

1 **Why common interests and collective action are not enough for environmental cooperation –**
2 **Insights from China-EU circular economy discourse**

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4
5 **Abstract**

6 Many stakeholders consider the signing of the first international agreement on circular economy ‘CE’
7 between China and the EU in 2018 a milestone towards global efforts to address pressing environmental
8 problems of extraction, resource use and waste management. This analysis rebuts this expectation. Based
9 on empirical analysis of 72 interviews with key stakeholders, 40 documents and participant observation
10 at key international CE events, we show that optimistic win-win narratives on China-EU CE cooperation
11 depoliticize cooperation goals, postponing deep-rooted tensions of identity, trust, negative competition
12 and the scaling of environmental solutions. This prevents a paradigm shift towards a CE and will likely
13 prevent fruitful cooperation on any other environmental paradigm. Traditionally, explanations for the
14 challenges of international environmental cooperation have focused on issues of collective action and
15 disparate interests. Our argument adds a different dimension to these explanations. It highlights the
16 critical importance of identity, trust, negative competition and the scaling of environmental solutions. We
17 propose more research on narrative strategies for identifying and promoting areas of trust, mutual
18 identity building and shared conceptualizations of the scales of environmental governance.

19
20 **Keywords:** identity, trust, circular economy, China, EU, international trade, environmental cooperation

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45 **1. Introduction**

46 In an age of increasing globalization, international cooperation is a central but challenging process for the
47 governance of socio-environmental change. Traditional explanations for cooperation failures often focus
48 on problems of collective action and disparate interests, yet literature from climate governance has
49 recently shown such explanations have weak empirical support and suggests the role of narratives as
50 important (Stevenson 2021; Aklin and Mildenerger 2020; Meckling and Allan 2020). Understanding the
51 politics that shape international cooperation through a discursive lens is therefore significant for global
52 environmental governance (Orach and Schlüter 2016; Biermann and Pattberg 2008; Hajer and Versteeg
53 2005; Adger et al. 2001; Andonova and Mitchell 2010; Bäckstrand and Lövbrand 2006).

54 To address this research gap, we present the first discursive analysis of international circular economy (CE)
55 cooperation. Many stakeholders consider the first international CE agreement, the Memorandum of
56 Understanding (MoU) (European Commission, Chinese Development and Reform Commission July 2018)
57 between China and the EU, as a milestone towards global efforts to address pressing environmental
58 problems of extraction, resource use and waste management. We therefore use this occasion as the entry
59 point for our analysis. The CE makes a good discursive case for studying international cooperation for
60 environmental governance because it is a prominent but contested international narrative on managing
61 socio-environmental change and achieving sustainability transitions.

62 Proponents see CE as a ‘paradigm shift’ (Prieto-Sandoval et al. 2018) away from the ‘linear’ economy of
63 high rates of resource extraction and waste production towards a ‘closed loop’ system of sustainable
64 production and consumption (Prieto-Sandoval et al. 2018; Korhonen et al. 2018b; Geissdoerfer et al. 2017).
65 Critics argue CE prevents radical systemic change by perpetuating practices embedded in ecological
66 modernization discourse (cf. Valenzuela and Böhm 2017; Hobson and Lynch 2016), characterized as
67 focusing on win-win narratives of decoupling environmental degradation from economic growth
68 (Bäckstrand and Lövbrand 2006; Hajer 1995; Mol 2002) through technological innovation and increased
69 efficiency (Dryzek 2013; Christoff 1996). What is undisputed is CE’s ability to bring diverse actors together
70 and to transcend collective action problem framings commonly used to explain international cooperation
71 stagnation (Machin 2019; Ghisellini et al. 2016; Blomsma and Brennan 2017). China and the EU’s CE
72 agreement is one example that supports proponents’ argument that it is a concept that unites interests
73 and enables global efforts to tackle urgent environmental challenges of extraction, resource use and
74 waste management (Ellen MacArthur Foundation 2018). At the same time, CE literature shows that there
75 is little international standardisation on what a CE includes or how it is defined, not even between
76 frontrunners (Flynn et al. 2019; Kern et al. 2020; Korhonen et al. 2018a).

77 Given these diverging expectations and assessments, we investigate China-EU CE cooperation narratives
78 to understand the politics shaping potentials and limitations of this new international cooperation
79 between an old (EU) and a new (China) global environmental leader. To do so, we apply Argumentative
80 Discourse Analysis (Hajer 2006) using data from 72 interviews with key stakeholders, 40 documents
81 related to China-EU CE, and participant observation at relevant international events. This approach
82 enables the generation of novel insights for international environmental cooperation. It views
83 cooperation as a sense-making process, shedding light on the relationships between diverse groups of
84 political actors and avenues for human expressiveness of identity and meaning (Yanow 2014; Leipold and
85 Winkel 2017). Understanding the values, beliefs, and sentiments behind stakeholder CE
86 conceptualizations in discourse gives a good indication of the enabling and disabling factors that shape
87 China and Europe’s joint CE actions. This paper will 1) introduce institutions, discourses, agents and

88 practices relevant to China-EU environmental cooperation prior to 2018, 2) trace CE cooperation
89 narratives in China-EU relations and explore their discursive dynamics, and 3) identify discourse coalitions
90 and stakeholder conceptualizations of the CE concept. These results expand scholarship on CE
91 development beyond national and regional comparisons to international relations, as well as facilitate a
92 realistic evaluation of China-EU CE cooperation's prospects and possible implications thereof for the
93 global governance of environmental change. Most importantly, they add new insights into opportunities
94 and obstacles for international environmental cooperation.

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96 **2. Theoretical Approach: Argumentative Discourse Analysis**

97 To analyze the politics of China-EU's efforts for CE coordination and what this means for international
98 environmental cooperation, this paper draws upon the discursive tradition of interpretive policy analysis,
99 which has gained prominence in environmental politics scholarship since the 1990s (Hajer 1995;
100 Bäckstrand and Lövbrand 2006; Litfin 1994). Rather than focusing on national interests or cost-benefits,
101 our analysis focuses on narratives and coalitions as well as their connected values, beliefs, and sentiments
102 in the context of China-EU relations, especially what the qualities of these relationships mean for the
103 conceptualization of their CE cooperation. We believe that much can be learned from this regarding the
104 political prospects of a relatively new concept in international relations because discourses and narratives
105 illuminate the underlying meaning structures shaping political discussions (Dryzek 2013) and the resulting
106 actions (Sharp and Richardson 2001). These meaning structures are critical for explaining current policy
107 processes and anticipating how they might develop in the future because they determine how people
108 translate human difficulties into policy problems, constitute policy instruments, and create coalitions of
109 support or opposition (Fischer and Forester 1993; Fischer and Miller 2017; Roe 1994; Yanow 2000).

