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Research

Who's in charge here anyway? Polycentric governance configurations and the development of policy on invasive alien species in the semisovereign Caribbean

*Jetske Vaas*¹, *Peter P. J. Driessen*¹, *Mendel Giezen*², *Frank van Laerhoven*¹ and *Martin J. Wassen*¹

ABSTRACT. We address the development of policy by polycentric governance configurations, taking Caribbean overseas territories and their advancements on invasive alien species (IAS) policy as an example. The British, Dutch, and French islands in the Caribbean address this matter to different degrees, which we analyzed through differences in their type of polycentric governance configuration with their respective European counterpart. We employ a continuum ranging from predominantly polycentric to predominantly monocentric governance configurations to characterize the three case studies. Based on semistructured interviews with government actors, park managers, and NGO employees on Anguilla, Guadeloupe, and St. Eustatius, plus a literature study, we characterize St. Eustatius as highly polycentric and Guadeloupe as becoming increasingly polycentric. Anguilla cannot be considered either of the two, given the virtually absent involvement of the UK. Policy development on IAS showed most progress in Guadeloupe, whereas in Anguilla and St. Eustatius, IAS management is ad hoc. Within these cases, the hampering effect of dispute about the functioning of the configuration was clear. For Guadeloupe, increasing autonomy to decide on policy priorities within a coherent system where standards are set and ample resources made available appears conducive to policy development. That same balance inherent to polycentric systems between autonomy and coherence is hard to strike for St. Eustatius, and currently mainly perceived as a trade-off, hampering policy development. By discussing these three cases, this study illustrates how different polycentric configurations can affect policy development.

Key Words: *Caribbean overseas territories; governance configurations; invasive alien species; policy development; polycentricity; semisovereign states; subnational island jurisdictions*

INTRODUCTION

The Caribbean islands make up one of the world's 25 global biodiversity hotspots, with about 60% of the region's 12,000 plant species being endemic (Mittermeier et al. 1998, Kairo et al. 2003). Invasive species pose a major threat to biodiversity in island systems (Baillie et al. 2004). Although the entire Caribbean region is more or less equally vulnerable to invasions, and although the subsequent severe, negative impact of this phenomenon on important ecosystem services has been studied and acknowledged (see Kairo et al. 2003, Baillie et al. 2004, Shine et al. 2010, European Commission 2013), we observe that the problem is being addressed to very different degrees on different islands.

On Dutch islands, much research has been conducted on invasive alien species (IAS), such as Coral vine (*Antigonon leptopus*) (see Coblenz 1980, Jongman et al. 2010, Smith et al. 2014). This rapidly growing vine smothers native vegetation, threatening biodiversity, which is a major tourist attraction, and overgrows nesting sites of the already threatened native *Iguana delicatissima* (van der Burg et al. 2012). On St. Eustatius, the plant is estimated to cover 15–20% of the island (van der Burg et al. 2012). Yet not much policy has been developed to address the problems such species pose, other than a statement included in the Caribbean nature policy plan 2013–2017 about IAS being an important threat, and an encouragement addressed to the islands to develop policy (Ministerie van Economische Zaken 2013). In contrast, in the French Caribbean, the International Union for Conservation of Nature (IUCN) started working on the topic in 2005, and on the British islands, there have been several initiatives, such as the

creation of a plant pest identification service, projects on the invasive lion fish, and workshops on nonnative species (Direction de l'Environnement, de l'aménagement et du logement (DEAL) Guadeloupe and DEAL Martinique 2013, Joint Nature Conservation Committee (JNCC) 2015). A conspicuous characteristic of these islands is their constitutional link with a European country, through which they have accrued configurations spanning multiple decision-making centers. We speak of governance configurations because nongovernmental organizations (NGOs) like IUCN or Anguilla National Trust play an important role. The extent to which these configurations "... actually function independently or instead constitute an interdependent system of relations ..." (Ostrom et al. 1961, as cited in Ostrom 1972, as cited in McGinnis 1999) differs between the islands, which we approach as different types of polycentric configurations. Whereas Guadeloupe is a "region" and "département" (county) of France and, like every other county, subject to French law, Anguilla shares little with the UK besides British citizenship. The Dutch island St. Eustatius is transitioning toward tighter nestedness within Dutch legislature, while at the same time striving for more leeway in decision making.

In this article, we use these Caribbean case studies to illustrate how different types of polycentric governance configurations influence the development of policy on IAS. The research question we address in this article is: how does the type of polycentric configuration of a Caribbean overseas territory and its metropolis influence the development of policy regarding IAS?

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CARIBBEAN TERRITORIES AS POLYCENTRIC CONFIGURATIONS

The overseas territories in the Caribbean region are sometimes perceived as anomalies, symptoms of incomplete decolonization, but the benefits of maintaining ties with a metropolis are increasingly recognized (Baldacchino 2006, Oostindie 2006). In terms of per capita income, the functioning of a representative democracy, and guarantees of civil rights and liberties, and with regard to migration, nonsovereign territories in the Caribbean generally outperform sovereign states such as the Dominican Republic and Haiti (Baldacchino 2006, Oostindie 2006). Literature on small island states or subnational island jurisdictions recognizes the potential benefits of ties to a larger state, even if that implies asymmetrical power relationships (e.g., McElroy and Pearce 2006, Veenendaal 2014). However, for those configurations to truly work, they need to have come about in settings of genuine mutual consent (Baldacchino and Milne 2006), and certain areas such as finances and natural resources might be better left with the islands (Baldacchino 2006). Thus, a balance needs to be struck between autonomy of the island and nestedness within the metropolis. This calls to mind governance literature on polycentric arrangements, where multiple decision-making entities are linked under an overarching system of rules, yet retain relatively autonomous prerogatives (Ostrom 1972, as cited in McGinnis 1999). According to Marshall (2015), *de facto* autonomy is required for polycentricity because *de jure* arrangements can play out like monocentric arrangements in reality (and the other way around). Polycentricity is seen to render governance arrangements adaptive and robust (Folke et al. 2005, Pahl-Wostl and Knieper 2014, Marshall et al. 2016), motivating voluntary cooperation (Marshall 2009) and capable of outperforming larger centrally controlled arrangements (Ostrom et al. 1961, Andersson and Ostrom 2008). However, just as there are many different island–metropolis configurations, there are different kinds of polycentricity, depending on the degree of autonomy of the decision-making centers (Gruby and Basurto 2013). We employ three Caribbean overseas territories and their development of policy on invasive plant species to learn more about the influence of different kinds of polycentricity on policy development.

