



Fostering transparency? Analysing information disclosure in transnational regulatory climate initiatives

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ABSTRACT

In the context of the first Paris Agreement's global stocktake, transnational regulatory climate initiatives hold the potential to catalyse states' action and boost the process' transparency. However, transnational initiatives' own transparency has been questioned. This article investigates the transparency of 56 initiatives by focusing on the 'quantity' and 'quality' of the information disclosed. The analysis underscores limits pertaining to both elements. To explain variation, the article correlates transparency with the initiatives' type of actors, type of regulatory activity, number of functions performed and size and identifies what constellations of factors better explain transparency and lack thereof via a Qualitative Comparative Analysis. Large initiatives which involve public actors and perform multiple functions are more strongly linked with transparency. Other factors do not yield significant effects. By identifying areas for improvement in regulatory initiatives' transparency, the article contributes to a better understanding of their role in the stocktake process.

1. Introduction

Under the framework of the Paris Agreement (PA), Parties are required to demonstrate their collective progress towards implementing climate action and meeting their Nationally Determined Contributions (NDCs) (Hale et al., 2020). This is done through a mechanism called global stocktake (GST), a process which every five years assesses Parties' collective progress in reaching the PA goals (Milkoreit and Haapala, 2019). The first stocktake took off at the UN Climate Change Conference in Glasgow in November 2021 (COP26) and runs until COP28 in 2023.

Serving as the first 'checkpoint' to review collective progress, the GST is a chance for countries part to the United Nations Framework Convention on Climate Change (UNFCCC) to cooperate with the array of non-state actors and transnational initiatives populating the landscape of global climate governance (Rajamani et al., 2022). The role of cross-border climate initiatives in multilateral climate negotiations has been subject to divergent interpretations. On the one hand, these initiatives broaden the participation of actors such as NGOs, companies and subnational governments in decision-making processes and hold the potential to catalyse states' action and boost transparency in multilateral climate negotiations (Bulkeley and Newell, 2015; Hale and Roger, 2014). On the other hand, transnational initiatives risk overburdening multilateral climate efforts and making the system more fragmented (Biermann et al., 2009; Van Hasselt and Zelli, 2014), which may have

negative consequences on transparency. Under the GST, transnational initiatives are called to play an active role by providing submissions, which enhances their potential to influence the negotiations and countries' action (C2ES, 2022). The GST process is thus an opportunity for transnational initiatives to synergise with and enrich the GST process and foster countries' accountability when taking stock of their collective progress.

The potential of transnational climate initiatives to boost procedural values like transparency in multilateral negotiations has received some scholarly attention (see Bäckstrand, 2008; Widerberg and Pattberg, 2015). However, attention has not been paid to these arrangements' internal transparency, as well as its main determinants. Data related to non- and sub-state climate initiatives is often limited and a lack of consistent reporting systems and harmonised accounting procedures makes it difficult to comprehensively track implementation of transnational climate action (Hsu et al., 2019). Given the voluntary nature of transnational climate initiatives, more timely and detailed transparency procedures are crucial for the credibility of their action (Hale et al., 2020) and for assessing their role in relation to multilateral climate governance. Against this backdrop, this article asks: considering the potential of transnational climate initiatives to enhance the transparency of multilateral climate governance, how transparent are these initiatives as regards their own operations and decision-making process?

The article pursues two main objectives. First, to provide an

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assessment of the transparency of a subset of transnational initiatives, namely regulatory ones. Within the universe of transnational climate governance, initiatives with a rule, standard and/or target-setting function – thereafter referred to as ‘regulatory’ initiatives – seek to contribute to tackling climate change by promoting, monitoring, and enforcing rules, standards, and targets (Dingwerth, 2017; Abbott et al., 2016). The article assesses the transparency of 56 of these regulatory initiatives, underlining significant room for improvement in their level of information disclosure. Second, the article aims to examine what (combinations of) factors drive transparency in these initiatives, a topic which has to date received scant scholarly attention (see for example Schleifer et al., 2019). A key finding is that large initiatives which involve public actors and perform multiple governance functions are quite strongly linked with high transparency.

The article proceeds as follows. Section 2 introduces the main feature of transnational regulatory climate initiatives. Section 3 discusses the relevance of transparency in relation to regulatory climate initiatives and delineates the assessment framework used in the empirical analysis. It also includes a review of the explanatory factors used to explain transparency scores. Next, Section 4 presents information on the data and research design. Section 5 provides the results of the analysis, including the combined effect of the explanatory factors on transparency by means of a qualitative comparative analysis (QCA). Finally, the concluding Section 6 reflects on the main research findings.

2. A typology of transnational regulatory climate initiatives

Transnational climate initiatives have come to form a key component of the global climate architecture (see e.g., Sanderink et al., 2020; Jordan et al., 2018). These voluntary arrangements undertake a variety of governance functions, from information sharing to capacity building, to implementation of internationally agreed outcomes (Pattberg and Johannes Stripple, 2008). Most often they perform a mix of governance activities (Bulkeley et al., 2014). Transnational initiatives can also act as regulators, by setting climate-related rules, standards, and targets (Pattberg and Stripple, 2008; Abbott and Snidal, 2009). Their regulatory activity consists, for example, in the setting of carbon standards to certify emissions reductions or removals from carbon-offset projects; rules for corporate disclosure of greenhouse gas (GHG) emissions; benchmark standards to assess corporate responses to climate change; or targets for GHG emission reductions addressed to the members of a transnational initiative. The variety of regulatory functions shows that in global climate governance rulemaking is no longer the domain of public agency only, as non-state and sub-state actors such as firms, NGOs and cities are responsible for the establishment and implementation of several rules, standards and targets directly or indirectly aimed at climate change mitigation (Gilligan and Vandenbergh, 2020; Abbott et al., 2016). From this perspective, regulatory initiatives are regarded as a response to regulatory gaps permeating more traditional inter-governmental institutions and national governments (Bulkeley and Newell, 2015). Some authors point to governance failures at the international level to explain the increasingly rule-making authority of transnational climate initiatives, which can more easily avoid barriers encountered by national and international institutions and contribute to the reduction of GHG emissions more rapidly (Andonova et al., 2017; Bäckstrand, 2008).