110 In particular, this study draws on Argumentative Discourse Analysis (ADA) (Hajer 2006). We understand
111 discourse analysis as theory and methodology intertwined, which means that the methodology assumes
112 certain basic philosophical premises. Discourses are ideas of realities and the exchange of these ideas
113 constructs social reality. For example, CE cooperation may mean different things to different stakeholders,
114 and each actor group attributes their own ideas to this term; their evolving exchanges shape the reality
115 of CE in China-EU relations. Based on these theoretical premises, we follow the common definition of
116 "discourse" as a sum of (topically related) communicative interactions between people (Keller 2013) and
117 the definition of "narratives" (or "storylines") as a subset of overarching discourses (Hajer 1995).
118 'Narrative' is defined as a story ascribing meaning to social or physical phenomena by connecting a
119 sequence of events and actions in a plot, including, excluding, and emphasizing problems, actors, and
120 events and, thus, providing an interpretation of who or what is significant (Hajer 1995; Feldman et al.
121 2004; Kaplan 1993). We use this definition to operationalize our narrative analysis, which is made explicit
122 in the results, and visualized in Tables 1 and 2.

123 Following (Hajer 1995), we consider dominance of a narrative to be constituted by discourse
124 structuration, where actors draw on the ideas, concepts, and categories of a given discourse to maintain
125 credibility, and discourse institutionalization, where a given discourse is translated into institutional
126 arrangements. Discourse coalitions are not necessarily connected to particular actors but rather to
127 practices in the context of which actors employ narratives, and (re)produce and transform particular
128 discourses. Some actors may utter contradictory statements or help reproduce different discourse-
129 coalitions. Discourse-coalition is thus defined as "the ensemble of story lines, the actors that utter these
130 story lines, and the practices through which these story lines get expressed" (Hajer 2006). Discursive (or

131 narrative) strength is evaluated based on frequency of actor subscription as well as on discourse
132 structuration.

133 **3. Materials and Methods**

134 To map and analyze the CE narratives shaping China-EU relations, this study collected data from key policy,
135 industry, research and NGO stakeholders from international, Chinese and European institutions whose
136 work relates to China-EU circular economy efforts (for more details see Appendix A). The data set is
137 comprised of:

- 138 • 20 explorative interviews that help to map the stakeholder field
- 139 • 72 semi-structured interviews (between 30 and 120 minutes in length, of which 61 were recorded
140 and transcribed; 11 could not be recorded because interviewees did not give consent, these have
141 been documented using on-site notes as well as follow-up memory protocol) conducted primarily
142 in Brussels and Beijing, with a select few in Geneva, Helsinki, the Netherlands and Shanghai
- 143 • 40 documents related to China-EU CE (e.g. environmental dialogues, joint declarations and event
144 programs, press releases, speeches, media articles, publications)
- 145 • Participant observation at the International Circular Economy Conference and Exhibition in
146 Beijing (November 2017), Circular Economy Stakeholder Conference in Brussels (March 2019),
147 and the World Circular Economy Forum in Helsinki (June 2019)

148 The data was gathered between October 2017 and August 2019. In a first step, interview guides were
149 drafted based on our research questions and ADA's analytical elements (Hajer 1995). Exploratory
150 interviews were conducted in autumn 2017 and early 2019 with experts knowledgeable on different
151 aspects of China-EU CE cooperation or with an overview of the topic but who were not directly involved.
152 These interviews provided important background and context information for CE in China and in the EU,
153 guidance for setting our case boundaries as well as insights for the formulation of the interview
154 questionnaires. Next, a Google internet search, using the keywords "circular economy", "European Union"
155 and "China" was conducted served to gather relevant communication and policy documents, which
156 together with information gathered from the exploratory interviews, suggested potentially relevant
157 interviewees and international events. Finally, the in-depth interviews were conducted between January
158 and August 2019. Based on the initial search, a list of 50 individuals or organizations was compiled. The
159 individuals or organizations were then contacted and a set of five interviews was conducted. The interview
160 list was refined and, where necessary, expanded using a snowballing method according to information
161 gathered in the initial interviews. This process was repeated until the remaining individuals could not be
162 reached for an interview (after five attempts) or refused the interview. In the end, 72 interviews could be
163 secured in English and Mandarin Chinese and were transcribed according to the recordings without
164 translation. Participant observation (Spradley 2016) was conducted at the sites of international CE
165 interaction identified through the desktop research and interviews, enabling an understanding of the
166 document and interview data in an embedded context. Participation was limited to occasional
167 conversations to gain deeper insight into important events identified through document analysis and
168 interviews. Field notes were taken throughout the period of observation in written, dictation and
169 photographic form.

170 The interview data was analyzed deductively, based on categories deduced from Hajer's ADA as well as
171 from our interview guide, and inductively, inspired by grounded-theory techniques using the coding
172 software MAXQDA (Saldaña 2015). Inductive analysis was cross-referenced between five analysts to
173 achieve intersubjective plausibility (Sousa 2014). Further documents and participant observation data
174 from relevant stakeholder events were analyzed to contextualize and complement the interview results.

175 In the results section, direct quotations from Mandarin Chinese interviews are translated into English for
176 comprehension purposes.

177 To assure the protection of interviewees' personal data, aggregated stakeholder categories (e.g. A =
178 academic institutions) have been developed for the purpose of referencing direct quotes in this article
179 (see Appendix 1). The interviews in each category were numbered according to the interview date (e.g.
180 A1 = first interviewee from this category, P7 = seventh interviewee from this category). The codes do not
181 represent the order of interviewees' affiliations presented in Appendix 1. Capitalized words in quotations
182 reflect emphasis made by interviewees.

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184 **4. Results**

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186 *a. China-EU CE cooperation prior to 2018*

187 To understand current narratives of CE cooperation between China and the EU, it is important to
188 introduce the relevant historical background that set the stage for the CE MoU to emerge. Key institutions,
189 actors, discourses and practices as identified through document analyses and the interview process are
190 briefly explained in this section.

191 In the 90s, China instigated bilateral dialogues with so-called 'developed' countries, many of which were
192 European, to seek both technology and policy learning to fast-track its industrialization process. During
193 this period, China-German relations (e.g. Sino-German Environment Forum) and the German
194 Development Cooperation Agency (GIZ) are perceived to have played a key role in introducing CE ideas
195 into bilateral conversations. At the time, CE ideas were more embodied by the term 'recycling economy'
196 as it was conceptualized primarily as recycling and cleaner production to achieve technology-based
197 pollution control. At the China-EU level, this older conceptualization dates back to industrial policy
198 dialogues between DG Grow and the Chinese Ministry of Industry and Information Technology, which
199 began around 2000 and continues up to the present.