Let us first take a closer look at polycentricity, which originally aimed at explaining the success of science. In science, an abstract end goal (objective truth) is pursued by actors who are free to contribute however they like, rather than their contributions being managed by a single entity in which power is vested (Polanyi 1951, as cited in Aligica and Tarko 2012). Vincent and Elinor Ostrom applied polycentric thinking to the study of metropolitan areas, when it was generally accepted that the fragmentation of authority and overlapping jurisdictions constituted chaos and led to failure. They found that a fully monocentric system is not necessarily more efficient than a polycentric one (Ostrom 1972, as cited in McGinnis 1999). Polycentric systems consist of formally independent centers, yet there is an overarching system into which all local units are nested to some extent, defined by Gruby and Carlisle (2015) as “acting in ways that take each other into account.” This allows polycentric systems to reach a common goal (Ostrom 1972, as cited in McGinnis 1999, Aligica and Tarko 2012). Important to note is that the distinction between a mono- and polycentric system is not a binary one; systems are

“predominantly” mono- or polycentric, but can still have elements of the other type (Ostrom 1972, as cited in McGinnis 1999). The Caribbean overseas territories hold different degrees of autonomy and nestedness regarding the metropolis, so can be placed on different spots along the polycentricity continuum. How are their dealings with the same problem, namely IAS, affected by that?

METHODS

Case selection

By exhibiting different degrees of polycentricity in their governance configurations with the metropolis, the Caribbean overseas territories of France, the Netherlands, and the United Kingdom make for interesting cases to compare. In this section, we elaborate on the conspicuous aspects of their respective configurations and the selected fieldwork sites.

The French islands of Martinique and Guadeloupe appear to be tightly integrated into the French state. Since 1946, they have held the status of “*départements et régions d’outre-mer*” and they are ultraperipheral regions (UPRs), to which all EU law in principle applies (Oostindie 2006). The French have actively lobbied for the right to retain tight links with their overseas territories within the EU structure (Blanchard et al. 2013) and often speak of them with pride (Hintjens and Hodge 2012). Rather different is the continuously disputed and loose link of the Netherlands with Bonaire, Saba, and St. Eustatius. The original kingdom configuration of 1954 was modified in 1986 and again in 2010 after 17 yr of negotiation and plebiscites (Oostindie and Klinkers 2012). The islands are overseas countries and territories (OCTs), hence only a limited fraction of EU law applies. Despite being (special) municipalities of the Netherlands, they have a very different tax system and are not part of the EU common market (Adeler and Kavelaars 2011, Murray 2012). The British Caribbean overseas territories of Anguilla, Montserrat, Turks and Caicos islands (TCI), British Virgin islands, and Cayman islands are highly autonomous. The UK does not structurally contribute financially to the islands, even though the UK is the ultimate responsible actor under the concept of “contingent liabilities” (Clegg 2006, Hintjens and Hodge 2012). Through these different degrees of polycentricity combined with aforementioned differences in IAS policy development, the cases make for insightful comparisons.

We conducted fieldwork on one British island (Anguilla), one French island (Guadeloupe), and one Dutch island (St. Eustatius). Anguilla is a British overseas territory that, in terms of gross domestic product (GDP), is comparable to the other two islands, whereas other British territories nearby have a very distinct financial service economy. It has a population of 14,000 and area of 91 km² (UNdata 2015). Guadeloupe, with a population of 468,000 and territory of 1705 km² (UNdata 2015), is relatively large for the Lesser Antillean islands. St. Eustatius, with a population of 4,020 in 2012 and area of 21 km², is the smallest (Statistics Netherlands 2013). Other, possibly confounding, factors are relatively stable. France, the Netherlands, and the UK are all European countries that obtained control over the islands in the Caribbean during the colonial era and are still linked to them. The fact that they are Western European countries also makes their political and socioeconomic context similar. Next to that, they have to adhere

Table 1. Overview of the subvariables and their indicators of the polycentric governance configurations

Subvariable	Indicators	Source	
Autonomous decision-making centers	Multiple autonomous decision-making entities actively devise and enforce rules, norms, and strategies	Gruby and Carlisle 2015	
	Opinions are implemented in practice by the decision-making centers	Aligica and Tarko 2012:254	
	The entities have a general understanding of the jurisdiction or domain of authority of one another	Gruby and Carlisle 2015	
	The decision-making centers have shared or common goals	Aligica and Tarko 2012:254, Gruby and Carlisle 2015	
Coherence	Overarching system of rules	The overarching system of rules complies with the decision-making centers' needs	Aligica and Tarko 2012:254
		The decision-making centers actively coordinate with one another and exchange knowledge	Aligica and Tarko 2012:254, Gruby and Carlisle 2015
Stability		Frequency of changes to, duration of decision-making process regarding, constitutional configuration	Oostindie and Klinkers 2012, Veenendaal 2014
		Contention surrounding the constitutional configuration	Oostindie and Klinkers 2012, Veenendaal 2014
Tightness		Resource interdependencies: is the dependence one-way or mutual?	Oostindie 2006, McElroy and Parry 2012
		Geopolitical status island: legal status within EU and metropolis; citizenship; part of EU customs zone	Oostindie 2006

(albeit to varying degrees) to the same body of European law. By focusing on Caribbean territories and not, for example, on French territories in the Pacific Ocean, we have attempted to ensure that the islands studied have a similar cultural background. Thus, despite the different sizes of these islands, we believe the factors they have in common will allow us to derive useful insights from a comparison on policy advancements.

Operationalization of variables

We approach the cases as embodiments of different polycentric governance configurations, manifesting different degrees of policy development regarding IAS. For the latter, we employ the policy cycle as outlined by Dunn (1994): agenda setting, policy formulation, policy adoption, policy implementation, and policy assessment. Implementation of policy entails one of the formulated policies being carried out by administrative units, which mobilize resources to that end. Determining whether these policies are indeed being abided by is policy assessment. Per case, we will indicate the progress made across these phases.

To characterize the polycentric governance configuration, we first look at Vincent Ostrom (1972, as cited in McGinnis 1999), reflecting on the article he published with Tiebout and Warren 10 yr earlier (Ostrom et al. 1961). They had defined polycentric systems as consisting of multiple decision-making entities, with shared and possibly overlapping mandates, and none having the ultimate decision-making power. In the 1972 reflection, he contends that "... a general system of rules as providing a framework for ordering relationships in a polycentric system is an issue that was seriously neglected in Ostrom, Tiebout and Warren" (Ostrom 1972, as cited in McGinnis 1999:58). Aligica and Tarko (2012) discuss the same three variables, defining polycentric systems as "... many decision centers having limited and autonomous prerogatives and operating under an overarching set of rules" (ibid:237). A visualization of this framework was presented by Gruby and Carlisle (2015) at the

