustry)	0	100.00	11.20	8.039	0.028	
	Other	0	100.00	7.17	5.994	0.028	
	Policy-Maker	0	100.00	6.54	5.233	0.028	
	Researcher	0	100.00	11.24	9.290	0.028	
HumanRes	Business(Utilitiesandindustry)	0	100.00	3.40	0.699	0.908	
	Other	0	100.00	3.47	0.706	0.908	
	Policy-Maker	0	100.00	3.50	0.707	0.908	
	Researcher	1	98.65	3.52	0.766	0.908	
FinancialRes	Business(Utilitiesandindustry)	0	100.00	3.70	0.483	0.603	
	Other	0	100.00	3.38	0.739	0.603	
	Policy-Maker	0	100.00	3.44	0.786	0.603	
	Researcher	1	98.65	3.32	0.880	0.603	
CentralManagePerform	Business(Utilitiesandindustry)	4	60.00	4.50	0.837	0.693	
	Other	10	70.59	4.46	0.509	0.693	
	Policy-Maker	14	58.82	4.55	0.605	0.693	
	Researcher	28	62.16	4.30	0.840	0.693	
EffecInterConf	Business(Utilitiesandindustry)	0	100.00	4.00	0.471	0.694	
	Other	7	79.41	4.26	0.526	0.694	
	Policy-Maker	5	85.29	4.24	0.689	0.694	
	Researcher	10	86.49	4.19	0.753	0.694	
EffecReports	Business(Utilitiesandindustry)	1	90.00	4.00	1.000	0.207	
	Other	2	94.12	3.91	0.689	0.207	
	Policy-Maker	4	88.24	4.10	0.759	0.207	
	Researcher	5	93.24	4.20	0.778	0.207	
EffecNewsletters	Business(Utilitiesandindustry)	1	90.00	4.11	0.601	0.188	
	Other	12	64.71	3.91	0.811	0.188	
	Policy-Maker	10	70.59	3.54	0.884	0.188	
	Researcher	26	64.86	3.90	0.928	0.188	
EffecWebinar	Business(Utilitiesandindustry)	3	70.00	4.29	0.756	0.236	
	Other	22	35.29	3.67	0.651	0.236	
	Policy-Maker	14	58.82	4.00	0.725	0.236	
	Researcher	41	44.59	4.09	0.947	0.236	
EffecTrainings	Business(Utilitiesandindustry)	5	50.00	4.00	1.000	0.658	
	Other	28	17.65	4.17	0.983	0.658	
	Policy-Maker	26	23.53	3.50	1.309	0.658	
	Researcher	61	17.57	4.15	0.801	0.658	
OutSatisf	Business(Utilitiesandindustry)	0	100.00	4.20	0.632	0.491	
	Other	2	94.12	4.12	0.609	0.491	
	Policy-Maker	2	94.12	3.94	0.669	0.491	
	Researcher	1	98.65	4.11	0.737	0.491	

SM5.2.4.3.   Results according to 1.5ºC compatibility

Table 16 below shows survey results for all variables according to 1.5ºC compatibility, including p-values from the Kruskal-Wallis test.

SM5.2, Table 16: Survey results according to compatibility of technology focus including p-values from Kruskal-Wallis test

A – Ordinary variables

Variable	ParisComp	Missing	Complete	Mean	sd	pVal	Histogram
Years	Compatible	0	100.00	8.72	7.704	0.555	
	Enabling, mixed or evolving	0	100.00	10.06	8.543	0.555	
	Not compatible	0	100.00	8.33	4.726	0.555	
HumanRes	Compatible	0	100.00	3.47	0.733	0.414	
	Enabling, mixed or evolving	1	98.44	3.51	0.738	0.414	
	Not compatible	0	100.00	4.00	0.000	0.414	

Variable	ParisComp	Missing	Complete	mean	sd	pVal	Histogram
FinancialRes	Compatible	0	100.00	3.40	0.819	0.930	
	Enabling, mixed or evolving	1	98.44	3.37	0.789	0.930	
	Not compatible	0	100.00	3.33	1.155	0.930	
CentralManagePerform	Compatible	29	65.88	4.48	0.632	0.303	
	Enabling, mixed or evolving	24	62.50	4.30	0.823	0.303	
	Not compatible	3	0.00			0.303	
EffecInterConf	Compatible	10	88.24	4.11	0.689	0.184	
	Enabling, mixed or evolving	11	82.81	4.32	0.644	0.184	
	Not compatible	1	66.67	4.50	0.707	0.184	
EffecReports	Compatible	7	91.76	4.10	0.731	0.742	
	Enabling, mixed or evolving	4	93.75	4.08	0.829	0.742	
	Not compatible	1	66.67	4.50	0.707	0.742	
EffecNewsletters	Compatible	19	77.65	3.83	0.921	0.874	
	Enabling, mixed or evolving	27	57.81	3.84	0.800	0.874	
	Not compatible	3	0.00			0.874	
EffecWebinar	Compatible	38	55.29	4.06	0.818	0.640	
	Enabling, mixed or evolving	39	39.06	3.92	0.862	0.640	
	Not compatible	3	0.00			0.640	
EffecTrainings	Compatible	63	25.88	4.00	1.069	0.621	
	Enabling, mixed or evolving	54	15.62	3.90	0.876	0.621	
	Not compatible	3	0.00			0.621	
OutSatisf	Compatible	3	96.47	4.07	0.681	0.668	
	Enabling, mixed or evolving	1	98.44	4.08	0.703	0.668	
	Not compatible	1	66.67	4.50	0.707	0.668	

B- Binary variables

Variable	ParisComp	Missing	Complete	Perc(== Yes)	sd	pVal	Histogram
Membership	Compatible	0	100.00	90.59	0.294	0.397	
	Enabling, mixed or evolving	0	100.00	87.50	0.333	0.397	
	Not compatible	0	100.00	66.67	0.577	0.397	
InternationalGoals***	Compatible	0	100.00	98.82	0.108	0.000	
	Enabling, mixed or evolving	0	100.00	98.44	0.125	0.000	
	Not compatible	0	100.00	66.67	0.577	0.000	
NationalGoals***	Compatible	0	100.00	98.82	0.108	0.003	
	Enabling, mixed or evolving	0	100.00	96.88	0.175	0.003	
	Not compatible	0	100.00	66.67	0.577	0.003	
WorkingParty	Compatible	2	97.65	72.29	0.450	0.964	
	Enabling, mixed or evolving	4	93.75	73.33	0.446	0.964	
	Not compatible	0	100.00	66.67	0.577	0.964	
CentralManagement*	Compatible	0	100.00	65.88	0.477	0.068	
	Enabling, mixed or evolving	0	100.00	62.50	0.488	0.068	
	Not compatible	0	100.00	0.00	0.000	0.068	
CenterNece	Compatible	53	37.65	31.25	0.471	0.254	
	Enabling, mixed or evolving	39	39.06	16.00	0.374	0.254	
	Not compatible	0	100.00	0.00	0.000	0.254	
PoliticalRelations	Compatible	2	97.65	28.92	0.456	0.625	
	Enabling, mixed or evolving	1	98.44	36.51	0.485	0.625	
	Not compatible	0	100.00	33.33	0.577	0.625	
InterConf	Compatible	2	97.65	90.36	0.297	0.301	
	Enabling, mixed or evolving	1	98.44	84.13	0.368	0.301	
	Not compatible	0	100.00	66.67	0.577	0.301	
Reports	Compatible	2	97.65	95.18	0.215	0.125	
	Enabling, mixed or evolving	0	100.00	93.75	0.244	0.125	
	Not compatible	0	100.00	66.67	0.577	0.125	
Newsletters***	Compatible	2	97.65	81.93	0.387	0.001	
	Enabling, mixed or evolving	2	96.88	61.29	0.491	0.001	
	Not compatible	0	100.00	0.00	0.000	0.001	

Webinar**	Compatible	2	97.65	56.63	0.499	0.031	
	Enabling, mixed or evolving	1	98.44	39.68	0.493	0.031	
	Not compatible	0	100.00	0.00	0.000	0.031	
Training	Compatible	3	96.47	26.83	0.446	0.202	
	Enabling, mixed or evolving	2	96.88	16.13	0.371	0.202	
	Not compatible	0	100.00	0.00	0.000	0.202	
PolicyAdop	Compatible	7	91.76	26.92	0.446	0.599	
	Enabling, mixed or evolving	2	96.88	30.65	0.465	0.599	
	Not compatible	1	66.67	0.00	0.000	0.599	
TechDeploy	Compatible	7	91.76	55.13	0.501	0.171	
	Enabling, mixed or evolving	3	95.31	44.26	0.501	0.171	
	Not compatible	1	66.67	100.00	0.000	0.171	
EconBen	Compatible	9	89.41	42.11	0.497	0.228	
	Enabling, mixed or evolving	5	92.19	38.98	0.492	0.228	
	Not compatible	1	66.67	100.00	0.000	0.228	
SocAcc	Compatible	10	88.24	53.33	0.502	0.742	
	Enabling, mixed or evolving	6	90.62	46.55	0.503	0.742	
	Not compatible	1	66.67	50.00	0.707	0.742	
ActSuff	Compatible	8	90.59	89.61	0.307	0.761	
	Enabling, mixed or evolving	4	93.75	86.67	0.343	0.761	
	Not compatible	1	66.67	100.00	0.000	0.761	
BetterIfCoop	Compatible	9	89.41	92.11	0.271	0.110	
	Enabling, mixed or evolving	2	96.88	91.94	0.275	0.110	
	Not compatible	1	66.67	50.00	0.707	0.110	
CoopOther**	Compatible	10	88.24	80.00	0.403	0.033	
	Enabling, mixed or evolving	4	93.75	60.00	0.494	0.033	
	Not compatible	1	66.67	50.00	0.707	0.033	
NeedCoop	Compatible	70	17.65	46.67	0.516	0.575	
	Enabling, mixed or evolving	40	37.50	45.83	0.509	0.575	
	Not compatible	2	33.33	100.00		0.575	
CoopSuff	Compatible	10	88.24	57.33	0.498	0.333	
	Enabling, mixed or evolving	5	92.19	50.85	0.504	0.333	
	Not compatible	1	66.67	100.00	0.000	0.333	
CountryRec	Compatible	10	88.24	58.67	0.496	0.119	
	Enabling, mixed or evolving	4	93.75	45.00	0.502	0.119	
	Not compatible	1	66.67	100.00	0.000	0.119	
RecMore**	Compatible	11	87.06	77.03	0.424	0.023	
	Enabling, mixed or evolving	4	93.75	81.67	0.390	0.023	
	Not compatible	1	66.67	0.00	0.000	0.023	

SM5.2.5. Additional tests

We ran some additional one-sided tests for pairwise comparisons using Wilcoxon rank sum test whenever the difference was not significant, but that results indicated that there could still be an effect for specific categories, occupations or type of compatibility. These are reported in Section II.5.1.

Moreover, we ran some exploratory regressions to assess whether correlations that seemed significant from the Kruskal-Wallis test would still remain so when controlling for other variables. These are reported in SM5.2.5.2.

SM5.2.5.1.   One sided-tests

II.5.1.1) Need of a center and development category

Results from SM5.2, Table 13 showed what could indicate a difference for answers on the need for a central management organization and country category: 45% of developing countries answered yes, against 19% of advanced countries and 0% of others, but the p-value showed that Category as a whole was not significant (0.135). We ran some additional one-sided tests to for pairwise comparisons using Wilcoxon rank sum test. For the alternative hypotheses that the answers from developing countries was greater than for developed countries, the p-value was 0.11 – this is still non-significant, but could indicate that something may be at hand especially because of high levels of missingness for this question. All other p-values were not even close to indicate a significant relationship (1.00).

II.5.1.2) Better output if cooperate with other TCPs and 1.5ᵒC compatibility

Results from SM5.2, Table 15 showed that 92% of "Compatible" and "Enabling, mixed or evolving" TCPs said their TCP could produce a better output if they cooperated with others, against 50% of "Not-compatible" TCPs (p-value: 0.11). We ran an additional one-sided test for pairwise comparisons using Wilcoxon rank sum test to identify whether participants from not-compatible TCPs were less likely to answer "Yes" to this question. We found that participants from "Not-Compatible" TCPs were less likely to answer their TCPs can produce a better output if they cooperate with others in comparison with those from TCPs with at least some degree of compatibility ("Compatible" and "Enabling, mixed or evolving" categories)(p-value 0.066).

II.5.1.3) Participant occupation and TCP conducting trainings

Results from SM5.2, Table 14 show that 50% of participants from a Business occupation answered that their TCPs conducted trainings, against much lower percentages for other occupations: 26% for policy-makers, 18% for researchers and 18% for "Others". We ran an one-sided test for pairwise comparisons using Wilcoxon rank sum test to identify whether participants with a Business occupation were more likely to answer that their TCPs conducted trainings and we found this difference to be significant only between Business and Researchers (p-value 0.066).

SM5.2.5.2.   Exploratory regressions

The previous study by Hattori et al (2022) used the same survey data to identify the most effective input and output channels for outcomes of international R&D collaborations. They are based on a logical framework approach and conduct step-wise regressions to answer to two questions: 1) which inputs lead to highest output satisfaction; and 2) which dissemination channels lead to positive innovation outcomes. Since the study is based on the log framework, they take a linear approach to innovation, and hence present a fundamentally different view than the systemic approach in our study. Moreover, as their question concerned innovation outcomes in participating countries, which included technology deployment, social acceptance, policy adoption and economic benefits, the concerns related to a fundamental shift in socio-

technical systems were not included in their models. As a result, by focusing on a logical framework (input-output-outcome) framework, the Hattori et al (2022) study lacks the 1) systemic approach from the transitions and innovation literature and 2) does not incorporate how diversity of participants (in terms of occupation and country category) and 1.5°C compatibility affect the results.

Our paper tries to address these limitations by looking at how directionality (1.5°C compatibility and environmental sustainability goals) and diversity of actors and contexts (country level of development, participant occupation, and share of sponsors) could play a role. Moreover, we do not consider that innovation follows a linear approach and hence allow for factors considered as "outcome" to feedback and influence "inputs": for instance, leading to social acceptance or technology deployment in a country (outcomes) could in fact increase recognition of TCP in a country and hence facilitate mobilization of financial and human resources (inputs) for that TCP. Figures 1 and 2 show the differences between Hattori et al (2022) framework and the framework of this study.
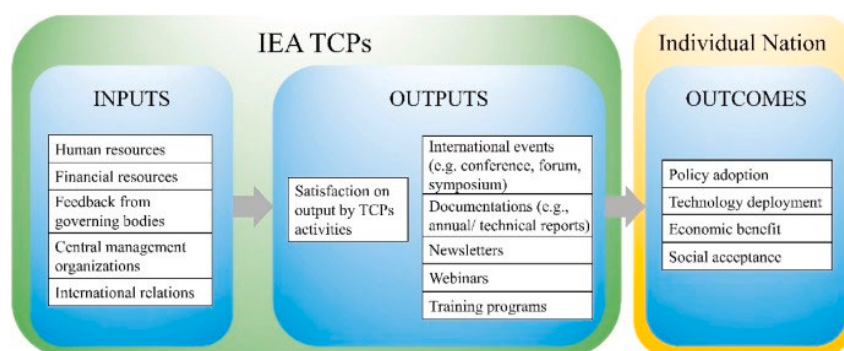
SM5.2, Figure 1. Hattori et al (2022) Analytical framework for TCP survey data (Hattori et al. 2022)
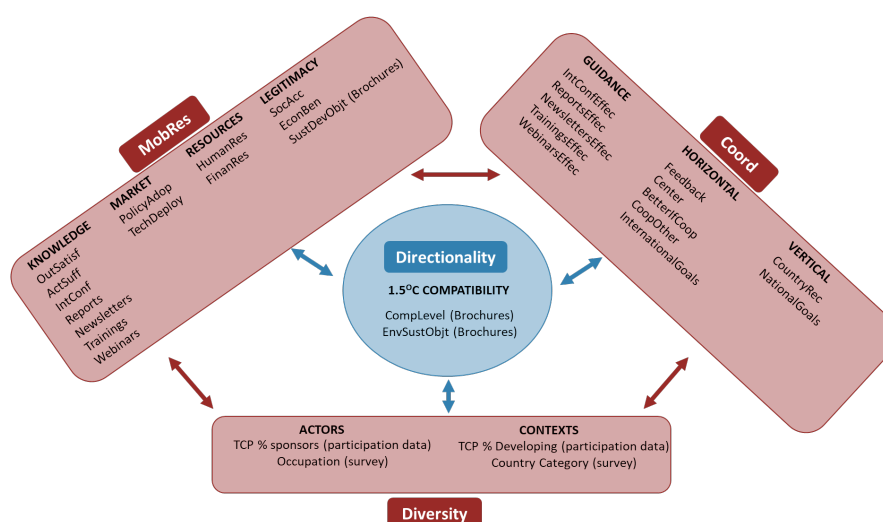
SM5.2, Figure 2. Analytical framework of this study

Firstly, we summarize the findings from the regressions conducted by Hattori et al (2022). Then we discuss the implications of a systemic approach, as well as from the findings from the interviews, to their approach. We then report results of some exploratory regressions

intended to incorporate this systemic approach as well as the findings from interviews. As it can be seen from Figure 2, this paper does not aim to derive causal unidirectional relationships between variables, but rather explore which links seem to be the most important in the system. Hence, it is only a first step in the identification of the dynamics in this system, and more investigation would be needed to further shed lights on which relationships are the most robust. This was out of the scope of this exploratory paper, but could be an area for further research.

SM5.2.5.2.1.   *Short summary of findings from previous regression study on survey data*

In the study from Hattori et al (2022), they identify Human Resources as the main input affecting satisfaction with knowledge sharing activities (called "OutSatisf" in the study). Coordination aspects also seemed to be important for satisfaction with outputs, especially the existence of a center (CentralManagement) and whether the feedback of the center was adequate (CentralManagePerform). Other relevant variables for output satisfaction were the interaction of FinanRes*IR meaning that sufficient financial resources with no influence of international relations increased satisfaction with outputs.

By looking at the impact of outputs on outcomes, Hattori et al (2022) paper provides insights on how knowledge sharing activities affected what we call market formation (policy adoption and technology deployment) and legitimacy (social acceptance and economic benefits). Regarding policy adoption, the interaction of international conferences, reports and trainings (IntConf*Reports*Training) was the best explaining model, followed by the interaction between webinars and trainings (Webinar*Training). For technology deployment, a combination of all five knowledge sharing activities was the best model, but models excluding international conferences also performed well (Reports*Newsletters*Trainings*Webinars and Newsletters*Trainings). For social acceptance, trainings was the only knowledge sharing activity that increased social acceptance, followed by reports. For economic benefits, reports were the most effective activity, while a combination of reports and webinars (Reports*Webinars) were the best fitting model. Regarding how coordination affected outcomes, they find that alignment with national goals was significant for leading to economic benefits, technology deployment and policy adoption in participant's countries. Our regressions

Four our regressions, we first elaborate models including the variables found to be significant in the study from Hattori et al (2022) and then control for diversity by looking at respondent's Occupation and country Category as well as indicators for TCPs diversity of participation such as percentage of non-IEA members (PercNonMember), percentage of sponsors (PercSp) and share of developing countries in total participation (ShareDeveloping). Additionally, we control for TCP's directionality indicators such as CompLevel (1- Not compatible, 2- Enabling, mixed or Evolving and 3- Compatible) and presence of environmental sustainability goals in TCP's brochures (EnvSust). Additionally, we control for whether TCPs have a sustainable development objective stated in the brochures (SustDeveObjt), and TCP total participation and age (calculated as years since TCP creation as of 2020).

Table 17 on next page shows the correlation matrix between the variables in the survey. As it can be seen, the only strong correlation found is not between survey answers but rather

between TCP characteristics of percentage of non-IEA members (PercNonMembers) and participation of developing countries (ShareDeveloping). For this reason, we decide to keep only ShareDeveloping as a variable for the preliminary regressions.

For each of the survey variables, we first attempted to fit regression models with the full range of variables (since correlation was relatively low), but most models did not converge. This could be explained by the very small sample of complete observations. Therefore, a subset of the survey data is created (SurveySub) to contain only the variables to which a response was mandatory. This was done to remove variables to which there was a high number of missing observations due to answers of previous questions. These included variables for effectiveness of knowledge sharing activities (variables EffecInterConf, EffecWebinar, EffecNewsletters, EffecTraining, EffecReport), since those that had previously answered that their TCP did not conduct those activities skipped this question, variables for performance of central management organization and the necessity of a center (CentralManagePerfom and CenterNece), since these depended on whether the participant had previously answered whether their TCP had such a center, and the variable for whether the participants thought their TCP had to cooperate more with international organizations (NeedCoop), since this seemed to rely on them having answered that their TCPs did not cooperate with such an organization.

For each variable, we create multiple regression models. Firstly, we regress the dependent variable on all variables from the survey sub-set, controlling for respondent characteristics (Occupation and Category of country of origin) and TCP characteristics, such as share of developing countries and sponsors in participation, compatibility with 1.5°C, years since creation, total participation, and objectives in brochures. For these models, the variable inflation factor is checked. If variables had a VIF > 3, the variable with the highest VIF was dropped and the model re-specified.

Due to high level of missingness, sample size for models taking all survey variables into account dropped from 152 to 123 observations. Since the exploratory data analysis in SM5.2.1 shows that missingness was higher for developing countries and "other" country categories than for advanced economies, this smaller sample has an even higher bias on representativeness, as 83% (n=103) observations would now be from advanced economies and 13% (n=17) from a developing country. Moreover, only 2 observations come from TCPs with a non-compatible level, against 51 from "enabling, mixed or evolving" and 70 from "compatible" TCPs.

Other models are estimated with smaller sets of variables in an interactive process, where different variables are added and removed based on relations that could be expected either from the analytical framework, previous studies, or interviews. For each model goodness-of-fit indicators are compared to assess which models perform better. Some models differed in the significance of coefficients, sometimes without an obvious reason, since sample sizes also differed according to the available observations for a given set of variables. The choice to use different sample sizes for some models was based on the motivation to incorporate as many observations from developing countries as possible, given the already limited sample size for this category.

Moreover, for all five knowledge sharing activities, from a same TCP there were both respondents saying "yes", that their TCP organized a certain knowledge sharing activity, and respondents saying that "no", they did not. A "No" hence does not seem to mean that the TCP

does not organize the activity in reality, as it could also mean that the respondent was simply less aware of it. The same could apply for other variables, since there was no option of "I don't know" as survey answer. Therefore, interpretation of results should be done carefully and it is not possible to derive any causal relation from this preliminary analysis. Further research would be needed to investigate the causes of these differences and further improve on the work of this study.

The best models are reported in the next sections. Interpretation of these models should be done carefully, given limitations of e.g., sample sizes and bias, possibility of omitted variables, untested potential moderating effects, among others. Hence, the focus will be only on variables that seemed to be consistently significant (and for which direction did not change) across models, while the exact magnitude of the correlation is difficult to assess.