200 The CE concept (re)emerged in China and the EU's policy realms at different times. Both China and the EU
201 are CE frontrunners who have been developing CE policy programs within their own jurisdictions. In China,
202 CE achieved national recognition in 2002 after cycling through a series of local and regional pilot
203 demonstration projects under the State Environmental Protection Agency¹. China's 11th Five-Year-Plan
204 (2006-2010) made CE its explicit goal, which led to the CE Promotion Law of 2008 and an upscaling of CE
205 pilots amongst other initiatives. The National Development and Reform Commission (NDRC) is the main
206 government body responsible for CE. The NDRC's CE work is supported significantly by the China
207 Association of CE (CACE) and its advisors, many of whom are scientists from top Chinese academic
208 institutions.

209 In the EU, the concept was promoted through the EU CE Action Plan of 2015, the 2018 CE Package and
210 the 2020 renewed CE Action Plan. Alongside the European Commission, especially DG Environment and
211 DG Grow, NGOs such as the Ellen MacArthur Foundation, and specific strands of the business community,
212 represented by Business Europe, have also been key CE stakeholders in the EU.

¹ Reorganized as Ministry of Ecology and Environment (MEE) since 2018.

213 CE in its current conceptualization of ‘closing the loop’ and eco-design based on ideas from resource
 214 efficiency surfaced in 2015 as the result of EU level policy processes. In 2016, the EU began its CE Missions,
 215 a series of “high-level political and business meetings to communicate and promote sustainable and
 216 resource-efficient policies” (European Commission, 2016), with China as one of its first target countries in
 217 2016. This Mission was coordinated together with the CACE in Beijing and attended by many EU industry
 218 associations, business representatives, NGOs and academia as well as select China-EU business groups.
 219 As CE frontrunners in the EU, the Dutch representation in the EU Delegation was perceived to be
 220 particularly influential. The CE Mission in China led to the signing of the CE MoU in 2018 at the 20th China-
 221 EU Summit. While the MoU is legally non-binding and a loosely worded document, it is significant because
 222 it is the first official joint declaration of intent from the China and the EU to begin a high-level cooperation
 223 on CE. Various international organizations, including the World Economic Forum (WEF), the United
 224 Nations Conference on Trade and Development (UNCTAD), and the Organisation on Economic
 225 Cooperation and Development (OECD) applauded the signing of the CE MoU from the sidelines.

226 Table 1 shows the main CE-related actors in China and the EU as well as those related to the China-EU CE
 227 MoU are the following:

228 **Table 1. Main CE-related actors in the EU, China and for the China-EU CE Memorandum of**
 229 **Understanding**

EU	China	International
European Commission (DG ENV and GROW)	National Development and Reform Commission (NDRC)	World Economic Forum
Ellen MacArthur Foundation	China Association of Circular Economy (CACE) – under NDRC	UNCTAD
Business Europe	Chinese academic institutions – e.g. Tsinghua, Tongji University	OECD
GIZ in China	Chinese Ministry of Industry and Information	
EU Delegation in China	Ministry of Ecological Environment (MEE)	
Dutch Embassy in China		

230
 231 *4.2 Optimist narratives: Circular economy as trade cooperation*

232 This section will explain the three narratives of ‘Common CE Market’, ‘Regulatory Harmonization and
 233 Learning for a CE’, and ‘CE Technology Exchange’ that structure CE discourse in China-EU relations. These
 234 narratives are not mutually exclusive and reinforce an overarching market optimistic win-win meta-
 235 narrative of the CE as primarily a trade cooperation concept to address problems of weakening trade
 236 relations and increasing carbon emissions. The causes of this problem framing are threefold. First, the EU
 237 is trying to find a balanced position as China-US relations deteriorate. Second, both China and the EU are
 238 adapting to shifting power relations as the EU’s trade imbalance with China increases, in part due to

239 protective measures from China such as subsidies to its companies or hard policy instruments such as its
240 2018 waste import ban. Third, China and the EU govern their political and economic systems very
241 differently and do not agree on many issues as a result of tensions between their worldviews. As trade
242 relations are historically very important for the China-EU relationship, shifting dynamics leave the two
243 sides seeking new areas for cooperation. CE, as a mutually beneficial, neutral cooperation that addresses
244 economic and environmental problems from both regions through technical rather than political
245 dimensions, meets this need.

246 According to this meta-narrative, CE is therefore good for China-EU relations because it gives the two
247 partners a new environmental topic to tackle together through market mechanisms. Additionally, CE
248 benefits the world: in cooperation, China and the EU can fight for the Sustainable Development Goals
249 (SDGs) together, for example by combating marine litter and climate change. These narratives are
250 dominant in the China-EU discourse as actors use them to structure their core arguments.

251 **Common CE Market.** The core premise of the ‘Common CE Market’ narrative is that EU and Chinese
252 cooperation will create a larger common market for the free trade of CE products and services, not only
253 between China and the EU but also globally (e.g. EU_NGO1, EU_P8). Such a market would ameliorate
254 financing difficulties that both China and the EU have faced in their efforts to create their own circular
255 economies. For the EU, market expansion would bring much-needed long-term investments for a circular
256 transition and the opportunity to upscale promising, small-scale CE innovations from circular businesses
257 and science institutes (e.g. EU_NGO1, EU_P8). A large common CE market would benefit the EU by
258 enabling the region to regain competitiveness and jobs lost during the 2008 financial crisis while
259 transitioning to a more sustainable future. CE is being used “as a vector, as an element that will stimulate
260 MORE the business opportunities” (EU_I7). For China, market expansion could help make circular
261 initiatives not only ‘循环’ (circular or environmentally friendly) but also ‘经济’ (economic or profitable)
262 and independent from government subsidies (e.g. CH_P7, IO_5, EU_P13). A large common CE market
263 would benefit China by speeding up its transition from state-led to market-oriented environmental
264 initiatives and by helping the country to overcome economic bottlenecks created by environmental
265 degradation that currently hinder rapid industrialization. The CE business cooperations characterized in
266 this narrative include business competition and considers market competition an advantage in driving CE
267 initiatives forward.