Transnational regulatory initiatives involve a variety of stakeholders and produce consequences and externalities for many actors, which creates high demands that these initiatives act in a transparent, verifiable way. In light of the wide range of stakeholders involved in these initiatives and their transparency potential, it is worth putting under scrutiny their transparency, as well as identifying their main transparency drivers. Given that transnational regulatory initiatives vary considerably, here the broad functional category of ‘regulation’ is disaggregated to highlight different ‘sub-regulatory activities’ that the initiatives may engage in (Bulkeley et al., 2014). Taking a broad

approach, I build a typology based on three categories already identified by the literature (see e.g., Hickmann, 2016; Bäckstrand, 2008; Pattberg and Stripple, 2008). The first includes arrangements which put in place self-regulation mechanisms to set GHG emission reductions targets for their members as a policy response to climate change. These target-setting initiatives mainly take the form of transnational city networks focusing on climate change mitigation which set targets to steer networks’ members and promote their compliance with the network goals (Hickmann, 2016; Kern and Bulkeley, 2009). Examples are the C40 Cities, EUROCIITIES, and the Covenant of Mayors. While not exercising ‘hard’ forms of regulation, target-setting initiatives can, to some extent, be considered to perform a regulatory activity as they aim to steer the behaviour of their constituencies towards emissions reductions targets. In the same category, I include public-private governance networks aimed at implementing internationally agreed outcomes, as they strive to steer the behaviour of certain actors towards the achievement of climate outcomes.

The second category includes standards established by private certification schemes aimed at governing the quality of projects designed to generate carbon offset credits for voluntary carbon offset markets (Green, 2013a, 2013b). In some instances, certification schemes aim to set guidelines for the evaluation of mitigation projects’ environmental and societal co-benefits (Hickmann, 2016). Examples of carbon standards are the Gold Standard, the Verified Carbon Standard (VCS) and the Climate, Community and Biodiversity Alliance (CCBA). Finally, the third category includes initiatives that aim at setting standards for governing the measurement, reporting and verification (MRV) of GHG emissions (Hickmann, 2017; Bulkeley et al., 2012). These initiatives establish norms and standards for corporate sustainability disclosure and management of carbon emissions and carbon reductions at the transnational level, e.g., the Greenhouse Gas Protocol (Pattberg et al., 2016). These initiatives are led by corporate or civil society actors, or by partnerships formed by a mix of public actors (e.g., sub-national actors, states) and private actors (businesses, non-profit organisations, research institutions). Before turning to the assessment of transparency, I provide an overview of theoretical discussions linking transparency to transnational climate governance.

3. Transparency and transnational climate initiatives

Transparency has become a central component in the global environmental discourse and practice (Ciplet et al., 2018; Gupta and Mason, 2014). It is often associated with concepts such as due process, accountability, and a more general democratisation rationale of a ‘right to know’ (Gupta, 2008). In the context of transnational climate change governance, transparency is routinely investigated to explain the increasing authority of non- and sub-state actors and assess their larger implications for key normative aspects such as legitimacy and accountability (Biermann and Gupta, 2011; Dingwerth, 2007). Transparency gained *momentum* in recent international climate policy developments, as shown by the Paris Agreements’ ‘enhanced transparency framework’, under which countries are obliged to apply detailed transparency rules on progress towards their NDCs (Gupta and van Asselt, 2019; Hickmann, 2017).

In the context of transnational climate governance, the use of transparency practices has been linked to a potential for transformative change (Gupta et al., 2020). Accordingly, over the past decades, scholars have noted an increasing call for transparency, which has been defined as a ‘governance by disclosure’ turn (Hale and Roger, 2014; Bulkeley, 2012). In this context, transparency is defined as ‘the extent to which individuals who may be significantly affected by a decision are able to learn about the decision-making process, including its existence, subject matter, structure, and current status’ (Dingwerth, 2007, 30). Defined as such, transparency is conceived as a means through which greater accountability can be achieved. In fact, transparency is an intrinsic element of accountability relationships, of which it can be considered

either a fundamental precondition (Biermann and Gupta, 2011) or a means through which greater accountability can be achieved (Dingwerth, 2007). The transparency turn has not come without objections. Scholarly work has questioned whether transparency lives up to its promise and identified possible limits in the presumption that increased transparency by public and private actors enables greater scrutiny of power-wielders (Gupta and Mason, 2014). Overall, discrepancies and limitations have been found in the assumed linear relationship between increased information disclosure practices and more legitimate and democratic governance. Research has highlighted how transparency is often upheld as a procedural norm, rather than leading to substantive environmental improvements (Gupta, 2008). In the governance by disclosure turn there is a disjuncture between embracing transparency as a ‘procedural’ norm that is linked to the idea of due process, and the practice of transparent governance aiming to substantive governance improvements. From this perspective, the logic behind embracing transparency in a normative sense is that better governance can be achieved through establishing procedures rather than mandating specific outcomes, as the very fact of agreeing upon common procedures will lead to desired governance goals (Gupta, 2008).

In the realm of transnational climate governance, transparency refers to a broad and fragmented context, where a multiplicity of ‘architects’ of transparency are driven by different normative rationales (Gupta and Mason, 2016). In this context, both public and private actors are potentially involved in the spectrum of transparency relationships, either at the demand or supply end. Private actors may operate under a privatisation rationale, promoting transparency as a voluntary means through which they accomplish corporate sustainability goals, improve their public image in response to peer-to-peer pressures and avoid more stringent government regulation. To the contrary, public actors may follow a more democratic rationale and promote transparency to respond to more stringent societal scrutiny, correct perceived democratic deficits in environmental decision making, improve accountability and ensure informed choice in environmental governance (Gupta and Mason, 2016; Pattberg and Enechi, 2009). From this perspective, transparency can be understood as ‘the reliance on targeted disclosure of information as a means by which to evaluate and steer behaviour, that is, as a means by which to govern’ (Gupta and Mason, 2014, 6). Transparency is thus equated with information disclosure, which is employed as ‘a way to evaluate and/or steer the behaviour of selected actors’ (Gupta and Mason, 2014, 6).

In sum, while transparency through information disclosure has become a widely embraced and institutionalised governance tool, it runs the risk of being an end in itself. The act of disclosing information does not automatically mean disclosing ‘good’ information. In the case of transnational, voluntary governance arrangements, the reliance on self-reporting and lack of reporting mandates may have important implications for the quality of transparency. Whereas transnational initiatives may decide to use transparency as a way to reduce information asymmetries and maintain or gain legitimacy, the voluntary nature of their reporting means their reporting may end up being symbolic and trivial rather than substantial.