SM5.2, Table 17 - Correlation Matrix on numerical variables in the survey dataset, strong correlations highlighted (-.5 < r < .5)

	Years	InternationalGoals	NationalGoals	HumanRes	FinancialRes	WorkingParty	CentralManagement	InterConf	Reports	Newsletters	Webinar	Training	OutSatisf	PolicyAdop	TechDeploy	EconBen	SocAcc	ActSuff	BetterIfCoop	CoopOther	CoopSuff	CountryRec	RecMore	EnvSust	SustDeveObjt	CompLevel	PercNonMember	age	PercSP	TotalParticipation	ShareDeveloping
Years	**1.0**	-0.1	-0.1	0.0	0.0	0.0	0.1	-0.2	-0.2	-0.1	-0.1	-0.1	0.1	0.2	0.1	0.1	0.1	-0.1	0.0	-0.1	0.1	0.1	-0.3	0.1	-0.2	-0.1	0.0	0.1	-0.1	0.0	0.1
InternationalGoa	-0.1	**1.0**	0.0	0.1	0.1	-0.1	-0.1	0.0	0.0	-0.1	0.1	0.1	0.0	0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.1	-0.1	0.1	-0.1	0.1	0.0	0.1
NationalGoals	-0.1	0.0	**1.0**	0.1	0.1	0.0	0.0	-0.1	0.0	-0.1	-0.2	-0.2	-0.1	0.0	0.1	0.1	-0.1	-0.1	0.1	0.0	0.1	0.1	-0.1	0.1	0.0	0.1	0.0	-0.1	-0.1	0.1	0.0
HumanRes	0.0	0.1	0.1	**1.0**	**0.5**	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.0	0.1	0.1	0.1	0.2	-0.1	0.0	0.1	0.2	-0.1	0.1	0.1	0.0	0.1	0.0	-0.2	0.1	0.1
FinancialRes	0.0	0.1	0.1	**0.5**	**1.0**	0.1	0.2	0.1	0.2	0.0	0.1	0.0	0.2	0.0	0.0	0.1	-0.1	0.1	-0.1	0.0	0.0	0.3	-0.2	0.0	0.1	0.0	0.1	-0.2	-0.1	0.0	0.1
WorkingParty	0.0	-0.1	0.0	0.1	0.1	**1.0**	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.2	-0.1	0.0	-0.1	-0.1	0.0	0.0	-0.1	-0.1	0.0
CentralManagem	0.1	-0.1	0.0	0.0	0.2	0.0	**1.0**	0.0	0.3	0.3	0.1	-0.1	0.2	0.0	-0.1	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.1	-0.1	-0.1	0.1	0.1
InterConf	-0.2	0.0	-0.1	0.0	0.1	0.1	0.0	**1.0**	0.3	0.1	0.0	0.2	0.3	-0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.1	0.2	-0.1	-0.1	0.0	-0.2	0.0	0.0	-0.1	-0.1	-0.1
Reports	-0.2	0.0	0.0	0.1	0.2	0.1	0.3	0.3	**1.0**	0.3	0.1	0.1	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	-0.1	0.1	-0.1	0.1	0.0	0.1	0.0	0.0
Newsletters	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.3	0.1	0.3	**1.0**	**0.5**	0.2	0.2	0.0	0.0	0.0	0.2	0.1	0.1	0.3	0.0	0.0	0.1	-0.1	0.2	0.3	0.2	0.0	0.0	0.2	0.2
Webinar	-0.1	0.1	-0.2	0.1	0.1	0.1	0.1	0.0	0.1	**0.5**	**1.0**	0.3	0.2	0.1	-0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.1	-0.1	0.2	0.3	0.2	0.2	-0.1	0.1	0.3	0.3
Training	-0.1	0.1	-0.2	0.1	0.0	0.1	-0.1	0.2	0.1	0.2	0.3	**1.0**	0.1	0.2	0.1	0.0	0.3	-0.1	0.0	0.1	0.0	0.1	0.1	-0.4	-0.2	0.1	-0.1	0.1	0.2	0.1	-0.1
OutSatisf	0.1	0.0	-0.1	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	**1.0**	0.2	0.3	0.3	0.4	0.2	0.3	0.2	0.3	0.2	0.0	0.0	-0.1	-0.1	0.1	0.1	-0.2	0.0	0.1
PolicyAdop	0.2	0.1	0.0	0.0	0.0	0.2	0.0	-0.1	0.1	0.0	0.1	0.2	0.1	**1.0**	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.2	0.0	0.1	-0.1	0.0	-0.1	0.0	-0.2	0.1	-0.1
TechDeploy	0.1	-0.1	0.1	0.1	0.0	0.1	-0.1	0.0	0.1	0.0	-0.1	0.1	0.2	0.2	**1.0**	0.3	0.4	0.2	-0.1	0.1	0.3	0.3	-0.2	-0.1	-0.1	0.1	0.0	0.0	0.2	-0.1	-0.1
EconBen	0.1	-0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.3	0.1	0.3	**1.0**	0.2	0.1	0.0	0.0	0.3	0.2	-0.1	-0.1	0.0	-0.1	0.0	0.1	-0.1	0.0	-0.1
SocAcc	0.1	-0.1	-0.1	0.1	-0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.4	0.2	**1.0**	0.0	-0.1	0.2	0.1	0.2	0.1	-0.1	-0.1	0.1	0.1	0.3	0.0	0.3	0.1
ActSuff	-0.1	0.0	-0.1	0.2	0.1	0.2	0.0	0.1	0.2	0.1	0.0	-0.1	0.4	0.0	0.2	0.1	0.0	**1.0**	0.1	0.2	0.3	0.3	-0.1	0.0	-0.1	0.0	-0.2	-0.1	-0.1	-0.1	-0.1
BetterIfCoop	0.0	0.0	0.1	-0.1	-0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	-0.1	-0.1	0.1	**1.0**	-0.1	-0.1	0.1	0.1	0.1	-0.1	0.1	-0.2	0.1	0.1	0.0	-0.2
CoopOther	-0.1	-0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.2	0.2	-0.1	**1.0**	0.3	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.1
CoopSuff	0.1	-0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.1	0.3	-0.1	0.3	**1.0**	0.2	-0.3	0.0	0.0	0.0	0.0	0.1	-0.1	0.1	0.1
CountryRec	0.1	-0.1	0.1	0.2	0.3	0.2	0.0	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.1	0.1	0.2	**1.0**	-0.4	0.1	-0.2	0.1	0.1	0.1	-0.2	0.2	0.1
RecMore	-0.3	-0.1	-0.1	-0.1	-0.2	-0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	-0.2	-0.1	0.1	-0.1	0.1	0.0	-0.3	-0.4	**1.0**	0.0	0.1	0.1	-0.3	0.1	0.1	-0.1	-0.3
EnvSust	0.1	0.0	0.1	0.1	0.0	0.0	0.2	-0.1	-0.1	-0.1	-0.1	-0.4	0.0	0.1	-0.1	0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.0	**1.0**	0.3	-0.2	0.0	-0.2	-0.3	0.2	-0.1
SustDeveObjt	-0.2	0.1	0.0	0.1	0.1	-0.1	0.1	-0.1	0.1	0.2	0.2	-0.2	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.2	0.1	0.3	**1.0**	-0.1	0.1	-0.1	0.2	0.3	-0.2
CompLevel	-0.1	-0.1	0.1	0.0	0.0	-0.1	0.1	0.0	-0.1	0.3	0.3	0.1	-0.1	0.0	0.1	-0.1	0.1	0.0	0.2	0.0	0.1	0.1	-0.2	-0.1	-0.1	**1.0**	0.0	0.2	-0.1	0.4	0.3
PercNonMember	0.0	0.1	0.0	0.1	0.1	0.0	0.1	-0.2	0.1	0.2	0.2	-0.1	0.1	-0.1	0.0	0.0	0.1	-0.2	-0.2	0.0	0.0	0.1	-0.3	0.0	0.1	0.0	**1.0**	0.1	-0.2	**0.5**	**0.8**
age	0.1	-0.1	-0.1	0.0	-0.2	0.0	-0.1	0.0	0.0	0.0	-0.1	-0.1	0.1	0.1	0.0	0.1	0.3	-0.1	0.1	0.2	0.1	0.1	0.1	-0.2	-0.1	0.2	0.1	**1.0**	-0.4	0.4	0.0
PercSP	-0.1	0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	0.1	0.0	0.1	0.2	-0.2	-0.2	0.2	-0.1	0.0	-0.1	0.1	0.2	-0.1	-0.2	0.1	-0.3	0.2	-0.1	-0.2	-0.4	**1.0**	-0.3	-0.3
TotalParticipation	0.0	0.0	0.1	0.1	0.0	-0.1	0.1	0.0	0.1	0.2	0.3	0.1	0.0	0.1	-0.1	0.0	0.3	-0.1	0.0	0.2	0.1	0.2	-0.1	0.2	0.3	0.4	**0.5**	0.4	-0.3	**1.0**	0.5
ShareDeveloping	0.1	0.1	0.0	0.1	0.1	0.0	0.1	-0.1	0.0	0.2	0.3	-0.1	0.1	-0.1	0.0	-0.1	0.1	-0.1	-0.2	0.1	0.1	0.1	-0.3	-0.1	-0.2	0.3	**0.8**	0.0	-0.3	0.5	**1.0**

31

To get an overall idea on whether TCP activities are sufficient, and whether there are differences according to mobilization of resources, coordination, diversity and level of compatibility, we first estimate regression models with the variable ActSuff as dependent variable. Firstly, we estimate models with the full range of variables present in SurveySub. Models did not converge and variables presented high values of for VIF (variable inflation factor). Hence, we estimate smaller models, keeping only some of the variables of greatest interest, based on the exploratory data analysis and the interviews.

A first model (ActSuff1) is estimated as following. For diversity, we take into account the country category of the respondent (Category and Occupation) and the diversity of the TCP the respondent participates in (PercSP for percentage of sponsors and ShareDeveloping for percentage of participants from developing countries in total participation). For 1.5°C compatibility, the compatibility level of the TCP is used (CompLevel and EnvSust). For mobilization of resources, satisfaction with human and financial resources (HumanRes and FinancialRes), and with knowledge sharing activities (OutSatisf) are used. For coordination, three variables are taken into account, one for internal coordination (CentralManagement), one for vertical coordination i.e. coordination with the national level (CountryRec) and one for horizontal coordination i.e. coordination with other international organizations (CoopOther). The control variables of total participation in TCP and the age of TCP (as years since its creation) are also included in the model. Moreover, the variable for the TCP having a sustainable development objective is included (SustDeveObjt). A second model is estimated (ActSuff2) based on the first model, but including the outcome variables for market creation (policy adoption and technology deployment) and legitimacy (economic benefits and social acceptance). Both models are estimated using both probit and logit methods.

Table 18 shows the results of the regressions. There was no significant difference between participants from developing countries and advanced economies, and neither between participant occupation. This implies that lower responses for developing countries were not due to this characteristic, but to other factors. Rather, the satisfaction with knowledge sharing activities (OutputSatisf) and recognition of TCP in respondent's country (CountryRec) were the only two variables that were significant in all four models. This would suggest that if a participant is satisfied with the knowledge sharing activities, they are more likely to think the activities are sufficient, holding all other variables constant. The same would hold for country recognition: if a participant thinks their TCP is well recognized in their country, they were more likely to say that their TCPs activities were sufficient, ceteris paribus. Some differences could be found between models 1 and 2: cooperation with other international organizations was positive and significant in model 1, but no longer significant in model 2. Moreover, when the outcomes for economic benefits, social acceptance, technology deployment and policy adoption are added to the model, the share of developing countries become significant and negatively correlated with a respondent finding that their TCP activity was sufficient. This could be related to the share of participation in itself, but also to the smaller number of complete observations. Further investigation would be needed to provide additional insights.

SM5.2, Table 18 – Exploratory regressions for sufficiency of activities

	Dependent variable:			
	ActSuff			
	logistic	*probit*	*logistic*	*probit*
	(1)	(2)	(3)	(4)
CategoryDeveloping	-1.181	-0.572	-0.639	-0.307
	(1.349)	(0.665)	(1.649)	(0.885)
CategoryOther	-3.285*	-1.869*	-5.516**	-3.035**
	(1.787)	(0.970)	(2.706)	(1.447)
OccupationOther	0.881	0.315	-1.061	-0.709
	(1.669)	(0.887)	(2.296)	(1.193)
OccupationPolicy-Maker	0.502	0.295	1.198	0.586
	(1.430)	(0.798)	(2.150)	(1.121)
OccupationResearcher	1.816	1.091	2.745	1.590
	(1.513)	(0.842)	(2.285)	(1.204)
PercSP	-6.419	-3.772	-4.988	-2.897
	(7.291)	(3.799)	(9.107)	(4.856)
ShareDeveloping	-9.385	-5.613	-20.522*	-10.584**
	(7.600)	(3.784)	(11.532)	(5.379)
TotalParticipation	0.010	0.036	0.109	0.086
	(0.161)	(0.074)	(0.191)	(0.091)
TCP Age	-0.129	-0.084*	-0.227*	-0.140*
	(0.099)	(0.051)	(0.132)	(0.071)
CompLevel	0.692	0.212	0.970	0.232
	(1.225)	(0.563)	(1.828)	(0.865)
EnvSust	-1.808	-1.227	-2.711	-1.730
	(2.354)	(1.154)	(2.522)	(1.338)
SustDeveObjt	0.393	0.241	-0.972	-0.381
	(1.414)	(0.698)	(2.034)	(1.052)
HumanRes	0.357	0.134	0.977	0.419
	(0.777)	(0.389)	(1.204)	(0.627)
FinancialRes	-0.264	-0.141	-1.285	-0.611
	(0.668)	(0.356)	(1.414)	(0.685)
OutSatisf	1.971**	1.063**	2.525**	1.498**
	(0.895)	(0.427)	(1.139)	(0.596)
CentralManagement	-1.001	-0.490	-0.990	-0.595
	(1.042)	(0.523)	(1.527)	(0.777)
CountryRec	2.506**	1.128**	3.305*	1.596*
	(1.221)	(0.562)	(1.947)	(0.945)
CoopOther	1.704*	0.942*	1.131	0.779
	(0.958)	(0.498)	(1.404)	(0.714)
EconBen			0.319	-0.058
			(1.548)	(0.727)

SocAcc			-2.801	-1.463
			(1.818)	(0.934)
TechDeploy			5.465**	3.105**
			(2.478)	(1.298)
PolicyAdop			-3.634*	-1.786*
			(2.157)	(1.000)
Constant	-0.877	0.370	3.202	2.172
	(7.374)	(3.759)	(8.409)	(4.464)
Observations	134	134	128	128
Log Likelihood	-24.863	-25.161	-17.747	-17.899
Akaike Inf. Crit.	87.726	88.323	81.495	81.799

Note: *p**p***p<0.01

SM5.2.5.2.3. *Mobilization of resources*

Output satisfaction

For satisfaction with knowledge sharing activities, three models are reported in Table 19. Model 1 is the one including all variables in the survey data sub-set (n=123, R^2-adj = 0.260). In this model, only international conferences, human resources and sufficiency of activities are significant (all positively correlated). Model 2 is the same as Model 1 but excluding percentage of non-IEA members, since this variable had a VIF >3. Model 2 has a slightly higher R^2-adj, but no differences in significance of variables. Model 3 includes the performance of central management organization. As a result, the sample since is reduced to n=77, since it includes only observations for which a central management organization existed.

For the sub-sample of participants that answered that there was a central management, the performance of the center was positive and significant (Model 3). Human resources was still positive and significant, but with a lower magnitude. Economic benefits became positive and significant, indicating that a TCP leading to economic benefits in the respondent's country was associated with higher output satisfaction for the sample subset where a central organization management existed. Instead of international conferences, newsletters was the knowledge sharing activity that became positive and significant in this subset.

SM5.2, Table 19 – Exploratory regressions for output satisfaction

	Dependent variable:		
	OutSatisf		
	(1)	(2)	(3)
CategoryDeveloping	-0.052	-0.052	0.307*
	(0.197)	(0.196)	(0.177)
CategoryOther	0.192	0.195	-0.306
	(0.471)	(0.461)	(0.446)

OccupationOther	0.236	0.234	0.035
	(0.303)	(0.298)	(0.262)
OccupationPolicy-Maker	-0.019	-0.020	-0.178
	(0.308)	(0.304)	(0.244)
OccupationResearcher	0.046	0.044	0.136
	(0.302)	(0.296)	(0.243)
Years	0.007	0.007	
	(0.009)	(0.009)	
InternationalGoals	0.257	0.255	
	(0.671)	(0.666)	
NationalGoals	-0.172	-0.174	-1.352***
	(0.429)	(0.425)	(0.398)
HumanRes	0.263**	0.263**	0.176**
	(0.103)	(0.103)	(0.081)
FinancialRes	0.019	0.019	
	(0.094)	(0.093)	
WorkingParty	0.048	0.048	
	(0.142)	(0.140)	
CentralManagement	0.125	0.124	
	(0.147)	(0.141)	
CentralManagePerform			0.610***
			(0.089)
InterConf	0.479**	0.479**	0.260
	(0.219)	(0.217)	(0.170)
Reports	0.155	0.154	
	(0.333)	(0.329)	
Newsletters	0.169	0.170	0.289*
	(0.173)	(0.169)	(0.164)
Webinar	0.205	0.206	-0.126
	(0.167)	(0.164)	(0.162)
Training	-0.111	-0.113	0.092
	(0.205)	(0.199)	(0.166)
PolicyAdop	0.151	0.151	-0.026
	(0.153)	(0.152)	(0.140)
TechDeploy	-0.029	-0.029	0.177
	(0.147)	(0.145)	(0.130)
EconBen	0.202	0.201	0.283**
	(0.152)	(0.149)	(0.118)
SocAcc	0.189	0.189	0.080
	(0.153)	(0.152)	(0.132)
ActSuff	0.611***	0.612***	0.290
	(0.229)	(0.226)	(0.200)
BetterIfCoop	0.207	0.206	

	(0.232)	(0.230)	
CoopOther	0.002	0.003	
	(0.163)	(0.161)	
CoopSuff	0.178	0.178	
	(0.154)	(0.153)	
CountryRec	-0.233	-0.233	-0.085
	(0.151)	(0.150)	(0.114)
RecMore	0.005	0.005	
	(0.183)	(0.182)	
EnvSust	-0.085	-0.084	-0.340
	(0.236)	(0.232)	(0.223)
SustDeveObjt	-0.092	-0.098	0.079
	(0.272)	(0.213)	(0.169)
CompLevel	-0.228	-0.225	-0.188
	(0.162)	(0.141)	(0.144)
PercNonMember	-0.097		
	(2.826)		
TCPAge	0.010	0.010	-0.007
	(0.011)	(0.011)	(0.010)
PercSP	-0.555	-0.558	-0.602
	(0.880)	(0.869)	(0.833)
TotalParticipation	-0.009	-0.009	0.007
	(0.020)	(0.019)	(0.017)
ShareDeveloping	0.942	0.874	0.854
	(2.277)	(1.089)	(0.961)
Constant	1.444	1.445	2.027**
	(1.245)	(1.237)	(0.921)
Observations	123	123	77
R^2	0.468	0.468	0.744
Adjusted R^2	0.254	0.262	0.618
Residual Std. Error	0.623 (df = 87)	0.620 (df = 88)	0.418 (df = 51)
F Statistic	2.184*** (df = 35; 87)	2.274*** (df = 34; 88)	5.919*** (df = 25; 51)

Note: *p**p***p<0.01

Conduction of knowledge sharing activities

From Hattori et al (2022) study, it seemed that reports, webinars and trainings were the most important activities for leading to outcomes in countries. From interviews, it seemed that these activities target broader audiences than international conferences (focused on researchers) and newsletters (which are not widely available online but are sent to personal emails). Moreover, interviews suggested that these broader audience activities were more important for

TCPs which have a perceived positive contribution to energy transition, as well as for those TCPs trying to reach out to higher diversity of participants (i.e. coming from developing country and non-researcher audiences). Therefore, we try to identify which conditions would influence a survey participant answering that their TCP conducted the five knowledge sharing activities.

Regarding webinars, the best fitting models were those including all variables in the survey, excluding those that were dependent on previous answers as explained. Model 6 was the best fitting model, since it had the lower AIC (AIC =146.857, n=123). In this model, the coefficient for country category "developing" was significant and positive, suggesting that if a participant was from developing country, they were more likely to say that their TCPs conducted webinars than participants from an advanced economy, ceteris paribus. Moreover, the variable for share of developing countries in TCP was positive and significant, suggesting that, holding everything else constant, the higher the share of developing countries in participants' TCPs, the more likely they were to say that their TCP held webinars. SustDevObjt was also found to be significant and positive, suggesting that if a respondent's TCP had a sustainable development objective in the brochure, the participant was also more likely to answer that they conducted webinars, holding everything else constant.

Finally, if a respondent answered positively to the question of whether their TCP conducted trainings they were also more likely to say that they conducted webinars, since coefficients for these variables were found to be positive and significant. The same for trainings would apply for the TCP publishing newsletters. Additionally, if a participant answered that their TCP cooperated with other international organizations, they were also more likely to say that their TCP conducted webinars, holding everything else constant. Moreover, having answered that the TCP led to policy adoption seemed to be positively correlated with the respondent saying that their TCP conducted webinars, while the opposite was found for technology deployment – if a respondent said their TCP had led to policy adoption, they were less likely to say that their TCP conducted webinars. Paris compatibility of a TCP did not seem to influence a participant's response on the conduction of webinars.

Models 1 and 4 have less variables included, but a bigger sample size than the best-fitting models. In these models, the share of sponsors was positive and significant, which could suggest that TCPs with a higher share of sponsors participating conduct more webinars, holding everything else constant.

SM5.2, Table 20 – Exploratory regressions for conduction of webinars

	Dependent variable:					
	Webinar					
	logistic			*probit*		
	(1)	(2)	(3)	(4)	(5)	(6)
CategoryDeveloping	0.870	1.230	2.409**	0.391	0.770*	1.394**
	(0.674)	(0.765)	(1.178)	(0.376)	(0.433)	(0.643)
CategoryOther	1.266	2.350	1.192	0.673	1.361	0.721
	(1.487)	(2.192)	(2.944)	(0.795)	(1.187)	(1.642)
OccupationOther	-0.873	-0.604	-0.432	-0.495	-0.380	-0.167
	(1.033)	(1.279)	(1.674)	(0.570)	(0.706)	(0.939)

OccupationPolicy-Maker	-0.022	0.879	1.074	-0.085	0.434	0.608
	(1.040)	(1.292)	(1.696)	(0.572)	(0.708)	(0.937)
OccupationResearcher	-0.569	-0.237	-0.391	-0.313	-0.209	-0.155
	(0.994)	(1.237)	(1.610)	(0.544)	(0.677)	(0.906)
Years			0.055			0.029
			(0.058)			(0.031)
InternationalGoals			14.721			4.061
			(3,956.181)			(973.499)
NationalGoals			-19.211			-7.024
			(1,756.964)			(425.020)
PercSP	5.220*	5.134	7.448	2.902*	2.856	3.906
	(2.913)	(3.564)	(4.837)	(1.652)	(1.999)	(2.721)
ShareDeveloping	7.824**	9.051**	10.454	4.130**	5.255**	5.824*
	(3.753)	(4.320)	(6.494)	(2.090)	(2.427)	(3.529)
TotalParticipation	0.018	0.024	0.127	0.011	0.012	0.072
	(0.072)	(0.079)	(0.112)	(0.041)	(0.044)	(0.059)
TCP Age	-0.033	-0.069	-0.131*	-0.016	-0.039	-0.076**
	(0.036)	(0.046)	(0.067)	(0.021)	(0.025)	(0.037)
CompLevel	0.485	0.528	1.446	0.277	0.336	0.818
	(0.544)	(0.655)	(0.926)	(0.293)	(0.350)	(0.497)
EnvSust	-0.057	0.202	-1.399	-0.104	0.134	-0.805
	(0.795)	(0.995)	(1.289)	(0.447)	(0.554)	(0.718)
SustDeveObjt	1.450**	1.701**	2.816**	0.846**	0.981**	1.613**
	(0.670)	(0.771)	(1.232)	(0.383)	(0.436)	(0.663)
HumanRes	0.431	0.343	-0.369	0.239	0.214	-0.150
	(0.365)	(0.446)	(0.765)	(0.205)	(0.252)	(0.412)
FinancialRes	-0.249	-0.188	0.013	-0.096	-0.086	-0.011
	(0.340)	(0.417)	(0.597)	(0.189)	(0.236)	(0.327)
WorkingParty			1.282			0.759*
			(0.831)			(0.449)
Training	1.227*	2.321***	2.351**	0.607*	1.315***	1.324**
	(0.651)	(0.853)	(1.081)	(0.364)	(0.477)	(0.604)
OutSatisf			0.658			0.355
			(0.612)			(0.341)
PolicyAdop			2.161**			1.134**
			(1.074)			(0.561)
TechDeploy			-1.916**			-1.049**
			(0.918)			(0.492)
EconBen			0.821			0.481
			(0.901)			(0.505)
SocAcc			-0.658			-0.359
			(0.955)			(0.525)
ActSuff			-0.281			-0.170

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
			(1.209)			(0.684)
Newsletters	1.940***	2.106***	1.816*	1.060***	1.152***	0.998**
	(0.614)	(0.698)	(0.938)	(0.330)	(0.378)	(0.503)
Reports	-0.284	-0.773	-0.539	-0.276	-0.383	-0.377
	(1.153)	(1.371)	(1.975)	(0.625)	(0.753)	(1.057)
InterConf	0.356	0.084	-0.145	0.237	0.091	-0.030
	(0.667)	(0.746)	(1.217)	(0.390)	(0.433)	(0.669)
CentralManagement		-0.192	-1.142		-0.183	-0.647
		(0.567)	(0.859)		(0.327)	(0.467)
BetterIfCoop		0.469	1.207		0.306	0.730
		(0.958)	(1.339)		(0.531)	(0.711)
CoopOther		0.924	1.683*		0.496	0.996**
		(0.633)	(0.918)		(0.359)	(0.508)
CoopSuff			0.794			0.455
			(0.873)			(0.483)
CountryRec			0.709			0.388
			(0.863)			(0.473)
RecMore			1.270			0.687
			(1.040)			(0.563)
Constant	-4.927*	-5.220	-6.348	-2.770*	-3.151	-3.130
	(2.994)	(3.784)	(4,328.778)	(1.656)	(2.087)	(1,062.238)
Observations	145	132	123	145	132	123
Log Likelihood	-68.459	-55.503	-38.441	-69.513	-55.689	-38.428
Akaike Inf. Crit.	174.919	155.005	146.882	177.026	155.378	146.857

Note: *p**p***p<0.01

For trainings, the best fitting models are Models 3 and 6 (AICs 70, n=123), which take all variables from the survey subset into account. In these models, no variable was significant. For the models including a smaller set of variables but larger sample, Model 5 was the best fitting model (AIC 88.965, n = 132). In this model, human resources had significant and positive coefficient, suggesting that if a participant thought their TCP had sufficient human resources they were more likely to answer their TCP conducted trainings, holding everything else constant. Moreover, if the participant answered their TCP could produce a better output if they coordinated with other TCPs, they were less likely to answer their TCPs conducted trainings, ceteris paribus. This could mean that if a participant thought their TCP should improve coordination with other TCPs, their TCP did not conduct trainings. In Model 5, having an environmental sustainability goal was also found to be positive and significant. This would mean that if a survey respondent participated in TCPs which had an environmental sustainability goal, they would be more likely to answer their TCPs conducted trainings.

