



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Conceptualising a governance framework for climate change adaptation and disaster risk reduction in Small Island Developing States through a systematic review	Page 1 of the manuscript
ABSTRACT			
Abstract	2	The world is off track in meeting the goals of the Paris Agreement of limiting global temperature rise to below 1.5°C, with dire consequences for Small Island Developing States (SIDS) in particular. If SIDS are to address their climate vulnerabilities through poli-cy-induced resilience building, they need to have in place a robust governance framework that coherently addresses climate change adaptation and disaster risk reduction. What would such a governance framework look like? To address this question, we carried out a systematic literature review of papers published between 1992 and 2023. Our review reveals that the governance of climate change adaptation and disaster risk reduction is relatively weak in SIDS. However, analysis of the barriers and enablers unveils the contours of a proposed three-tiered governance framework: Tier 1 comprises three key pillars: Policy Planning, Institutional Arrangements, and Laws and Regulations; Tier 2, the principles of transparency, accountability, equity, legitimacy and subsidiarity. The core pillars and the principles are nested within a broader Tier 3 comprising democratic processes (rule of law), religious and cultural values, and political commitment. In order for SIDS to fight the existential threat of climate change, the proposed framework will allow SIDS to better understand their climate governance framework and deliver low-carbon, climate resilient development within the broader ambit of sustainable development. This framework also addresses the weakness in previous researches which consider dimensions, principles and enabling environment of good governance on equal footing. We illustrate this frame-work in analogy to the lotus flower. Keywords: Island 1; governance 2; climate 3; adaptation 4; disaster 5; risk 6	Page 1 the manuscript
INTRODUCTION			
Rationale	3	The rationale behind this systematic literature review is to identify the key elements of existing governance systems, focussing on SIDS, and based on the appraisal from the literature to determine what are considered as effective and good governance practices. The outcomes then guided better framing to the governance framework of Mauritius.	Pages 2 and 3 the manuscript
Objectives	4	The research question is: What are the relative merits and potential caveats of existing governance frameworks for climate change adaptation and disaster risk reduction in SIDS?	Pages 4 and 5 of the manuscript
METHODS			
Eligibility criteria	5	We retained articles if they focused explicitly on or covered aspects/dimensions of governance of climate change adaptation and/or disaster risk reduction such as policies, institutions and management in countries/territories on the United Nations list of Small Island Developing States. Articles had to be about human systems with an empirical focus and having enough details for analysis. In contrast, we excluded papers that concerned countries/territories not on the UN list of Small Islands Developing States and those not focusing on governance or aspects/dimensions of climate change adaptation and disaster risk reduction. Similarly, we excluded articles focusing on mitigation, on individual measures and concepts/theories not related to governance, on perceptions, or those with too little details for analysis. The studies were tabulated in a matrix which is submitted a supplementary material.	Page 5 of the manuscript
Information sources	6	ScienceDirect database	Page 5 of the manuscript
Search strategy	7	We searched the ScienceDirect database using the following search string in the topic field: (“climat* chang*” OR “global warming” OR: disaster risk”) AND (adapt* OR resilien* OR cope OR cop) AND (govern* OR manage), as well as a list of SIDS names plus Indian OR Caribbean OR Pacific OR Ocean*. We limited our research to English papers published between 1992 and 2023. We used 1992 as our starting point because the UNFCCC was negotiated and signed in 1992. The end point corresponds to the time of writing.	Pages 5 and 6 of the manuscript



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
Selection process	8	Our initial research yielded 7,530 articles, as shown in Figure 1. We downloaded a list of these articles (including their abstracts) to identify those papers that met our inclusion and exclusion criteria. We were interested in papers that examined climate change adaptation and/or disaster risk reduction in SIDS (including island territories) from a governance perspective. We hence retained articles if they focused explicitly on or covered aspects/dimensions of governance of climate change adaptation and/or disaster risk reduction such as policies, institutions and management in countries/territories on the UN list of Small Island Developing States. Articles had to be about human systems with an empirical focus and having enough details for analysis. In contrast, we excluded papers that concerned countries/territories not on the United Nations list of Small Islands Developing States and those not focusing on governance or aspects/dimensions of climate change adaptation and disaster risk reduction. Similarly, we excluded articles focusing on mitigation, on individual measures and concepts/theories not related to governance, on perceptions, or those with too little details for analysis. In a first step, we read through the titles of all 7,530 articles to match the titles against our inclusion and exclusion criteria. This allowed us to eliminate 6,673 articles. In a second step, we read the abstracts of the remaining 857 articles, which allowed us to further reduce the sample to 37 articles. The 37 articles represent the empirical database for our analysis. No automation tool was used in the process.	Pages 5 and 6 of the manuscript