The discrepancy between the adoption of transparency measures and delivering transparent governance may be not be due necessarily to an inadequate implementation of transparency practices or to flawed disclosure systems. It may be related to power imbalances and broader conflicts over norms, practices and objectives of global governance (Gupta, 2010a, 2010b). This suggests that ‘transparency in itself is neither inherently good nor bad, and that the impact of increased transparency depends fundamentally on what information is being made transparent, how, to whom and for what purpose’ (Gardner et al., 2019, 164). Overall, the ideal of transparency itself often remains contested, since ‘the relationship between transparency and more accountable, legitimate and effective governance is far from being straightforward’ (Gupta and Mason, 2014, 4). Speaking to this debate, this article claims that if the potential of climate transnational initiatives is to enhance

transparency practices, then they first of all should be transparent towards their own members and stakeholders, as well as the general public, about their own activities and practices. A follow-up question is which factors may have an impact on varying degrees of information disclosure.

3.1. Assessment: Quantity and quality of transparency

To assess transparency, this article focuses both on the ‘quantity’ and the ‘quality’ of information disclosure. For quantity, I refer to the sheer amount of information that can be publicly accessed, i.e., made ‘visible’ by the initiatives. To assess quality, I refer to criteria of accessibility, comprehensiveness, and understandability (Dingwerth and Eichinger, 2010; Gupta and Mason, 2014).

By focusing on these parameters, information disclosure is measured not only by the amount of information disclosed, but also by whether that information can be easily accessed, is detailed, and can be clearly understood (Michener and Bersch, 2013). Quantity and quality provide value to each other: very ‘high quality’ information might be disclosed, but that quality could somewhat be lost if the amount disclosed is particularly low. Conversely, there might be a case of a large amount of information disclosed, but whose poor quality makes information irrelevant or useless. More disclosure does not necessarily correspond to better disclosure, especially since an excessive amount of or irrelevant information disclosed to recipients may result in what Gupta and Mason call a ‘drowning in disclosure’ (Gupta and Mason, 2016, 82).

As shown in Table 1, quantity and quality are understood in relation to three broad categories, i.e. basic information, performance and governance/decision-making. The first dimension aims to verify a basic, yet essential, level of transparency, namely information about what each initiative is and does, and consists of three main elements: (1) its overall mission; (2) its objective(s) and (3) its main driving principles.

The second dimension looks at whether an initiative communicates on its operations, progress, and outputs toward its climate targets, first of all through reporting. Reporting systems specify the processes through which information is generated, shared, and reviewed, and hence, made visible (Gupta and van Asselt, 2019). Transparency through progress reporting has acquired centre stage at the international level, being one of the pillars of the PA enhanced transparency framework for generating and sharing information about countries’ commitment to achieve their individual NDCs as well as their collective progress (Gupta and van Asselt, 2019; Hale et al., 2020). According to the enhanced framework, transparency entails that ‘information is presented in a way that is clear and can be understood and verified’ (Pauw and Klein, 2020, 4). Reporting is considered to be beneficial for climate initiatives, as keeping track of achievements and measuring progress towards their own targets allows them to verify whether their action is in line with their chosen benchmarks and to gain a better understanding of what practices and approaches are more successful than others (Hale et al., 2020). Thus, I also look at the frequency of reporting, as an indication of the consistency with which initiatives provide information to the external world about what they do and the results they achieve.

Table 1
Transparency framework.

Transparency dimensions	Indicators
BASIC INFORMATION	Information disclosure on mission, objectives and principles
PERFORMANCE	a. Presence/frequency of reporting b. Quality of reporting: activities carried out during the reporting period; progress against goals; finances c. Disclosure through newsletters/press releases
GOVERNANCE/ DECISION-MAKING	a. Information disclosure on members b. Information disclosure on rules

Source: Author’s own compilation.

The next indicator focuses on the quality of the reporting activity. Based on the three assessment parameters mentioned above, I verify the extent to which accessible, detailed and comprehensive information is disclosed on: 1) the activities carried out by an initiative in the reporting period; 2) the progress of an initiative over the reporting period against its goals; and 3) financial statements and expenses of an initiative for the period covered by the reporting activity. Next, I evaluate the frequency with which information is disseminated in the form of press releases and newsletters. I look at whether initiatives do not produce any newsletters and press releases or do so very rarely, or on the other hand, at very 'loud' initiatives producing newsletters and press releases more than once a month. Lastly, the third dimension assesses disclosure of information in relation to the initiatives' governance structure (composition of governing bodies) and decision-making process (rules and procedures of governing bodies). Here I draw on studies on transparency in transnational sustainability governance that look at the level of depth of information disclosed, understood as 'the degree to which the disclosed information allows insights into the actual workings of an institution, not just its formal procedures' (Schleifer et al., 2019, 491). In the next section, I turn to possible 'sources' of transparency.

3.2. Possible transparency drivers

To make sense of the variation in transparency detected through the empirical assessment, I focus on identifying some possible transparency drivers. Four explanatory factors related to climate initiatives are tested, namely (1) type of actors, (2) type of regulatory activity, (3) single/multiple function and (4) size. While existing literature has employed these factors to account for the emergence of transnational forms of climate governance (e.g., Andonova et al., 2009), a systematic analysis of their effects (if any) on the transparency of regulatory initiatives is still largely missing. For each factor, I develop some hypotheses to be tested through the analysis. First, I assume that the nature of the actors involved in an initiative may produce different transparency scores. The various actors populating the world of transnational climate governance bring in different power, resources, and sources of authority (Abbott, 2012a). On the one hand, initiatives involving public actors are expected to make ample use of transparency as they may be subject to legal requirements and aim for public responsiveness. However, the linear relation between public actors and transparency in transnational (and multilateral) climate governance should not be taken for granted. For instance, while in the context of the Paris Agreement much hope is put on the transparency of the system through the agreed enhanced transparency framework applicable to all parties, the overall transparency of the process remains contested (Gupta and van Asselt, 2019).

On the other hand, private actors may be expected to be less transparent and to provide a lower quantity and quality of information disclosure, seeing as they are driven by corporate interests and their accountability systems revolve around tenets of supply and demand. Regarding hybrid initiatives, formed by a mix of public and private actors, they are expected to be generally transparent, as they are open to a bigger number of stakeholders and interests and generally privilege transparency of decision-making processes. A competing hypothesis is that the inclusion of multiple actors means that ensuring flow of information requires a high level of coordination, which could also have a paralysing effect on an initiative (Ewert and Maggetti, 2016).