268 **Regulatory Harmonization and Learning for a CE.** The narrative of ‘Regulatory Harmonization and
269 Learning for a CE’ (‘Regulatory Harmonization’) assumes that neither the European nor the Chinese
270 government has sufficient knowledge, experience or capacity to implement a CE alone. Due to globalized
271 value chains, the EU needs China and other supplier countries to adjust to its CE-relevant regulations to
272 achieve its own CE goals, while learning from EU’s regulatory examples and mistakes can help China
273 develop its own CE. While focusing on government-led cooperations of CE policy learning and standard
274 alignment, the goal of regulatory harmonization is “work together in order to set the rules to make it
275 possible for those new [circular] business activities to succeed...” (EU_I1). Regulatory harmonization
276 addresses both trade and technical challenges posed by divergences in regulatory frameworks, for
277 example with respect to waste treatment. Some actors envision mutual policy learning and believe that
278 the EU’s past environmental policy experiences and China’s current policy experimentation have great
279 complementarity (e.g. CH_R4, EU_I1, CH_R1), while others believe that China seeks to learn from the EU’s
280 more developed and systematic regulations (e.g. EU_P16, EU_P1, EU_P7). Regulatory harmonization
281 benefits the EU by leveling the playing field for European companies in that it forces all companies to

282 compete on CE values and prevents Chinese companies from competing purely on price (e.g. EU_I1,
 283 EU_I7). Policy alignment, including early warning systems for policy changes, would protect EU industries
 284 from external shocks such as the one the Chinese waste import ban inflicted on EU recycling industries
 285 (e.g. EU_P4, EU_P7). Regulatory harmonization benefits Chinese companies who are early movers of CE
 286 by giving them access to European markets. Moreover, increases in CE-related standards in China would
 287 also improve Chinese environmental conditions and reduce emissions, in turn benefitting the whole world.
 288 A goal of China-EU CE MoU is to develop CE standards that would be mutually beneficial (European
 289 Commission, Chinese Development and Reform Commission July 2018). For Chinese actors, closing the
 290 gap between EU and Chinese regulations is also proof that China is catching up to industrialized countries.

291 **CE Technology Exchange.** The narrative of ‘CE Technology Exchange’ emphasizes the importance of CE-
 292 relevant technology exchange, primarily in the form of market transactions, between China and the EU as
 293 a means of resource acquisition for the EU and technology acquisition for China. ‘CE-relevant technology’
 294 in this case is often used synonymously with ‘green technology’ and ‘high technology’ and refers to both
 295 the materials and knowledge required for its production. In this narrative, actors assume that the EU has
 296 the necessary green technology to solve environmental problems such as pollution, because it is more
 297 advanced in development, has already overcome similar problems, and therefore has the technology
 298 ready at hand. As one of the EU’s key exports, high technology is however dependent on critical raw
 299 materials such as rare earth minerals, which are abundant in China. The EU therefore benefits from
 300 circular trade with China, which would ensure that second-hand raw materials resulting from the waste
 301 to value processes triggered by CE philosophy will be accessible to the EU. This would enable EU green
 302 technology businesses to take advantage of their market leadership in China and elsewhere. This process
 303 would also benefit China because it adds value to China’s environmental industries by improving eco-
 304 efficiency, pollution control and waste management among other environmental goals (e.g. EU_I13,
 305 EU_NGO1, EU_P1, CH_I3). EU actors see an opportunity for regaining competitiveness by helping China
 306 to reduce emissions. Chinese actors see an opportunity for retaining competitiveness by solving solid
 307 waste management and pollution problems that hinder continuous economic growth. Almost all actors
 308 agree that reducing emissions in China with European green technology is a win-win for China and the EU
 309 as well as for the environment and the economy. This narrative aligns well with eco-modernist discourse,
 310 which focuses on the power of technology to solve environmental problems.

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312 **Table 2. Optimistic Narratives in China-EU Cooperation Related to the Circular Economy**

Meta-narrative	CE as a trade cooperation concept		
	The three optimistic narratives are based on the premise that China-EU trade relations are weakening. The underlying hope of each narrative is to revive China-EU trade for their respective and mutual benefit.		
Narrative	‘Common CE Market’	‘Regulatory Harmonization and Learning for a CE’	‘CE Technology Exchange’
Problem	The EU lacks long-term investments for its CE transition	Neither EU nor China has enough knowledge or experience to develop comprehensive CE frameworks or implement CE alone	Resource insecurity of critical raw materials for key EU exports, e.g. hi-tech

	China has difficulties making CE environmentally friendly AND profitable	Diverging regulations for areas such as trade, waste and technology across EU and China create problems for CE business cooperations	China needs innovative technology from the EU to improve eco-efficiency
Cause	Investors do not have sufficient incentives to invest in EU CE innovations as they lack economies of scale to guarantee returns	Globalized value chains	The EU suffers from resource insecurity due to a lack of naturally occurring resources and competitive resource acquisition strategies from countries like China
	China's economic development process requires a lot of financing, especially the upgrading of its industrial infrastructure and processes is costly	Development gap: China and the EU are in different development stages and therefore have different regulatory frameworks	China is still developing and has not mastered all necessary technologies to solve development problems such as pollution (though it has improved a lot)
Con- sequence	The EU is losing competitiveness and suffers from a lack of growth and jobs	Operational problems for companies and trade barriers for Chinese and EU firms	The EU is losing competitiveness and global relevancy and suffers from a lack of growth and jobs
	China lacks control over pollution from industrialization, which hampers economic growth	Unlevel playing field enables some (Chinese) firms to compete on price and not on environmental standards	China lacks control over pollution from industrialization, which hinders further economic growth
Solution	EU and Chinese businesses should cooperate/compete to create a large common CE market for circular products and services in China, the EU but also globally	As the EU is more developed, China can learn from its legislations and develop compatible standards and policies The EU can learn from China's CE policy experimentations.	Enable CE technology exchange through common CE market: Trade secondary raw materials from China for green technology/knowledge from EU
Benefits	The EU regains competitiveness and jobs lost during the financial crisis while transitioning to a more sustainable future	Better enable CE trade, business cooperations, and similar waste treatment processes	The EU secures access to necessary resources for its hi-tech exports and regains competitiveness through exporting CE technology
	China speeds up its transition from state-led to market-oriented environmental initiatives, overcome economic bottlenecks created by environmental degradation	Companies will compete on a level playing field, and some Chinese firms then cannot compete on price Environmental standards in China will improve	China secures necessary CE technology to overcome economic bottlenecks created by environmental degradation

314 *4.2 Skeptical narratives: The Barriers of CE Cooperation*

315 Three skeptical CE narratives of ‘Identity Disparity’, ‘Negative Competition’, and ‘Distrust’ demonstrate
316 a market skeptical discourse that run counter to the optimistic CE trade cooperation discourse above.
317 These narratives are also not mutually exclusive and reinforce barriers to CE trade and environmental
318 cooperation. They appear more fragmented than the optimistic narratives, as actors who drew on
319 these narratives did not always offer clear solutions to the problems they presented, and fell back on
320 solutions from the optimistic narratives. They often referenced more joint research projects as well as
321 educational and cultural exchanges between China and the EU as necessary to foster greater mutual
322 understanding.