Data collection process	9	The data extraction and analysis are crucial steps in the systematic literature review process since they imply unpacking the data that are needed for the study. In order to analyse these 37 papers in a systematic way and extract all relevant information, we established a coding scheme (see supplementary materials). This coding scheme captured the following information: (i). General description of our database. In a first step, we were interested in simply mapping where and how governance has been studied. The elements of interest here are, in which SIDS has governance of climate change adaptation and disaster risk reduction been studied and with respect to which types of hazards, impacts and sectors. Geographical distribution helps to identify any trends across the SIDS studied and across SIDS regions, and to establish linkages if any, with the types of hazards, types of impacts and sectors of interest.¹ (ii). Governance mechanism and dimensions. The governance mechanisms and the dimensions of governance are key elements of the study. The literature review sought to identify the levels at which governance was studied (local, national, regional, and global) and the key stakeholders (community, public sector, private sector, civil society) that were involved. We also examined whether the governance systems were government-centric, decentralized or polycentric, and how it was exercised. (iii). Barriers and enablers of good governance: Barriers and enablers are the two sides of the same coin; they aim to capture elements that hinder or enhance good governance of climate change adaptation and disaster risk reduction. Barriers and enablers were at the core of our review, as they provide rich information regarding the framing and conceptualisation of governance. They allowed us to formulate a framework of good governance for climate change adaptation and disaster risk reduction, by identifying key pillars, principles and preconditions of good climate governance. The three reviewers were collectively involved in data collection from all the 37 papers. It was done through consultations. No automation tool was used in the process.	Pages 5 and 6 of the manuscript
Data items	10a	We stood guided by our coding scheme which is described in the previous section. The results that were collected were those mentioned in the matrix which has been provided as supplementary material.	Page 6 of the manuscript
	10b	We stick to the dimensions/parameters as mentioned in our database.	Matrix/database
Study risk of bias assessment	11	Screening was done concertedly based on the strict application of the inclusion and exclusion criteria and divergences were discussed in light of these criteria.	Page 5 of the manuscript
Effect measures	12	The results of the study are based on a systematic review of governance framework, and do not involve quantitative analysis of data.	Pages 5 and 6 of the

¹ To classify SIDS into regions, we used the United Nation Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States classification. It recognizes SIDS as a distinct group of 39 States and 18 Associate Members of United Nations regional commissions that are distributed in three geographical regions namely, the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS). <https://www.un.org/ohrls/content/list-sids>



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
			manuscript
Synthesis methods	13a	This was based on our coding scheme described above.	Page 5 of the manuscript
	13b	None	
	13c	The rows in our database/matrix gave a clear visual display of the results of individual studies since the key elements were mapped against the dimensions that were of interest to us.	Matrix/database
	13d	Simple statistics including means and averages and the use of excel pivot tables were used to synthesize results. Additionally, since the database is presented in an excel sheet, it allowed easy comparisons by filtering through the columns and comparing the fields of interest to us.	Matrix/database
	13e	Our data analysis covered issues both across and within the three SIDS regions, namely, Caribbean, Pacific and 'Atlantic, Indian Ocean and South China Sea' (AIS). Geographical distribution helps to identify any trends across the SIDS studied and across SIDS regions, and to establish linkages if any, with the types of hazards, types of impacts and sectors of interest.	Page 6 of the manuscript
	13f	None	
Reporting bias assessment	14	None	
Certainty assessment	15	None	
RESULTS			
Study selection	16a	The flow diagram is provided as supplementary material.	Page 5 of the manuscript and given as supplementary material
	16b	All studies that met the inclusion criteria were retained.	Pages 5 and 6 of the manuscript
Study characteristics	17	This is provided through our database/matrix.	Matrix/database