The second factor refers to the fact that regulatory initiatives are driven by different interests and pursue different goals through different means. Literature on accountability and legitimacy in global environmental governance provides some suggestions as to the use of transparency by different types of initiatives. First, certification bodies make ample use of transparency provisions to enhance their credibility, accountability, and legitimacy (Auld and Gulbrandsen, 2010). However, since most carbon offsetting and certification standard initiatives are formed by private actors (mostly non-profit organisations), it could also be expected that they will provide a lower quantity and quality of

information disclosure.

Second, for target-setting initiatives the exchange of information and knowledge is key. These initiatives employ information and knowledge sharing as tools to motivate and bind together their participants in the pursuit of their targets, as well as to foster learning processes among members to spread good-practices (Hickmann, 2016). Given the importance of sharing information, controlling information flaws, and reaching a wide range of actors, they can be expected to make use of transparency practices to encourage their members to achieve set goals. Finally, at the core of initiatives setting MRV standards is to set rules and standards for carbon reporting at the level of corporations and sub-national governments. In doing so, they attempt to govern the climate arena through information disclosure and public awareness. For these types of initiatives transparency is a high priority (Pattberg and Enechi, 2009) as they require it from the companies or cities that join them by establishing clear guidelines for the measurement, reporting and mitigation of corporate (or city) GHG emissions.

The third factor relates to whether an initiative performs other functions in addition to regulation, e.g., information production and exchange, networking, or institutional capacity building and aims to verify whether performing one or more functions at the same time bears any implications for transparency. The overall expectation is that for regulatory initiatives performing some form of knowledge creation and exchange information, disclosure is among the main resources used to steer constituents toward a certain goal (Andonova et al., 2009). A competing hypothesis is that initiatives that are only regulatory are more transparent since they can be expected to constrain more their members in terms of transparency requirements.

Finally, the fourth variable refers to the size of transnational climate arrangements. Understood primarily as the number of members, this factor has been mostly analysed in relation to the output legitimacy of transnational governance arrangements, where large initiatives were found to be more effective than small ones in reaching their targets (Szulecki et al., 2011). This may be because large initiatives have more resources at disposal and therefore are able to perform better than initiatives with a small number of members and less resources. If an initiative is large is because it is able to attract more partners, and the reason why it attracts more partners could be that it is highly transparent about its operations. Furthermore, it may be argued that the bigger an initiative gets, the more additional resources will be brought in by new members which, in turn, will potentially enhance the level of transparency and participation of that initiative.

4. Research design

To reach beyond small-n case studies, the article focuses on a newly compiled database of 56 climate initiatives. This approach is justified by the need for 'methodological innovations capable of creating a more comprehensive account of the overall phenomenon (of transnational climate initiatives)' (Bulkeley et al., 2014, 17). Initiatives were included in the database following four main criteria: first, they are transnational in nature, i.e., they 'operate in more than one country and include private actors and/or subnational units of government as well as, or rather than, states and interstate organisations (IOs)' (Abbott, 2012b, 573). Second, the listed initiatives are either private – that is, formed by one or more non-state actor such as firms and/or NGOs; or public, i.e., formed by one or more state and/or sub-state actors, such as cities, regions and provinces; or hybrid – i.e., formed by a mix of public actors (such as states and/or sub-national actors) and private actors (such as firms and/or NGOs).

Third, at least one of the governance functions of the initiatives is regulatory. Regulation is either the only function fulfilled by the initiatives included in the sample, or a function performed in addition to other governance functions, e.g., information sharing, networking, or capacity building. Fourth, all the listed initiatives aim to exert an impact on a specific set of actors within a specific sector related to the issue of

climate change.

The cases were generated by drawing on academic studies focused on mapping and characterising the existing realm of transnational climate governance initiatives (e.g., [Widerberg and Stripple, 2016](#)). This article builds on and expands these efforts by aggregating governance initiatives that share a regulatory function. The database draws also from available online repositories showcasing transnational climate action beyond the UNFCCC, e.g., the NAZCA platform, the UNFCCC Portal on Cooperative Initiatives, and the Climate Initiatives Platform. To assess transparency, I checked each initiative's website and analysed other publicly available sources, such as annual reports and governance documents produced by the initiatives. To assess quality of reporting, I relied on the latest report I could retrieve on the web for each initiative at the time the analysis was carried out (between May and October 2020).

The cases were divided into three 'clusters of transparency' distinguishing between 'high', 'medium' and 'low' transparency initiatives. This was done not only to stress differences in the initiatives' level of transparency, but also to correlate the explanatory factors not to each single initiative, but to groups of initiatives. To create the clusters, I summed the scores assigned in the assessment to each initiative (where the higher the score, the more information is disclosed by an initiative, hence the more transparency).

4.1. Identifying combinations of factors through qualitative comparative analysis

As a further step, I looked at the interaction between the proposed explanatory factors to investigate what combinations of factors are particularly conducive to higher or lower degrees of transparency. By means of a Qualitative Comparative Analysis (QCA), I compared the results of all cases and analysed which combinations of factors led to a higher or lower degree of transparency. A central motivation for undertaking the QCA relates to what I observed in the transparency assessment, where I did not identify one single factor that fully correlated with a specific degree of transparency. Rather, several factors appeared to show some kind of relationship with transparency, with different degrees of robustness.

QCA is a set-theoretic approach that interprets relations between (sets of) cases in terms of necessity and sufficiency ([Schneider and Wagemann, 2012](#), 53). It enables researchers to investigate the interaction of what is called in QCA-language 'conditions' towards an 'outcome' of interest ([Schneider and Wagemann, 2012](#), 77–79). In my case, the 'outcome' is transparency and the 'conditions' are the four explanatory factors outlined in Section 3.2. According to the QCA approach, several different (combinations of) conditions may lead to a specific outcome, i.e., different causal paths, each one of them consisting of a combination of conditions, may induce the same outcome – the former called 'equifinality', the latter 'multiple (conjunctural) causation' ([Mahoney and Goertz, 2006](#); [Rihoux and Ragin, 2009](#)). Furthermore, according to QCA causality is not assumed to be symmetrical, which means that there may not be one single explanation for the presence or the absence of the outcome. In other words, the combinations of conditions that can produce an outcome may be different from the (combinations of) conditions that are responsible for the absence of the outcome ([Rihoux and Ragin, 2009](#)). Thus, QCA helps to identify constellations of factors that can explain different transparency scores in terms of presence and absence.