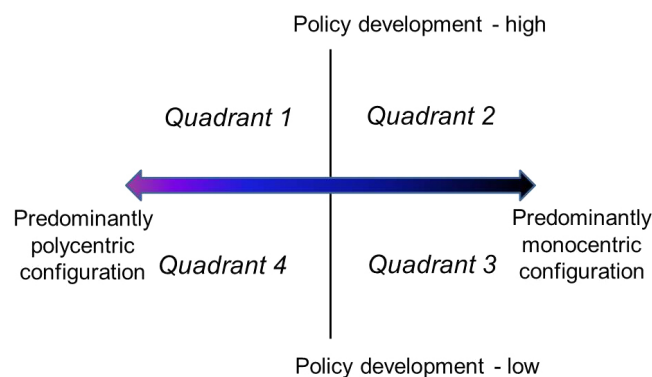
International Association for the Study of the Commons (IASC) meeting of 27 May 2015, showing three variables: multiplicity of centers for decision making, overarching system of rules, and spontaneous order by evolutionary competition. Pahl-Wostl and Knieper (2014) mention two variables: multiple centers of decision making and an overarching system of rules. Marshall (2015) looks at de facto autonomy "... the entities exhibit considerable or substantive de facto autonomy from each other" (Marshall 2015:14). In addition, he mentions coherence by the centers entering into competitive, cooperative, and conflict-resolving relationships as the distinguishing feature between a polycentric arrangement vs. system. This seems to capture both an overarching system of rules and spontaneous order, hence we will look into two variables: autonomous decision-making centers and coherence. An overview of how we operationalize these two variables is shown in Table 1.

There are "autonomous decision-making centers" actively expressing and acting on their opinions. Yet, they are aware of the other centers' jurisdictions and have a shared goal (Aligica and Tarko 2012, Gruby and Carlisle 2015). In our cases, institutions and actors on the islands, but also in the metropolis, are the decision-making centers. "Coherence" is the extent to which decision-making centers take each other into account when making decisions, and whether they engage in competitive, coordinating, and cooperating relationships (Ostrom 1972, as cited in McGinnis 1999, Pahl-Wostl and Knieper 2014, Marshall 2015). It stems from an "overarching system of rules" that needs to fit the decision-making centers' needs, and to which all centers contribute (Aligica and Tarko 2012, Gruby and Carlisle 2015). For our study, the arrangement that links the metropolis and island is the overarching system constraining the decision-making centers' governance. De jure, this system exists given the islands' overseas territory status, but our concern here is with de facto coherence. In the literature on subnational island jurisdictions, multiple factors mediating the coherence between a territory and

metropolis are mentioned, which we group together under “stability” and “tightness.” Regarding stability, we look at the continuity of the constitutional configuration, which comprises both the changes made through time and the disputes accompanying those changes (Oostindie and Klinkers 2012, Veenendaal 2014). Regarding tightness, dependency of the metropolis and the islands can, for certain resources, be one-way or mutual (Baldacchino and Milne 2006). In addition, the geopolitical status of the island is important, comprising the island’s legal status within the EU and the nation state; for example, UPR status within the EU means much stronger nestedness than OCT status (Bröring et al. 2008), and the influence of the Caribbean Community and Common Market (CARICOM) on the islands defines their insularity.

For each of the cases, we discuss the materialization of these variables, as well as indications given in the interviews of how they influence policy development. In order to assign each case to a spot on the polycentricity continuum, we focus on the degree of autonomy of the decision-making centers, in line with Gruby and Basurto (2013): “More polycentric systems will show significant autonomy for decision-making among local units and units operating over larger jurisdictions. In less polycentric systems, for example, nested enterprises may engender partial or complete dominance of local groups by government regulators or other powerful actors ...” (Gruby and Basurto 2013:262). Hence, on the polycentric end of the continuum (see Fig. 1), we place the cases with high autonomy within the overarching system, and on the monocentric end, the cases with low autonomy within the overarching system. Combined with the earlier mentioned gauged differences in policies on IAS, we tentatively place the British islands in quadrant 1, the French in quadrant 2, and the Dutch in quadrant 4 of Fig. 1. How we gather the data to verify this is explained in the next section.

Fig. 1. Quadrants in which different polycentric governance configurations can be placed. The horizontal axis depicts the contrast between different configurations. On the vertical axis, the contrast between limited and advanced policy development is depicted.



Data collection and analysis

Our study of the scholarly and secondary literature that focused on the three cases both informed the analytical framework

presented earlier (Table 1) and provided a basis for the interview questions. As the research site was new to us and the topics we wished to address broad ranging, we conducted semistructured interviews. Thus, we could adjust the questions throughout the interview, depending on the interviewees’ expertise, and follow up on insights that emerged during the interview. As such, we paid attention to “...lived experience while also addressing theoretically driven variables of interest” (Galletta and Cross 2013:24). This also implies that we mostly formulated open-ended questions, in order to “...elicit rich, full, and complex accounts from participants” (Magnusson and Marecek 2015:47).

Preliminary findings on the governance configuration gleaned from scientific and gray literature were validated through the interviews, and remaining gaps in understanding were filled. The interviews were conducted in October and November 2015 with government actors, park rangers, and NGO employees, all of whom were to some degree involved in IAS management. Interviews were conducted in Dutch, English, or French, and because the populations of the islands are small, the interviewees’ anonymity has been respected in this article. We interviewed four people on each island. On Bonaire, we interviewed a representative of the Caribbean Netherlands Kingdom Services and one of the Dutch Caribbean Nature Alliance: two institutions whose jurisdictions also cover St. Eustatius. We also interviewed two government officials in the Netherlands and France, to get the perspective of the metropolis. Thus, in total, there were 16 interviews (see the list in Appendix 1). The number of interviewees is not very high, but given the small scale of the islands, we believe the interviews to be representative. Appendix 2 lists per indicator the interviews in which it was addressed. In the next section, the subvariables are analyzed in a narrating manner. We discuss the responses per variable as well as links with the advancements of IAS policy mentioned in the interview. In Fig. 1, we place the cases based on the “autonomy” variable and the “advancement of IAS policy.”

RESULTS

In this section, we present the findings from our research, first in terms of the advancements in policy development across the three cases and subsequently in terms of their polycentric configurations.

Policy advancements on invasive alien species

The combination of desk research and semistructured interviews did indeed reveal differences in the degree to which policy on IAS has been developed. Remarkably, in all three cases, IAS activities can be located across multiple phases of the policy process, indicating a rather messy and nonlinear process, as shown in Table 2. Anguilla does not have policy in place, as a general framework for IAS management was provided by the National Environmental Management Strategy and Action Plan, but that expired in 2010. A draft IAS strategy does exist, but it has never been endorsed by the government. The Department of Environment is nevertheless implementing parts of it, mostly those relating to education and awareness raising (Interviewee 11). They are also haphazardly attempting to contain certain species: the departments of Environment and Agriculture communicate on this and sometimes disagree, but this has never resulted in a structured program (Interviewees 11 and 12). Thus, Anguilla undertakes some IAS management activities, but not according to an endorsed strategy or policy.