Risk of bias in studies	18	There was no quantitative analysis of data and risk of bias was minimised through the strict application of the inclusion and exclusion criteria.	Page 5 of the manuscript
Results of individual studies	19	<u>Three pillars of climate governance</u> A striking outcome of the systematic literature review is that almost all studies, n=32 papers, are about deficiencies in the governance system, 4 papers focus on effectiveness and, 1, covers both deficiencies and effectiveness. This high level of papers focusing on deficiencies also highlights the need to completely change or at least drastically improve the management of CCA and DRR in SIDS. Deficiencies are reported in all SIDS regions. Out of the 4 studies highlighting effectiveness, 2 cover all three regions; one focuses on the Caribbean (Friedman, 2023), one the Indian Ocean (Poti et al., 2022), and none on the Pacific specifically. When considered together, the reported deficiencies and effectiveness allow us to identify the main constituents of an adequate climate governance framework. Additionally, wide range of barriers to effective CCA and DRR emerged from the systematic literature review. The barriers suggest that existing climate governance in SIDS, in general, tend to favour strategies for coping with the impacts of climate change rather than adapting to them with very rare examples attesting to the other way. Our analysis reveals three main dimensions of governance as follows: Policy Planning	Pages 8 to 13 of the manuscript



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
		(n=13), Institutional Arrangements and Structures (n=25) and Laws and Regulations (n=6). The total does not amount to 37 since there is double counting. <u>Policy Planning</u> Deficiencies pertaining to the Policy Planning dimension of governance of CCA and DRR are studied in, n=11 of the papers. Out of these 11 papers, 6 highlight inadequate or lack of long-term policy planning. For instance, according to Lee, Pavola and Dessai (2022), short term planning horizon and political cycle results in difficulties for integrating adaptation policy with mid- and long-term climate projections. Mitchell, Enemark and Van der Mollen (2015) affirm that the impact of natural disasters is magnified by inappropriate land-use planning and trace back the cumulative risk of hazard to deficiencies in previous decisions about land use, land development, and building standards. This hints at the lack of cross-sectoral, integrated policy planning. Top-down institutional approaches to land-use planning generally do not accommodate community responses to climate variability and change (Lewsey, Cid and Kruse, 2004; Duvat et al., 2021). Lee, Pavola and Dessai (2022) highlights the fact that lack of policy coherence between sectors usually results in conflicts over resources and incentives between sectors or departments. Lack of integrated policy planning is also closely linked with poor mainstreaming that is reported in the literature. Poor mainstreaming of CCA and DRR in economic sectors of relevance to SIDS (n=7) is a major sign of poor governance (Scobie, 2016; Hassanali, 2017; Duvat et al., 2021). Low level of mainstreaming results in or reflects disparate cross-sectoral policies and strategies, implying lack of policy coherence and policy Integration (Scobie, 2016). In some cases, the governance mechanism that is in place is inherited from the colonial period, and has never been adapted to a SIDS context. It is therefore unsuitable for addressing collective action problems. Duvat et al. (2021) exemplify this by stating that legal, economic, demographic, sociocultural, planning-related and environmental drivers compounded the accumulation of exposure and vulnerability over time. Saint-Martin is given as an example wherein historical social and political dynamics involving unsustainable development and settlement patterns, the weakness of local institutions, population mistrust in public authorities, high social inequalities and environmental degradation maintained a maladaptive trajectory. An important observation here is that all these are non-climate (or non-natural disaster) drivers of maladaptation. Coherent cross-sectoral policies can also allow SIDS to move away from a project-based approach towards a programmatic one, allowing countries to propose programs and establish links with wider development purposes (Klöck, Molenaers and Weiler, 2018; Scandurra et al., 2020). Policy incoherence is also discussed in 4 papers that call for a more creative type of management, requiring new ways of thinking, prioritisation, and changes in resources and land uses. This transformative type of governance can be construed as a mechanism through which complex adaptive systems attain synergy between conservation and creativity, thereby conferring more resilience in the face of current and future shocks than offered by existing governance (Chaffin et al., 2016). Management and adaptation options should adopt an inclusive approach which offers enhanced opportunities to develop and implement transformative adaptation solutions, particularly in remote and regional areas where centralised management does not extend (Dutra et al., 2021). While corroborating the need to change the existing obsolete governance mechanism, Duvat et al. (2021) emphasise the relevance of backward-looking approaches to support forward-looking