However, since CompLevel was not significant, while the existence of a sustainable development objective was, this seems to indicate that it is more the existence of a clear goal that would be relevant for a TCP conducting trainings or not, and not the actual compatibility

with 1.5ºC goals. This together with the significance of the improving coordination with other TCPs and of Human Resources, this could point out to the organization of trainings being more of a communications and outreach strategy – and hence coordination and human resource factors playing a more relevant role than level of compatibility. In other models it seemed that respondents with a business occupation would be more likely to answer their TCPs conducted trainings than from other occupations, ceteris paribus, as well as if the respondent came from a TCP had higher share of sponsors too.

SM5.2, Table 21 – Exploratory regressions for conduction of trainings

	Dependent variable:			
	Training			
	logistic		*probit*	
	(1)	(2)	(3)	(4)
CategoryDeveloping	-1.143	-115.409	-0.673	-32.765
	(1.206)	(217,942.100)	(0.669)	(60,603.810)
CategoryOther	15.076	204.965	4.160	60.007
	(2,532.271)	(1,447,916.000)	(512.998)	(352,572.800)
OccupationOther	-3.915**	-286.085	-2.210**	-82.736
	(1.774)	(126,888.700)	(0.969)	(29,030.310)
OccupationPolicy-Maker	-3.514**	-178.212	-2.002**	-51.161
	(1.764)	(70,119.370)	(0.972)	(18,816.050)
OccupationResearcher	-4.756***	-307.325	-2.668***	-88.819
	(1.823)	(177,977.000)	(0.979)	(45,458.070)
Years		-7.952		-2.314
		(8,453.882)		(2,389.958)
InternationalGoals		-245.927		-71.729
		(387,547.700)		(85,187.310)
NationalGoals		-190.646		-54.565
		(155,998.200)		(35,852.360)
PercSP	14.154**	560.568	7.894**	163.893
	(7.184)	(409,180.200)	(3.926)	(128,769.500)
ShareDeveloping	-21.836***	-1,293.679	-12.561***	-372.874
	(7.717)	(542,836.400)	(4.154)	(104,516.200)
TotalParticipation	0.368***	9.642	0.211***	2.770
	(0.134)	(7,053.737)	(0.073)	(1,456.366)
TCPAge	0.025	-2.848	0.013	-0.803
	(0.060)	(2,311.748)	(0.035)	(753.877)
CompLevel	0.127	19.225	0.063	6.095
	(1.028)	(144,439.300)	(0.582)	(50,968.560)
EnvSust	0.450	184.251	0.103	54.638
	(2.039)	(322,853.000)	(1.132)	(103,130.300)
SustDeveObjt	-6.053***	-334.503	-3.392***	-96.494

	(1.806)	(109,696.500)	(0.942)	(24,675.080)
HumanRes	1.338*	56.517	0.764*	16.211
	(0.751)	(31,939.650)	(0.411)	(5,821.576)
FinancialRes	-0.489	-4.762	-0.287	-1.644
	(0.479)	(69,537.200)	(0.267)	(25,197.250)
WorkingParty		-7.176		-2.032
		(78,918.690)		(18,148.950)
Webinar	3.034***	159.957	1.733***	45.989
	(1.160)	(101,098.600)	(0.656)	(20,060.760)
OutSatisf		33.550		9.552
		(56,180.520)		(15,646.800)
PolicyAdop		28.828		8.612
		(77,480.000)		(30,614.160)
TechDeploy		-66.529		-19.640
		(93,037.610)		(35,218.150)
EconBen		-83.255		-23.884
		(45,531.620)		(11,666.940)
SocAcc		105.204		30.117
		(54,195.610)		(11,367.960)
ActSuff		-77.126		-21.899
		(167,463.100)		(47,607.070)
Newsletters	0.514	61.726	0.166	17.991
	(1.227)	(45,187.850)	(0.678)	(9,525.491)
Reports	37.881	258.738	12.411	75.425
	(5,079.856)	(258,840.200)	(1,078.693)	(83,362.890)
InterConf	32.645	150.448	10.043	43.796
	(3,935.015)	(107,865.600)	(786.423)	(19,802.350)
CentralManagement	-0.480	-132.202	-0.231	-38.474
	(0.934)	(66,515.830)	(0.510)	(19,675.040)
BetterIfCoop	-3.001**	-4.927	-1.679**	-1.586
	(1.454)	(51,674.500)	(0.800)	(19,459.230)
CoopOther	0.327	-73.864	0.279	-21.673
	(0.906)	(91,319.440)	(0.510)	(24,753.650)
CoopSuff		117.665		34.094
		(58,152.590)		(12,126.890)
CountryRec		28.317		8.252
		(40,806.830)		(8,379.678)
RecMore		55.213		15.729
		(50,836.610)		(15,554.670)
Constant	-75.794	-157.713	-25.290	-47.257
	(7,356.228)	(516,623.000)	(1,519.335)	(142,152.500)
Observations	132	123	132	123

Log Likelihood	-30.658	-0.00000	-30.351	-0.00000
Akaike Inf. Crit.	105.316	70.000	104.703	70.000

Note:	*p**p***p<0.01

For reports, nothing was significant in any of the models estimated. For the models with larger sample sizes, Category "developing" was significant and negative, suggesting that if a respondent was from a developing country they were less likely to say that their TCP published reports, ceteris paribus, than respondents from advanced economies (he reference category). Also occupation was significant and positive for researchers and "other", indicating that if a participant was from one of these occupations, they were more likely to say their TCP published reports than participants from the reference category (Business). ShareDeveloping was positive and significant, indicating that if a participant was from a TCP with a higher share of developing countries they were more likely to say that their TCP published reports.

SM5.2, Table 22 – Exploratory regressions for publication of reports

	Dependent variable:			
	Reports			
	logistic		*probit*	
	(1)	(2)	(3)	(4)
CategoryDeveloping	-4.942*	-14.554	-2.799**	-4.035
	(2.642)	(78,597.260)	(1.400)	(15,287.570)
CategoryOther	-5.083	-28.635	-2.817	-8.147
	(4.418)	(192,076.300)	(2.247)	(51,838.030)
OccupationOther	20.448*	82.855	11.520**	23.243
	(11.404)	(175,840.600)	(5.557)	(36,146.970)
OccupationPolicy-Maker	3.626	20.025	1.756	5.630
	(4.154)	(170,665.900)	(1.954)	(43,787.430)
OccupationResearcher	6.524*	30.691	3.542*	8.629
	(3.940)	(182,885.200)	(1.943)	(44,712.050)
PercSP	54.978	175.831	30.405	50.567
	(39.175)	(383,632.700)	(19.109)	(72,078.880)
ShareDeveloping	38.857*	137.723	22.601*	38.316
	(22.548)	(707,720.400)	(11.808)	(134,655.700)
TotalParticipation	-0.001	2.273	-0.014	0.655
	(0.289)	(13,077.790)	(0.147)	(3,348.783)
age	0.302*	1.023	0.175**	0.294
	(0.174)	(9,124.825)	(0.089)	(2,472.477)
CompLevel	-2.310	-58.456	-1.316	-16.555
	(2.023)	(99,379.120)	(1.028)	(24,281.750)
EnvSust	9.091	-4.496	5.355	-0.712
	(7.099)	(209,356.500)	(3.452)	(56,666.240)

SustDeveObjt	3.844	18.019	2.237	4.771
	(3.915)	(224,486.100)	(1.950)	(61,149.820)
HumanRes	0.900	12.553	0.455	3.405
	(1.878)	(72,644.740)	(0.888)	(20,954.610)
FinancialRes	2.940**	13.543	1.622**	3.851
	(1.459)	(30,751.020)	(0.737)	(6,253.561)
Training	3.190	30.331	1.830	8.185
	(6.767)	(263,565.200)	(3.256)	(76,312.750)
Newsletters	6.815	20.385	3.716	6.069
	(4.681)	(178,038.400)	(2.287)	(48,693.250)
Webinar	-2.122	-27.117	-1.066	-7.728
	(2.795)	(105,558.600)	(1.369)	(20,185.180)
InterConf	11.256**	61.740	6.353**	17.343
	(5.270)	(71,173.220)	(2.691)	(15,401.470)
CentralManagement		40.101		11.330
		(151,673.400)		(37,345.870)
BetterIfCoop		-4.508		-1.362
		(125,327.400)		(34,015.950)
CoopOther		16.673		4.832
		(135,501.300)		(34,391.490)
Constant	-47.809*	-112.527	-26.789**	-32.111
	(25.814)	(336,681.600)	(12.898)	(69,142.910)
Observations	145	132	145	132
Log Likelihood	-10.393	-0.000	-10.235	-0.000
Akaike Inf. Crit.	58.785	44.000	58.470	44.000

Note: *p**p***p<0.01

For international conferences, nothing was significant in the best fitting models (Models 5 and 6) (Table 23). For the models considering a smaller set of variables, Models 2 (AIC= 100.606, n=132) and 4 (AIC 100.356, n=132) were the best fitting models. In both models, reports was positive and significant, suggesting that if a participant said that their TCP published reports, they would be more likely to also say that their TCPs held international conferences, ceteris paribus. Moreover, CompLevel was positive and significant, suggesting that the higher the compatibility of the respondent's TCP, the more likely they were to say their TCPs held international conferences, holding everything else constant. The opposite was found for diversity of contexts: the higher the share of developing countries in a TCP, the less likely the participant was to say that the TCP held international conferences, ceteris paribus.

SM5.2, Table 23 – Exploratory regressions for conduction of international conferences

Dependent variable:

InterConf

| | logistic | | | probit | | logistic |
	(1)	(2)	(3)	(4)	(5)	(6)
CategoryDeveloping	0.227	0.455	0.102	0.248	-53.807	-170.548
	(0.949)	(1.080)	(0.532)	(0.615)	(50,141.180)	(44,577.170)
CategoryOther	-25.283	-42.573	-10.371	-15.372	-366.596	-1,226.149
	(1,904.647)	(4,546.680)	(372.477)	(875.179)	(267,565.200)	(579,322.900)
OccupationOther	-42.743	-60.452	-15.977	-20.764	-59.599	-189.507
	(4,069.473)	(7,415.028)	(874.261)	(1,488.036)	(79,734.310)	(127,251.600)
OccupationPolicy-Maker	-41.310	-58.419	-15.096	-19.598	5.848	39.036
	(4,069.473)	(7,415.028)	(874.260)	(1,488.035)	(124,835.200)	(132,240.300)
OccupationResearcher	-41.657	-59.369	-15.215	-20.107	-26.239	-83.271
	(4,069.473)	(7,415.028)	(874.260)	(1,488.035)	(223,731.200)	(159,557.300)
Years					-5.705	-18.761
					(2,571.313)	(3,041.633)
InternationalGoals					222.294	734.117
					(92,745.000)	(377,502.200)
NationalGoals					119.159	376.260
					(233,175.500)	(189,574.300)
PercSP	0.343	1.207	0.527	0.637	-98.729	-298.004
	(4.498)	(5.068)	(2.542)	(2.883)	(153,652.500)	(165,013.500)
ShareDeveloping	-16.784**	-20.899**	-9.194**	-11.641**	-417.819	-1,340.597
	(7.459)	(9.445)	(3.929)	(5.052)	(300,977.000)	(545,794.500)
TotalParticipation	0.050	0.079	0.021	0.045	-8.998	-29.643
	(0.121)	(0.142)	(0.065)	(0.076)	(5,596.166)	(6,942.025)
age	0.003	0.015	0.007	0.011	3.415	11.060
	(0.057)	(0.062)	(0.031)	(0.034)	(4,305.072)	(2,831.392)
CompLevel	1.389	1.706*	0.784	0.940*	101.070	327.774
	(0.887)	(1.017)	(0.486)	(0.556)	(69,916.670)	(75,872.590)
EnvSust	-5.054*	-19.752	-2.864*	-6.689	-90.020	-268.058
	(2.815)	(3,344.943)	(1.499)	(638.691)	(174,245.200)	(213,806.000)
SustDeveObjt	-2.706**	-3.377**	-1.508**	-1.900**	-54.042	-181.003
	(1.340)	(1.601)	(0.706)	(0.862)	(157,223.000)	(78,780.450)
HumanRes	-0.848	-0.977	-0.509	-0.591	-77.604	-246.529
	(0.683)	(0.730)	(0.365)	(0.403)	(40,226.570)	(52,327.560)
FinancialRes	0.125	0.425	0.084	0.241	64.128	197.174
	(0.559)	(0.710)	(0.299)	(0.384)	(65,276.590)	(65,036.080)
WorkingParty					20.253	88.246
					(78,859.820)	(76,107.070)
Training	20.199	35.369	7.392	11.422	4.869	42.886
	(1,904.654)	(4,522.357)	(372.486)	(866.276)	(102,683.900)	(181,348.100)
OutSatisf					103.923	342.268
					(18,471.470)	(42,835.690)
PolicyAdop					-18.270	-80.908

					(49,882.010)	(73,011.340)
TechDeploy					-7.265	-11.015
					(43,962.100)	(52,269.500)
EconBen					-14.048	-46.111
					(108,587.500)	(61,241.680)
SocAcc					141.547	458.192
					(69,019.130)	(71,593.060)
ActSuff					21.637	50.526
					(102,142.500)	(100,184.200)
Webinar	0.209	-0.360	0.188	-0.134	29.820	94.868
	(0.800)	(0.947)	(0.440)	(0.522)	(38,659.110)	(33,517.300)
Reports	3.673***	4.686***	2.094***	2.683***	70.922	252.866
	(1.282)	(1.551)	(0.701)	(0.850)	(157,914.800)	(85,730.940)
Newsletters	0.906	2.142*	0.532	1.175*	-29.399	-75.045
	(0.977)	(1.289)	(0.523)	(0.683)	(194,574.900)	(88,833.710)
CentralManagement		-1.341		-0.712	-11.418	-47.127
		(1.078)		(0.559)	(71,571.300)	(44,841.390)
BetterIfCoop		-2.290		-1.311	-21.719	-52.516
		(1.939)		(1.022)	(205,957.200)	(117,612.500)
CoopOther		-0.479		-0.358	-17.409	-68.145
		(0.918)		(0.506)	(68,784.760)	(46,007.130)
CoopSuff					-59.965	-193.460
					(29,743.370)	(38,683.450)
CountryRec					-18.479	-54.901
					(56,744.110)	(47,936.110)
RecMore					-6.482	-25.898
					(50,580.510)	(31,590.730)
Constant	46.986	79.978	18.181	27.356	-560.386	-1,874.314
	(4,069.476)	(9,410.026)	(874.265)	(1,854.193)	(446,625.300)	(507,668.700)
Observations	145	132	145	132	123	123
Log Likelihood	-33.995	-28.303	-33.814	-28.178	-0.00000	-0.00000
Akaike Inf. Crit.	105.990	100.606	105.628	100.356	70.000	70.000

Note: *p**p***p<0.01

For newsletters, Model 3 was the best fitting model when including all variables from the survey (AIC 133.162, n= 123). Regarding coordination, if participants answered that their TCPs cooperated with other international organizations, they were more likely to answer that their TCP published newsletters, ceteris paribus. The same held for their TCP having a central management organization. Regarding diversity of actors, if a survey respondent was a policy maker, they were more likely to say that their TCPs had newsletters than respondents from a Business occupation, holding everything else constant. Moreover, if the respondent came from a TCP with high shares of sponsors, they were less likely to say that their TCPs had newsletters, keeping other variables constant. Both findings are aligned, since business are more likely to

be sponsors, while policy makers would be contracting parties. CompLevel was positive and significant, indicating that the higher the compatibility of a respondent's TCP, the more likely they were to say their TCP published newsletters, holding everything else constant. The same was true for TCPs which had a sustainable development objective.

SM5.2, Table 24 – Exploratory regressions for publication of newsletters

	Dependent variable:					
	Newsletters					
	logistic			*probit*		
	(1)	(2)	(3)	(4)	(5)	(6)
CategoryDeveloping	-0.557	-0.222	2.356	-0.356	-0.141	1.189
	(0.717)	(0.836)	(1.913)	(0.404)	(0.481)	(1.044)
CategoryOther	0.009	1.171	-1.729	0.055	0.662	-1.336
	(1.645)	(2.058)	(5.981)	(0.934)	(1.202)	(2.437)
OccupationOther	-1.105	-0.245	2.032	-0.655	-0.239	1.019
	(1.416)	(1.449)	(1.927)	(0.792)	(0.827)	(1.083)
OccupationPolicy-Maker	-1.500	-0.284	5.758*	-0.849	-0.199	3.104*
	(1.426)	(1.515)	(3.215)	(0.797)	(0.862)	(1.741)
OccupationResearcher	-1.379	-0.109	3.144	-0.775	-0.088	1.739
	(1.386)	(1.455)	(2.171)	(0.770)	(0.830)	(1.224)
Years			0.159*			0.088*
			(0.091)			(0.051)
InternationalGoals			-11.316			-1.905
			(3,956.181)			(973.500)
NationalGoals			-16.758			-5.857
			(1,761.058)			(414.108)
PercSP	-7.469	-7.676	-17.495*	-4.414*	-4.348	-9.677*
	(4.548)	(5.466)	(9.925)	(2.516)	(3.050)	(5.222)
ShareDeveloping	4.280	6.662	13.816	2.348	4.067	7.066
	(3.808)	(4.858)	(8.603)	(2.186)	(2.782)	(4.449)
TotalParticipation	-0.006	0.021	-0.174	-0.005	0.007	-0.086
	(0.075)	(0.089)	(0.170)	(0.043)	(0.050)	(0.088)
age	-0.024	-0.073	-0.167	-0.012	-0.040	-0.093
	(0.047)	(0.060)	(0.114)	(0.027)	(0.033)	(0.062)
CompLevel	0.726	0.442	2.397**	0.422	0.265	1.381**
	(0.468)	(0.531)	(1.057)	(0.276)	(0.313)	(0.590)
EnvSust	-0.773	-1.439	-4.431*	-0.514	-0.820	-2.610**
	(0.951)	(1.243)	(2.368)	(0.538)	(0.689)	(1.320)
SustDeveObjt	1.902**	2.065*	7.621***	1.111**	1.143*	4.070***
	(0.963)	(1.098)	(2.867)	(0.533)	(0.618)	(1.493)
HumanRes	-0.255	-0.176	-1.588*	-0.122	-0.123	-0.896*
	(0.413)	(0.501)	(0.915)	(0.236)	(0.286)	(0.508)

	(1)	(2)	(3)	(4)	(5)	(6)
FinancialRes	-0.345	-0.597	-1.182	-0.172	-0.331	-0.633
	(0.377)	(0.436)	(0.755)	(0.217)	(0.249)	(0.416)
WorkingParty			0.737			0.410
			(0.960)			(0.551)
Training	0.998	1.041	3.339*	0.578	0.560	1.574*
	(0.818)	(0.938)	(1.795)	(0.454)	(0.525)	(0.882)
OutSatisf			1.778*			0.954*
			(0.927)			(0.507)
PolicyAdop			-0.726			-0.338
			(1.129)			(0.615)
TechDeploy			-1.495			-0.751
			(1.321)			(0.712)
EconBen			2.846**			1.551**
			(1.386)			(0.774)
SocAcc			1.242			0.724
			(1.445)			(0.795)
ActSuff			4.669*			2.472*
			(2.445)			(1.305)
Webinar	2.052***	2.311***	1.928*	1.139***	1.305***	1.087*
	(0.612)	(0.724)	(1.100)	(0.336)	(0.401)	(0.626)
Reports	2.524**	1.593	3.701	1.474**	0.995	2.134
	(1.198)	(1.319)	(2.354)	(0.669)	(0.765)	(1.364)
InterConf	0.989	1.912**	-0.066	0.541	1.019*	-0.203
	(0.760)	(0.927)	(1.515)	(0.436)	(0.523)	(0.844)
CentralManagement		1.502**	2.568**		0.827**	1.361**
		(0.613)	(1.148)		(0.345)	(0.619)
BetterIfCoop		1.737	5.201		1.063	2.757*
		(1.225)	(3.302)		(0.675)	(1.614)
CoopOther		0.655	3.372**		0.422	1.950**
		(0.707)	(1.481)		(0.403)	(0.812)
CoopSuff			-2.542**			-1.448**
			(1.212)			(0.679)
CountryRec			0.313			0.258
			(1.040)			(0.587)
RecMore			0.662			0.427
			(1.226)			(0.702)
Constant	-0.305	-1.566	14.296	-0.307	-0.905	0.437
	(3.791)	(4.631)	(4,330.446)	(2.148)	(2.609)	(1,057.926)
Observations	145	132	123	145	132	123
Log Likelihood	-58.645	-47.485	-31.476	-58.468	-47.159	-31.581
Akaike Inf. Crit.	155.290	138.970	132.952	154.936	138.318	133.162

Note: *p**p***p<0.01

Financial and human resource mobilization

Regarding financial resources, Model 3 was the best-fitting model (R^2adj = 0.306, n= 131). The coefficient for country category "developing" was found to be positive and significant, suggesting that survey participants from developing countries had higher satisfaction with financial resources than participants from advanced economies, ceteris paribus. Being satisfied with mobilization of human resources also seemed positively correlated with being satisfied with financial resources, ceteris paribus. The same applied for the participant thinking that their TCP was well recognized in their country. Knowledge sharing activities did not seem to be related to satisfaction with financial resources.