Table 2. Findings regarding policy development on IAS in the three cases

Territory	Guadeloupe	Anguilla	St. Eustatius
Agenda setting	<p>IAS have been on the agenda of NGOs, the ministry, and the local government for approximately 5 yr (Interviewees 1, 3, 4) The ministry is conducting studies on the economic impacts of IAS (Interviewee 1)</p> <p>IAS are listed in National Biodiversity Strategy as a topic that should be addressed by Guadeloupe (DEAL Guadeloupe and DEAL Martinique 2013)</p>	<p>Awareness of IAS is present among the population and the government (Interviewee 11)</p>	<p>IAS are a well-known phenomenon, although perception of the problem differs (Interviewees 6, 7, 8, 13) Government stresses the need for insight into the economic impacts of the plants in order to create willingness for management (Interviewees 7, 8) The BES Nature policy plan lists IAS as a problem, and orders the islands to come up with policies to address them, but this has not yet been done. (Ministerie van Economische Zaken 2013)</p>
Policy formulation	<p>In the first years of awareness of the problem, there was much debate about who should deal with the issue. Only recently has local government taken on the responsibility (Interviewee 1) NGOs and universities are closely involved with the design of policy (Interviewee 1)</p> <p>A Regional Scheme for Natural Patrimony and Biodiversity is being developed by the local government and will include IAS policies (Interviewee 3) Working groups with local stakeholders are elaborating the biodiversity strategy (Interviewee 3)</p> <p>A scientific committee appointed by the ministry is drafting a list of native and invasive species (Interviewees 1, 4) A procedure for managing and controlling IAS has been drafted by the local office of the ministry, but has not yet been endorsed by other actors (Interviewee 1)</p>	<p>Draft strategy of IAS management has been developed by local department of environment, but not yet endorsed by rest of the local government (Interviewee 11a) Most land is privately owned, and proposed laws impinging on private land lead to much public protest (Interviewees 9, 11, 12a) Government actors frequently participate in workshops and conferences on this topic (Interviewee 11)</p> <p>National Environmental Management Strategy and Action plan speaks in very general terms about IAS management, and expired 6 yr ago (Government of Anguilla 2005)</p>	<p>Project proposal for Dutch funding was written by the park management organization to deal with IAS, but island government refrained from submitting it (Interviewee 6) Many reports written with elaborate recommendations, but not many of them have been adopted nor implemented (Interviewee 9)</p>
Policy adoption	<p>Ministry and local government have agreed that projects on invasive species will be prioritized when allocating project funds (Interviewee 1)</p>	<p>IAS are mentioned in National Biodiversity Strategy and Action plan. Local government says they abide by it, but difficult to get a copy (Interviewees 9, 11) For some IAS, the departments of Agriculture and Environment do not agree about the required actions (Interviewee 11) The numerous laws on nature and environment are scarcely being implemented by local government (Interviewee 9) There is no structured program in place for management of IAS, nor is there a strategy for dealing with encountered IAS (Interviewees 9, 11)</p>	<p>Many reports written with elaborate recommendations, but not many of them have been adopted nor implemented (Interviewee 9)</p>
Policy implementation	<p>Local government is funding projects on lion fish and green iguana (Interviewee 3)</p> <p>National park is running pilots on bamboo eradication (Interviewee 4) Ministry is funding pilot on lion fish (Interviewee 1)</p> <p>Most attention for IAS is in relation to health issues and pest control (Interviewee 1) About €6 million project funding is available for the coming 7 yr for biodiversity. The application process has started (Interviewee 1)</p>	<p>Giant African snail has been brought under control through involvement of population (Interviewee 11)</p> <p>Brown rat on a smaller uninhabited island has been exterminated (Interviewee 9) Lion fish has been made into a delicacy and has even become scarce (Interviewee 11)</p> <p>In general, invasive animals receive more attention than plants (Interviewee 11) Awareness raising and environmental education campaigns announced in draft strategy of IAS management are in place (Interviewee 11) Coordination between the departments of Agriculture and Environment on the removal of specific species takes place (Interviewees 11, 12)</p>	<p>Management of nature is limited to the NGO mandated to manage the parks (Interviewees 7, 13) Nature laws designed by the Netherlands are scarcely being implemented (Interviewee 13) Coral vine is removed sporadically from the botanical garden (Interviewee 7)</p>
Policy assessment	<p>Guadeloupe has a good environmental police force able to enforce regulations (Interviewee 1)</p>	<p>Enforcement of law is difficult, and is, e.g., clearly nonexistent regarding turtle hunting (Interviewee 9)</p>	<p>Several instances of spatial planning documents being breached by the local government (Interviewees 6, 13) Existing laws on roaming animals are only incidentally implemented by local government (Interviewee 13)</p>
Policy developed?	<p>Partly, and well on track</p>	<p>Haphazard activities</p>	<p>Haphazard activities, only in the parks</p>

After 5 yr of dispute about the division of mandates and responsibilities, Guadeloupe has begun designing multiple management tools for IAS. These will be embedded in the Regional Scheme in the making. Local government has set up working groups with stakeholders and a scientific council, so support is being acquired from the target groups of present and future policy. Also, the relevant authorities coordinate their approaches (Interviewees 3 and 4). Overall, Guadeloupe has proceeded to the phase of policy implementation.

Lastly, St. Eustatius has no IAS policy plans, despite the very visible spread of Coral vine (Smith et al. 2014). They have asked the Netherlands for help in developing their own nature policy plan, which is still forthcoming (Interviewee 14). The park management organization STENAPA tries to control it in the parks and their botanical garden, but in other public areas, no one is really responsible, and there is no IAS strategy (Interviewee 6). Interestingly, Anguilla is more active regarding IAS than St. Eustatius, even though the latter has a much higher GDP (USD\$26,300 per capita in 2012 vs. USD\$12,200 in 2008) and receives structural financial support from the Netherlands whereas Anguilla does not (Central Intelligence Agency (CIA) 2015, Sociaal en Cultureel Planbureau (SCP) 2015).

Summing up, Guadeloupe is advanced in developing IAS policy, but Anguilla and St. Eustatius are not. Despite the lack of policy in place, Anguilla's government is incidentally managing species throughout its territory, whereas St. Eustatius does so only in the national parks. We will now turn to their respective governance configurations, to see which differences exist there.

The Caribbean polycentric configurations

Having established differences in the development of policy regarding IAS, we describe, by island, the polycentric governance configurations, drawing on the interviews and desk study.