Regarding the sufficiency analysis, QCA starts from an assumption of maximum complexity and lists all logically possible combinations of the conditions examined in a so-called 'truth table'. By combining the cases with identical dichotomized scores, a truth table lists all the logically possible combinations of causal conditions and the empirical outcome associated with each configuration ([Ragin, 2008](#)). The main goal of a truth table is to identify explicit connections between combinations of causal conditions and outcomes ([Ragin, 2008](#)). Once the truth table has

been created, it can be minimised, i.e., causal pathways (or combinations of conditions) towards presence of the outcome are identified. By means of Boolean principles of logical minimisation, conditions with conflicting values among the cases from these causal paths are excluded ([Guerin, 2018](#)). In particular, the goal is to determine which minimum combinations of conditions are required to bring about the outcome under investigation (transparency).

4.2. Data and calibration

To perform the QCA, the data were manually calibrated by transforming the available 'raw' data into membership scores, which requires the definition of two qualitative anchor points (0–1). These anchor points determine whether a case is considered to have full membership in a specific set (point 1), or full non-membership in a specific set (point 0). As said, the outcome to be explained in this article is transparency. To dichotomize it, I needed to decide on an anchor point, or threshold, on the basis of which the outcome for each case can be assigned the value of either 0 or 1. To do so, I needed to determine in a clear way when a case can be considered more 'in' than 'out' of the set of transparency. Adopting an inductive approach, I calibrated the outcome based on the three transparency clusters. Calibrating in this way also allows me to have a meaningful variation in the number of cases with a positive and negative outcome, which is usually advisable when conducting QCA ([Rihoux and Ragin, 2009](#)).

Taking into account, for each case, the sum of each transparency score obtained through the assessment, I got values between 0 and 7. To dichotomize the data I opted for an anchor point dividing my cases between high (and medium) versus low transparency. Considering the maximum score assigned in my assessment to low transparency cases, I set my threshold at 2, thereby creating a division between high - medium transparency on the one hand, and low transparency on the other hand. Therefore, I assigned the value 0 to all cases with a total transparency score ranging from 0 to 2 (as ≤ 2) (18 cases in total), and the value 1 to all cases with a total transparency score ranging from 2.1 to 7 (as > 2) (38 cases in total).

The condition 'type of actor' can be dichotomized according to my theoretical expectations on different types of actors' performance of transparency, particularly that initiatives formed by public actors are more transparent than private ones. Since presence of public actors is theoretically expected to be positively associated with transparency, I opted for calibrating the condition as 'public actor involvement', since also in the case of hybrid initiatives, I expect the presence of public actors to be positively associated with the outcome. Therefore, for each case, I assign the value 0 when there is a lack of public actor involvement (30 cases in total) and 1 when public actors are included (26 cases in total).

The condition 'type of regulatory activity' is also multi-nominal, as it is divided into (a) carbon offsetting & certification standards; (b) MRV Standards and (c) target-setting. Empirical evidence and theoretical expectations are not robust enough to make this condition a dichotomous one, that is, to calibrate it as either member in a set (1) or non-member (0). While some expectations were developed regarding both MRV and target setting initiatives being more positively correlated with high transparency than carbon offsetting and certification standards, empirical evidence did not validate this hypothesis significantly. Not having clear expectations in relation to this condition, I opted for calibrating it as a multi-value condition, where the numerical values assigned (0, 1 or 2) simply denote a category of regulatory activity, to see how different values of the same condition interact with my outcomes of interest. I calibrated the condition in the following way: for each case, I assign the value 0 to target setting initiatives (20 cases in total); the value 1 to carbon offsetting & certification standards initiatives (22 cases in total) and the value 2 to MRV initiatives (14 cases).

The third condition – 'single regulatory function or multiple functions' – can be easily dichotomized according to my theoretical

expectations. I assume the combination of a regulatory function with other governance activities to be positively associated with the outcome transparency, therefore I assign the value 1 to initiatives performing multiple functions besides being regulatory (19 cases in total) and the value 0 to initiatives performing only a regulatory function (37 cases in total).

Finally, to calibrate the condition 'size', I first took into the transparency assessment, which showed that large initiatives are more positively correlated with transparency than small initiatives. I based the calibration of the factor 'size' on the division created earlier in the analysis between (relatively) small initiatives (< or equal to 100 members), medium initiatives (between 101 and 499 members) and large initiatives (equal or > 500 members). For the QCA I grouped large and medium size initiatives - to which I assigned the value 1 (in total, 24 initiatives) whereas to small initiatives (equal or <100 members) I assigned the value of 0 (in total, 32 initiatives).

5. Results

5.1. Assessing transparency: A mixed performance

A large majority of initiatives (52 out of 56) disclose information about their mission, objectives, and principles. However, there are differences in the way information is disclosed: while a big chunk of initiatives (36) does so in a comprehensive and detailed manner, 16 of them provide very limited information on their principles, goals, and general approach. Four initiatives fail to provide basic information. Slightly over 50 per cent of the initiatives contained in the database (29) present information on operations and progress in the form of a publicly available report. In contrast, 27 initiatives do not show any sign of reporting activity. As for frequency of reporting, 20 initiatives conduct annual reporting, whereas 9 initiatives report on their activities less than once a year.

Regarding the quality of reporting activity, roughly 60 per cent of the initiatives (17 out of 28) disclose only partial information on their activities, progress, and finances. These reports often provide rather comprehensive information on the processes around which an initiative works but tend to illustrate past activities largely in the form of highlights and selected case studies, with a rather concise and often vague or scarce illustration of concrete achievements over the reporting period. This suggests that for these initiatives information disclosure on procedures is favoured over substance. Furthermore, a small number of initiatives (four) disclose even less, providing very scarce information about their activities and progress and no information at all on finances. Rather than communicating on activities and performance, these reports appear to be more a statement of intentions. This may be due to lower financial support, or lower external pressure on these initiatives to communicate on their results. Only seven initiatives in the sample report in a way that can be qualified as substantive, disclosing clear, detailed, and comprehensive information on all three indicators of quality of reporting activity.