SM5.2, Table 25 – Exploratory regressions for satisfaction with financial resources

	Dependent variable:				
	FinancialRes				
	(1)	(2)	(3)	(4)	(5)
CategoryDeveloping	0.460**	0.313*	0.403**	0.091	1.866
	(0.218)	(0.186)	(0.192)	(0.185)	(2.200)
CategoryOther	-0.112	-0.096	-0.060	0.259	2.425
	(0.526)	(0.389)	(0.389)	(0.379)	(2.188)
OccupationOther	-0.209	-0.255	-0.313	-0.404	-1.730
	(0.340)	(0.267)	(0.276)	(0.275)	(2.171)
OccupationPolicy-Maker	-0.224	-0.190	-0.258	-0.333	-2.440
	(0.345)	(0.267)	(0.282)	(0.272)	(1.754)
OccupationResearcher	-0.422	-0.431*	-0.512*	-0.450*	-0.720
	(0.334)	(0.254)	(0.270)	(0.258)	(1.088)
Years	0.0004				
	(0.010)				
InternationalGoals	-0.190				
	(0.760)				
PercNonMember		2.403	2.593	0.703	43.055
		(2.540)	(2.637)	(2.722)	(42.275)
NationalGoals	-0.226	-0.204	-0.278		
	(0.485)	(0.425)	(0.428)		
HumanRes	0.494***	0.492***	0.526***	0.497***	-0.324
	(0.109)	(0.088)	(0.092)	(0.091)	(0.610)
WorkingParty	0.021				
	(0.160)				
CentralManagement	0.371**				

	(0.156)			
InterConf	0.260			0.041
	(0.252)			(0.204)
Reports	0.030			0.455
	(0.375)			(0.298)
Newsletters	-0.138			-0.082
	(0.193)			(0.163)
Webinar	-0.076			-0.078
	(0.188)			(0.153)
Training	0.044			-0.034
	(0.228)			(0.182)
OutSatisf	0.025			
	(0.121)			
PolicyAdop	-0.013		-0.047	
	(0.174)		(0.149)	
TechDeploy	-0.169		-0.238*	
	(0.165)		(0.139)	
EconBen	0.163		0.075	
	(0.170)		(0.139)	
SocAcc	-0.351**		-0.211	
	(0.170)		(0.143)	
ActSuff	0.015			
	(0.268)			
BetterIfCoop	0.042			
	(0.264)			
CoopOther	0.014			
	(0.183)			
CoopSuff	-0.180			
	(0.174)			
CountryRec	0.378**	0.327**	0.421***	
	(0.169)	(0.126)	(0.140)	
RecMore	-0.211			
	(0.206)			
EffecWebinar				0.115
				(0.998)
EffecTrainings				-1.033
				(0.720)
EffecNewsletters				0.330
				(0.852)
EffecReports				-0.848

					(1.291)
EffecInterConf					0.138
					(0.591)
EnvSust	-0.361	-0.294	-0.256	-0.195	3.393
	(0.262)	(0.218)	(0.226)	(0.226)	(3.141)
SustDeveObjt	0.175	0.041	-0.017	0.125	
	(0.243)	(0.214)	(0.221)	(0.243)	
CompLevel	-0.028	0.104	0.101	0.111	4.952
	(0.164)	(0.159)	(0.162)	(0.160)	(3.896)
age	-0.017	-0.027**	-0.024**	-0.026**	-0.145
	(0.012)	(0.011)	(0.011)	(0.011)	(0.169)
PercSP	-0.293	-1.162	-0.724	-1.044	20.694
	(0.993)	(0.811)	(0.870)	(0.867)	(17.956)
TotalParticipation	0.005	-0.007	-0.001	0.004	-0.619
	(0.022)	(0.019)	(0.020)	(0.020)	(0.416)
ShareDeveloping	0.219	-1.659	-1.860	-1.014	-13.519
	(1.246)	(2.033)	(2.068)	(2.213)	(24.211)
Constant	2.864**	3.133***	3.036***	2.567***	6.183
	(1.388)	(0.857)	(0.888)	(0.778)	(14.048)
Observations	123	137	131	145	21
R^2	0.462	0.362	0.413	0.304	0.903
Adjusted R^2	0.255	0.277	0.306	0.198	0.031
Residual Std. Error	0.706 (df = 88)	0.687 (df = 120)	0.683 (df = 110)	0.727 (df = 125)	1.074 (df = 2)
F Statistic	2.225*** (df = 34; 88)	4.251*** (df = 16; 120)	3.866*** (df = 20; 110)	2.870*** (df = 19; 125)	1.036 (df = 18; 2)

Note: *p**p***p<0.01

For human resources, the best fitting model was Model 1 (Adj R^2 = 0.273, n=123), which takes the full sub-set of independent variables. In this model, financial resources was found to be positive and significant, suggesting that the more a participant was satisfied with the level of financial resources, the more they would be satisfied with the level of human resources, keeping everything else constant. The coefficient for Trainings was also significant and positive. This means that if a participant answered that their TCP conducted trainings, they were also more satisfied with human resources, ceteris paribus. If a participant answered that their TCP held international conferences, they were less satisfied with availability of human resources, holding all other variables constant. Percentage of sponsors was significant and negative, suggesting that the higher the shares of sponsors of a participant's TCP, the less respondents were satisfied with the human resources of their TCP, ceteris paribus.

SM5.2, Table 26 – Exploratory regressions for satisfaction with human resources

	Dependent variable:				
	HumanRes				
	(1)	(2)	(3)	(4)	(5)
CategoryDeveloping	0.107	0.131	0.071	0.182	2.421
	(0.196)	(0.173)	(0.178)	(0.162)	(2.195)
CategoryOther	-0.298	-0.225	-0.215	-0.601*	2.438
	(0.461)	(0.354)	(0.351)	(0.328)	(2.475)
OccupationOther	0.246	0.130	0.195	0.268	-1.992
	(0.298)	(0.245)	(0.250)	(0.243)	(2.308)
OccupationPolicy-Maker	0.136	0.012	0.098	0.093	-2.300
	(0.304)	(0.245)	(0.256)	(0.241)	(2.117)
OccupationResearcher	0.401	0.192	0.289	0.231	-0.478
	(0.293)	(0.233)	(0.246)	(0.228)	(1.259)
Years	-0.004				
	(0.009)				
InternationalGoals	0.413				
	(0.666)				
NationalGoals	0.682	0.372	0.389		
	(0.420)	(0.385)	(0.385)		
FinancialRes	0.382***	0.415***	0.433***	0.388***	-0.381
	(0.084)	(0.074)	(0.076)	(0.071)	(0.718)
WorkingParty	-0.002				
	(0.140)				
CentralManagement	-0.092				
	(0.141)				
InterConf	-0.393*			-0.153	
	(0.219)			(0.178)	
Reports	0.203			0.188	
	(0.329)			(0.261)	
Newsletters	-0.168			-0.095	
	(0.169)			(0.142)	
Webinar	0.064			0.163	
	(0.165)			(0.133)	
Training	0.429**			0.317**	
	(0.195)			(0.157)	
OutSatisf	0.264**				
	(0.103)				
PolicyAdop	-0.138		-0.035		
	(0.152)		(0.136)		
TechDeploy	0.032		0.091		
	(0.146)		(0.127)		
EconBen	-0.077		-0.005		

	(1)	(2)	(3)	(4)	(5)
	(0.150)		(0.126)		
SocAcc	0.143		0.188		
	(0.152)		(0.130)		
ActSuff	0.054				
	(0.236)				
BetterIfCoop	-0.226				
	(0.231)				
CoopOther	-0.094				
	(0.161)				
CoopSuff	0.060				
	(0.154)				
CountryRec	0.025	0.016	0.013		
	(0.152)	(0.119)	(0.132)		
RecMore	-0.015				
	(0.182)				
EffecWebinar					0.572
					(1.009)
EffecTrainings					-0.878
					(0.924)
EffecNewsletters					0.435
					(0.908)
EffecReports					-1.250
					(1.267)
EffecInterConf					-0.145
					(0.641)
EnvSust	0.167	0.119	-0.006	0.105	0.232
	(0.232)	(0.201)	(0.206)	(0.199)	(2.727)
SustDeveObjt	0.334	0.135	0.198	0.232	2.531
	(0.211)	(0.157)	(0.158)	(0.174)	(3.216)
CompLevel	0.067	-0.079	-0.043	-0.120	1.239
	(0.143)	(0.124)	(0.125)	(0.121)	(3.793)
age	0.001	0.004	-0.002	0.004	-0.230
	(0.011)	(0.009)	(0.010)	(0.009)	(0.236)
PercSP	-1.556*	-0.956	-1.382*	-1.480**	11.715
	(0.856)	(0.729)	(0.767)	(0.742)	(12.761)
TotalParticipation	-0.016	-0.001	-0.002	-0.013	-0.318
	(0.019)	(0.017)	(0.018)	(0.018)	(0.305)
ShareDeveloping	0.022	0.168	-0.127	0.475	11.036
	(1.094)	(0.859)	(0.887)	(0.904)	(14.155)
Constant	0.210	1.605*	1.679**	2.195***	17.263
	(1.249)	(0.815)	(0.832)	(0.687)	(15.501)
Observations	123	137	131	145	21
R^2	0.476	0.314	0.358	0.341	0.795

Adjusted R^2	0.273	0.229	0.248	0.246	-1.051			
Residual Std. Error	0.620 (df = 88)	0.631 (df = 121)	0.621 (df = 111)	0.640 (df = 126)	1.165 (df = 2)			
F Statistic	2.351*** (df = 34; 88)	3.697*** (df = 15; 121)	3.254*** (df = 19; 111)	3.617*** (df = 18; 126)	0.431 (df = 18; 2)			

Note: *p**p***p<0.01

Market Creation

For policy adoption, models with the interactions reported to be significant by Hattori et al (2022) are estimated. However, when controlling for the variables of diversity, directionality and overall TCP characteristics these are no longer significant. Moreover, they had found that national goals were important, whereas from our models country recognition seem to be a more important variable for all models, that is, if a respondent answered that their TCP was well recognized in their country they were more likely to say their TCP had led to policy adoption in their country, ceteris paribus. The percentage of sponsors in a participant's TCP was found to be significant and negative, indicating that the higher the share of sponsors in a participant's TCP, the less likely they were to say that their TCP had led to policy adoption. This could be explained by the fact that sponsors are not designated by national governments and hence would be expected to have less coordination with national policy making, while contracting parties should have more legitimacy back at home since they are designated. This would imply that in TCPs with high share of sponsors the government is less involved, which could result in both these TCPs having a lower impact on policy making or participants being less aware of such impacts.

Regarding knowledge sharing activities, webinars/or trainings were significant and positive in almost all models, while international conference was significant but negative. This could be explained by the fact that, according to interviews, webinars and trainings target policy makers, while international conferences focus on researchers (both from university and private sector). Model 4 was the best-fitting model (AIC = 157.871, n= 130). In addition to the explained above, technology deployment was positive and significant in this model. This means that if a participant answered that their TCP had led to technology deployment in their country, they were also more likely to say that their TCP had led to policy adoption in their country. This could imply that policy adoption and technology deployment actually go together in practice, which makes sense based on the literature.

SM5.2, Table 27 – Exploratory regressions for policy adoption

	Dependent variable:							
	PolicyAdop							
	logistic					*probit*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CategoryDeveloping	0.556	0.471	0.875	0.645	0.863	0.478	0.320	0.442
	(0.609)	(0.614)	(0.780)	(0.816)	(0.943)	(0.438)	(0.457)	(0.530)

53

CategoryOther	0.333	0.820	0.304	0.221	1.613	0.210	0.157	0.873
	(1.435)	(1.338)	(1.700)	(1.744)	(2.372)	(0.960)	(1.000)	(1.322)
OccupationOther	-0.594	-0.932	-0.733	-0.806	-2.027	-0.434	-0.481	-1.144
	(0.961)	(0.973)	(1.019)	(1.041)	(1.338)	(0.604)	(0.612)	(0.758)
OccupationPolicy-Maker	-1.457	-1.792*	-1.500	-1.280	-2.252*	-0.784	-0.676	-1.194
	(0.956)	(0.980)	(1.018)	(1.052)	(1.309)	(0.594)	(0.611)	(0.749)
OccupationResearcher	-0.373	-0.565	-0.477	-0.255	-1.175	-0.253	-0.069	-0.581
	(0.893)	(0.887)	(0.990)	(1.019)	(1.293)	(0.580)	(0.591)	(0.734)
PercNonMember	-13.299	-12.345	-15.716			-8.051		
	(9.912)	(9.907)	(11.625)			(6.357)		
Years					-0.004			0.001
					(0.045)			(0.025)
InternationalGoals					16.187			5.470
					(1,455.398)			(235.035)
PercSP	-7.208**	-6.196*	-11.051**	-10.893***	-12.883***	-6.391***	-6.282***	-7.348***
	(3.384)	(3.395)	(4.309)	(4.056)	(4.982)	(2.372)	(2.241)	(2.686)
ShareDeveloping	3.911	4.632	2.830	-9.561**	-12.640**	0.729	-5.423**	-7.086**
	(7.752)	(7.828)	(8.796)	(4.504)	(5.683)	(4.941)	(2.475)	(3.098)
TotalParticipation	0.086	0.040	0.075	0.073	0.109	0.039	0.028	0.053
	(0.069)	(0.075)	(0.080)	(0.086)	(0.096)	(0.045)	(0.047)	(0.054)
TCP Age	-0.046	-0.035	-0.058	-0.082*	-0.113**	-0.032	-0.044*	-0.060**
	(0.040)	(0.041)	(0.046)	(0.044)	(0.053)	(0.026)	(0.025)	(0.030)
CompLevel	-0.676	-0.437	-0.806	-0.411	-0.774	-0.360	-0.142	-0.348
	(0.623)	(0.659)	(0.690)	(0.609)	(0.739)	(0.385)	(0.342)	(0.406)
EnvSust	0.274	0.287	0.025	0.142	-0.299	0.109	0.235	-0.077
	(0.955)	(0.952)	(1.041)	(1.060)	(1.403)	(0.581)	(0.588)	(0.762)
SustDeveObjt	0.352	0.469	0.379	-0.508	-0.590	0.144	-0.314	-0.313
	(0.802)	(0.829)	(1.047)	(0.926)	(1.102)	(0.594)	(0.516)	(0.609)
HumanRes			-0.708	-0.718	-0.596	-0.399	-0.401	-0.322
			(0.480)	(0.467)	(0.516)	(0.268)	(0.267)	(0.293)
FinancialRes			-0.222	-0.122	0.032	-0.116	-0.041	0.012
			(0.371)	(0.382)	(0.461)	(0.212)	(0.219)	(0.259)
WorkingParty					0.489			0.367
					(0.691)			(0.389)
CentralManagement					0.011			0.039
					(0.722)			(0.403)
Webinar	0.472	0.915	0.921	1.281*	1.257	0.588	0.765*	0.745
	(0.566)	(0.621)	(0.741)	(0.774)	(0.896)	(0.414)	(0.423)	(0.498)
Training	32.149	3.137***	1.794**	1.275	0.545	1.008**	0.791	0.386
	(2,768.048)	(1.096)	(0.835)	(0.851)	(1.019)	(0.472)	(0.481)	(0.578)
Newsletters	-0.686	-0.729	-1.001	-0.635	-0.932	-0.585	-0.391	-0.622
	(0.588)	(0.599)	(0.697)	(0.697)	(0.886)	(0.396)	(0.391)	(0.496)
Reports	16.922	1.622	1.764	1.710	0.870	1.022	0.971	0.557

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(1,379.954)	(1.249)	(1.491)	(1.545)	(1.694)	(0.827)	(0.859)	(0.973)
InterConf	15.100	-1.085	-1.934**	-1.755**	-2.280*	-1.072**	-1.063**	-1.260**
	(1,379.955)	(0.692)	(0.818)	(0.867)	(1.177)	(0.463)	(0.483)	(0.630)
NationalGoals	-0.273	-0.238	-0.356	-0.937	-2.128	-0.173	-0.424	-1.068
	(1.396)	(1.392)	(1.647)	(1.553)	(1.908)	(0.952)	(0.902)	(1.087)
Reports:InterConf	-16.432							
	(1,379.955)							
Training:InterConf	-30.268							
	(2,768.048)							
Training:Reports								
Training:Reports:InterConf								
Webinar:Training		-1.973						
		(1.305)						
CountryRec			1.594**	1.484**	1.824**	0.871**	0.784**	0.936**
			(0.640)	(0.653)	(0.821)	(0.348)	(0.356)	(0.434)
RecMore					0.354			0.202
					(0.883)			(0.490)
TechDeploy			1.169*		1.291		0.671**	0.733*
			(0.608)		(0.795)		(0.336)	(0.438)
EconBen					-0.439			-0.196
					(0.720)			(0.410)
SocAcc					0.659			0.333
					(0.710)			(0.404)
OutSatisf			0.856*	0.777	0.609	0.488*	0.427	0.348
			(0.479)	(0.479)	(0.506)	(0.270)	(0.270)	(0.293)
ActSuff			-1.489	-1.815	-2.120*	-0.794	-1.004	-1.155
			(1.095)	(1.160)	(1.279)	(0.601)	(0.633)	(0.703)
BetterIfCoop					1.950			1.093
					(1.348)			(0.769)
CoopOther					1.193			0.757
					(0.855)			(0.484)
CoopSuff					-0.104			-0.110
					(0.745)			(0.423)
Constant	-13.132	1.549	4.747	4.727	-8.980	2.288	2.334	-2.067
	(1,379.957)	(3.246)	(4.035)	(4.146)	(1,455.408)	(2.282)	(2.342)	(235.052)
Observations	140	140	130	130	123	130	130	123
Log Likelihood	-67.327	-67.216	-54.958	-53.936	-47.749	-55.270	-54.111	-47.655
Akaike Inf. Crit.	178.654	176.432	159.915	157.871	165.498	160.540	158.221	165.310

Note: *p**p***p<0.01

Regarding technology deployment, when controlling Hattori et al (2022) models for other variables, only the interaction between trainings and newsletters remain significant

(Models 1-4). National goals was no longer significant. The best fitting models were Models 5 and 6 (AIC 177.05, and 177.418, n=130). In both models, all other three outcomes – economic benefits, social acceptance, and policy adoption - were positive and significant, suggesting that if a respondent had answered that their TCP had led to any of these three outcomes, they were more likely to say that their TCP had also led to technology deployment in their country. In these models, training and webinar were both significant but negative when considered in isolation, while when together with Newsletters, Training was positive and significant.

SM5.2, Table 28 – Exploratory regressions for technology deployment

	Dependent variable:					
	TechDeploy					
	logistic		*probit*		*logistic*	*probit*
	(1)	(2)	(3)	(4)	(5)	(6)
CategoryDeveloping	0.369	0.373	0.205	0.211	0.442	0.280
	(0.569)	(0.556)	(0.348)	(0.340)	(0.833)	(0.472)
CategoryOther	0.002	-0.422	0.036	-0.235	2.072	1.212
	(1.454)	(1.231)	(0.883)	(0.746)	(1.761)	(1.024)
OccupationOther	-0.098	-0.050	-0.027	-0.035	0.070	0.103
	(0.979)	(0.905)	(0.572)	(0.531)	(1.521)	(0.827)
OccupationPolicy-Maker	-1.426	-1.437	-0.833	-0.860*	-0.942	-0.435
	(0.955)	(0.877)	(0.558)	(0.516)	(1.447)	(0.786)
OccupationResearcher	-1.244	-1.063	-0.720	-0.628	-1.065	-0.556
	(0.906)	(0.839)	(0.527)	(0.493)	(1.492)	(0.809)
PercNonMember	9.574	10.445	6.030	6.827	17.314	9.808
	(8.537)	(8.552)	(5.169)	(5.153)	(11.049)	(6.372)
PercSP	-3.472	-3.076	-2.035	-1.750	-3.018	-1.507
	(2.724)	(2.689)	(1.643)	(1.620)	(3.696)	(2.130)
ShareDeveloping	-9.376	-8.963	-5.804	-5.747	-11.727	-6.585
	(7.254)	(7.264)	(4.351)	(4.332)	(9.837)	(5.567)
TotalParticipation	0.089	0.068	0.054	0.041	0.062	0.037
	(0.070)	(0.067)	(0.042)	(0.040)	(0.090)	(0.051)
TCP Age	-0.014	-0.007	-0.009	-0.004	-0.048	-0.025
	(0.036)	(0.035)	(0.022)	(0.021)	(0.049)	(0.028)
CompLevel	-0.143	0.030	-0.084	0.035	0.318	0.180
	(0.513)	(0.503)	(0.314)	(0.305)	(0.680)	(0.388)
EnvSust	-0.500	-0.570	-0.286	-0.322	-0.598	-0.315
	(0.739)	(0.733)	(0.450)	(0.445)	(0.991)	(0.561)
SustDeveObjt	-0.632	-0.576	-0.399	-0.396	-0.271	-0.146
	(0.771)	(0.772)	(0.466)	(0.461)	(1.108)	(0.632)
HumanRes					0.355	0.208
					(0.453)	(0.261)

	(1)	(2)	(3)	(4)	(5)	(6)
FinancialRes					-0.297	-0.185
					(0.355)	(0.206)
OutSatisf					-0.493	-0.292
					(0.470)	(0.266)
ActSuff					3.966***	2.346***
					(1.372)	(0.752)
Webinar	-16.305	-0.273	-5.058	-0.169	-1.479**	-0.862**
	(2,399.545)	(0.464)	(376.754)	(0.282)	(0.698)	(0.401)
Training	-2.013	-2.017	-1.183	-1.213	-4.771**	-2.855**
	(1.575)	(1.450)	(0.940)	(0.843)	(2.052)	(1.184)
Newsletters	-1.118	-0.453	-0.789	-0.277	-0.461	-0.303
	(2,912.741)	(0.511)	(455.191)	(0.313)	(0.684)	(0.396)
Reports	-0.149	0.667	-0.090	0.439	-0.983	-0.566
	(1.192)	(0.982)	(0.738)	(0.592)	(1.265)	(0.732)
InterConf	0.352	0.290	0.217	0.176	0.539	0.335
	(0.661)	(0.634)	(0.403)	(0.385)	(0.780)	(0.462)
Webinar:Newsletters	0.146		0.071			
	(1.284)		(0.793)			
Webinar:Training	-14.216		-3.843			
	(2,399.546)		(376.756)			
NationalGoals					0.902	0.554
					(1.751)	(1.055)
PolicyAdop					2.057***	1.261***
					(0.734)	(0.416)
SocAcc					1.541**	0.874**
					(0.604)	(0.345)
EconBen					1.239**	0.750**
					(0.588)	(0.337)
Training:Newsletters	1.946	2.902*	1.121	1.733*	6.565***	3.916***
	(1.849)	(1.553)	(1.111)	(0.907)	(2.261)	(1.296)
Webinar:Reports	15.857		4.780			
	(2,399.545)		(376.755)			
Newsletters:Reports	0.771		0.581			
	(2,912.741)		(455.191)			
Training:Reports						
Webinar:Training:Newsletters	15.368		4.576			
	(2,399.546)		(376.756)			
Webinar:Newsletters:Reports						
Webinar:Training:Reports						

Training:Newsletters:Reports						
Webinar:Training:Newsletters:Reports						
Constant	1.617	0.325	0.916	0.091	-1.991	-1.419
	(2.512)	(2.320)	(1.535)	(1.407)	(4.128)	(2.409)
Observations	139	139	139	139	130	130
Log Likelihood	-85.057	-86.652	-85.115	-86.710	-58.493	-58.279
Akaike Inf. Crit.	220.113	213.303	220.230	213.420	172.985	172.557

Note: $^{*}p^{**}p^{***}p<0.01$

Legitimacy

For economic benefits: best fitting model was Model 1 (AIC 159.997, n= 123). For coordination variables, having a central management organization was found to be significant and negatively correlated, as well as the participant answering that their TCP cooperated with other organizations. However, when participants found the cooperation of their TCPs with other international organizations to be sufficient, they were more likely to say their TCPs led to economic benefits in their countries, holding everything else constant. This would suggest that cooperating with other international organizations only leads to economic benefits if this cooperation is in a sufficient level. The variable RecMore was also significant and positive. This would suggest that if a TCP participant said that their TCPs had to be more widely recognized in their countries, they were also more likely to say that their TCPs had led to economic benefits in their country, ceteris paribus.

Moreover, both EnvSust and SustDeve were significant, suggesting that the TCP having a clear goal would increase the likelihood of a participant to say that their TCP led to economic benefits in their country. However, while EnvSust coefficient was positive, SustDeve was negative. This means that, holding everything else constant, a TCP having a goal focused on environmental sustainability increased the probability of a participant to say their TCP had led to economic benefits in their country, while having a broader sustainable development goal decreased this probability.

Furthermore, the share of developing countries was found to be negative and significant in Model 1, indicating that the higher the share of developing countries in a TCP, the lower the probability of a respondent saying their TCP led to economic benefits in their country. However, this could be related to the smaller sample size, considering that missingness was higher for developing countries. Indeed, when looking at models with a smaller set of variables and larger sample size, share of developing countries was no longer significant in the best fitting model (Model 6, AIC=184.551, n=135). In this model, technology deployment instead became significant.