Caribbean Netherlands

In 2010, Bonaire, St. Eustatius, and Saba moved from being entities within the federal system of the Netherlands Antilles to “public bodies according to article 134 of the Dutch Constitution” of the Netherlands (Spies et al. 2015). Although their structure is akin to that of Dutch municipalities, there are important deviations from Dutch law, e.g., regarding their tax system. Even though the islands are Dutch territory, deviation from Dutch law is allowed by article 1 sub 2 of the Statute of the Kingdom (Kingdom of the Netherlands 1954, Bröring et al. 2008:150). The original idea was to continue Antillean laws as much as possible, with new laws only for topics that had become the responsibility of the Netherlands, such as health care, education, and international security. Dutch regulation was then supposed to gradually replace Antillean legislation, but this intention appears to have withered. Instead, both sides have paid increasing attention to the specific contexts of the islands that require different laws and regulations (Spies et al. 2015). For nature management, the “overarching system,” i.e., the Netherlands, is responsible for compliance with international commitments, but the islands need to manage nature on their own territory (Interviewee 14). However, due to limited resources, St. Eustatius often argues it needs help from the Netherlands for taking on that responsibility (Interviewees 6, 13, 14). There seems to be some confusion about what are local responsibilities, and what the rather lean “overarching system” is supposed to do.

Although this might change, currently the local decision-making centers are quite independent from one another. As the islands are now municipalities of the Netherlands, there are national responsibilities residing with the Netherlands (overlapping jurisdictions), and municipal responsibilities residing with the respective islands (parallel jurisdictions) (Bröring et al. 2008). When it comes to invasive species, no common goal exists because that should be defined at the island level. More generally, the mutual awareness of St. Eustatius and the Netherlands is high due to the lengthy constitutional debates, but understanding is sometimes lacking (Interviewees 7, 8, 13, 14, 15). Due to the difficult communication with ministries in the Netherlands, the exercising of the island's opinions by implementing them into practice is quite limited (Interviewees 5, 8, 13). The supervision imposed by the Netherlands epitomizes this (van Kerkhof 2015a, b). The concomitant limitations on spending by the government were mentioned as hampering the development of nature policies (Interviewees 6, 7, 8, 14). In general, the island desires greater autonomy in deciding what to spend their money on (Interviewees 6, 8) and a larger mandate (Interviewees 6, 8, 13). As it stands, their degree of autonomy is moderate.

The delicate relationship between the Netherlands and St. Eustatius makes their coherence much debated. As several interviewees indicated, it is difficult for such a small island to attain the same standards of governance as those in the Netherlands (Interviewees 5, 7, 8, 13, 15). This is seen both as a problem of capacity (Interviewees 7, 8, 13) and as the outcome of different standards (Interviewees 13, 15). Contributing to that challenge is the absence of the provincial tier of government because that makes it necessary for Dutch ministries to communicate directly with the islands, which is something they are neither used to nor good at (Interviewees 8, 13, 14, 15). Also, the checks and balances that provinces exert, are missing, and the ministries are reluctant to interfere in disputes at the island level (Interviewees 13, 14, 15). Yet, because of their “special municipality” status, the islands have high expectations regarding the improvement of their facilities (Spies et al. 2015; Interviewees 7, 8, 13). Currently, the level of socioeconomic development on the islands is recognized by the Netherlands as being too low, but not necessarily to be leveled with that of the Netherlands (Interviewee 15). Thus the islands' special municipality status leads to some confusion. However, financial investment has increased greatly: the budget spent on these three islands increased from €113 million in 2010 to €310 million in 2015 (Spies et al. 2015:123). About 80% of that comes from the ministries and is earmarked for a specific purpose, which is found to make the relationship between the local government and the Netherlands skewed (Spies et al. 2015; Interviewee 8). The mutual dependency is very lopsided, as can be seen from the budget and as agreed by the interviewees (Interviewees 5, 6, 8, 13). Insularity is high, and the influence of Europe is minimal; the islands have remained OCTs, and the plan to make them into UPRs seems to have waned (Interviewee 15). They can apply for project funding from the EU through the Biodiversity and Ecosystem Services in Territories (BEST) grants and an innovation program for OCTs, but that's the only influence mentioned by the interviewees (Interviewees 5, 6, 13, 14). Overall, the link between the Netherlands and St. Eustatius can be characterized as tight but asymmetric. The island is very dependent on the Netherlands (Interviewee 5, 8, 13), but

feels that the Netherlands is carefully strategizing its involvement and only supporting them as a municipality when it is convenient to do so (Interviewees 8 and 13). The bond is not very stable: the original configuration of 1954 was modified in 1986 and again in 2010 after 17 yr of negotiation and plebiscites, and two decades fraught with protests and campaigns (Oostindie and Klinkers 2012). In St. Eustatius, a referendum took place in December 2014, followed by one in Bonaire in December 2015; the outcomes of both revealed that the current configuration was viewed negatively (Leidel-Schenk 2014, Posthumus 2015). A recent evaluation committee has published a critical report (Spies et al. 2015), to which both parties at the time of the interviews were drafting a response. Although restructuring may not happen, interviewees from both sides agreed that significant changes are needed (Interviewees 8, 14, 15). The interviewees indicated that these discussions take up much time and energy that could be better spent differently (Interviewees 5, 7, 8, 14). Invasive alien species management is not a top priority in the ongoing discussions with the Netherlands about the configuration and might be one of those topics that energy could be devoted to if it weren't spent on other topics.

This configuration can be placed toward the polycentric end of the continuum (quadrant 4), given the overarching system that's planned to become stronger, combined with a push for autonomy from the local center. Being a relatively new configuration, the centers are still searching for a balance between autonomy and coherence. Currently, that results in uncertainty about responsibilities and a lack of resources to be spent, as well as attention being addressed elsewhere, all affecting the advancements of IAS policy. In general, the need for more assistance from the metropolis and a wish for more autonomy lead to friction, according to one interviewee (Interviewee 15), as it is a somewhat paradoxical combination. Yet, in the French Caribbean, it seems to result in less friction, as we will describe in the following section.

French Caribbean

France's Caribbean territories became *Départements d'Outre-Mer* (DOM) in the constitution of 1946. Constitutional changes pushing for decentralization in 1982, 2003, and 2008 have resulted in the constitution now referring to *Département et Région d'Outre-Mer* (DROM), where deviations from French law are allowed only in specific cases. Next to this, there exists the form of *Collectivité d'Outre-Mer*, for which specific statutes lay down how the territory is governed (Assemblée Nationale Française 1958, Article 74). Guadeloupe, Martinique, La Réunion, and Guyane (French Guiana) are the Caribbean DROM, governed by local offices of the national ministry, and a locally elected Regional Council and General Council. All French laws apply (Mrgudovic 2012), and thus the jurisdiction of France extends over the islands. Some deviations are allowed, but these are rare and do not apply to nature management (Mrgudovic 2012; Interviewees 3 and 16). For IAS, this thus means that the French standards are adhered to. The present "overarching system" is elaborate, but there is clear evidence of decentralization by the national government (Interviewees 3 and 16). According to Mrgudovic, Sarkozy's proactive pursuit of decentralization in 2008 was "...an official attempt to put an end to the vicious cycle of dependency..." (Mrgudovic 2012:94–95). However, she states that the DROM are not very keen on receiving more autonomy,

and interviewees stressed that the high standard of living in Guadeloupe cannot be sustained by the island's economy alone (Interviewees 1, 2, 3).