323 **Identity Disparity.** This narrative emphasizes China and the EU’s varied histories and
324 national/supranational conditions – for example: different governance systems, development stages
325 and also physical environment. China and the EU’s different CE foci are rooted in their respective
326 developmental needs and national priorities, which hinders China-EU CE cooperation through a
327 common market, regulatory harmonization and learning, and technology exchange. A European
328 industry representative sums up the skepticism towards building a common CE market: “You can
329 exchange concept, but if you want to cooperate, just to have an agreement on having a SINGLE circular
330 economy, an economy means business, functioning business, making profits, revenues and giving
331 salaries. Then if there are two different rules...CAN'T function” (EU_I7). While most Chinese actors
332 think positively of policy learning from the EU, many actors also think that in some areas, the
333 harmonization of rules between China and the EU is premature. They think that China is not yet ready
334 to adopt some EU rules on a national scale because of its development stage, e.g. plastic bans; and
335 lack institutional capacity to implement others, e.g. Extended Producer Responsibility (EPR) (e.g. CH_I4,
336 CH_I5, CH_R4, CH_R7). Chinese actors were generally supportive of technology exchanges, although
337 several expressed unease that ‘easily applicable’ and profitable technologies, e.g. waste-to-energy
338 plants, often cannot fix local environmental problems and sometimes even bring new challenges due
339 to diverging socio-environmental conditions and unsuitable implementation measures (e.g. CH_NGO1,
340 EU_I14, CH_I2, EU_P15)². Other times, European technologies are unsuitable for China’s
341 environmental problems due to being too expensive, not matching the scale of the local problem, or
342 was not designed for local Chinese contexts (CH_I3, EU_P15).

343 **Negative Competition.** This narrative demonstrates the difficulties of China-EU CE cooperation
344 engendered by competition for resources, market share, technology, and standard-setting. Further
345 adding to competitive tensions are the blocs’ respective desires to regain or maintain competitiveness
346 (EU) and to close the development gap with the EU and other western nations (China). Both China and
347 the EU strive to be more resource independent for security purposes. Although regulatory
348 collaborations provide opportunities for policy learning and knowledge sharing, CE-related standards
349 from China and the EU are perceived by counterparts to also have impacts on businesses that affect
350 their ability to compete. For example, European industry actors often refer to China’s waste import
351 ban as good in principle but unnecessarily stricter than EU waste standards and implemented as a hard
352 instrument that harms EU waste industries and the environment in the short term (e.g. EU_I4, EU_I11).
353 CE-related EU regulations such as the 2003 Restriction of Hazardous Substances Directive (RoHS), the

² Waste-to-energy plants are often criticized for damaging surrounding soil and water due to leakages and endangering neighbouring communities. Sometimes these are attributed to poor implementation, but the difference in food waste composition between Europe and China (Chinese food waste contains a higher degree of water and oil due to cooking culture) was also cited as a reason.

354 2003 Waste Electrical and Electronic Equipment Directive (WEEE), and the 2007 Registration,
355 Evaluation, Authorisation and Restriction of Chemicals (REACH) are simultaneously praised for their
356 precision and described as hurtful to Chinese firm competitiveness (e.g. CH_R7). China is also perceived
357 as wanting to set its own standards after policy learning and to extend their standards regionally
358 instead of following standards agreed upon by the international community³. Some actors see the
359 development gap as an opportunity for China to exercise its latecomer advantages, such as not having
360 some of the EU's technological lock-in effects or path dependencies, to catch up to or leapfrog past
361 developed countries. These actors also saw China's loose regulatory environment as an enabling factor
362 for experimentation with new technologies and policies. Some Chinese actors also describe China as
363 having a comprehensive value chain of its own and the capacity to build a domestic CE, while the EU
364 relies on external regions to complete its value chain. In essence, this narrative argues that a desire to
365 build their own version of a CE hinders China-EU CE cooperation. Referring to the CE MoU, one Chinese
366 industry representative remarked: "But whose way should we follow in the implementation?" (CH_I5).

367 **Distrust.** This narrative shows the significance of trust building for China-EU CE cooperation.
368 Stakeholders expressed the need to switch from a competitive and defensive mindset to one of
369 collaboration and sharing information for better understanding of each regions' assets (EU_P11,
370 CH_R5). Collaborative mindsets and trust are necessary as well for creating common CE standards for
371 green goods or eco-design (EU_NGO6, EU_P7). EU actors find transparency and communication to be
372 a challenge when working with Chinese counterparts and feel they do not receive timely information,
373 that there is not always follow-through on promises, and that they do not understand the rationale
374 behind certain decisions made (EU_P7, EU_I14, EU_P9, EU_I4, EU_P17, EU_P4). While there are many
375 channels for exchange, one stakeholder expressed that the communication is fragmented and lacks
376 structure (EU_P7). Language barriers are cited as reasons for industry communication problems while
377 China's complex bureaucracy and general internal ministerial division and competition are cited as
378 reasons for lack of political transparency (e.g. EU_I4, EU_P4). Distrust hinders knowledge and
379 technology transfers and slows down broader CE cooperation and implementations, for example
380 because actors are concerned about protecting their intellectual property rights (EU_P17, EU_P15,
381 CH_I3). While Chinese actors do not share their EU counterparts' distrust in specific transactions, there
382 is distrust that cooperating with the EU will result in concrete benefits to China's environment. This
383 sentiment is exacerbated by the EU's official position that China is no longer a developing country;
384 many actors understand this EU position as a signal that it is less willing to finance and invest in China's
385 development projects (e.g. CH_R4, EU_NGO4, IO_10; also see European Commission, 2019). This
386 quote from a well-established CE academic in China exemplifies this overarching distrust: "I think that
387 many people are just shouting slogans [CE]... they don't offend anyone and everyone loves to hear
388 them, but they...do not result in anything concrete. Which of China's environmental problems has been
389 solved thanks to cooperation between China and the EU in the area of circular economy? At least I
390 have not seen anything" (CH_R9).

391

392

393

³ Many standards were agreed upon by developed countries prior to China's inclusion in the international community (e.g. United Nations).

394 **Table 3. Skeptical Narratives in China-EU Cooperation Related to the Circular Economy**

Narrative	‘Identity Disparity’	‘Competition’	‘Distrust’
Problem	EU and China are at different development stages and also have different governance and economic systems	EU and China are competing for resources, global economic status, and on CE	The EU distrusts China in political and commercial transactions China distrusts the EU to follow through in concrete actions that benefit China’s environment
Cause	Different histories and national conditions	Resource scarcity, development gap, the global capitalist system	Chinese lack of transparency and reliability Solving China’s environmental problems would accelerate China’s ‘catching up’ to the West in development and threaten the EU’s competitiveness
Consequence	Different conceptualizations of CE - Difficulties to apply CE technologies and standards with the same results, difficulties for mutual learnings	Lack of trust to share information and assets, a barrier to building a CE	Challenges in knowledge and technology transfers slow down CE cooperation and implementation
Solution	Underdeveloped, mostly falling back to solution suggestions proposed by the optimistic narratives	Underdeveloped, mostly falling back to solution suggestions proposed by the optimistic narratives	Suggesting more educational and cultural exchange between China and the EU to foster greater mutual understanding