SM5.2, Table 29 – Exploratory regressions for economic benefits

Dependent variable:

| | EconBen | | | | | | |
| | *logistic* | | | | *probit* | | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
CategoryDeveloping	-1.479	-0.234	-0.719	-0.806	-0.129	-0.408	-0.451
	(1.060)	(0.609)	(0.681)	(0.691)	(0.367)	(0.407)	(0.412)
CategoryOther	3.981*	0.464	0.867	0.945	0.264	0.534	0.585
	(2.264)	(1.473)	(1.592)	(1.607)	(0.885)	(0.957)	(0.963)
OccupationOther	-23.313	-2.586**	-18.806	-18.825	-1.407**	-6.871	-6.883
	(2,861.226)	(1.259)	(1,380.127)	(1,373.602)	(0.659)	(298.991)	(297.556)
OccupationPolicy-Maker	-24.135	-3.017**	-18.836	-18.869	-1.679***	-6.902	-6.921
	(2,861.226)	(1.224)	(1,380.127)	(1,373.602)	(0.637)	(298.991)	(297.556)
OccupationResearcher	-24.268	-3.667***	-19.514	-19.502	-2.072***	-7.322	-7.318
	(2,861.226)	(1.221)	(1,380.127)	(1,373.602)	(0.630)	(298.991)	(297.556)
Years	0.017						
	(0.050)						
InternationalGoals	-18.236						
	(10,754.010)						
NationalGoals	19.357		17.474	17.591		5.540	5.593
	(4,937.642)		(3,320.227)	(3,296.777)		(763.916)	(760.156)
HumanRes	-0.376	0.338	0.222	0.224	0.223	0.146	0.150
	(0.569)	(0.345)	(0.370)	(0.380)	(0.208)	(0.224)	(0.229)
FinancialRes	0.699	-0.055	0.140	0.137	-0.059	0.077	0.072
	(0.506)	(0.296)	(0.312)	(0.320)	(0.179)	(0.189)	(0.193)
WorkingParty	0.027						
	(0.753)						
CentralManagement	-1.600**						
	(0.760)						
InterConf	-0.553	0.410	0.420	0.388	0.255	0.228	0.216
	(1.195)	(0.675)	(0.719)	(0.740)	(0.412)	(0.430)	(0.441)
Reports	21.309	18.676	35.240	35.305	6.948	12.432	12.487
	(3,257.998)	(1,237.793)	(2,207.970)	(2,197.362)	(284.068)	(492.287)	(490.325)
Newsletters	0.757	0.041	0.238	0.255	0.027	0.174	0.188
	(0.895)	(0.529)	(0.558)	(0.561)	(0.322)	(0.336)	(0.337)
Webinar	0.930	0.077	0.106	0.180	0.046	0.046	0.083
	(0.963)	(0.500)	(0.542)	(0.549)	(0.303)	(0.323)	(0.327)
Training	-2.014**	-0.617	-0.832	-0.862	-0.362	-0.500	-0.514
	(0.986)	(0.625)	(0.710)	(0.710)	(0.376)	(0.424)	(0.424)
OutSatisf	0.783						
	(0.613)						
PolicyAdop	-0.424		0.147	0.088		0.070	0.037
	(0.782)		(0.565)	(0.571)		(0.336)	(0.340)
TechDeploy	1.027		1.130**	1.056**		0.689**	0.645**
	(0.814)		(0.463)	(0.475)		(0.277)	(0.284)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
SocAcc	0.170			0.205			0.105
	(0.728)			(0.511)			(0.309)
ActSuff	-0.135						
	(1.216)						
BetterIfCoop	-1.935						
	(1.200)						
CoopOther	-1.874**						
	(0.889)						
CoopSuff	2.464***						
	(0.795)						
CountryRec	0.630						
	(0.806)						
RecMore	1.783*						
	(1.004)						
EnvSust	2.682*	0.745	1.504	1.572*	0.432	0.934*	0.971*
	(1.460)	(0.809)	(0.948)	(0.945)	(0.477)	(0.555)	(0.553)
SustDeveObjt	-2.542*	-1.409*	-1.490*	-1.522*	-0.844*	-0.914*	-0.932*
	(1.327)	(0.834)	(0.904)	(0.912)	(0.498)	(0.539)	(0.543)
CompLevel	-0.108	-0.253	-0.281	-0.271	-0.166	-0.176	-0.170
	(0.873)	(0.530)	(0.587)	(0.587)	(0.320)	(0.351)	(0.351)
PercNonMember	22.476	10.425	10.615	11.771	6.530	6.485	7.157
	(14.669)	(8.938)	(9.748)	(9.854)	(5.363)	(5.807)	(5.866)
age	0.025	0.010	0.023	0.023	0.005	0.013	0.013
	(0.063)	(0.037)	(0.043)	(0.043)	(0.022)	(0.025)	(0.025)
PercSP	-2.190	-1.049	0.133	-0.359	-0.531	0.125	-0.144
	(5.127)	(2.935)	(3.354)	(3.415)	(1.728)	(1.989)	(2.025)
TotalParticipation	0.073	0.082	0.063	0.048	0.050	0.041	0.033
	(0.100)	(0.066)	(0.072)	(0.074)	(0.040)	(0.043)	(0.044)
ShareDeveloping	-19.496*	-8.851	-8.826	-9.299	-5.467	-5.413	-5.683
	(10.936)	(7.264)	(7.859)	(7.839)	(4.349)	(4.668)	(4.658)
Constant	-5.908	-18.398	-38.245	-38.242	-6.861	-13.751	-13.758
	(12,602.790)	(1,237.795)	(3,740.895)	(3,716.230)	(284.071)	(858.209)	(854.236)
Observations	123	136	135	134	136	135	134
Log Likelihood	-43.989	-76.938	-68.398	-67.662	-77.101	-68.275	-67.583
Akaike Inf. Crit.	159.977	195.876	184.796	185.325	196.201	184.551	185.165

Note: *p**p***p<0.01

For social acceptance, Category "developing countries" was positive and significant in all models. This means that participants from developing countries were more likely to say that their TCPs had led to social acceptance in their countries when compared to participants from advanced economies, holding everything else constant. The variable PercSP was also positive and significant in all models, suggesting that the higher the percentage of sponsors in a

respondent's TCP, the more likely they were to say that their TCP led to social acceptance in their country. For almost all models, human resources was positive and significant while financial resources was significant but negative, which could indicate that a TCP having sufficient human resources would be more important for increasing social acceptance than a TCP having sufficient financial resources. However, differently from Hattori et al (2022), training was no longer significant. Given that human resources was significant for training, this could perhaps be the reason. Instead, international conferences was significant. Technology deployment was positive and significant, as well as share of sponsor in participation, existence of a central management organization and TCP recognition in participant's country.

Appendix II, Table 30 – Exploratory regressions for social acceptance

	Dependent variable:								
	SocAcc								
	logistic				*probit*				*logistic*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CategoryDeveloping	1.697**	1.697**	1.485*	1.525*	1.045**	1.048**	0.888*	0.919*	2.113*
	(0.783)	(0.783)	(0.823)	(0.831)	(0.449)	(0.451)	(0.467)	(0.472)	(1.213)
CategoryOther	-0.031	-0.031	0.210	0.232	0.0003	0.006	0.113	0.130	-0.418
	(1.423)	(1.423)	(1.448)	(1.447)	(0.829)	(0.830)	(0.845)	(0.844)	(2.789)
OccupationOther	-0.456	-0.456	0.077	0.200	-0.278	-0.280	0.033	0.106	1.026
	(1.118)	(1.118)	(1.154)	(1.181)	(0.645)	(0.645)	(0.660)	(0.675)	(1.527)
OccupationPolicy-Maker	-1.438	-1.438	-0.642	-0.502	-0.881	-0.882	-0.416	-0.336	-1.493
	(1.080)	(1.080)	(1.110)	(1.147)	(0.620)	(0.619)	(0.634)	(0.654)	(1.562)
OccupationResearcher	-0.832	-0.832	0.013	0.189	-0.499	-0.506	-0.029	0.069	-0.073
	(1.067)	(1.067)	(1.115)	(1.167)	(0.611)	(0.617)	(0.636)	(0.666)	(1.573)
Years									0.050
									(0.050)
InternationalGoals									-14.896
									(1,455.398)
PercSP	6.416*	6.416*	7.973**	8.049**	3.955**	3.944**	4.857**	4.876**	12.053**
	(3.347)	(3.347)	(3.628)	(3.644)	(1.942)	(1.947)	(2.066)	(2.069)	(5.845)
ShareDeveloping	3.896	3.896	5.185	5.313	2.408	2.386	3.133	3.167	1.085
	(3.562)	(3.562)	(3.955)	(3.979)	(2.112)	(2.141)	(2.305)	(2.313)	(11.572)
TotalParticipation	0.101	0.101	0.092	0.089	0.061	0.062	0.058	0.057	0.162*
	(0.066)	(0.066)	(0.072)	(0.073)	(0.039)	(0.041)	(0.043)	(0.043)	(0.096)
TCP Age	0.053	0.053	0.057	0.055	0.033	0.032	0.034	0.032	0.073
	(0.042)	(0.042)	(0.046)	(0.046)	(0.024)	(0.025)	(0.026)	(0.026)	(0.076)
CompLevel	-0.381	-0.381	-0.404	-0.381	-0.234	-0.234	-0.253	-0.242	-0.651
	(0.474)	(0.474)	(0.494)	(0.498)	(0.282)	(0.282)	(0.291)	(0.293)	(0.890)
PercNonMember									11.907
									(15.084)
EnvSust	0.148	0.148	0.449	0.427	0.101	0.100	0.230	0.211	0.004
	(0.833)	(0.833)	(0.932)	(0.939)	(0.495)	(0.496)	(0.534)	(0.536)	(1.290)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SustDeveObjt	-0.360	-0.360	-0.256	-0.198	-0.204	-0.207	-0.172	-0.142	-0.526
	(0.689)	(0.689)	(0.724)	(0.738)	(0.409)	(0.411)	(0.428)	(0.434)	(1.351)
HumanRes	0.734*	0.734*	0.644	0.640	0.457*	0.459*	0.409*	0.407*	0.289
	(0.408)	(0.408)	(0.427)	(0.426)	(0.236)	(0.238)	(0.247)	(0.247)	(0.548)
FinancialRes	-0.640*	-0.640*	-0.567	-0.569	-0.393*	-0.393*	-0.339	-0.337	-1.145*
	(0.355)	(0.355)	(0.376)	(0.372)	(0.206)	(0.206)	(0.217)	(0.216)	(0.591)
WorkingParty									0.500
									(0.716)
CentralManagement									1.325*
									(0.762)
Webinar	0.026	0.026	0.185	0.171	0.017	0.013	0.115	0.107	0.028
	(0.542)	(0.542)	(0.598)	(0.600)	(0.321)	(0.324)	(0.348)	(0.349)	(0.832)
Training	0.690	0.690	0.506	0.555	0.433	0.428	0.291	0.313	0.840
	(0.669)	(0.669)	(0.747)	(0.756)	(0.395)	(0.402)	(0.434)	(0.438)	(1.003)
OutSatisf									0.879
									(0.567)
Newsletters	0.260	0.260	0.311	0.333	0.153	0.152	0.194	0.212	-0.150
	(0.559)	(0.559)	(0.604)	(0.604)	(0.330)	(0.331)	(0.353)	(0.353)	(0.909)
Reports	1.727	1.727	1.106	0.996	1.022	1.024	0.673	0.606	-1.456
	(1.404)	(1.404)	(1.407)	(1.427)	(0.795)	(0.796)	(0.807)	(0.818)	(2.065)
InterConf	1.710**	1.710**	2.088**	2.057**	1.055**	1.055**	1.285**	1.268**	5.040***
	(0.782)	(0.782)	(0.881)	(0.878)	(0.454)	(0.454)	(0.507)	(0.505)	(1.684)
NationalGoals			-0.228	-0.280		-0.057	-0.119	-0.151	0.652
			(1.821)	(1.827)		(0.944)	(1.029)	(1.029)	(2.839)
PolicyAdop			0.795	0.801			0.489	0.493	0.410
			(0.601)	(0.603)			(0.349)	(0.349)	(0.871)
TechDeploy			1.312***	1.241**		0.785***	0.744**		2.280***
			(0.499)	(0.515)		(0.288)	(0.297)		(0.819)
EconBen				0.293				0.165	-0.446
				(0.518)				(0.305)	(0.774)
ActSuff									-0.955
									(1.215)
BetterIfCoop									-2.890**
									(1.291)
CoopOther									0.358
									(0.797)
CoopSuff									-0.348
									(0.763)
CountryRec									1.710*
									(0.912)
RecMore									1.620*
									(0.980)
Constant	-7.599**	-7.599**	-9.263**	-9.287**	-4.656**	-4.600**	-5.659**	-5.655**	1.442

	(3.403)	(3.403)	(4.130)	(4.151)	(1.959)	(2.188)	(2.322)	(2.327)	(1,455.415)
Observations	134	134	134	134	134	134	134	134	123
Log Likelihood	-68.251	-68.251	-62.643	-62.484	-67.799	-67.797	-62.015	-61.868	-44.666
Akaike Inf. Crit.	176.502	176.502	171.286	172.967	175.598	177.594	170.030	171.737	161.333

Note: *p**p***p<0.01

SM5.2.5.2.4.   Coordination

Implementation

For country recognition, policy adoption, technology deployment and financial resources were positive and significant for most models estimated (Table 31). The best-fitting model was Model 6 (AIC 168.671, n=123). In this model, the coefficient for Category "Developing" was estimated to be significant and negative, indicating that if a respondent was from a developing country, they were less likely to say that their TCP was well recognized in their country than participants from advanced economies (reference category), holding everything else constant. The variable RecMore was also significant but negative, which makes sense since this indicated that if a participant thought their TCP should be recognized more widely they were less likely to say that their TCP was recognized enough in their country, ceteris paribus. For alignment with national goals, nothing was found to be significant in any of the nine models estimated (Table 32).

SM5.2, Table 31 – Exploratory regressions for country recognition

	Dependent variable:									
	CountryRec									
	logistic						*probit*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
CategoryDeveloping	-1.500	-1.006	-1.087	-1.480*	-0.897	-0.964*	-0.614	-0.664	-0.545	-0.903**
	(0.941)	(0.682)	(0.710)	(0.761)	(0.670)	(0.553)	(0.405)	(0.420)	(0.401)	(0.447)
CategoryOther	-17.727	-18.075	-18.401	-18.998	-17.907	-5.064	-6.573	-6.866	-6.341	-6.441
	(3,735.105)	(1,554.432)	(1,480.041)	(2,531.243)	(1,542.705)	(554.961)	(371.218)	(350.876)	(372.703)	(367.643)
OccupationOther	1.549	0.521	1.152	1.441	0.922	0.942	0.386	0.744	0.585	0.918
	(1.449)	(1.041)	(1.118)	(1.162)	(1.057)	(0.824)	(0.618)	(0.656)	(0.628)	(0.677)
OccupationPolicy-Maker	0.904	-0.217	0.190	0.427	-0.093	0.541	-0.104	0.147	-0.032	0.296
	(1.414)	(1.003)	(1.056)	(1.095)	(1.002)	(0.800)	(0.595)	(0.628)	(0.602)	(0.645)
OccupationResearcher	1.633	0.556	1.149	1.407	0.906	1.029	0.385	0.732	0.577	0.908
	(1.506)	(0.999)	(1.083)	(1.122)	(1.015)	(0.849)	(0.591)	(0.636)	(0.603)	(0.656)
Years	0.020					0.009				

63

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	(0.045)					(0.026)				
InternationalGoals	-16.846					-4.494				
	(6,522.639)					(973.498)				
PercNonMember		-3.529	-3.144	-3.346			-2.838	-2.317	-2.173	-2.133
		(9.365)	(9.669)	(9.156)			(5.417)	(5.608)	(5.496)	(5.723)
NationalGoals	0.954	1.266	1.253			0.639	0.827	0.758		
	(1.629)	(1.449)	(1.426)			(0.970)	(0.870)	(0.863)		
HumanRes	-0.090			-0.100		-0.038				-0.067
	(0.482)			(0.382)		(0.282)				(0.228)
FinancialRes	0.896**			0.897***		0.538**				0.540***
	(0.402)			(0.345)		(0.234)				(0.202)
WorkingParty	0.301					0.133				
	(0.634)					(0.367)				
CentralManagement	-0.289					-0.172				
	(0.658)					(0.378)				
InterConf	0.907	0.242	0.163	0.00001	-0.023	0.449	0.102	0.059	-0.034	-0.034
	(1.195)	(0.766)	(0.777)	(0.804)	(0.759)	(0.659)	(0.453)	(0.463)	(0.452)	(0.477)
Reports	18.564	17.568	17.259	17.782	17.523	6.266	5.967	5.714	5.941	5.653
	(2,292.690)	(1,309.230)	(1,306.230)	(2,152.718)	(1,313.103)	(309.969)	(316.003)	(316.686)	(313.390)	(305.692)
Newsletters	-0.247	-0.755	-0.787	-0.589	-0.864	-0.056	-0.477	-0.478	-0.510	-0.344
	(0.817)	(0.556)	(0.600)	(0.635)	(0.597)	(0.460)	(0.335)	(0.352)	(0.350)	(0.370)
Webinar	0.676	0.432	0.340	0.408	0.431	0.412	0.259	0.201	0.262	0.248
	(0.803)	(0.556)	(0.586)	(0.608)	(0.566)	(0.455)	(0.337)	(0.351)	(0.339)	(0.361)
Training	0.336	0.193	0.375	0.197	0.425	0.191	0.109	0.197	0.254	0.097
	(1.032)	(0.698)	(0.734)	(0.787)	(0.688)	(0.592)	(0.416)	(0.434)	(0.408)	(0.457)
OutSatisf	-0.413					-0.256				
	(0.541)					(0.313)				
PolicyAdop	1.243*	1.000*	0.937	0.947		0.765*	0.612*	0.583*		0.571
	(0.744)	(0.581)	(0.589)	(0.626)		(0.430)	(0.340)	(0.347)		(0.363)
TechDeploy	0.511	1.002**	0.880*	1.124**	1.004**	0.278	0.635**	0.541*	0.606**	0.684**
	(0.660)	(0.454)	(0.484)	(0.521)	(0.470)	(0.380)	(0.272)	(0.289)	(0.280)	(0.307)
EconBen	0.719		0.648	0.563	0.635	0.447		0.418	0.416	0.353
	(0.733)		(0.517)	(0.541)	(0.504)	(0.422)		(0.305)	(0.298)	(0.317)
SocAcc	1.067		0.313	0.509	0.333	0.651		0.206	0.225	0.318
	(0.708)		(0.518)	(0.547)	(0.510)	(0.406)		(0.310)	(0.306)	(0.324)
ActSuff	1.752					1.085				
	(1.297)					(0.752)				
BetterIfCoop	0.508					0.297				
	(1.173)					(0.662)				

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
CoopOther	0.174					0.023				
	(0.779)					(0.447)				
CoopSuff	-0.136					-0.019				
	(0.676)					(0.391)				
RecMore	-2.698***					-1.586***				
	(0.985)					(0.542)				
EnvSust	0.606	0.074	-0.029	0.116	-0.015	0.362	0.002	-0.042	-0.017	0.048
	(1.092)	(0.769)	(0.820)	(0.851)	(0.810)	(0.617)	(0.468)	(0.490)	(0.484)	(0.501)
SustDeveObjt	-1.384	-0.766	-0.376	-0.830	-0.517	-0.844	-0.333	-0.243	-0.310	-0.533
	(0.999)	(0.674)	(0.905)	(0.952)	(0.881)	(0.577)	(0.521)	(0.540)	(0.524)	(0.559)
CompLevel	0.031	-0.014	-0.162	-0.191	-0.169	0.034	-0.110	-0.101	-0.105	-0.111
	(0.683)	(0.481)	(0.593)	(0.624)	(0.584)	(0.387)	(0.329)	(0.350)	(0.345)	(0.361)
age	0.023	0.007	0.008	0.017	-0.005	0.014	0.007	0.003	-0.004	0.009
	(0.049)	(0.035)	(0.038)	(0.039)	(0.037)	(0.028)	(0.022)	(0.023)	(0.022)	(0.023)
PercSP	-0.453	-1.261	-1.879	-0.899	-3.446	-0.225	-0.547	-1.089	-2.105	-0.638
	(4.262)	(2.882)	(3.025)	(3.350)	(2.901)	(2.440)	(1.743)	(1.808)	(1.722)	(1.979)
TotalParticipation	0.057	0.060	0.033	0.059	0.048	0.032	0.039	0.021	0.028	0.037
	(0.097)	(0.070)	(0.071)	(0.074)	(0.068)	(0.056)	(0.042)	(0.043)	(0.041)	(0.044)
ShareDeveloping	-0.653	0.828	5.022	3.456	3.536	-0.659	2.492	3.106	2.233	2.045
	(5.210)	(3.627)	(7.994)	(8.158)	(7.753)	(2.988)	(4.561)	(4.734)	(4.594)	(4.793)
Constant	-9.009	-20.636	-20.375	-23.417	-18.278	-6.155	-7.777	-7.556	-6.353	-8.982
	(6,913.846)	(1,309.233)	(1,306.234)	(2,152.720)	(1,313.105)	(1,021.660)	(316.007)	(316.690)	(313.393)	(305.696)
Observations	123	132	130	130	130	123	132	130	130	130
Log Likelihood	-48.376	-69.291	-65.937	-61.899	-67.652	-48.062	-69.013	-65.678	-67.511	-61.567
Akaike Inf. Crit.	166.753	180.583	179.873	173.798	179.304	166.123	182.026	179.357	179.022	173.135

Note: *p**p***p<0.01

SM5.2, Table 32 – Exploratory regressions for national goals

	Dependent variable:								
	NationalGoals								
	probit	*logistic*					*probit*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CategoryDeveloping	8.815	48.355	46.339	43.862	41.526	14.019	12.978	12.242	10.992
	(29,189.070)	(100,218.400)	(139,224.300)	(128,393.000)	(248,591.900)	(18,021.120)	(32,327.290)	(25,149.500)	(157,749.300)
CategoryOther	-3.267	82.817	-5.720	-6.961	-6.624	23.597	-1.849	-2.128	-2.342
	(77,880.140)	(224,391.400)	(205,213.900)	(171,561.300)	(220,079.200)	(43,982.610)	(39,177.260)	(34,639.450)	(83,802.010)
OccupationOther	-9.006	-28.222	-22.581	-13.877	-9.445	-7.918	-6.316	-3.692	-2.414

	(92,300.050)	(94,621.680)	(124,669.000)	(130,133.600)	(174,154.300)	(19,042.580)	(22,061.150)	(24,201.180)	(59,877.720)
OccupationPolicy-Maker	-3.548	24.694	14.784	12.450	30.343	6.977	4.232	3.421	9.008
	(112,205.100)	(101,691.700)	(121,434.100)	(155,515.800)	(218,562.500)	(19,777.090)	(23,903.050)	(30,890.140)	(100,852.400)
OccupationResearcher	-12.637	-40.814	-51.939	-48.405	-44.511	-11.395	-14.540	-13.481	-12.546
	(91,386.430)	(99,913.110)	(178,962.100)	(122,113.600)	(210,962.000)	(20,551.990)	(41,493.510)	(23,100.960)	(55,928.370)
Years	-0.251								
	(2,137.848)								
InternationalGoals	5.607		69.052	67.927	49.254		19.989	19.963	13.277
	(100,856.100)		(398,706.300)	(310,152.400)	(667,031.900)		(86,589.570)	(80,973.900)	(291,335.200)
HumanRes	5.230	21.385	27.805	24.265	20.987	6.120	7.958	6.856	5.886
	(17,359.660)	(18,461.860)	(167,495.600)	(63,360.270)	(45,511.710)	(3,155.165)	(40,033.700)	(12,190.110)	(13,442.780)
FinancialRes	-0.429	4.367	-6.157	-1.792	-4.925	1.314	-1.787	-0.520	-1.486
	(35,462.910)	(35,073.930)	(166,831.800)	(63,065.750)	(61,697.030)	(6,410.342)	(39,922.030)	(11,584.840)	(26,212.370)
WorkingParty	4.354								
	(29,166.250)								
CentralManagement	-0.197								
	(47,343.390)								
InterConf	-4.528	6.545	-5.453	-0.406	-2.868	1.939	-0.966	-1.447	-0.687
	(60,199.610)	(58,784.580)	(259,023.200)	(487,878.000)	(154,916.900)	(10,662.620)	(51,442.860)	(129,966.400)	(35,090.900)
Reports	-3.301	89.778	-2.379	17.665	3.566	25.406	0.029	4.527	1.144
	(81,267.400)	(100,801.500)	(515,383.700)	(329,430.400)	(373,794.000)	(18,800.250)	(115,784.600)	(72,495.070)	(123,941.600)
Newsletters	6.138	3.090	46.707	29.828	27.507	1.181	12.821	9.580	7.109
	(70,608.640)	(175,295.000)	(296,300.100)	(471,382.300)	(350,676.800)	(34,081.690)	(58,843.510)	(120,624.900)	(189,729.500)
Webinar	-3.078	-25.239	-23.466	-28.307	-34.972	-7.034	-6.603	-8.232	-9.764
	(45,005.620)	(56,469.810)	(140,366.200)	(96,867.160)	(168,566.000)	(10,333.770)	(32,715.740)	(18,322.660)	(48,630.180)
Training	-6.660	-46.437	-41.698	-36.918	-28.884	-13.197	-11.940	-10.307	-8.441
	(56,067.540)	(54,962.080)	(142,059.600)	(89,364.470)	(132,405.100)	(9,910.611)	(32,902.530)	(16,992.370)	(71,778.250)
OutSatisf	-1.651								
	(38,908.950)								