With regard to Guadeloupe and France sharing a common goal, the differences in impact of IAS between the islands and mainland France make this difficult (Interviewees 1, 3, and 16). This might be why the "autonomy of decision-making centers" in relation to the topic of IAS is moving slowly from low to moderate. The most important actor for nature management is still the local office of the national ministry (Interviewees 1, 2, 3, 4). This does not mean that Guadeloupe agrees with everything France imposes: interviewees gave the example of the National Biodiversity Agency that is currently being set up. Instead of setting up a joint committee for Martinique and Guadeloupe, Guadeloupe ensured separate committees (Interviewees 2, 3). This will result in the islands themselves having more responsibility for nature management (Interviewees 2, 3). As mentioned earlier, the regional council is developing a nature management framework for Guadeloupe; according to one interviewee this is to show Guadeloupe's capacity to surpass the national state (Interviewee 1). With the councils taking more responsibility, the overlapping jurisdictions of nature management might eventually become parallel. An interviewee from the French ministry indicated that the islands were increasingly setting out strategies themselves and turning to the metropolis solely for support (Interviewee 16). This continuous tweaking of responsibilities also shows a high two-way awareness among the two tiers of government. Thus, although the autonomy is rather low, it appears to be increasing, and IAS management would increasingly be tailored to Guadeloupe's needs.

The coherence between France and Guadeloupe appears high at first sight. Their DROM status implies integral application of French laws, and within the European Union, they are UPRs, meaning that EU laws also apply. Furthermore, they are the only overseas territories that are part of the European Customs Zone (Muller 2001:442). As mentioned earlier, Guadeloupe is financially heavily dependent on France (Interviewees 1, 2, 3). It is difficult to obtain a breakdown of the expenditures per island as all three are paid out of a general ministerial budget. However, in 2009, it was calculated that annual expenditure on overseas territories was €16.7 billion, of which €7 billion was thought to be what the ministries specifically spent on the territories instead of in France (Crouzel 2009, Lautrou 2009). The expenditure on Guadeloupe in 2009 was allegedly €2.5 billion (Crouzel 2009), which is much higher than the expenditure by the Netherlands (of approximately €300 million) on Bonaire, Saba, and St. Eustatius—however, when translated into expenditure per capita, the amounts are quite similar. It is transferred to local offices of the ministries as a lump sum. Although the civil servants in these offices are typically seconded from France (Interviewee 2), the nature management priorities set in Guadeloupe sometimes lead France to force the local government to change them (Interviewee 1). Conversely, Guadeloupe is guiding France on the topic of IAS by raising awareness and gaining experience in managing IAS (Interviewee 1). The dependency is therefore mutual. The islands do not collaborate much with other islands in the Caribbean, although they do host the secretariat for the international Specially Protected Areas and Wildlife (SPAW) convention. An important reason for the limited collaboration is the language barrier (Interviewees 1, 3).

The interviewees differed in their perceptions of the influence of the EU: one stated that it was the EU directive on IAS that led Guadeloupe to take up that topic (Interviewee 4), whereas other interviewees denied any influence of the EU apart from applications for the BEST funds (Interviewees 1, 2, 3). Interviewees did not criticize the amount of attention paid to the islands by France, but one interviewee criticized the lack of understanding when drafting policies for which the local government was then answerable to their constituency (Interviewee 3). Others objected that France helps Guadeloupe greatly to manage its own affairs, e.g., by supplying ample funds (Interviewees 1, 2, 3). Interestingly, one interviewee indicated that the ministry complained about getting little response from the islands to requests for updates or invitations to collaborate (Interviewee 1).

In terms of stability, there have been many changes to the islands' constitutional status: in 1956, 1982, 2003, 2008 (Mrgudovic 2005). However, interviewees considered the configuration to be evolving, but not very unstable. The role of the regional council is slowly developing, and some responsibilities are being devolved, but interviewees considered the tie with France to be constant, given Guadeloupe's dependency on France (Interviewees 1, 2, 3). The stability of the bond is therefore moderate, making for a moderate degree of coherence of the local decision-making centers with France.

Overall, the French case is currently on the more monocentric end of the polycentricity continuum (quadrant 2), with a moderate degree of coherence, an elaborate overarching system, and low autonomy of the local centers. For development of IAS policy, the resources transferred from France to the island are a crucial enabling factor, and France ensures a certain minimum is adhered to. This strong overarching system is thus beneficial for policy development. Interestingly, at the same time, they appear to be obtaining more autonomy, which allows them to cater to their specific circumstances. The configuration might thus end up closer toward the polycentric end of the continuum, quadrant 1.

British Caribbean

Britain has 14 overseas territories (OT), falling under the sovereignty of Britain and with the Queen as their head of state. However, they are not British territory, and the UK is adamant that they do not belong on the UN's list of nonself-governing territories (Foreign and Commonwealth Office (FCO) 2008). This ambiguity characterizes the judicial consolidation of the relationship between the UK and its OTs (Hintjens and Hodge 2012), starting with the fact that unlike France and the Netherlands, the UK does not have a codified constitution. Instead, an aggregate of treaties, court rulings, and laws together make up what is considered the constitution (Bogdanor 2005). The relationship between the UK and its territories is therefore laid down in the latter's respective constitutions. Anguilla's constitution stipulates that the executive power vested in the Queen is exercised by the Government of Anguilla (Government of Anguilla 2008, art. 26). This appears to grant the OTs great autonomy, but formally, the UK parliament has unlimited power to legislate for the territories (FCO 2012: 14). The responsibilities of the UK toward the OTs are rather vague: "...to ensure the security and good governance of the Territories and their peoples" (FCO 2012:13), but the responsibilities also comprise

external affairs, defense, internal security, and the appointment, discipline, and removal of public officers (FCO 2015). Either way, the UK demands to be involved in drawing up the constitutions of the islands, in order to ensure it obtains the powers it needs to meet these so-called "contingent liabilities" (FCO 2008). Other than that, the day-to-day involvement of the UK appears minimal. Interviewees indicated they rarely collaborate directly with people in UK government (Interviewees 9, 12, 13), and to their knowledge, no UK legislation applies to their biodiversity management, let alone IAS policy (Interviewees 11, 12). Regarding nature management, the UK plays no role other than distributing project funding (Interviewees 9, 10, 11, 12). A consultative council of OTs and UK ministers meets annually (FCO 2012), but the interviewees did not mention anything coming out of that (Interviewees 9, 10, 11, 12). Overall, the autonomy of the local decision-making centers is high, and IAS policy is instigated locally. Some of the interviewees would like to see more effort put into IAS policy (Interviewees 9).