The analysis also showed the absence of one single standardised way of reporting, as progress indicators vary significantly from initiative to initiative. Overall, there is a lack of specific indicators to track initiatives' performance, with some exceptions. Some initiatives privilege more quantitative indicators, some others prefer to track their progress by using mostly qualitative indicators. This may reflect the different goals and activities pursued by the initiatives. Moreover, several initiatives in the sample produce general information for the public in the form of press releases and newsletters. Over 60 per cent of the initiatives (35 out of 56) make available information on the members and composition of their governing bodies on the website or in the annual report (in case an initiative produces one). The remaining initiatives (21) do not disclose such information.

Assessing information disclosure on rules and procedures revealed a rather opposite picture: a big chunk of the initiatives – roughly 60 per

cent of the whole sample does not disclose information on rules and procedures guiding their governing bodies. Almost 30 per cent of the initiatives that disclose such information do so only partially, usually providing general information on the different roles of the decision-making bodies but disclosing no information on the rules and procedures guiding their decision-making process. Only around 10 per cent of the initiatives in the sample disclose clear and full information on their decision-making process. These results suggest that the initiatives analysed privilege disclosure of formal procedures (identity and composition of governing bodies), rather than substantive procedures (decision-making process).

5.2. Explaining transparency: Involvement of public actors, multiple governance functions and size as strong predictors

For each cluster of initiatives (high, medium, and low transparency), I looked at possible correlations with the explanatory factors. Testing the relationship between transparency and actor type, I found that a majority of private initiatives show either a medium (33.3 per cent) or low (50 per cent) level of transparency, with only five private initiatives scoring high transparency. In contrast, initiatives formed by public actors perform better, with only one initiative showing a low level of transparency, which aligns with what was hypothesised about public initiatives being more positively correlated with transparency than private ones. However, hybrid initiatives are, in relative terms, the ones that score best. A slight majority of them are included in the high transparency group, with only two initiatives scoring low transparency. Despite these results, the high transparency expected towards hybrid initiatives was not entirely met, as 40 per cent of them show only a medium level of transparency. Nevertheless, the performance of both public and hybrid initiatives suggests a positive link between initiatives in which public actors are involved (either alone or in cooperation with private actors) and transparency.

Testing the connection between the initiatives' type of regulatory activity and their transparency did not indicate strong correlations. However, the analysis revealed some interesting insights. A big chunk of carbon offsetting and certification standards initiatives (slightly over 40 per cent) occupies the low transparency group. This result aligns with what was previously observed about the relationship between private actors and low levels of transparency, since most of the carbon offsetting and certification standards initiatives included in the sample are run by private actors. Regarding target-setting initiatives, the positive relationship expected with transparency was met to some extent, given that a slight majority of them occupy the high transparency group. The rest of them are distributed equally in the medium and low clusters of transparency. Regarding MRV initiatives, over 60 per cent of them (9) show a medium level of transparency, with only two highly transparent initiatives standing out in the group. While this indicates that MRV initiatives are fairly transparent, the analysis did not confirm the strong relationship expected between MRV standards initiatives and transparency, in light of the high importance placed by these initiatives on information disclosure. Overall, the results suggest that the regulatory activity in which the initiatives engage may influence their degree of transparency, but not in a clear and direct way.

Regarding the possible relationship between transparency and whether initiatives fulfil only a regulatory function or multiple functions, over 40 per cent of initiatives which are only regulatory (16 in total) show a low level of transparency. In contrast, initiatives with multiple functions appear to be relatively more transparent, with only two initiatives showing a low level of transparency and the rest more or less equally distributed in the high (8 cases) and medium (9 cases) transparency clusters. As it was the case for private initiatives, it should be noted that the number of (only) regulatory initiatives in my database (37) is higher than the number of initiatives with multiple functions (19), which limits the representativeness of the finding. Furthermore, the analysis does not allow for a clear comparison between initiatives

performing multiple functions and initiatives with only a regulatory function. However, in relative terms initiatives with multiple functions appear to link more positively with transparency.

Finally, a quite robust relationship was identified between large initiatives and high transparency, with over 50 per cent of large initiatives (over 500 members) scoring high transparency and only one large initiative delivering a low transparency performance. Medium size initiatives (between 101 and 499 members) also score fairly well, with over 50 per cent of them scoring high transparency and only two cases included in the low transparency group. In contrast, almost half of initiatives with a smaller number of members (between 1 and 100) are in the low transparency group. This finding aligns with the hypothesis that large initiatives have more resources at their disposal to implement transparency practices than initiatives with a smaller number of members.

Next, I verified the effect of multiple factors on transparency through QCA. First, I checked for necessary conditions for the outcome transparency to occur and to not occur. For the necessity analysis for csQCA, the consistency score should be set at least at 0.9 (Schneider and Wagemann, 2012). No necessary conditions were found for presence and absence of transparency with this cut-off point. Lowering the cut-off to 0.8, two necessary conditions were identified for absence of transparency, namely absence of multiple functions and absence of size. This means that whenever there is a lack of transparency, the corresponding initiatives are not performing multiple functions (that is, they are exclusively regulatory) and, at the same time, they are small. Thus, the simultaneous presence of these conditions is a necessary condition for transparency to be absent. This result refines what indicated in the previous analysis between both conditions and high transparency. For the condition ‘single/multiple function(s)’, the analysis did not allow me to establish clearly whether initiatives performing multiple governance functions are more transparent than initiatives which are only regulatory in nature. Mirroring that result, the QCA analysis indicates that when initiatives perform only a regulatory function, they are more likely to make less use of transparency. In a similar vein, the QCA results reinforce the positive effect of being a large (or medium) size initiative on transparency, by assigning to being a (relatively) small initiative a determinant role for bringing about lack of transparency.

As a next step, I identified sufficient conditions for the presence of transparency. To that end, a truth table was created. As already mentioned, a truth table represents all possible configurations of conditions associated with the same outcome (Cronqvist and Berg-Schlosser, 2009). Based on the minimisation by means of the QCA with the software R (Dusa, 2019) and SetMethods packages in the R software (Oana and Schneider, 2018), seven solution paths have been identified. Importantly, all these paths have the same importance, as each of them represents an alternative configuration of conditions that is sufficient to bring about the outcome transparency. Table 4 shows the different solutions of sufficient combinations of conditions identified for presence of transparency based on the truth table. Three of the four conditions are presented using the following abbreviations: ‘PUB_ACT_INV’ (public actors’ involvement); REGACT (type of regulatory

activity); MULTI (single/multiple functions).