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
PolicyAdop	-1.623			9.821	13.741			2.866	4.198
	(35,122.540)			(83,544.180)	(173,639.900)			(15,634.520)	(100,824.900)
TechDeploy	0.730			-1.125	-3.796			-0.235	-0.952
	(37,106.940)			(77,148.230)	(79,513.550)			(14,396.720)	(41,430.380)
EconBen	1.948				-6.316				-2.074
	(65,933.700)				(216,828.400)				(92,397.300)
SocAcc	-1.993				16.647				4.796
	(44,883.190)				(99,188.170)				(36,164.140)
ActSuff	-12.337								
	(77,928.070)								
BetterIfCoop	3.777								
	(42,724.480)								
CoopOther	2.408								
	(48,766.710)								
CoopSuff	1.347								
	(36,296.860)								
CountryRec	0.524		-1.256	-7.443	-3.759		-0.328	-2.020	-1.203
	(50,047.430)		(214,297.300)	(128,399.500)	(106,867.900)		(54,551.010)	(24,382.340)	(52,920.600)
RecMore	1.751								
	(36,082.110)								
EnvSust	-3.666	54.856	-1.000	11.053	-1.072	15.918	-0.117	3.563	-0.751
	(51,996.760)	(144,766.000)	(449,380.600)	(354,462.600)	(327,526.900)	(27,731.540)	(98,706.830)	(71,321.270)	(108,850.600)
SustDeveObjt	-10.256	-116.286	-97.212	-89.455	-61.901	-33.205	-27.744	-24.934	-17.101
	(41,097.640)	(117,905.100)	(226,556.500)	(207,317.800)	(245,032.900)	(21,471.260)	(48,454.160)	(37,619.760)	(89,420.120)
CompLevel	-4.585								
	(42,425.730)								
PercNonMember	-13.245	410.626	337.498	268.735	235.560	116.255	96.534	74.279	64.989
	(732,332.600)	(1,224,060.000)	(2,485,587.000)	(2,117,606.000)	(1,796,287.000)	(242,918.200)	(573,927.900)	(414,315.700)	(386,503.500)
age	-0.578	-1.124	-3.027	-2.146	-2.536	-0.309	-0.834	-0.606	-0.700
	(3,200.142)	(4,536.822)	(11,436.700)	(9,037.215)	(11,809.490)	(860.912)	(2,262.848)	(1,889.132)	(4,157.729)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ParisCompEnabling, mixed or evolving		-51.589	-9.345	-15.186	-17.878	-14.867	-2.614	-4.558	-4.575
		(156,995.000)	(288,695.100)	(355,198.300)	(316,197.000)	(31,165.560)	(64,667.570)	(75,348.330)	(101,872.000)
ParisCompNot compatible		1.625	57.101	43.203	50.187	1.030	15.113	13.174	13.414
		(218,314.600)	(621,489.600)	(762,691.200)	(417,846.500)	(39,589.310)	(127,797.100)	(174,029.600)	(176,953.300)
PercSP	-9.723	-21.750	-29.026	-29.464	-41.552	-5.826	-7.581	-7.896	-11.073
	(209,548.000)	(406,757.400)	(889,511.600)	(841,630.800)	(701,857.900)	(74,316.320)	(189,039.900)	(161,183.600)	(219,402.400)
TotalParticipation	1.066	4.576	5.946	5.174	4.292	1.289	1.664	1.424	1.213
	(3,903.486)	(9,965.271)	(18,627.380)	(18,844.870)	(20,896.870)	(1,951.722)	(4,002.976)	(4,085.172)	(5,579.026)
ShareDeveloping	-49.794	-791.370	-690.876	-591.224	-497.307	-225.874	-195.161	-166.999	-135.925
	(538,898.600)	(1,136,923.000)	(1,262,010.000)	(1,879,145.000)	(2,289,354.000)	(219,184.500)	(254,675.700)	(382,160.600)	(1,096,859.000)
Constant	44.183	-6.437	49.075	0.042	62.037	-2.882	11.396	0.333	17.336
	(212,417.000)	(215,096.400)	(1,222,932.000)	(740,807.200)	(526,830.600)	(39,370.310)	(261,041.700)	(156,468.800)	(187,626.300)
Observations	123	145	134	132	130	145	134	132	130
Log Likelihood	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
Akaike Inf. Crit.	72.000	44.000	48.000	52.000	56.000	44.000	48.000	52.000	56.000

Note: *p**p***p<0.01

For whether the participant thought their TCP should be recognized more widely, even when controlling for country recognition, it seems that the older the TCP, the less likely the participant was to say so. Moreover, if a TCP conducted webinars or held international conferences, the participant was also more likely to say their TCP should be recognized more widely in their country. The same holds for a TCP leading to policy adoption and social acceptance. If the participant said that their TCP cooperation with other TCPs was sufficient, they were less likely to say so.

SM5.2, Table 33 – Exploratory regressions for need for more recognition

	Dependent variable:			
	RecMore			
	logistic		*probit*	
	(1)	(2)	(4)	(5)
CategoryDeveloping	2.319	2.461	1.297	1.341
	(1.797)	(1.739)	(0.960)	(0.942)
CategoryOther	1.172	1.175	-1.763	-3.072

	(2,956.443)	(2,915.918)	(29,929.090)	(630.921)
OccupationOther	5.058	4.625	2.752	2.607
	(3.975)	(3.488)	(2.064)	(1.888)
OccupationPolicy-Maker	2.164	2.059	0.767	0.756
	(2.984)	(2.945)	(1.559)	(1.545)
OccupationResearcher	0.986	0.742	0.322	0.246
	(2.554)	(2.355)	(1.353)	(1.278)
Years	-0.246**	-0.239**	-0.143**	-0.140**
	(0.125)	(0.119)	(0.062)	(0.061)
InternationalGoals	-17.210	-17.576	-6.013	-4.907
	(6,522.639)	(6,522.639)	(73,981.790)	(1,568.513)
NationalGoals	-6.752	-7.008	-0.687	0.514
	(3,223.931)	(3,211.766)	(31,969.260)	(670.075)
HumanRes	-1.428	-1.372	-0.842	-0.813
	(1.088)	(1.052)	(0.601)	(0.580)
FinancialRes	-0.558	-0.572	-0.314	-0.332
	(1.120)	(1.119)	(0.575)	(0.573)
WorkingParty	-1.438	-1.482	-0.681	-0.711
	(1.468)	(1.443)	(0.758)	(0.742)
CentralManagement	2.722	2.430*	1.569	1.469*
	(1.859)	(1.459)	(0.957)	(0.788)
InterConf	5.333*	5.228*	3.310**	3.276**
	(2.816)	(2.719)	(1.500)	(1.477)
Reports	0.969	0.728	-0.054	-0.147
	(6.027)	(6.088)	(2.755)	(2.733)
Newsletters	0.614	0.582	0.552	0.543
	(1.772)	(1.742)	(0.942)	(0.941)
Webinar	3.132**	3.095**	1.655**	1.639**
	(1.594)	(1.565)	(0.840)	(0.828)
Training	-1.077	-1.123	-0.524	-0.551
	(2.803)	(2.752)	(1.457)	(1.445)
OutSatisf	0.822	0.868	0.399	0.410
	(1.054)	(1.030)	(0.545)	(0.543)
PolicyAdop	4.238*	4.137*	2.363*	2.341*
	(2.528)	(2.415)	(1.299)	(1.276)
TechDeploy	-1.590	-1.733	-0.791	-0.847
	(1.396)	(1.322)	(0.698)	(0.662)
EconBen	1.515	1.403	0.697	0.672
	(1.613)	(1.541)	(0.837)	(0.820)
SocAcc	3.743*	3.624*	2.141**	2.092**
	(2.136)	(2.026)	(1.077)	(1.039)
ActSuff	-2.687	-2.126	-1.808	-1.555

	(6.480)	(6.092)	(3.033)	(2.816)
BetterIfCoop	-4.193	-4.001	-2.237	-2.180
	(3.046)	(2.920)	(1.692)	(1.641)
CoopOther	1.438	1.644	0.741	0.829
	(1.976)	(1.819)	(1.017)	(0.942)
CoopSuff	-9.164**	-8.991**	-4.999***	-4.943***
	(3.765)	(3.623)	(1.895)	(1.838)
CountryRec	-7.648***	-7.573***	-4.260***	-4.229***
	(2.877)	(2.840)	(1.431)	(1.409)
EnvSust	1.654	1.753	1.081	1.107
	(2.603)	(2.552)	(1.471)	(1.461)
SustDeveObjt	-1.360	-1.708	-0.865	-0.997
	(2.408)	(2.034)	(1.277)	(1.081)
CompLevel	2.193	2.366	1.197	1.267
	(1.715)	(1.604)	(0.915)	(0.853)
PercNonMember	-7.864		-2.979	
	(28.884)		(15.036)	
age	0.167	0.149*	0.094	0.087*
	(0.106)	(0.082)	(0.059)	(0.047)
PercSP	3.715	3.653	1.743	1.763
	(9.284)	(9.256)	(5.196)	(5.185)
TotalParticipation	-0.217	-0.211	-0.138	-0.134
	(0.208)	(0.205)	(0.109)	(0.107)
ShareDeveloping	-16.918	-22.309**	-10.492	-12.549**
	(22.292)	(11.199)	(11.858)	(5.877)
Constant	33.199	33.334	13.052	10.533
	(7,275.896)	(7,270.515)	(80,593.660)	(1,705.657)
Observations	123	123	123	123
Log Likelihood	-23.507	-23.546	-23.597	-23.615
Akaike Inf. Crit.	119.014	117.091	119.194	117.231

Note: *p**p***p<0.01

Duplication

Regarding whether TCPs cooperate with other international organizations (CoopOther), the share of developing countries and TCP age were positive and significant in all models. This means that the higher the share of participants from developing countries in a TCP, the more likely the participant was to say that this TCP cooperated with other international organizations, holding everything else constant. Moreover, ceteris paribus, the longer ago the TCP was created, the more likely it was for the respondent to say their TCP cooperated with other international organizations. Finally, SustDeveObj was positive and significant in the best-fitting

model (Model 7, AIC = 159.058, n=128), meaning that if a TCP had a sustainable development objective stated in their brochure, it was more likely that the participant would say their TCP cooperate with other international organizations. Interestingly, compatibility with 1.5°C goals did not seem to be significant for cooperation with other international organizations when controlling for other factors.

SM5.2, Table 34 – Exploratory regressions for cooperation with other international organizations

	Dependent variable:							
	CoopOther							
	logistic					*probit*		*logistic*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CategoryDeveloping	0.096	0.015	0.411	0.354	0.054	0.180	0.163	0.096
	(0.630)	(0.638)	(0.669)	(0.716)	(0.371)	(0.384)	(0.407)	(0.630)
CategoryOther	0.397	-0.032	1.367	1.078	-0.177	0.464	0.419	0.397
	(1.620)	(1.644)	(1.747)	(1.724)	(0.833)	(0.875)	(0.897)	(1.620)
OccupationOther	0.694	1.268	0.615	0.403	0.732	0.545	0.430	0.694
	(1.132)	(1.209)	(1.150)	(1.246)	(0.610)	(0.629)	(0.669)	(1.132)
OccupationPolicy-Maker	-1.127	-0.939	-0.777	-1.130	-0.501	-0.373	-0.533	-1.127
	(1.006)	(0.989)	(1.055)	(1.193)	(0.536)	(0.574)	(0.635)	(1.006)
OccupationResearcher	-0.942	-0.606	-0.964	-1.695	-0.327	-0.437	-0.836	-0.942
	(0.968)	(0.965)	(1.022)	(1.188)	(0.517)	(0.560)	(0.643)	(0.968)
PercSP	-3.408	-1.839	-2.093	-2.198	-1.416	-0.309	-0.339	-3.408
	(2.839)	(3.343)	(2.824)	(3.373)	(1.660)	(1.653)	(1.927)	(2.839)
ShareDeveloping	5.585*	25.727**	5.901*	5.647	11.495***	9.997**	9.462**	5.585*
	(3.236)	(11.533)	(3.268)	(3.621)	(4.391)	(4.307)	(4.595)	(3.236)
TotalParticipation	-0.053	-0.019	-0.040	-0.052	-0.020	-0.015	-0.023	-0.053
	(0.063)	(0.072)	(0.065)	(0.070)	(0.039)	(0.040)	(0.042)	(0.063)
age	0.074**	0.086*	0.072**	0.089**	0.060***	0.057***	0.065***	0.074**
	(0.034)	(0.049)	(0.035)	(0.038)	(0.021)	(0.021)	(0.023)	(0.034)
ParisCompEnabling, mixed or evolving	-0.540	0.185			0.211			-0.540
	(0.581)	(0.746)			(0.398)			(0.581)
ParisCompNot compatible	-2.272	-0.461			-0.878			-2.272
	(1.674)	(2.130)			(1.050)			(1.674)
CompLevel			0.662	0.674		0.027	0.076	
			(0.490)	(0.505)		(0.352)	(0.361)	
EnvSust	0.159	0.114	0.608	0.682	-0.176	0.233	0.360	0.159
	(0.855)	(1.008)	(0.762)	(0.841)	(0.501)	(0.456)	(0.490)	(0.855)
SustDeveObjt	0.810	1.463	0.823	0.817	0.971**	0.831*	0.804*	0.810
	(0.620)	(1.052)	(0.668)	(0.699)	(0.460)	(0.462)	(0.489)	(0.620)
PercNonMember		-10.305			-11.459**	-9.536*	-9.013	
		(20.617)			(5.623)	(5.724)	(6.148)	
OutSatisf			0.331	0.316		0.207	0.200	

71

			(0.352)	(0.392)		(0.197)	(0.216)	
ActSuff			1.623**	2.080**		0.829*	1.099**	
			(0.776)	(0.841)		(0.457)	(0.493)	
EconBen				-0.830			-0.472	
				(0.572)			(0.322)	
SocAcc				0.691			0.361	
				(0.586)			(0.328)	
TechDeploy				-0.683			-0.311	
				(0.569)			(0.325)	
PolicyAdop				0.838			0.485	
				(0.608)			(0.340)	
InternationalGoals	0.871	0.801	0.707	0.233				0.871
	(1.740)	(1.745)	(1.790)	(1.788)				(1.740)
HumanRes	-0.019	-0.027	-0.235	-0.160				-0.019
	(0.342)	(0.342)	(0.377)	(0.412)				(0.342)
FinancialRes	-0.028	0.019	-0.069	-0.007				-0.028
	(0.302)	(0.309)	(0.324)	(0.355)				(0.302)
ShareDeveloping:PercNonMember		-46.340						
		(72.740)						
Constant	-1.495	-4.497	-5.998*	-6.109*	-1.655	-3.566**	-3.788**	-1.495
	(2.669)	(3.105)	(3.370)	(3.470)	(1.144)	(1.607)	(1.703)	(2.669)
Observations	137	137	134	128	137	134	128	137
Log Likelihood	-69.581	-66.907	-65.420	-60.651	-67.602	-64.221	-59.529	-69.581
Akaike Inf. Crit.	173.161	171.814	166.839	165.302	165.204	160.442	159.058	173.161

Note: *p**p***p<0.01

For whether they thought their TCP could provide a better output if cooperated with other TCPs (BetterIfCoop), nothing was significant for the best fitting model (Model 1, AIC=70, n=123). In models with larger samples and less variables, social acceptance, sustainable development objective, as well as share of developing countries were significant but negatively correlated with answering that the TCP could produce a better output if it cooperated with other TCPs. This means that if a participant said that their TCP had led to social acceptance in their country, that they were less likely to say that their TCPs could produce a better output if it coordinated with other TCPs, holding everything else constant. This could mean that if a TCP led to social acceptance, the participant was already satisfied the current output (hence cooperation would not necessarily make it "better"). The same would apply for the other sustainable development objective and share of developing countries. However, due to the way the question was asked, it is unclear whether this was because they thought that their current output did not need to be improved (and hence no need for more cooperation) or that cooperation would not improve output in any case.

SM5.2, Table 35 – Exploratory regressions for better output if cooperate with other TCPs

Dependent variable:

| | BetterIfCoop | | | | | | | |
| | logistic | | | | | probit | | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CategoryDeveloping	-77.014	-0.824	-0.773	-1.191	-25.865	-0.396	-0.356	-0.608
	(62,045.730)	(0.963)	(1.013)	(1.132)	(11,631.750)	(0.501)	(0.521)	(0.587)
CategoryOther	-552.466	-3.736**	-3.664**	-4.830**	-143.026	-2.046**	-1.999**	-2.594**
	(169,864.900)	(1.826)	(1.864)	(2.304)	(24,430.690)	(0.969)	(0.996)	(1.232)
OccupationOther	318.813	0.809	0.817	0.659	72.823	0.358	0.369	0.299
	(76,292.730)	(1.681)	(1.692)	(2.257)	(25,396.260)	(0.903)	(0.911)	(1.166)
OccupationPolicy-Maker	52.381	-0.009	0.002	-1.189	21.930	-0.140	-0.131	-0.698
	(93,207.490)	(1.393)	(1.417)	(1.750)	(22,633.190)	(0.784)	(0.793)	(0.931)
OccupationResearcher	-79.146	-0.129	-0.123	-1.369	-27.518	-0.244	-0.232	-0.748
	(156,836.800)	(1.426)	(1.464)	(1.840)	(28,474.880)	(0.784)	(0.801)	(0.966)
Years	-10.455				-3.285			
	(2,535.723)				(376.108)			
InternationalGoals	116.899				34.586			
	(361,648.100)				(74,785.800)			
NationalGoals	11.060				-2.888			
	(80,811.430)				(282,092.600)			
HumanRes	16.924				12.546			
	(68,858.210)				(13,503.560)			
FinancialRes	9.124				-0.040			
	(37,007.160)				(4,413.744)			
WorkingParty	200.530				64.330			
	(87,637.070)				(28,934.520)			
CentralManagement	118.443				32.758			
	(55,663.820)				(13,302.170)			
InterConf	104.085				47.119			
	(78,062.830)				(36,173.180)			
Reports	-371.106				-106.234			
	(126,169.800)				(12,401.070)			
Newsletters	267.371				86.179			
	(57,205.600)				(20,325.260)			
Webinar	-33.292				-15.103			
	(38,028.590)				(6,214.166)			
Training	-277.984				-89.571			
	(73,701.050)				(21,309.400)			
OutSatisf	-48.056		0.062	0.470	-16.089		0.064	0.264
	(43,360.690)		(0.496)	(0.628)	(9,011.943)		(0.262)	(0.334)
PolicyAdop	114.860			1.153	43.126			0.669
	(84,937.900)			(1.035)	(34,518.770)			(0.551)
TechDeploy	43.390			-0.427	18.715			-0.326

	(112,838.800)			(0.929)	(37,114.820)			(0.486)
EconBen	102.845			-1.107	40.737			-0.479
	(54,507.470)			(0.935)	(22,120.640)			(0.486)
SocAcc	-209.260			-1.858*	-75.150			-1.014*
	(112,688.200)			(1.091)	(47,272.750)			(0.573)
ActSuff	147.800		-0.049	0.374	43.142		-0.053	0.172
	(157,293.600)		(1.119)	(1.341)	(20,841.190)		(0.601)	(0.715)
CoopOther	-80.390				-21.173			
	(124,397.700)				(33,591.330)			
CoopSuff	-207.673				-82.559			
	(55,513.510)				(21,829.600)			
CountryRec	48.518				13.478			
	(67,350.600)				(20,266.140)			
RecMore	86.010				20.148			
	(77,609.360)				(24,736.080)			
EnvSust	20.261	0.470	0.573	1.071	19.149	0.239	0.336	0.505
	(65,211.000)	(1.353)	(1.019)	(1.273)	(29,120.720)	(0.695)	(0.565)	(0.671)
SustDeveObjt	-382.510	-2.503*	-2.474	-3.187*	-123.543	-1.224*	-1.201*	-1.804**
	(114,060.600)	(1.510)	(1.513)	(1.670)	(18,303.030)	(0.695)	(0.693)	(0.879)
CompLevel	-212.219		-0.108	-0.486	-60.481		0.024	-0.211
	(84,303.890)		(0.828)	(0.985)	(18,227.780)		(0.433)	(0.532)
age	-0.291	0.006	0.006	0.075	0.204	0.009	0.009	0.036
	(2,274.632)	(0.049)	(0.049)	(0.059)	(664.484)	(0.027)	(0.027)	(0.032)
ParisCompEnabling, mixed or evolving		0.231				0.080		
		(1.152)				(0.557)		
ParisCompNot compatible		0.183				-0.147		
		(2.007)				(1.155)		
PercSP	2,190.862	5.223	5.177	7.761	692.504	2.981	3.078	4.127
	(998,095.600)	(5.143)	(5.064)	(5.644)	(286,216.900)	(2.464)	(2.453)	(2.830)
TotalParticipation	34.102	0.185	0.177	0.253	9.960	0.088	0.083	0.145
	(12,872.630)	(0.147)	(0.142)	(0.170)	(1,351.183)	(0.071)	(0.069)	(0.090)
ShareDeveloping	-1,396.072	-14.510*	-14.345*	-14.260	-408.390	-6.638*	-6.574*	-8.042
	(863,315.300)	(8.407)	(8.449)	(9.358)	(201,165.600)	(3.837)	(3.818)	(4.899)
Constant	295.177	1.697	1.879	-0.757	55.739	0.856	0.601	-0.350
	(655,947.200)	(2.436)	(4.004)	(4.795)	(331,552.200)	(1.303)	(2.110)	(2.559)
Observations	123	140	137	130	123	140	137	130
Log Likelihood	-0.00000	-33.020	-32.952	-26.310	-0.00000	-32.751	-32.678	-26.057
Akaike Inf. Crit.	70.000	94.039	95.904	90.620	70.000	93.502	95.355	90.113

Note: *p**p***p<0.01

For performance of the center, the best-fitting model was Model 3 with an R2 adj of 0.439 and a sample of 76 observations. The smaller sample is due to the fact that participants that did not have a center skipped this question. In this model, CompLevel was positive and significant, indicating that the higher the compatibility of the TCP, the better the survey respondent thought their central management was performing. Policy adoption was also positive and significant, indicating that if the respondent would be more satisfied with the performance of the center if that their TCP had led to policy adoption, ceteris paribus. However, technology deployment was significant and negative, indicating that if a respondent had said that their TCP led to technology deployment, they thought their center was performing less well than respondents that said their TCP had *not* led to technology deployment.