395

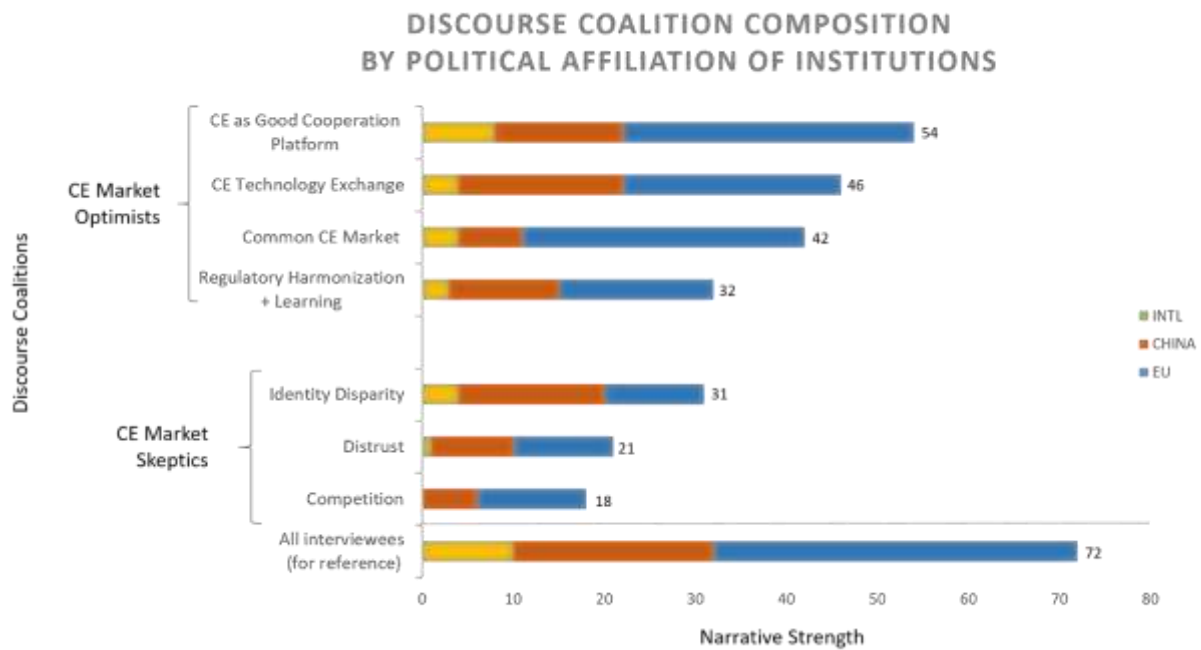
396 *4.3 China-EU CE Discourse Coalitions: Market Optimists Trump Skeptics...for Now*

397 Section 4.1 has shown that China-EU CE cooperation is predated by the two political actors’ respective
 398 CE trajectories that shifted responsibility towards economic institutions and business and trade
 399 frameworks. This is evidenced by the key actors involved and the institutional process that led up to
 400 the MoU. Section 4.2 has shown that optimistic CE cooperation narratives focus on trade while
 401 skeptical narratives cast doubt on this focus. This section will explain the discourse coalitions that
 402 support and counter this cooperation and their sentiments towards the market as a key leverage
 403 behind the China-EU CE cooperation.

404 The results demonstrate two discourse coalitions: ‘CE Market Optimists’ (‘Optimists’) and ‘CE Market
 405 Skeptics’ (‘Skeptics’). The ‘Optimists’ comprise actors who, in the context of trade promotional
 406 practices, draw on optimistic CE narratives to structure their arguments for how a market-driven

407 China-EU CE cooperation would be beneficial for all parties: EU, China, the economy and the
 408 environment. Actors who draw on these narratives exclusively are primarily European actors,
 409 especially those affiliated with industry trade associations, policy actors in the Commission, Dutch
 410 government, an EU member state embassy representative in China, regional governments, NGOs such
 411 as the Ellen MacArthur Foundation, but also international organizations including UNCTAD, WTO,
 412 OECD, the International Resource Panel and the Bureau of International Recycling. This discourse
 413 coalition converges actors' diverse understandings of CE behind an optimistic perception that China-
 414 EU business and regulatory cooperation will boost the trade of circular goods and services on a global
 415 market, resulting in positive diplomatic, economic and environmental outcomes.

416 **Figure 1: The x-axis shows the narrative strength or how often actors used the narratives to structure**
 417 **their arguments. The y-axis shows the optimistic and skeptical discourse coalitions and their**
 418 **respective narratives. These narratives are shown in descending order according to their narrative**
 419 **strength. The colours show the political institutional affiliation of actors supporting individual**
 420 **narratives. The bottom bar shows the total of interviewed actors per each political institutional**
 421 **affiliation; this is not the sum of actors who drew on all narratives as some actors drew on multiple**
 422 **narratives. (Colours in figures necessary for print).**