Some solution paths have a larger coverage of cases than others. The coverage score indicates ‘the proportion of cases exhibiting the outcome captured by each configuration’ (Greckhamer et al., 2018, 489). Following Ragin and Fiss, black circles indicate the presence of a condition, crossed out circles its absence (Ragin and Fiss, 2008; see also Guerin, 2018). The alternative paths that have been identified for the outcome 1 (presence of transparency), based on the minimisation including the logical remainders are the following:

- 1) The absence of public actors’ involvement and being a large initiative are together sufficient conditions for transparency to be present. This configuration corresponds to the following cases: RE100, We Mean Business Coalition, Airport Carbon Accreditation, IATA Carbon Offset Program, Lean & Green, Rainforest Alliance, and Roundtable on Sustainable Palm Oil.
- 2) Being a carbon offsetting and certification standards initiative and performing multiple governance functions are together sufficient conditions for transparency to be present. This configuration corresponds to one case, namely the Regional Greenhouse Gas Initiative.
- 3) Being a carbon offsetting and certification standards initiative and being a large initiative are together sufficient conditions for transparency to be present. This configuration corresponds to the following cases: Airport Carbon Accreditation, IATA Carbon Offset Program, Forest Stewardship Council, Lean & Green, Rainforest Alliance, and Roundtable on Sustainable Palm Oil.
- 4) Performing multiple functions and being a large initiative are together sufficient conditions for transparency to be present. This configuration corresponds to 11 cases namely We Mean Business Coalition, 1000 Soils for Food Security and Climate, C40 Cities Climate Leadership Group, Climate Alliance, Covenant of Mayors, EUROCIITIES, ICLEI Local Governments for Sustainability, New York Declaration on Forests and UN Global Compact Caring for Climate.
- 5) The lack of involvement of public actors and being an MRV initiative and performing multiple functions are together sufficient conditions for transparency to be present. This configuration corresponds to two cases, namely Carbon Disclosure Project and Haga Initiative.
- 6) The involvement of public actors and being a target-setting initiative and being a small initiative are together sufficient conditions for transparency to be present. This configuration corresponds to the following cases: Sustainable Energy for All, Below 50 and Carbon Neutral Cities Alliance.
- 7) The involvement of public actors and being an MRV initiative and performing only a regulatory function are together sufficient conditions for transparency to be present. This configuration corresponds to the following cases: Carbon Climate Registry, Climate Registry, America’s Pledge, Compact of States and Regions and ISO.

Even though the paths identified represent a logical minimisation of all the possible combinations of conditions, they express the causal complexity at the core of QCA: there is not just one driver of transparency, which is brought about by the simultaneous occurrence of

Table 4
Sufficient combinations of conditions for presence of outcome transparency.

Conditions	Path 1	Path 2	Path 3	Path 4	Path 5	Path 6	Path 7
PUB_ACT_INV	⊗						
REGACT		●1*	●1		⊗	●0*	●
MULTI		●		●	●2*		●2
SIZE	●		●	●	●	⊗	⊗
Covered cases	RE100; WMB; ACI; IATA; L&G; RA; RSPO	RGGI	ACI; IATA; FSC; L&G; RA; RSPO	WMB; 4per1000; C40; CA; COV; EURO; ICLEI; NYD; UNC4C	CDP; HAGA	SE4ALL; BELOW; CNCA	cCR; TGRReg; AP; CSR; ISO
Consistency	0.857	1.000	0.833	1.000	1.000	1.000	0.800

Note: crossed out circles indicate absence of a condition, black circles its presence.

*●1 = carbon offsetting & certification standards *●2 = MRV standards *●0 = target-setting.

several different, mutually non-exclusive combinations of conditions (or ‘paths’). Each condition (either its presence or absence) appears in at least one path. This indicates that, while not being individually decisive, all conditions appear to be contributing factors to a high level of disclosure of information. Importantly, these paths show that some conditions play a role for the presence of transparency only if combined with other factors.

Regarding ‘involvement of public actors’, the QCA results indicate a positive influence of this factor on transparency. To bring about transparency, public actors’ involvement must be combined with either being a target-setting, small initiative (path 6), or with being an MRV initiative performing only a regulatory function (path 7). However, the condition did not entirely yield the expected effect, as the lack of public actors’ involvement can also bring about transparency, if it is combined with being a large initiative (path 1) or with being an MRV initiative *and* performing multiple functions (path 5).

As regards the condition ‘single/multiple functions’, the results confirm the positive relationship between initiatives performing multiple functions and transparency. The sufficiency analysis sheds further light by indicating that performing multiple functions is a condition particularly conducive to transparency, given that it appears in three of the seven paths identified. Performing multiple functions is linked to transparency provided that initiatives are also carbon offsetting and certification standard initiatives (path 2); or provided that they are large initiatives (path 4); or that they are private performing an MRV function (path 5). To the contrary, the only instance in which performing only a regulatory function is conducive to transparency is when it is combined with public actors’ involvement and being an MRV initiative (the case of Carbon Climate Registry, Climate Registry, America’s Pledge, Compact of States and Regions and ISO). This might be a sign that the lack of transparency associated with performing only a regulatory function can be somewhat ‘neutralised’ by the presence of public actors and when the goal of an initiative is to set MRV standards.

Similar observations can be made about the condition ‘size’: the analysis shows that being a large initiative is strongly linked with presence of transparency, appearing in three paths. This mirrors what was observed in the necessity analysis, with absence of size being a necessary condition for lack of transparency. Large initiatives are transparent provided that they are private (path 1), or that they perform a carbon-offsetting and certification standard function (path 3); or that they perform multiple functions (path 4). In a similar way to public actors’ involvement, the factor size appears to be decisive in bringing about transparency, as in paths 1 and 3 it neutralises factors that earlier on in the analysis were negatively correlated with transparency, such as private actors and performing a carbon-offsetting & certification standards setting activity. As regards path 4, it confirms that large initiatives who also perform multiple governance functions are more likely to make ample use of transparency practices. At the same time, being a small initiative can also lead to transparency, provided that it is combined with the involvement of public actors and with performing a target-setting function (path 6).