SM5.2, Table 36 – Exploratory regressions for central management performance

	Dependent variable:		
	CentralManagePerform		
	(1)	(2)	(3)
CategoryDeveloping	-0.058	-0.070	0.013
	(0.251)	(0.257)	(0.254)
CategoryOther	0.528	0.331	0.742
	(0.623)	(0.634)	(0.627)
OccupationOther	0.240	0.042	0.068
	(0.343)	(0.361)	(0.370)
OccupationPolicy-Maker	0.394	0.369	0.366
	(0.344)	(0.340)	(0.342)
OccupationResearcher	-0.022	-0.166	-0.291
	(0.323)	(0.329)	(0.351)
PercNonMember	2.359	2.868	3.778
	(3.223)	(3.383)	(3.506)
PercSP	0.202	0.039	1.075
	(1.050)	(1.125)	(1.145)
ShareDeveloping	-1.008	-1.670	-2.189
	(2.623)	(2.929)	(3.102)
TotalParticipation	-0.022	-0.015	0.001
	(0.022)	(0.022)	(0.022)
Age	-0.006	-0.010	0.004
	(0.014)	(0.014)	(0.014)
CompLevel	0.349	0.362	0.477**
	(0.231)	(0.231)	(0.229)
EnvSust	0.385	0.275	0.439
	(0.310)	(0.315)	(0.321)
SustDeveObjt	-0.199	-0.417	-0.515
	(0.268)	(0.329)	(0.336)
OutSatisf	0.688***	0.754***	0.761***

	(0.134)	(0.135)	(0.144)
ActSuff	-0.052	-0.258	-0.028
	(0.296)	(0.293)	(0.293)
HumanRes	0.065	0.072	0.102
	(0.125)	(0.126)	(0.132)
FinancialRes	-0.090	-0.045	-0.087
	(0.122)	(0.123)	(0.122)
CoopOther	0.188	0.262	0.090
	(0.209)	(0.207)	(0.209)
InternationalGoals	0.283	0.152	-0.395
	(0.670)	(0.650)	(0.644)
InterConf		-0.163	-0.014
		(0.236)	(0.247)
Reports			
Training		-0.303	-0.248
		(0.241)	(0.237)
Webinar		0.088	0.073
		(0.225)	(0.227)
Newsletters		-0.402*	-0.325
		(0.238)	(0.236)
PolicyAdop			0.359*
			(0.194)
TechDeploy			-0.489***
			(0.174)
SocAcc			-0.253
			(0.182)
EconBen			-0.066
			(0.182)
Constant	0.457	1.014	0.289
	(1.511)	(1.537)	(1.468)
Observations	83	80	76
R^2	0.454	0.543	0.641
Adjusted R^2	0.289	0.356	0.439
Residual Std. Error	0.633 (df = 63)	0.607 (df = 56)	0.572 (df = 48)
F Statistic	2.754*** (df = 19; 63)	2.895*** (df = 23; 56)	3.176*** (df = 27; 48)

Note: *p**p***p<0.01

Guidance of the search

For effectiveness of knowledge sharing activities, no model estimated presented a good fit for the data. This was largely due to the small sample size for these variables, resulting in not enough degrees of freedom in most models. For reports, it seemed that participants from

developing countries would think these activities are more effective than participants from advanced economies, ceteris paribus. For international conference, one model indicated that a higher compatibility level could be associated with lower perceived effectiveness of international conferences, but this model had a negative adj-R^2.

SM5.2, Table 37 – Exploratory regressions for effectiveness of knowledge sharing activities

	Dependent variable:									
	EffecTrainings		EffecWebinar		EffecReports		EffecNewsletters		EffecInterConf	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
CategoryDeveloping	2.136	0.655	-2.457	0.211	2.861	0.375*	-15.459	0.567**	-136.522	0.165
		(0.579)		(0.302)		(0.197)		(0.284)		(0.186)
CategoryOther	1.199	0.712	-1.380	0.233	1.606	-0.432	-8.679	-0.210	-76.646	-0.285
		(0.684)		(0.545)		(0.486)		(0.554)		(0.426)
OccupationOther	0.415	0.125	-0.477	-0.268	0.556	-0.061	-3.003	-0.120	-26.517	0.271
		(0.675)		(0.435)		(0.290)		(0.357)		(0.259)
OccupationPolicy-Maker	1.732	-0.440	-1.993	-0.101	2.321	0.070	-12.540	-0.569	-110.747	0.182
		(0.668)		(0.380)		(0.292)		(0.352)		(0.260)
OccupationResearcher	-0.332	-0.020	0.382	0.023	-0.445	0.103	2.405	-0.279	21.242	0.110
		(0.608)		(0.370)		(0.272)		(0.331)		(0.241)
Years	0.052		-0.060		0.070		-0.377		-3.326	
InternationalGoals										
NationalGoals	-0.239		0.275		-0.320		1.728		15.258	
HumanRes	-0.262		0.301		-0.350		1.894		16.725	
FinancialRes	-0.601		0.692		-0.805		4.352		38.433	
WorkingParty	-2.656		3.056		-3.558		19.223		169.764	
CentralManagement	-0.532		0.612		-0.712		3.849		33.994	
InterConf										
EffecInterConf	0.016		-0.018		0.021		-0.113			
Reports										
EffecReports	-0.746		0.859				5.403		47.719	
Newsletters										0.035

EffecNewsletters	0.138	-0.159	0.185		-8.831
Webinar		0.142 (0.985)			
EffecWebinar Training	0.869		1.164	-6.291	-55.556
EffecTrainings		1.151	-1.340	7.239	63.927
OutSatisf	1.982	-2.281	2.656	-14.350	-126.730
PolicyAdop	1.589	-1.829	2.129	-11.504	-101.596
TechDeploy	1.240	-1.427	1.661	-8.976	-79.275
EconBen	-1.131	1.301	-1.515	8.185	72.287
SocAcc					
ActSuff					
BetterIfCoop					
CoopOther					
CoopSuff					
CountryRec					
RecMore					
EnvSust	0.753 (1.129)	-0.865* (0.488)	-0.089 (0.239)	-0.358 (0.363)	-0.090 (0.223)
SustDeveObjt	-0.604 (0.706)	-0.124 (0.364)	-0.188 (0.180)	-0.039 (0.262)	-0.203 (0.176)
CompLevel	0.772 (0.846)	0.019 (0.390)	-0.046 (0.151)	-0.153 (0.279)	-0.263* (0.138)
PercNonMember					
age	0.004 (0.044)	-0.034** (0.017)	-0.025** (0.011)	-0.007 (0.015)	0.007 (0.010)
PercSP	2.801 (3.621)	-2.661* (1.348)	-1.057 (0.818)	-0.615 (1.153)	0.087 (0.790)
TotalParticipation	-0.003 (0.058)	0.033 (0.043)	0.012 (0.020)	0.011 (0.032)	0.008 (0.019)
ShareDeveloping	-4.214 (3.124)	-2.605 (2.205)	0.208 (1.009)	0.586 (1.561)	-0.301 (0.990)

Constant	-2.576	1.724	2.964	5.929***	-3.451	4.991***	18.647	4.725***	164.680	4.461***
		(3.591)		(1.808)		(0.716)		(1.048)		(0.647)
Observations	20	32	20	72	20	140	20	103	20	128
R^2	1.000	0.330	1.000	0.173	1.000	0.135	1.000	0.101	1.000	0.073
Adjusted R^2		-0.094		-0.012		0.054		-0.019		-0.033
Residual Std. Error		1.045 (df = 19)		0.835 (df = 58)		0.750 (df = 127)		0.884 (df = 90)		0.688 (df = 114)
F Statistic		0.779 (df = 12; 19)		0.937 (df = 13; 58)		1.656* (df = 12; 127)		0.840 (df = 12; 90)		0.687 (df = 13; 114)

Note: *p**p***p<0.01

SM5.3.   Interviews

SM5.3.1. Interview guide

1. Round of introductions
2. A short explanation about our paper
3. General explanations about the interview
   - It will be a semi-structured interview with 4 open questions
   - When referring to interviews in the final paper, interviewees will be cited anonymously
   - The interview will be recorded for analysis purposes only
   - After the interview, I will transcribe it and send the transcript back for them to check if there is something missing. If no response in 2 weeks we will assume it is ok.
   - They will be able to see publication at the end.

4. Interview questions:

1- Activities: TCPs usually hold several activities for sharing knowledge and experience, for instance international conferences, reports, newsletters, webinars, trainings. Which activities of your TCP are you the **most** satisfied with?
   a. Which ones do you think are the most effective for sharing knowledge and experiences and which ones do you feel like you learn the most from? Can you explain?
   b. What is the targeted audience of these activities?
   c. Do you think that the performance of your TCP could be improved in this regard? Can you explain?
   d. Has COVID had any impact on that? Can you explain?
   e. Is there anything else you'd like to say about it?

2- Outcomes: TCPs can sometimes lead to outcomes like policy adoption, technology deployment, increased social acceptance or economic benefits. Has your TCP led to any of these outcomes in your country? Can you explain?
   a. Has COVID impacted this in any way? Can you explain?
   b. Is there anything else you'd like to say about it?

3- Have the climate negotiations (e.g. Paris Agreement) impacted the work of your TCP?
   a. Has it affected the way your TCP works? Can you explain?
   b. Do you perceive any challenges coming from it? Or advantages?
   c. Do you think your TCP contributes to achieve Paris Agreement goals? What could (or should) your TCP do to increase its contribution?

4- There is a growing participation of emerging economies and developing countries in IEA TCPs. How is it in your TCP?
   a. Has it affected the way your TCP works? Can you explain?
   b. Do you perceive any challenges coming from it? Or advantages?

c. What could (or should) be done better to facilitate the participation of developing countries?

SM5.3.2. *List of interviews*

SM5.3, Table 1: List of interviews

CODE	Country Category	TCP Sector	Compatibility	Survey	Date
1	Advanced	Buildings	Enabling	Yes	20/07/2021
2	Advanced	Renewables and Hydrogen	Evolving	Yes	11/08/2021
3	Advanced	Fossil Fuels	Mixed	Yes	01/09/2021
4	Advanced	Buildings	Enabling	Yes	07/09/2021
5	Developing	Fossil Fuels	Mixed	Yes	28/09/2021
6	Developing	Buildings	Enabling	No	15/09/2021
7	Developing	Renewables and Hydrogen	Compatible	Yes	27/09/2021
8	Developing	Transport	Compatible	No	05/10/2021
9	Advanced	Renewables and Hydrogen	Compatible	No	07/10/2021
10	Advanced	Fossil Fuels	Evolving	No	20/10/2021
11	Developing	Buildings	Enabling	No	19/10/2021
12	Advanced	Renewables and Hydrogen	Compatible	Yes	20/10/2021
13	Advanced	Renewables and Hydrogen	Compatible	No	25/10/2021
14	Developing	Renewables and Hydrogen	Compatible	Yes	05/11/2021
15	Developing	Renewables and Hydrogen	Compatible	No	23/11/2021

SM5.3.2.1. Summary of interview arguments by interview number

Reference regards the number of the interview according to SM5.3, Table 1. Since interviews were semi-structured with open-ended questions, not all topics came up for all interviews. Hence, the fact that the number of an interview is not mentioned in a certain reference does not mean that the interviewee disagreed with that point, it simply means that this argument could not be found in their answer.

SM5.3, Table 2: Summary of interview findings by interview number

Argument	Reference interview	Section in paper
Overall satisfaction with TCPs activities for knowledge sharing.	All	MobRes
Difficulties in funding projects and tasks, especially if from different domestic budgets.	2, 3, 4, 7, 8, 9, 13	MobRes
Strongest point of the TCPs is their ability to create influential international networks of experts which promote	All	MobRes

state of the art knowledge and experience sharing, being reference in their fields.		
Networks are sometimes so strong that their influence extends beyond TCP-specific activities, as participants apply for joint research grants and collaborate outside of their TCPs framework.	3	MobRes
Coordination across TCPs is even more crucial if TCPs are to contribute to the energy transition, given the need of understanding the overall energy system and not individual technologies.	All	Coord
My TCP contributes to the energy transition or Paris Agreement goals of limiting global warming	1, 3, 4, 5, 6, 7, 9, 11, 14, 15	Coord
TCPs activities changed according to technology maturity levels, with initial phases focusing more on research and demonstration and later stages prioritizing knowledge dissemination and outreach.	3, 12, 13	MobRes
Targeted audience are mainly scientists, even though some TCPs organize regular meetings and events in order to share knowledge and coordinate with other stakeholders like industry, policy makers, the financial sector and civil society (e.g. energy communities or NGOs)	1, 2, 3, 4, 6, 9, 10, 11	Diversity
Participation from developing countries was considered to contribute to the effectiveness of the TCPs, by providing knowledge about the application of the technology in different contexts and markets, and allowing the TCPs to better coordinate between the main global players	All	Innovation-diversity
Differences in institutional capacity and budget constraints were often a barrier for equal participation of developing countries, impacting countries' ability to travel for in person conferences, take part in cost-shared tasks, conduct research locally, or afford membership fees	1, 4, 5, 8, 12, 14	Innovation-diversity
Increased participation from developing countries had the potential to create opportunities for mutual learning.	3, 5, 9, 13, 14	Innovation-diversity
Increased participation from developing countries had the potential to lead to a higher diversity of topics.	1, 2, 3, 4, 6, 9, 11, 12	Innovation-diversity
Opportunities for capacity building were limited, and often conducted in a top-down fashion, where developing	7, 15	Innovation-diversity

countries are seen simply as consumer markets, and not innovation markets.		
Lower capabilities and few opportunities for effective capacity building resulted in less space for active contribution and ownership of developing countries in meetings, projects, and agenda-setting.	6, 7, 8, 11, 12, 15	Innovation-diversity
Lower capabilities and few opportunities for effective capacity building undermined mutual learning and higher diversity of topics.	5, 7, 8, 14, 15	Innovation-diversity
Knowledge-sharing activities were overly focused on technical aspects of the deployment of technologies, overlooking knowledge on innovation, manufacturing and economic use of technologies. This limited the potential for acquiring capabilities needed to leverage economic benefits from technologies and their potential applications.	6, 7, 8, 11, 15	Innovation-diversity
Fewer opportunities for leveraging economic benefits was considered to compromise legitimacy and social acceptance in developing countries.	6, 7, 8, 11, 15	Innovation-diversity
Low levels of local awareness among countries' governments was a reason for low political and financial support for participation in TCPs especially in developing countries	1, 7, 8, 9, 11, 13	Innovation-diversity
Three interviewees from developing countries said they were able to build networks in TCPs that provided access to resources, allowing them to exert higher influence at the domestic level	6, 8, 11	Innovation-diversity
TCPs which attracted developing countries were the ones that actively engaged with local authorities to convince them of the value of participating.	3, 10, 12, 13	Innovation-diversity
Developing countries considered increasing social acceptance and overcoming cultural barriers as key factors for enabling the energy transition in their countries.	6, 8, 9, 11	Innovation-diversity
Developing countries face other pressing development challenges which can increase resistance for the introduction of new technologies if the potential for socio-economic benefits are unclear	6, 7, 8, 9, 11, 15	Innovation-diversity

As social and cultural factors are very context-dependent, participants have to adapt insights from TCPs into their own reality.	6, 8, 11, 13	Innovation-diversity
Predominance of participants from advanced countries made issues concerning social acceptance in lower-income contexts often got overlooked.	6, 8, 11, 13	Innovation-diversity
Having more countries with similar conditions or a regional focus in TCPs activities could facilitate implementation at country level.	6, 8, 11, 12	Innovation-diversity
Increasing activities to "lower entry barriers" and reach out to more diverse audiences (via e.g., targeted webinars, factsheets and the website) could improve diversity in participation, both from contexts and actors.	1, 7, 14, 15	Innovation-diversity
Improving knowledge dissemination beyond expert audiences was considered necessary to increase awareness and enhance implementation of TCPs' findings among at the local level	6, 7, 8, 11	Innovation-diversity
Some TCPs have hired communications professionals to improve their outreach to non-scientific audiences.	1, 12	Innovation-diversity
Challenges in funding projects and tasks come from not only from difficulties in getting funds from domestic budgets. It is hence challenging to acquire external funding for collaborations with researchers coming from countries with lower capabilities, less equipped labs and fewer peer-reviewed publications.	2, 3, 4, 7, 8, 9, 13	Innovation-diversity
Increased regional focus in activities was also suggested as a way to make the TCPs work more tailor-made to the diversity of contexts	6, 7, 8, 14	Innovation-diversity
Concerns around climate change have had an impact on TCPs' activities, with current priorities focusing far more on sustainability aspects	1, 2, 3, 6, 8, 5, 10, 11, 12	Innovation-compatibility
TCP started including societal and environmental requirements in new project proposals	1	Innovation-compatibility
TCPs shifted priorities of research activities towards cleaner applications	1, 2, 3, 5, 12	Innovation-compatibility

The reflection of increased focus on environmental sustainability on national implementation varied according to the domestic policy context of participant countries.	3,7	Innovation-compatibility
Some countries shifted earlier to prioritize cleaner applications while others remained focusing on fossil fuels applications.	3	Innovation-compatibility
TCPs started to incorporate a systems approach, including in terms of the overall energy system decarbonization, and the entire socio-technical system	1, 2, 4, 6, 8, 9, 10, 11, 12, 13	Innovation-compatibility
Systems approach increased the need for coordination with other TCPs	1, 2, 8, 9, 10, 11, 12, 13	Innovation-compatibility
Systems approach increased work in non-hardware issues	4, 6, 8, 10, 11	Innovation-compatibility
According to interviewees, TCPs aiming to contribute to the energy transition need to work more closely with policy makers and other actors, and actively promote knowledge dissemination to non-scientific audiences, including the general public, to increase social acceptance.	All	Innovation-compatibility
Contributing to the transition required a change in communication strategy, including publishing fact sheets, increasing social media engagement and organizing webinars.	1, 2, 5, 6, 8, 9, 12	Innovation-compatibility
Contributing to the transition required increase the frequency of knowledge dissemination in order to timely inform policy making, instead of waiting for long scientific publication cycles.	2, 12	Innovation-compatibility
TCPs now need a team with a more multidisciplinary background, including not only engineers, but also social scientists, industry representatives and communications specialists	1, 4, 8, 10, 11, 12	Innovation-compatibility
TCPs' activities varied according to technology maturity level. For instance, proof-of-principle was crucial for technologies in earlier stages of development, while engagement with social acceptance and regulatory issues become increasingly necessary as the focus shifts to diffusion	3, 12, 13	Discussion
Two interviewees argued that not directly involving policy makers ensures TCPs remain independent from political interests.	2, 3	Discussion

Capacity building could be useful but should not be a one-sided transfer of knowledge.	6,7,8	Discussion
In some TCPs, developed countries supported participation of entities from developing countries by providing bilateral capacity-building funding directly to these institutions.	11, 13	Discussion
Some TCPs created an independent source of income with certain projects which were then converted into seed capital to deployment projects.	12	Discussion

SM5.4. Coding of brochures according to 1.5ºC compatibility, environmental sustainability and sustainable development

SM5.4. Table 1: Ongoing TCPs as of December 2020

TCP	Name	Sector	Objective (from brochures on IEA website as of Dec 2020)	Env	Dev	Technologies (from brochures on IEA website as of Dec 2020)	Compatibility
EBC	Buildings and Communities	Buildings	Carries out research and development efforts towards near-zero energy and carbon emissions in the built environment. Activities under the EBC TCP focus on the integration of energy-efficient and sustainable technologies into healthy buildings and communities.	1	1	Energy efficiency and decentralized energy systems. Integrated planning and building design; Building energy systems; Building envelope; Community-scale methods; Real building energy use	Compatible
DHC	District Heating and Cooling	Buildings	The DHC TCP conducts research and development as well as policy analysis and international co-operation to increase the market penetration of district heating and cooling systems with low environmental impact.	1	0	DHC system technologies. Decarbonisation and temperature reduction in district heating networks. Improving the business case of DHC including the integration of prosumers. Digitalisation – systematic optimisation of DHC in the era of big data	Compatible
4E	Energy Efficient End-use Equipment	Buildings	The aims of the 4E TCP are to promote energy efficiency as the key to ensuring safe, reliable, affordable and sustainable energy systems. As an international platform for collaboration between governments, the 4E TCP provides policy guidance to its members and other governments concerning energy using equipment and systems. The 4E TCP prioritises technologies and applications with significant energy consumption and energy saving potential within the residential, commercial and industrial sectors (not including transport). To meet its aims, the 4E TCP harnesses the expertise of governments, industry, experts and other	1	1	Technologies and applications with significant energy consumption and energy saving potential within the residential, commercial and industrial sectors (not including transport. Electric Motor Systems (EMSA); Solid State Lighting (SSL); Electronic Devices and Networks (EDNA); Power Electronic Conversion Technology (PECTA); Monitoring, Verification and Enforcement (MV&E)	Enabling

			TCPs for joint research related to the development and deployment of energy efficient equipment.				
HPT	Heat Pumping Technologies	Buildings	The HPT TCP functions as an international framework of co-operation and knowledge exchange for the different stakeholders in the field of heat pumping technologies used for heating, cooling, air-conditioning and refrigeration in buildings, industries, thermal grids and other applications. The mission of the HPT TCP is to accelerate the transformation to an efficient, renewable, clean and secure energy sector in its member countries and beyond through collaboration research, demonstration and data collection and through enabling innovations and deployment in the area of heat pumping technologies.	1	0	Heat pumping technologies used for heating, cooling, air-conditioning and refrigeration in buildings, industries, thermal grids and other applications	Compatible
Bioenergy	Bioenergy	Renewable Energy and Hydrogen	The aim of the Bioenergy TCP is to increase knowledge and understanding of bioenergy systems in order to facilitate the commercialisation and market deployment of environmentally sound, socially acceptable, and cost-competitive, low-carbon bioenergy systems and technologies, and to advise policy and industrial decision makers accordingly.	1	1	Low-carbon bioenergy systems and technologies	Compatible
SolarPACES	Concentrated Solar Power	Renewable Energy and Hydrogen	The SolarPACES TCP supports collaboration to advance development and deployment of concentrating solar thermal technologies. From a system perspective, concentrating solar power (CSP) offers significant advantages. With built-in thermal storage, CSP can improve the flexibility and stability of power systems, provide dispatchable electricity and help integrating more variable renewables.	1	0	Concentrating solar thermal technologies	Compatible
Geothermal	Geothermal Energy	Renewable Energy and Hydrogen	The Geothermal TCP promotes international collaboration fostering and enhancing the development and sustainable use of geothermal energy. Activities are chiefly directed towards the sharing of information; developing technologies, techniques and best practices for exploration, development and utilisation; and producing and disseminating authoritative geothermal information and data.	1	0	Geothermal energy	Compatible