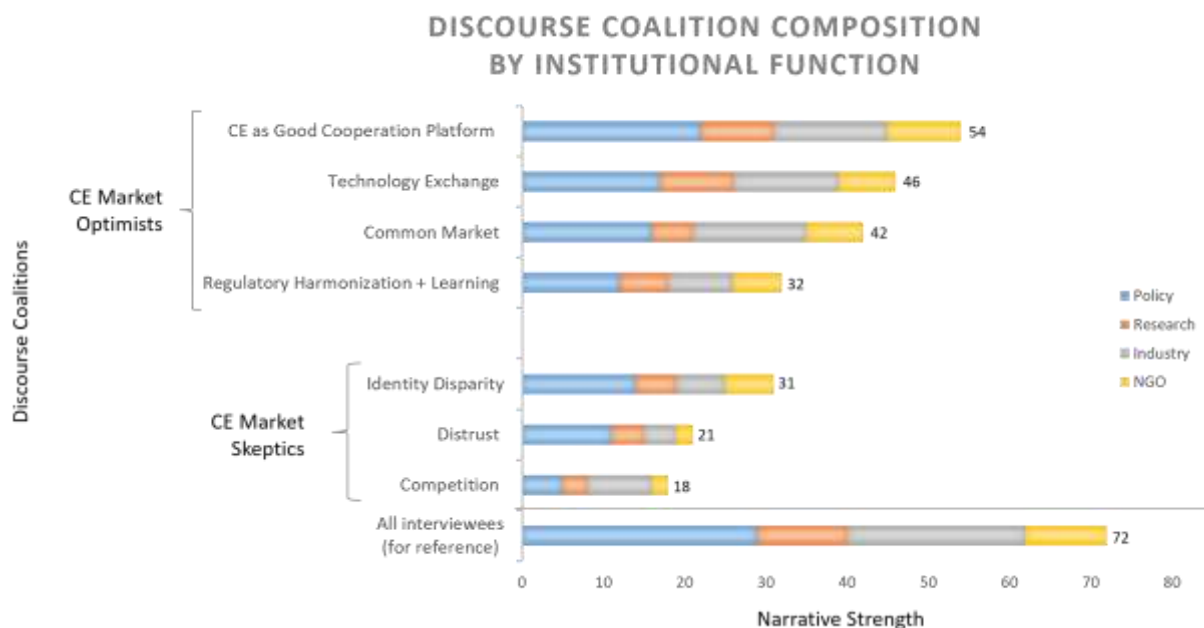


423
 424 'Skeptics' is a discourse coalition ascribing to skeptical CE narratives that are critical of the win-win
 425 cooperation meta-narrative the 'Optimists' favour. They question whether a market-driven CE
 426 between EU and China is feasible or desirable given bilateral tensions. Actors who draw on these
 427 narratives are embedded in various sets of practices: environmental, scientific but also diplomatic.
 428 They comprise Chinese actors conducting research for government and in environmental NGO;
 429 European policy actors working in China: at embassies, on China-EU environmental cooperation
 430 projects, and in NGOs; as well as actors from international NGOs such as Greenpeace, ICLEI and NRDC.
 431 As the 'Skeptics' primarily adhere to problem-focused narratives, actors did not always propose clear
 432 solutions other than suggesting more educational and cultural exchange is needed between China and
 433 the EU to foster greater mutual understanding.

434

435 **Figure 2: The x-axis shows the narrative strength or how often actors used the narratives to structure**
 436 **their arguments. The y-axis shows the optimistic and skeptical discourse coalitions and their**
 437 **respective narratives. These narratives are shown in descending order according to their narrative**
 438 **strength. The colours show the institutional function of actors supporting individual narratives. The**
 439 **bottom bar shows the total of interviewed actors per each institutional function; this is not the sum**
 440 **of actors who drew on all narratives as some actors drew on multiple narratives. (Colours in figures**
 441 **necessary for print).**

442



443

444 While the ‘Optimists’ coalition currently trump the ‘Skeptics’, this relationship may quickly change.
 445 ‘Optimists’ are a fragile discourse coalition because their cohesion depends on CE’s ability to deliver
 446 on the hopes of reviving China-EU trade relations and helping both sides make profits. A quote by an
 447 EU industry representative sums up the fragility of China-EU CE trade optimism: “I don’t think that [CE]
 448 is the most important topic [between China and the EU]...Today the international trade is
 449 probably...more important than to transform a society...in a circular model...They [CE and international
 450 trade] are totally – ideally they are totally integrated...But I think when we have discussions about an
 451 open economy and circular economy and the discussion will be separated” (EU_I3).

452 The narrative of ‘Identity Disparity’ is particularly strong and together with the narratives of ‘Distrust’
 453 and ‘Negative Competition’, the skeptical coalition offers a significant counterweight to the optimist
 454 coalition. In addition, a significant number of actors that use optimistic narratives to structure their
 455 arguments also draw on skeptical narratives. One explanation for why skeptical narratives do not
 456 present clear solutions is that the solutions are currently dominated by the ‘Optimists’. At the same
 457 time, it also shows that the underlying tensions between China and the EU is a consistent concern for
 458 the ‘Optimists’. ‘Optimists’ and ‘Skeptics’ alike described China-EU CE cooperation as slow and
 459 challenging and could name few existing and upcoming implementations of China-EU CE cooperation
 460 beyond historical and existing environmental projects and dialogues eg. Switch-Asia. This
 461 demonstrates the lack of institutionalization of the optimistic narratives despite their discursive
 462 structuration, which signals instability in the dominant optimist coalition.

463

464 5. **Discussion**

465 This study suggests that while current CE cooperation may facilitate a short term boost in China-EU
466 trade relations, the cooperation is fragile, unsustainable and therefore unlikely to support any
467 transitions towards a CE or any other environmental paradigm. This observation is based on three
468 major findings: First, three dominant optimistic narratives, which perpetuate old ecological
469 modernization and global trade discourses, are countered by three skeptical narratives of bilateral
470 tensions. Second, discursive dynamics between the optimist and skeptical narratives demonstrate that
471 'depoliticization' is a weak discursive strategy to enable China-EU CE cooperation as it postpones
472 tensions of identity, trust and negative competition. However, these tensions, if unaddressed, would
473 likely prevent fruitful cooperation towards CE or any other environmental paradigm. Third, the
474 dominance of the optimistic discourse coalition is dependent on its ability to offer trade solutions; as
475 such, it is fragile and would likely lose ground to the skeptics if trade objectives are not met. This
476 discourse coalition further constructs an international CE through trade while obscuring how diverse
477 national, regional and local CEs might interact in a globalized world.

478 Overall, our analysis shows that this discursive constellation has major disadvantages. On the one hand,
479 the skeptical narratives show that bilateral tensions beneath the optimistic China-EU CE narratives play
480 a significant role as barriers to the cooperation. On the other hand, the market optimistic CE narratives
481 of 'Common CE Market', 'CE Technology Exchange', and 'Regulatory Harmonization', based in wider
482 eco-modernist discourses, subsume environmental priorities to those of the economy but also to those
483 of diplomacy. Furthermore, the market optimistic discourse coalition, who draws on the dominant CE
484 narratives for its core arguments, is weakened by the narratives' embeddedness in global trade
485 discourses that underline the importance of creating appropriate regulatory environments for large
486 single markets and the freedom of trade (Ville and Orbie 2013; Strange 2011; Cho 2014).

487 The intertwined skeptical narratives of 'Identity Disparity', 'Negative Competition', and 'Distrust'
488 reveal that CE cooperation is highly political, as it pertains to resources, geo-economic status and
489 technology leadership. While the cooperation goals seek to expand common CE markets, distrust and
490 negative competition fueled by identity disparity can undercut access to these markets. Such
491 undermining of the cooperation raise similar questions as literature that have critiqued the CE in China
492 and the EU for falling short on social dimensions and those that question whether a market-led CE can
493 achieve the socio-environmental benefits some proponents claim (Moreau et al. 2017; Zink and Geyer
494 2017; Koprina 2018; Valenzuela and Böhm 2017; Korhonen et al. 2018a). These questions may be even
495 more relevant for a CE cooperation entangled with international relations.