Finally, regarding the condition ‘regulatory activity’, the QCA results strengthen the idea that the type of regulatory activity is not a determinant transparency factor. In fact, each type of regulatory activity can be conducive to transparency, depending on which other conditions it is combined with. One interesting insight pertains to carbon offsetting and certification standards initiatives: the earlier analysis showed that this type of initiatives tends to show a rather low level of transparency compared to the other two types. What the QCA analysis suggests is that when carbon offsetting initiatives perform multiple functions (path 2) or are medium-large initiatives (path 3) they are more likely to be transparent. Target setting initiatives tend to be more transparent when they include public actors and are relatively small (path 6). Finally, being an MRV initiative is linked to transparency if this is combined with being a private initiative performing multiple functions (path 5), or with the involvement of public actors and performing only a regulatory function

(path 7).

After illustrating the results for presence of transparency, I turn to identifying which conditions are sufficient to bring about the absence of the outcome transparency (Table 5). Based on the minimisation carried out on the truth table for absence of transparency, one single path was identified.

The path identified for the outcome 0 (absence of transparency), based on the minimisation including the logical remainders is the following:

- 1) The absence of public actors’ involvement *and* being a target-setting initiative *and* being a small initiative are together sufficient conditions for transparency to be absent. This configuration corresponds to four cases, namely Business Environmental Leadership Council, Climate Counts, WWF Climate Business Network and Business Alliance for Water and Climate.

The path identified confirms what was observed in the analysis in relation to both private actors and small initiatives being negatively associated with transparency and reinforces the positive correlation between public actors’ involvement and transparency already established. The presence of the condition target-setting is somewhat more surprising, given the positive association expected between this type of initiatives and transparency. However, it seems to add an important insight to the lack of a clear correlation between this type of initiatives and transparency detected earlier in the analysis. The fact that being a target-setting initiative appears strongly linked with a lack of transparency stresses once again that the type of regulatory activity alone does not reveal much in relation to transparency: whether target-setting initiatives are linked with transparency or not depends on the conditions they are combined with.

6. Conclusions

This article has examined the transparency – understood as both quantity and quality of information disclosure – of 56 transnational regulatory initiatives. This is particularly relevant to understand the role that transnational initiatives can play in the first PA global stocktake, where Parties undergo the first reviewing process in the implementation of their NDCs. By underscoring several grey areas pertaining to the transparency of the initiatives analysed, this article suggests caution regarding the extent to which these initiatives can be drivers of transparency.

Only around 20 per cent of the sample displays high information disclosure. Even particularly virtuous initiatives fall short on the quality of information provided. Furthermore, the analysis showed that a portion of the initiatives tend to provide an information ‘overload’ which does not always go hand in hand with its quality, including level of detail and comprehensiveness. Numerous initiatives seem to privilege quantity over quality. Information provided about the operations they conduct and the progress made is sometimes ample, but not always clear and comprehensive. Closely related to this is the issue of quality of

Table 5
Sufficient combination of conditions for absence of outcome transparency.

Conditions	Path 1
PUB_ACT_INV	⊗
REGACT	●0*
MULTI	
SIZE	⊗
Covered cases	BELC; CC; WWF; BAWC
Consistency	1.000

Note: crossed out circles indicate absence of a condition, black circles its presence.

*●0 = target-setting initiative.

reporting, as the analysis of the 28 annual reports revealed both a lack of specific indicators used by the initiatives to track their performance and progress and a significant diversity of approaches. These findings suggest that in the absence of clear and harmonised accounting procedures, the reliance on self-reporting by transnational initiatives carries important implications for both the quantity and quality of transparency. It also unveils the risk that transnational climate initiatives use information disclosure for greenwashing purposes (Hsu et al., 2019), with a view to produce misleading claims about their climate commitments and results rather than to report on meaningful climate results.

A more standardised and comparable way of reporting would allow for a better understanding of how initiatives collectively fare on transparency and on delivering climate results. In this regard, some initiatives explicitly stress in their reports the need to improve reporting (Science Based Targets Initiative, 2021). A lack of consistent reporting poses a significant limit to the possibility of assessing the initiatives' transparency and it suggests that they are simply not transparent about their actions. Finally, around 30 per cent of the sample was found to disclose very little information and to be rather silent with respect to their operations.

How can differing transparency performances be explained? The analysis has revealed that the chosen factors do not carry the same explanatory weight. A key finding is that the involvement of public actors in transnational regulatory climate initiatives is quite strongly associated with high information disclosure, both in case public actors are the only type of actors involved (public sub-state initiatives) and when they collaborate with private actors (hybrid initiatives). The low level of information disclosure showed by private initiatives may be explained by a lack of resources at disposal and/or by lower scrutiny and pressure exerted on private actors, compared to public actors. Conversely, initiatives with a stronger presence of public actors may be subject to more public scrutiny and accountability pressures than private ones, and therefore they may be more geared towards disclosing more and better information.

The QCA analysis has added an innovative perspective, as this method is still largely unused within research on transnational climate governance. The QCA has shown how no single factor can exhaustively explain the transparency of transnational regulatory climate initiatives. Rather, a combination of factors pertaining largely to the nature of the actors forming these initiatives, as well as the variety of governance functions performed and their size, can more comprehensively predict varying levels of transparency.

Following Hale and colleagues (Hale et al., 2020), more and better transparency about targets, activities, and achievements would benefit not only the 'right to know' of the public but also the initiatives themselves, as regular progress reporting can help 'learning-by-doing' and peer-to-peer review, as well as exchange of best practices. It is paramount for national and international policymakers to be able to keep track of the progress of sub- and non-state actors to accurately assess national and global progress on climate change. This in turn can produce learning effects for climate initiatives as it allows for an understanding of which measures are most effective and can be used as an example for others to adopt, and which ones are flawed (Hsu et al., 2019). If transnational climate initiatives are meant to be effective in pushing countries to adopt more ambitious goals, they must be transparent regarding their results, progress, and operations. The gaps emerged in the analysis on both the quantity and quality of information disclosed should be bridged for the benefit of transnational regulatory climate initiatives' credibility, for the overall effectiveness of these initiatives in tackling climate change and for the feasibility of the PA GST more broadly.

CRedit authorship contribution statement

Laura Iozzelli: The author confirms sole responsibility for the study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

Declaration of competing interest

No conflict of interest exists. I declare that there are no conflicts of interest associated with this publication. I have no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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Appendix A. Supplementary data

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