The overarching system is very lean. Interviewees were aware of several white papers issued in the UK and dealing with biodiversity management on the islands (e.g., Department for Environment, Food and Rural Affairs (DEFRA) 2009), but did not use them in practice (Interviewees 9, 11). In general, they felt the UK has a very hands-off attitude, only intervening when real trouble arises in terms of natural disasters or deep corruption (Interviewees 9, 10, 11, 12). The official line of the UK is that it focuses on having the powers to be able to "...discharge its responsibilities" (FCO 2008:4). The overarching system is in practice thus absent, as no coordination between decision-making centers takes place, and certainly not regarding nature management. Some of the interviewees suggested that a stronger overarching system would be conducive to environmental standards being elevated (Interviewees 9, 10).

The coherence of the territories with the UK differs greatly from the French and Dutch cases in financial terms. The OTs have their own tax system and receive only project funding from the UK. The FCO operates a Strategic Program Fund for the Overseas Territories, which in 2014–2015 had a value of £4.7 million (FCO 2015). Apart from this funding, "reasonable assistance needs of the Territories are a first call on the UK's international development budget" (FCO 2012:13), but there is no record of what this amounts to. Compared with the Dutch €300 million for three islands, and the French €7 billion for 12, the UK's transfer is very low. Still, the FCO stresses the need for the territories to "...do everything they can to reduce over time their reliance on subsidies from the UK taxpayer" (FCO 2012:14). In terms of the OTs' insularity, they work closely together with other members of the Organization of Eastern Caribbean States (OECS), an association of former British colonies in the Caribbean (Interviewees 9, 10, 11). The OECS is also the organization that drafts laws and regulations for the OTs, which are adapted per OT (Interviewee 9). There is collaboration with surrounding islands, regardless of the nation they belong to, and with the USA through Santo Domingo (Interviewees 11, 12). Instead of having bonds with the UK, the islands have bonds with countries and territories in the region, and interviewees expressed the sentiment that the UK government pays little attention to them and their needs (Interviewees 9, 10, 11). Geopolitically, they are not part of UK territory, and within the EU, hold OCT status, which means

that barely any UK and EU legislation applies (Hintjens and Hodge 2012). Regarding resource interdependencies, interviewees indicated not to depend on the UK for anything (Interviewees 9, 11), even though the UK could potentially mean a lot to them (Interviewee 10). Thus the coherence is not high.

The stability of the bond between the UK and OTs is low. From the beginning of the 20th century onward, attempts were made to establish some sort of federation in the British West Indies. In 1947, the foundations for such a federation were agreed upon, and in 1958, the West Indies Federation was established, only to collapse 4 yr later. In 1967, “associated statehood” was adopted (Rapaport et al. 1971), but this had also fallen apart by the late 1970s. Anguilla had protested several times during the 1950s and 1960s against the association with St. Kitts and Nevis, and following the 1967 revolution, came under direct British rule in 1970 and evolved into an OT in 1980 (FCO 2012). From 2000 onward, the UK planned to increase the engagement with the islands, but interviewees concurred that the “lack of wanting to know continues” (Hintjens and Hodge 2012:218; Interviewees 13 and 14). New constitutions were drafted from 2006 onward, but Anguilla’s 2008 draft has still not been endorsed (Government of Anguilla 2008, Hintjens and Hodge 2012).

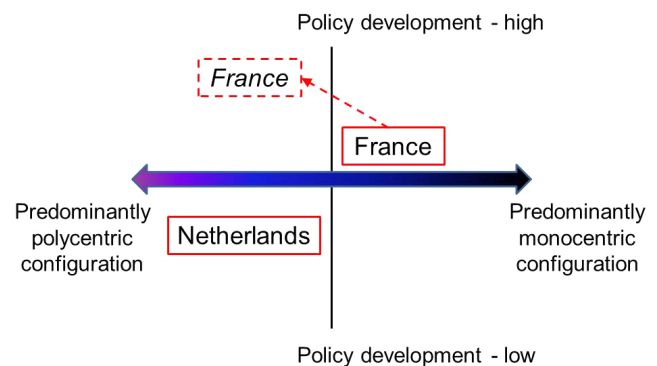
Overall, the highly autonomous island is in practice barely affected by the overarching system and no coordination between the decision-making centers takes place. Therefore, it doesn’t really qualify as a polycentric configuration. For IAS policy, this entails that Anguilla has full autonomy to set the standards, with little support and demands. A stronger overarching system might enhance the development of policy by setting standards to be adhered to and providing more resources, but conversely, pertaining to the endorsement of the constitution, the UK appeared to be a delaying factor. Although the current IAS activities cannot be qualified as policies put in place, more actions are undertaken than in the Dutch case, possibly because there is no distracting debate about the role of the overarching system.

DISCUSSION

Our findings are depicted schematically in Figure 2. To recap, we qualify the Dutch case as being on the polycentric end, the French as currently on the monocentric end but moving to the polycentric end, and the British to not fit on the continuum. Regarding policy development on IAS, France has determined some policy and is currently making significant steps, whereas the Netherlands and UK have virtually no such policy in place. The comparative success of the French case, with high autonomy for decision-making centers coupled with strong coherence, fits well with the polycentricity literature. The liberty to reach a given end in whichever way, provided coordination takes place, is the core tenet of polycentricity. However, in the Dutch case, actors saw a trade-off relationship between these two elements, and thus a hard combination to attain. Is it exactly the strong overarching system that incited France to devolve more autonomy to Guadeloupe, feeling like it has a safety net? Could Anguilla’s high autonomy be combined with a strong overarching system, and would that be beneficial for policy development? Although insightful, approaching these configurations solely through the lens of polycentricity is not sufficient to understand the development of policy. A governance configuration is more than a neutral structure, and in these cases, the metropolises are very distinct in

terms of resources from the Caribbean territories. The latter are in general largely dependent on help from the former, but at the same time entertain a strong desire for autonomous decision making. Also, the distribution of mandates and responsibilities does not follow logically from a given configuration; Guadeloupe’s development of IAS policy was hampered by disagreement about the distribution of mandates and responsibilities for a while. Guadeloupe has that clarified by now, whereas St. Eustatius is still gridlocked. Thus, rather than a neutral structure, through the governance configuration, dynamics such as mandate division and resource dependency play out. The concept of “institutional bricolage” advocated by Frances Cleaver within the critical institutionalism literature might be useful for this. Her approach entails a central role for social relationships and regards institutions as forged through a messy process of piecing together parts of existing institutions and devising new elements (e.g., Cleaver 2002).

Fig. 2. Overview of the results, with the dashed arrow indicating the evolvement of France’s configuration. On the vertical axis, the advancement of policy development. On the horizontal axis, the contrast between different polycentric configurations, in neither of which the UK fits, thus left out.