496 At the international scale, 'win-win' narratives that reconcile economic growth and ecological
497 sustainability typical in eco-modernist discourse become 'win-win-win' narratives that claim that
498 China-EU relations will also win through the CE trade cooperation (Hajer 1995). These triple-win
499 narratives rely on depoliticization strategies that avoid bilateral tensions. Although some scholars
500 (Scott 2014) suggest a depoliticized approach to China-EU environmental cooperation, we show for
501 the case of a CE that instead of enabling fruitful cooperation, these depoliticized narratives reduce
502 regulatory actors' tasks to optimizing the regulatory environment for the best market potentials. CE
503 cooperation is optimistically envisioned to be able to resolve problems of investment, regulatory
504 knowledge gaps and divergence, and resource and technology needs without addressing sensitive
505 socio-economic and geopolitical issues that arise from the tensions between EU and China's different
506 governance systems and development stages. Depoliticization also hinders the adequate coordination
507 necessary to conceptualize more effective environmental problem solving strategies, such as

508 addressing which scales of CE cooperation should be supported. The depoliticized triple-win narratives
509 leave the environment as the last priority because environmental benefits are only possible if the
510 cooperation can be sustained by the growth of the trade relationship. As such, they are also unlikely
511 to yield substantial environmental policy efforts beyond the types that already exist. Furthermore, the
512 impact of trade on the environment, especially between industrialized and industrializing
513 countries/regions is ambiguous or negative according to scholarship (Bruckner et al. 2012; Nemati et
514 al. 2019).

515 As the discourse coalition that facilitate the optimistic narratives is dependent on the achievement of
516 trade objectives, this coalition is fragile and contingent upon the uncertainties of the global trade
517 system. If trade goals of the former coalition are not obtained through current narratives, our results
518 suggest that the coalition could disintegrate, with some economic and political actors potentially
519 abandoning CE for another trade promotion tool and environmental and social actors aligning more
520 strongly with the skeptics.

521 This study is limited to addressing narratives in the China-EU CE cooperation in a relatively short time
522 period, does not analyze the relationship in other international fora (eg. OECD, WEF), and does not
523 include statistics such as trade data. We further acknowledge that the China-EU CE cooperation may
524 yet evolve differently than what we have portrayed as the cooperation is still young. Despite these
525 limitations, our results nevertheless provide important lessons for CE as well as for wider literature
526 investigating opportunities and obstacles of international environmental cooperation.

527

528 **6. Conclusion**

529 This discursive study on China-EU CE agreement, a first of its kind, expands CE scholarship beyond
530 national and regional comparisons to international relations and adds important new insights to
531 international environmental cooperation scholarship. The empirical analysis of the first international
532 CE cooperation shows that despite a strong intent for cooperation and aligned interests in trade, the
533 China-EU case has weak potential for sustaining a lasting cooperation. It highlights the need to address
534 disparate identities, distrust, negative competition and problems of scaling as new dimensions of focus
535 for scholars and practitioners interested in international cooperation for the governance of
536 environmental change. The China-EU CE cooperation further demonstrates that established
537 cooperation strategies of de-politicization, 'win-win' narratives, and focusing on trade exacerbate
538 these issues.

539 Depoliticization and 'win-win' narratives cannot sustain international cooperation that achieve socio-
540 environmental change. At the international scale, eco-modernist discourse takes on narratives that
541 stress compatibility between diplomacy, economics and environment by employing a depoliticization
542 strategy that ignores bilateral political tensions. Depoliticization overcomes collective action and
543 disparate interest problems at the expense of addressing the political roots of these problems, which
544 in our case was underlined by tensions of identity disparities. Avoiding addressing such disparities fuels
545 sentiments of distrust and negative competition that propel systemic rivalry (European Commission
546 2019), which threatens and undermines any much needed long-term collaborative efforts to build trust
547 and to make sense of the disparities. Such strategies therefore contribute to gridlock, or stuckness,
548 rather than a paradigm shift. We call for future research on international environmental governance
549 to explore the role of trust as a relational, identity-based concept (Weinhardt 2015). While some
550 scholarship have examined trust-building in China-EU relations through new dialogue structures (Scott

2014) or rules and shared norms to reduce conflicts of interest (Geeraerts 2019) in sensitive geopolitical fields, the significance of relational trust in international environmental cooperations uncovered in this analysis could provide new stimuli for the field. As our case has shown depoliticization to be a weak strategy in achieving long-lasting international cooperation to transition towards new environmental paradigms, future research may also investigate what discursive strategies might have more success enabling global players with distinct governance systems and development needs to sustain environmental cooperation.

International trade cooperation strategies are problematic as the central basis for global environmental governance. The case shows that, first, the dominant trade conceptualization of the CE cooperation reinforces EU-Chinese identity disparities, distrust and negative competition that in turn make trade cooperations difficult. Second, as international trade is a volatile and uncertain domain that is subject to myriad global factors such as financial markets, natural disasters, and most recently the COVID-19 pandemic (Baldwin and Tomiura 2020), environmental cooperations that rely on increasing international trade to continue are fragile. Environmental cooperation that is negotiated as interlinked but independent to trade as well as other relevant areas such as education and cultural exchange may have greater potential for endurance. Third, scholars and practitioners need to scrutinize, experiment and study what kinds of trade and scales of trade contribute to improving environmental governance. The value of international trade for environmental governance cannot be taken for granted. A few scholars have suggested regional and local CEs to be key in achieving sustainability goals (Korhonen et al. 2018b; Norris 2018; Novy et al. 2019). More studies in this direction along with how transregional and translocal CE interactions might manifest would be desirable.

New strategies developing shared identities, trust and an agreement on appropriate governance scales and their international links are needed. As established strategies fail to overcome issues of environmental cooperation, our analysis highlights the need for stakeholders to reflect and address how disparaging identity issues can be reconstructed for an enduring environmental cooperation. We join scholars in regional environmental and climate studies in emphasizing that building cohesive identities as crucial for international actors seeking to govern environmental change (Elliott 2003; Ide and Fröhlich 2015). Furthermore, as identity is discursively constructed (Cillia et al. 1999), we call for more research and practitioner discussions on what kind of discursive strategies can help countries with different governance systems and development stages to create interlinked identities for environmental cooperation despite their particular historical, physical and governance differences. Existing research on discursive agency and strategies may be a good starting point to develop such endeavors (Leipold and Winkel 2017). This is not to say that China and the EU should bring difficult political differences into environmental cooperation, but it is important to not treat environmental cooperation as depoliticized territory when it is actually power-laden.

Our study adds to previous research that international environmental cooperation depends not only on collective action and common interests, but that narratives, issues of identity, trust and converging conceptualizations of scales of cooperation are also crucial if we want to shift paradigms in international environmental discourse (Stevenson 2021; Aklin and Mildemberger 2020; Meckling and Allan 2020). These issues relate to geopolitics, areas environmental governance tends to shy away from. However, our case shows that avoiding such tensions drives eco-modernist discourse as depoliticization, trade and the emphasis of 'win-win' are three of its most fundamental discursive strategies. This may have led to gains for environmental discourse in the past, but we now need new

595 narratives to shift us into new territory. To do so, actors in global environmental governance will need
596 to develop new strategies to take on issues of national and supranational identities, trust and
597 conceptualizing scales for governance, implementation and action.

598

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