Hydropower	Hydropower	Renewable Energy and Hydrogen	The Hydropower TCP is a global platform for advancing hydropower technology, encouraging the sustainable use of water resources for the development and management of hydropower.	1	0	Hydropower technology	Compatible
OES	Ocean Energy Systems	Renewable Energy and Hydrogen	The OES TCP connects organisations and individuals working in the ocean energy sector to accelerate the viability, uptake and acceptance of ocean energy systems in an environmentally acceptable manner. The work of the OES TCP covers all forms of energy generation in which sea water forms the motive power through its physical and chemical properties i.e. wave, tidal range, tidal and ocean currents, ocean thermal energy conversion and salinity gradients.	1	0	Wave, tidal range, tidal and ocean currents, ocean thermal energy conversion and salinity gradients	Compatible
PVPS	Photovoltaic Power Systems	Renewable Energy and Hydrogen	The PVPS TCP supports international collaborative efforts to enhance the role of photovoltaic solar energy (PV) as a cornerstone in the transition to sustainable energy systems. The PVPS TCP seeks to serve as a global reference for policy and industry decision makers; to act as an impartial and reliable source of information on trends, markets and costs; and to provide meaningful guidelines and recommended practices for state-of-the-art PV applications.	1	0	Photovoltaic solar energy	Compatible
SHC	Solar Heating and Cooling	Renewable Energy and Hydrogen	Through multi-disciplinary international collaborative research and knowledge exchange, as well as market and policy recommendations, the SHC TCP works to increase the deployment rate of solar heating and cooling systems by breaking down the technical and non-technical barriers to increase deployment.	0	0	Solar heating and cooling systems	Compatible
Wind	Wind Energy	Renewable Energy and Hydrogen	The Wind TCP's mission is to stimulate co-operation on wind energy research, development, and deployment (RD&D). The Wind TCP provides high quality information and analysis to member governments and commercial sector leaders by addressing technology development, deployment and its benefits, markets, and policy options. Activities include Resource and site characterisation; Advanced technology for wind energy; Energy systems with high amounts of wind; Social,	1	1	Wind energy	Compatible

			environmental and economic impacts; Communication, education and engagement				
AFC	Advanced Fuel Cells	Transport	Created in 1990, the AFC TCP seeks to make a significant contribution to address the opportunities and barriers to fuel cell commercialisation by fostering the development of fuel cell technologies and their application on an international basis, and conveying key messages to policy makers and the wider community as appropriate.	0	0	Fuel cells	Compatible
HEV	Hybrid and Electric Vehicles	Transport	the HEV TCP provides a forum for global co-operation on the development and deployment of electric vehicles. It supplies objective information to support decision making, functions as a facilitator for international collaboration in pre-competitive research and demonstration projects, fosters international exchange of information, and it can promote projects and programmes for research, development, demonstration and deployment. With more than six million electric vehicles on the road today, electric mobility contributes significant energy savings, CO2 emissions reductions, and energy security.	1	0	Transport electrification for automotive and beyond (e.g. trucks, buses, ships, bicycles; Infrastructure issues (extreme fast charging, interoperability, wireless charging, vehicle/grid interactions); Connected and automated electric vehicles	Compatible
ECES	Energy Storage	Buildings	The mission of the Energy Storage TCP is to facilitate research, development, implementation and integration of energy storage technologies to optimise the energy efficiency of all kinds of energy systems and enable the increasing use of renewable energy. Storage technologies are a central component in energy-efficient and sustainable energy systems. Energy storage is a cross-cutting issue that relies on expert knowledge of many disciplines. The Energy Storage TCP fosters widespread experience, synergies and cross-disciplinary co-ordination of working plans and research goals.	1	0	Energy storage technologies, including thermal storage (when the final energy to be stored is heat or cold); electrical energy storage (such as pumped hydro, batteries, compressed air, etc.; material storage systems (e.g. gas storage); virtual storage (controllable loads which can be switched on or off depending on demand)	Enabling
C3E	Clean Energy Education and Empowerment	Cross-cutting	The C3E TCP, originally created as a CEM initiative in 2010, aims to build a community of women leaders in the field of clean energy across diverse sectors; create a framework for co-operation and information sharing among participating countries; and share best practices	1	1	cross-cutting	Enabling

			for effective strategies to advance women in the clean energy field. These objectives will be pursued by collecting, integrating, synthesising and distributing information on promising practices and policies to engage women in clean energy careers and leadership positions.				
ETSAP	Energy Technology Systems Analysis	Cross-cutting	Its mission is to support policy makers in improving the evidence base underpinning energy and environmental policy decisions. This is achieved through energy systems modelling tools and capability through a unique network of nearly 200 energy modelling teams from approximately seventy countries. The ETSAP TCP develops, improves and makes available the TIMES (and MARKAL) energy systems modelling platform. It also provides training to energy modellers to use this platform to build national, regional and global energy systems models. In addition, ETSAP supports policy makers in undertaking and interpreting energy technology assessments and scenario analysis to inform policy decisions.	1	0	cross-cutting	Enabling
HTS	High-Temperature Superconductivity	Electricity	The mission of the HTS TCP is twofold: to evaluate the status of and assess the prospects for the electric power sector's use of HTS within the developed and developing world; and to disseminate the findings to decision makers in government, the private sector, and the research and development community. The HTS TCP provides evidence from socio-technical research on energy use to policy makers to support clean energy transitions. Through its work the HTS TCP provides evidence on the design, social acceptance and usability of clean energy technologies in the area of high temperature superconductivity.	1	0	Use of high temperature superconductivity in the electric power sector	Enabling
ISGAN	Smart Grids	Electricity	The ISGAN TCP is a strategic platform to support high-level government attention and action for the accelerated development and deployment of smarter, cleaner electricity grids around the world. Operating as both an initiative of the Clean Energy Ministerial, and as a TCP, the ISGAN TCP provides an important channel for	1	0	Smart grids	Enabling

			communication of experience, trends, lessons learned, and visions in support of clean energy objectives as well as new flexible and resilient solutions for smart grids.				
Users	User-Centred Energy Systems	Electricity	The Users TCP's mission is to provide evidence from socio-technical research on the design, social acceptance and usability of clean energy technologies to inform policy making for clean, efficient and secure energy transitions. Decarbonisation, decentralisation and digitalisation are embedding energy technologies in the heart of our communities. Communities' response to these changes and use of energy technologies will determine the success of our energy systems. Poorly designed energy policies, and technologies that do not satisfy users' needs, lead to 'performance gaps' that are both energy and economically inefficient. User-centred energy systems are therefore critical for delivering socially and politically acceptable energy transitions.	1	0	User-centred energy systems (demand-side management)	Enabling
FBC	Fluidised Bed Conversion	Fossil Fuels	Fluidized bed conversion of solid fuels applied to clean energy. Fluidized bed conversion offers several advantages over pulverized fuel combustion, notably low emissions and the ability to burn a wide range of fuels including waste and biomass, but also coal.	1	0	Fluidized bed conversion of solid fuels applied to clean energy.	Mixed
GHG	Greenhouse Gas R&D Programme	Fossil Fuels	the remit of the GHG TCP is to evaluate options and assess the progress of carbon capture and storage, and other technologies that can reduce greenhouse gas emissions derived from the use of fossil fuels, biomass and waste. The aim of the TCP is to help accelerate energy technology innovation by ensuring that stakeholders from both the public and private sectors share knowledge, work collaboratively and, where appropriate, pool resources to deliver integrated and cost-effective solutions.	1	0	Carbon capture and storage (CCS), carbon capture utilization (CCU) and other technologies that can reduce greenhouse gas emissions	Mixed
IETS	Industrial Technologies and Systems	Industry	The IETS TCP focuses on energy use in a broad range of industry sectors with significant potential for emissions and cost savings. The IETS TCP work programme ranges from aspects relating to development of processes and energy technologies, to overall system analysis and	1	1	Industry-based biorefineries, Membrane filtration for energy-efficient separation of lignocellulosic biomass components, Industrial excess	Mixed

			energy efficiency in industry sectors.Industrial systems must drastically reduce their GHG emissions in order to meet global emissions reduction target. Through its activities of knowledge sharing and dissemination among public and private sector, the IETS TCP increases awareness of technology and energy efficiency in industry, contributes to synergies between different systems and technologies, and enhances international cooperation related to sustainable development.			heat recovery – technologies and applications; the role of process integration for greenhouse gas mitigation in industry; the role of industrial biorefineries in a low carbon economy, digitalization, artificial intelligence and related technologies for energy efficiency and GHG emissions reduction in industry, electrification in industry.	
Hydrogen	Hydrogen	Renewable Energy and Hydrogen	The Hydrogen TCP, founded in 1977, works to accelerate hydrogen implementation and widespread utilisation in the areas of production, storage, distribution, power, heating, mobility and industry. The Hydrogen TCP seeks to optimise environmental protection, improve energy security, transform global energy systems and grid management, and promote international economic development, as well as serving as the premier global resource for expertise in all aspects of hydrogen technology.	1	1	Hydrogen implementation and widespread utilisation in the areas of production, storage, distribution, power, heating, mobility and industry	Evolving
AMT	Advanced Materials for Transportation	Transport	the AMT TCP focuses on materials critical to fuel efficiency improvement for current and future transportation technologies. The AMT TCP conducts co-operative research activities on friction reduction, waste heat recovery, and light weighting of vehicles. The TCP work programme includes the development of standard test methods, testing, demonstration and design guidelines.	0	0	Friction reduction in vehicles; Thermoelectric materials; Model based coatings; Multi-material vehicle lightweight structures, materials joining technology; Automotive glazing, weight reduction, materials substitutions	Enabling
AMF	Advanced Motor Fuels	Transport	The mission of the AMF TCP is to advance the understanding and appreciation of the potential of advanced motor fuels towards transport sustainability. This is achieved by providing sound information and technology assessments designed to facilitate informed and science-based decisions regarding advanced motor fuels at all levels of decision-making.	1	0	Assessment of the applicability of new fuels; Evaluation of fuel efficiency, regulated and unregulated pollutant emissions from specific fuel/engine/vehicle combinations; Assessment of best matching fuel/vehicle technologies for specific applications	Enabling

Combustion	Clean and Efficient Combustion	Transport	The Combustion TCP provides a forum for interdisciplinary exchange and enables international collaborative research to advance the understanding of combustion processes to: accelerate the development of combustion technologies that demonstrate reduced fuel consumption and have lower pollutant emissions in transportation, power generation, industry and buildings, and; generate, compile and disseminate independent information, expertise and knowledge related to combustion for the research community, industry, policy makers and society. The Combustion TCP is focused on researching the combustion of the primary fossil fuels, which provide 80% or more of the energy currently used in industrial countries, with a growing emphasis on new and emerging fuels (e.g., e-fuels made from renewable energy, hydrogen, ammonia, etc.).	1	0	Low temperature combustion engines; Gas engines; Gas turbines; Solid fuels; Fundamental research on fuel sprays, soot formation and combustion chemistry, growing emphasis on hydrogen, ammonia and e-fuels.	Evolving
CCC	Clean Coal Centre	Fossil Fuels	all coal related trends and all aspects of coal production, transport, processing and utilisation including efficiency improvements, lowering greenhouse gas and non-greenhouse gas emissions, reducing water stress, ensuring poverty alleviation through universal access to robust and reliable electricity, together with other sustainability and socially led goals.	1	1	All coal technologies including improving efficiency and environmental impact	Not compatible
EOR	Enhanced Oil Recovery	Fossil Fuels	primary focus is on improving the economics of EOR, increasing the recovery of oil originally in place, and extending reservoir economic life.	0	0	Fluids and interfaces; Surfactants and polymers; Development of gas flooding techniques; Thermal recovery; Dynamic reservoir characterisation; Emerging technologies	Not compatible
GO	Gas and Oil	Fossil Fuels	GOTCP brings together representatives from governments, industry and academia in a global dialogue to explore the role of oil and gas technology in the energy transition. GOTCP aims to catalyse innovation across oil and gas technologies and to provide collaborative opportunities	1	0	Onshore and offshore oil and gas activities. From interview: increased focus on Offshore Wind.	Evolving
ESEFP	Environmental, Safety,	Fusion Power	The ESEFP TCP provides a platform for scientists and engineers to exchange information and further enhance	1	0	o In-vessel tritium source terms o Activation products source	NA

	Economic Aspects of Fusion Power		the collaboration, coordinating international efforts to bridge the scientific and technical gaps between the International Thermonuclear Experimental Reactor (ITER) and DEMO (a proposed nuclear fusion power station that is intended to build upon the ITER experimental nuclear fusion reactor), and supporting governmental policies and raising awareness of fusion energy developments and potential to the general public. Participants in the ESEFP TCP exchange expertise with a view to better understanding the environmental, safety and economic issues associated with fusion power. Broad stakeholder engagement, managing public opinion, and a positive media framing of fusion devices is key in dealing with the overall socio-economic impact of this technology. The work of the ESEFP TCP serves to bring fusion science closer to the public and thus contribute to greater social consensus.			terms o Failure rate database o Radioactive waste study o Socio-economic aspects of fusion power o Magnet safety	
FM	Fusion Materials	Fusion Power	The scope of the FM TCP covers materials needed to meet the requirements of structural, thermal management, fuel breeding and processing, and neutron economy of fusion systems. Relevance and application of the results of this work range from meeting the needs of existing plasma physics devices, through International Thermonuclear Experimental Reactor (ITER), and DEMO* stages of fusion development, to the application of advanced materials in fully mature fusion power plants serving the base energy needs of society. The FM TCP aims to achieve the broader goals of developing the materials needed to allow fusion to reach its full potential as a safe, economical and environmentally attractive energy source. Activities of the FM TCP enhance the co-operation and collaboration of the parties interested in understanding the behaviour and development of materials for a fusion power system environment.	1	0	Beryllium technology; Irradiation facilities and testing; Materials theory and modelling; Radiation effects in ceramic insulators; Silicon carbide composites; Reduced activation; ferritic/martensitic steels; Tungsten alloys; Vanadium alloys	NA
NTFR	Nuclear Technology Fusion Reactors	Fusion Power	The NTFR TCP is a collaborative programme on the research and development of nuclear technology of fusion reactors, a priority area for fusion energy. The TCP focuses on technologies of components located	0	0	Work is structured in 2 main tasks ('Appendixes'): • Appendix 1 addresses the characterisation of blanket:	NA

			close to the fusion plasma and subjected to high-energy neutron irradiation, in particular tritium production and processing, energy extraction, radiation shielding and components such as the first wall, blanket, shield and plasma facing components. The NTFR TCP provides a unique framework for co-ordinating and collaborating international research and development activities in fusion nuclear technologies that will be essential for the successful realisation of fusion as an energy source. Most activities undertaken under the framework of the NTFR TCP are of direct relevance to ITER.			tritium breeding blankets, radiation shielding and tritium processing systems • Appendix 2 addresses the characterisation of tungsten as a plasma-facing material	
PWI	Plasma Wall Interaction	Fusion Power	The PWI TCP conducts research to understand the phenomena of interaction between the plasma and the chamber walls and to develop relevant wall materials for applications in fusion power.	0	0	Interaction between plasma and the chamber walls in fusion power	NA
RFP	Reversed Field Pinches	Fusion Power	The RFP TCP aims to advance the development of fusion power through research on the Reversed Field Pinch (RFP) magnetic configuration. The three members of the RFP TCP co-ordinate RFP experiments, and can share equipment and computational tools, as well as supporting staff exchanges. As a close relative to the tokamak and stellarator configurations, RFP research advances fusion science and engineering generally, while resolving key challenges specific to a RFP-based fusion reactor. Activities include RFP experiments worldwide, all in academic environments: o Extrap T2R (Sweden) o Keda Torum eXperiment (KTX) (China) o Madison Symmetric Torus (MST) (USA) o RELAX (Japan) o RFX-mod (Italy)	0	0	Reversed Field Pinch based fusion reactors	NA
ST	Spherical Tori	Fusion Power	the ST TCP aims to enhance the effectiveness and productivity of fusion energy science and technology by strengthening co-operation among spherical torus research programmes and facilities; contributing to and extending the scientific and technology database of toroidal confinement concepts to the spherical torus physics regime; and providing a scientific and	0	0	Co-operation on spherical tori science Co-operation on the physics and technology of future spherical torus devices Co-operation on steady state operation of fusion devices	NA

			technological basis for the successful development of fusion power using the spherical torus.					
SH	Stellarator-Heliotron Concept	Fusion Power	The strategic objective of the SH TCP is to improve the physics base of the Stellarator concept and to enhance the effectiveness and productivity of research by strengthening co-operation among member countries. Worldwide collaborative activities on the stellarator and heliotron research are combined under the umbrella of this programme, which promotes the exchange of information among the partners, the secondment of specialists to facilities and research groups, joint planning and coordination of experimental programmes in selected areas, joint experiments, workshops, seminars and symposia, joint theoretical, design and system studies, and the exchange of computer codes.	0	0	Plasma heating and fuelling Plasma confinement: influence of turbulent and neoclassical (collisional)transport, effects of isotope composition and impurities on plasma transport Stability and equilibrium: high-beta operation, stability limits Exhaust of heat and particles from the plasma and plasma wall interaction Support and extension of databases	NA
CTP	Tokamak Programmes	Fusion Power	The CTP TCP supports the development of fusion energy by contributing to the physics basis of the International Thermonuclear Experimental Reactor (ITER), and DEMO (a proposed nuclear fusion power station that is intended to build upon the ITER experimental nuclear fusion reactor) design optimisation. The CTP TCP provides a forum for tokamak programmes of the ITER Members to co-ordinate tokamak research by carrying out scientific and technological exchanges, holding workshops and meetings for the purpose of advancing the tokamak concept in the context of fusion energy, and supporting ITER physics and technology needs. The CTP TCP is one of the main programmes for the implementation of the ITPA, which now operates under the auspices of the ITER Organisation and co-ordinates activities among the domestic programmes of the signatories to the ITER Agreement. The next critical step in demonstrating the scientific feasibility of fusion energy is to demonstrate burning plasmas in long pulses. As achieving this objective is a great challenge, and there are many scientific and technological issues to be	0	0	Experimental nuclear fusion reactor	NA

addressed, this is the primary mission of ITER and of tokamak research programmes worldwide

SM5.4, Table 2: Closed or merged TCPs as of December 2020

TCP name	Start	End	Sector	Compatibility	P[1]
Pressurized Fluidised Bed Conversion (Grimethorpe)	1975	1985	Fossil Fuels	Not compatible	2
Pyrolisis of Coal	1978	1991	Fossil Fuels	Not compatible	2
Tokamaks PFD (ASDEX Upgrade)	1985	2012	Nuclear	NA	2
Hot Dry Rock Technology	1979	1986	Renewables and H2	Compatible	2
Energy Cascading	1977	1984	Cross-cutting	Enabling, mixed or evolving	3
Superconducting Magnets for Fusion Power	1977	1989	Nuclear	NA	3
Geotheral Equipment Testing	1979	1983	Renewables and H2	Compatible	3
Low Nitrogen Oxides Coal Burner	1980	1991	Fossil Fuels	Not compatible	4
Coal and Oil Mixtures	1981	1996	Fossil Fuels	Not compatible	4
Man-Made Geothermal	1977	1989	Renewables and H2	Compatible	5
High-Pressure, High-Temperature Filters	1980	1987	Fossil Fuels	Not compatible	6
Multiphase Flow Science	1987	2014	Fossil Fuels	Not compatible	6
Process Integration	1995	2005	Industry	Enabling, mixed or evolving	6
Heat Transfer/Exchangers	1977	2004	Cross-cutting	Enabling, mixed or evolving	8
International Center for Gas Technology Information	1995	2003	Fossil Fuels	Not compatible	8
Renewables Deployment	2005	2017	Renewables and H2	Compatible	9
Pulp and Paper	1981	2005	Industry	Enabling, mixed or evolving	10
Climate Technology Initiative	2003	2017	Cross-cutting	Enabling, mixed or evolving	12
Clean Coal Sciences	1985	2012	Fossil Fuels	Not compatible	12
ENARD	2006	2012	Electricity	Enabling, mixed or evolving	13
EETIC	1997	2007	Cross-cutting	Enabling, mixed or evolving	16
Energy Technology Data Exchange	1987	2014	Cross-cutting	Enabling, mixed or evolving	21
Energy Conservation Applications Buildings	1976	1987	Buildings	Compatible	NA
Advanced Heat Pump Systems	1978	1980	Buildings	Compatible	NA
CADDET	1987	1996	Cross-cutting	Enabling, mixed or evolving	NA
IEA Information Centres Analysis & Dissemination	1988	1988	Cross-cutting	Enabling, mixed or evolving	NA

GREENTIE	1992	1996	Cross-cutting	Enabling, mixed or evolving	NA
Coal Technology Information Service	1975	1989	Fossil Fuels	Not compatible	NA
Economic Assessment Service	1975	1989	Fossil Fuels	Not compatible	NA
Mining Technology Clearing House Service	1975	1989	Fossil Fuels	Not compatible	NA
World Coal Resources & Reserves Data Bank	1975	1989	Fossil Fuels	Not compatible	NA
Dry Coal Feeding	1976	1978	Fossil Fuels	Not compatible	NA
Coal Gasifier Effluent Liquors	1977	1982	Fossil Fuels	Not compatible	NA
Feeding Dry Solid Fuels	1978	1985	Fossil Fuels	Not compatible	NA
Treatment of Coal Gasifier Effluent Liquors	1979	1982	Fossil Fuels	Not compatible	NA
Peat Production and Utilization	1984	1988	Fossil Fuels	Not compatible	NA
Energy Conservation in Cement Industry	1978	1987	Industry	Compatible	NA
Energy Conservation in the Iron and Steel Industry	1982	1987	Industry	Compatible	NA
Construction of an Intense Neutron Source	1976	1977	Nuclear	Compatible	NA
Large-Scale Wind Energy Conversion Systems	1977	1992	Renewables and H2	Compatible	NA
Wave Energy Conversion	1978	1984	Renewables and H2	Compatible	NA
Biomass Conversion Technical Info Service	1978	1987	Renewables and H2	Compatible	NA
Forestry	1978	1988	Renewables and H2	Compatible	NA
Wave Energy Information	1985	1988	Renewables and H2	Compatible	NA

[1] Participation as the total amount of entities that participated in the programme throughout its existence, not necessarily at the same time.

SM5.4 Table 3- TCP focus according to technology compatibility with 1.5ºC pathways

Sector	1.5ºC compatible	Enabling, mixed or evolving	Not 1.5ºC compatible	NA
Buildings	60%	40%	0%	0%
Cross-cutting	0%	100%	0%	0%
Electricity	0%	100%	0%	0%
Fossil Fuels	0%	60%	40%	0%
Fusion Power	0%	0%	0%	100%
Industry	0%	100%	0%	0%
Renewables and Hydrogen	89%	11%	0%	0%
Transport	40%	60%	0%	0%
Grand Total	**34.2%**	**39.5%**	**5.3%**	**21.1%**

SM 5.4 Table 4 – mention of sustainable development dimension in TCP brochures

Technology role in 1.5ºC pathways	Other sustainable development dimensions		
	Yes	**No**	**Total**
1. Positive	7.89%	26.32%	34.21%
2. Enabling, mixed or evolving	10.53%	26.32%	36.84%
4. Negative	2.63%	5.26%	7.89%
NA[1]	0.00%	21.05%	21.05%
Total	**21.05%**	**78.95%**	**100.00%**

[1] NA was applied to Fusion Power technologies which will have most likely not achieved maturity in time to play a significant role in achieving net-zero by 2050

SM5.5. Matching of indicators to survey questions, interviews and other sources

SM5.5 Table 1: Matching survey questions, interviews, IEA data and TCPs brochures according to indicators

Dimension	Survey questions	Other sources
Mobilization of resources	Overall satisfaction Activities are sufficient	Interviews Q1
Knowledge	International conferences and effectiveness Reports and effectiveness Newsletters and effectiveness Webinars and effectiveness Training programmes and effectiveness	Interviews Q1
Market formation	TCP led to technology deployment and why TCP led to policy adoption and why	Interviews Q2
Financial and human resources	Does your TCP have sufficient human resources? Does your TCP have sufficient financial resources?	Interviews Q1 & Q2
Legitimacy	TCP led to economic benefits and why TCP led social acceptance and why	Interviews Q2
Coordination		
Internal coordination	Feedback from working parties Central management and performance Coordination with other TCPs	Interviews Q1
Horizontal coordination	Alignment with international goals Cooperation with other international organizations	Interviews Q3
Vertical coordination	Alignment with national goals How have the TCPs outputs been reflected in your country Recognition in country	Interviews Q2 & Q3
Diversity		
Diversity of actors	Occupation	Interviews Q1

		IEA excel file on participation
Diversity of contexts	Development Category	Interviews Q4 IEA excel file on participation
1.5ºC compatibility		
Goals	None	Interviews Q3 TCPs brochures
Technologies	None	Interviews Q3 TCPs brochures

SM5.6. Definition of TCPs activities for knowledge development according to IEA (2016)

Activities	IEA description
Proof- of-principle	Proof-of-principle (PoP) or proof of concept is the first step towards further development of a potential technology or energy solution.
Pilot and demonstration projects	Pilot and demonstration projects (PDP) are the most visible outcomes of research activities. They are costly to produce and may incur considerable risk. Multilateral co-operation enables countries to share these potential burdens and to go beyond what could have been achieved individually.
Field studies, measurements and exchange	Field studies (on-site or in situ testing and surveys) enable monitoring and testing of technologies under real-life operating conditions. Testing technology performance also requires high- quality and consistent instrumentation. Thus a range of activities involves testing measurement instruments between laboratories across the world to ensure they are calibrated to deliver consistent results. In addition to direct funding of studies and measurements, a number of TCPs are funded through in- kind contributions from laboratories and research centres as well as sharing personnel, equipment – and, not least, benefits stemming from the research results.
Applied research	Laboratory and in situ testing, simulations, comparative and life-cycle analyses are carried out in order to define the reliability and durability of the technology and to set optimal operating conditions and parameters. The results of these activities are compiled into data sets that are analysed to form "benchmarks", which in turn form the basis for the industry standards that underpin regulatory instruments and commercialisation of technologies. International collaboration in applied research is beneficial to participants as it enables a broader testing base and a variety of market conditions under which the technology can be deployed. Activities include: • technical analysis • environment, safety and waste assessments • life-cycle and systems analysis • barrier analysis • economic analysis • standards and benchmarks analysis • forecasts
Raising awareness	An important part of the work of TCPs has involved carrying out activities to raise awareness of new energy technologies and practices by sharing research results among broad communities of experts and non-experts.

These efforts include hosting websites, distributing newsletters, development of guidebooks and manuals, training, capacity building, and stakeholder networking.