This leads us to point out some limitations to our research. One, the three islands have very idiosyncratic and historically delicate relationships with the metropolis, making them quite different from, e.g., the police departments studied by Ostrom (e.g., Ostrom 1973). Also, topics like health care or education receive much more attention, and focusing on those themes might have yielded very different insights about the influence of polycentric configurations. Lastly, we glossed over phenomena such as nepotism and patrimonialism, which have been described as linked to the size of polities (see Veenendaal 2014) as well as to polities where the institutions embodied by the formal state do not coincide with the practices of daily life (see Feikema 2015). These two characteristics fit the Caribbean islands, and although these dynamics might not affect the structure of the configuration, they may affect its working in practice. It would be interesting to further research this, especially in light of the claims that are made regarding the performance of polycentric arrangements (Folke et al. 2005, Pahl-Wostl and Knieper 2014, Marshall et al. 2016). To what extent do such contextual factors affect the performance of polycentric arrangements? Notwithstanding these limitations, the results offer some insights for answering the research question,

which we will proceed with now.

CONCLUSION

From our results, three findings are worth discussing separately before answering the research question, the first being that the British case cannot be considered a polycentric configuration at all. An overarching system exists on paper, but in practice, no coordination takes place between the decision-making centers. Second, none of the cases score high on IAS policy development. Guadeloupe is making significant progress, but still has no island-wide policy in place. Third, it appears to be precisely France's involvement from the mono- to polycentric end of the continuum that is fostering the policy progress, because it allows Guadeloupe to address challenges that are specific to the island, while having ample resources provided by France. For the Dutch case, this is a combination that currently mainly provides tension: the dependency of the island on the metropolis, while needing leeway to be able to design appropriate policy. Being much younger than the French configuration, over time a balance may be struck.

Returning to the research question "how does the type of polycentric configuration of a Caribbean overseas territory and its metropolis influence the development of policy regarding invasive alien species?," we can draw two main conclusions based on our cases. The strong coherence is beneficial to the French case for two reasons. One, because the overarching system ensures a minimum level of environmental policy, and two, because it comprises substantial financial support. Coherence can, however, not be assumed to always take this shape and have these effects. In the Dutch case, confusion about the role of the overarching system and dispute about concomitant financial resources seem to be the main hampering factor for policy development on IAS. In the British case, the overarching system is lacking, and no financial resources are transferred, but that is not coupled with dispute and resentment. Hence, agreement on how coherence is structured appears to be pivotal.

What the configuration should look like cannot be derived from three case studies, but we can note that increasing autonomy coupled with strong coherence works well for the French case. The overarching system ensures certain standards are met, and entails financial support, whereas the increasing degree of autonomy allows the employment of those resources in the most expedient way. Based on our study, we can only speculate about which type of polycentricity would work best for the Dutch and British cases, but it is clear that dispute about the governance configuration can be a significant hampering factor.

Responses to this article can be read online at:
<http://www.ecologyandsociety.org/issues/responses.php/9487>

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Appendix 1.

Background on the interviewees. The citation IDs correspond to the numbers mentioned in the article. A, b and c indicate multiple interviewees participating in one interview. To guarantee anonymity, we have left out the positions within the organizations.

Citation ID	Country/island	Organization	Date
1	Guadeloupe	Department of Environment, Infrastructure and Housing (DEAL)	7 Oct. 2015
2a	Guadeloupe	Regional Activity Centre for Specially Protected Areas and Wildlife (SPAW-RAC)	9 Oct. 2015
2b	Guadeloupe	Regional Activity Centre for Specially Protected Areas and Wildlife (SPAW-RAC)	9 Oct. 2015
3	Guadeloupe	Regional Council of Guadeloupe	13 Oct. 2015
4	Guadeloupe	National Park of Guadeloupe	12 Oct. 2015
5	St. Eustatius	Caribbean Netherlands Science Institute	19 Oct. 2015
6	St. Eustatius	St. Eustatius National Park (STENAPA)	21 Oct. 2015
7	St. Eustatius	Island government	23 Oct. 2015
8	St. Eustatius	Island government	23 Oct. 2015
9a	Anguilla	Anguilla National Trust	2 Nov. 2015
9b	Anguilla	Anguilla National Trust	2 Nov. 2015
9c	Anguilla	Anguilla National Trust	2 Nov. 2015
10	Anguilla	United Kingdom Overseas Territories Conservation Forum	3 Nov. 2015
11a	Anguilla	Department of Environment	5 Nov. 2015
11b	Anguilla	Department of Environment	5 Nov. 2015
12a	Anguilla	Department of Agriculture	6 Nov. 2015
12b	Anguilla	Department of Agriculture	6 Nov. 2015
13	Bonaire	Dutch Caribbean Nature Alliance (DCNA)	9 Nov. 2015
14	Bonaire	Rijksdienst Caribisch Nederland	12 Nov. 2015

15	Netherlands	Ministry of Internal Affairs and Kingdom Relations	26 Dec. 2015
16	France	Ministry of Ecology, Sustainable Development and Energy	2 Feb. 2016

Appendix 2.

The variables and the interviews in which they were mentioned. The citation IDs correspond to the numbers mentioned in the article and in Appendix 1. Bold numbers indicate interviewees for the French case, underlined numbers are interviewees for the British case, and normal font are interviewees for the Dutch case.

Subvariable	Indicators	Citation ID
Autonomous decision-making centers		
	Multiple autonomous decision-making entities actively devise and enforce rules, norms, and strategies	1-3 , 5, 7, 8, <u>9</u> , 11, 14, 15, 17, 16
	Opinions are implemented in practice by the decision-making centers	1-3 , 5, 7, 8, <u>9</u> , <u>11</u> , 14
	The entities have a general understanding of each other's jurisdiction or domain of authority	1, 3, 4 , 8, <u>9</u> , 13, 15, 16
	The decision-making centers have shared or common goals	1, 2 , 5, 7, 8, <u>10</u> , <u>11</u> , 13, 14, 15, 16
Coherence		
Overarching system of rules	The system of rules complies with the decision-making centers' needs	1-3 , 5, 7, 8, <u>9</u> , <u>10</u> , <u>11</u> , 12, 13, 14, 15
	The decision-making centers actively coordinate with one another and exchange knowledge	1-4 , 7, 8, <u>9</u> , <u>10</u> , 13, 15, 16
Stability	Frequency of changes to, duration of decision-making process regarding, constitutional configuration	1, 3 , 6, 7, 8, 13, 15
	Contention surrounding the constitutional configuration	2, 3 , 5, 6, 7, 8, <u>9</u> , 13, 15, 16
Tightness	Resource interdependencies: is the dependence one-way or mutual?	1-4 , 5, 6, 7, 8, <u>9</u> , <u>10</u> , <u>11</u> , 13, 14, 15
	Geopolitical status island: legal status within EU and metropolis; citizenship; part of EU customs zone	1, 2 , 7, 8, <u>11</u> , 13, 14, 15, 16