climate adaptation, favouring a backcasting rather than a forecasting approach. This entails breaking path dependency through the alignment of local institutional capacities with national risk reduction policies, the promotion of social justice and involvement of local communities in decision making. Networking can contribute to social resilience and for designing approaches that account for the multi-level or polycentric nature of governance required to perform critical tasks for adaptation (Ojea, 2015). Additionally, 3 papers suggest that policy coherence can be improved through the promotion of nature-based solutions which requires harmonisation between multiple actors, including those involved in land-use planning, land drainage, agriculture, and economic operators, among others. <u>Institutional Arrangement and Structures</u> Another pertinent outcome of the literature review is the set of barriers linked to institutional arrangement and structures that are required for the coordination of actors and agents vertically and horizontally. The inadequacy or, in certain cases, the lack of institutions that can effectively deliver tasks that are essential for good governance is highlighted as a significant gap in 23 papers. In this respect, 13 papers focussed on the lack of effective institutions for long-term planning, 10 papers on ineffective coordination, 10 papers on the inability of institutions to effectively	



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
		mainstream CCA and DRR in key sectors and 6 papers on the low capacity of concerned institutions to access, mobilise and use climate finance. The total does not amount to 37 because some papers (n=6) cover more than one dimensions. It is pointed out that adequate coordination structures and institutional arrangements are required for the design, conceptualization, formulation, implementation, and monitoring and evaluation of long-term integrated and coherent policies for CCA and DRR. Weak institutional arrangements and structures trigger other deficiencies (n=9) such as ineffective or non-participation of key actors in the policy planning process, including those at grass-root level and civil society. This lack of representativeness also leads to poor communication, lack of ownership (Middelbeek, Kolle and Verrest, 2014), and social cohesion (Walshe, 2022). The absence of a coordinating mechanism jeopardises a collaborative process through which stakeholders at all levels can meaningfully contribute in addressing the serious threat of climate change (Hassanali, 2015). <u>Laws and Legislation</u> The third dimension of governance that emerges from the systematic literature review is the legal framework for managing climate change and DRR (n=6). A weak legal framework results in the lack of clear roles and responsibilities of institutions and stakeholders, lack of clarity of institutional arrangements for coordinating and enabling the inclusive participation of multiple stakeholders, and the mandate for long-term integrated policy planning for resilience building. Another barrier associated with a weak legal framework is the ineffective allocation of power, meaning how power is held and exercised by actors in key institutions. One paper also mentions the lack of gender equity and monitoring of project implementation as the consequence of a poor legal framework (Hattam et al., 2020). Overall, the papers advocate that an effective legal framework must set the legal and institutional pathways for good governance of CCA and DRR. Principles and preconditions of good climate governance <u>Principles</u> While the three dimensions are considered as the pillars of governance, there are other elements (sub-dimensions) identified in the literature review that pertain more to the enabling environment that is required for good governance. We refer to these sub-dimensions as the principles underlying the pillars of governance. These principles are transparency, accountability, equity, legitimacy and subsidiarity. Transparency is a key principle of good governance, it enables the setting-up of meaningful climate targets, tracking progress, informing policies, and mobilising financial support for increased climate ambition. It is very important for stakeholders to have access to information so as to clearly understand the decision-making process and the rationale behind decisions taken. This is in line with the Enhanced Transparency Framework, which is a mandatory mechanism established under the Paris Agreement to allow transparent monitoring and reporting. Hence, transparency serves the dual purpose of transparently informing both local and international stakeholders. However, to create a context that is conducive to good governance, accountability mechanisms in climate change framework legislation are necessary conditions for building trust between and within nations, providing clarity about the roles of the different actors involved in legislating and implementing climate policies (Pittman et al., 2014; Gupta et al., 2016; Anisimov, Magnan and Duvat, 2020). Accountability also ensures policy coherence (Scobie, 2016). In addition to defining clear roles and responsibilities, good governance requires that key actors and institutions have legitimacy to exercise their mandate. The right and acceptance of an authority is usually addressed through the legal framework (Hassanali, 2015; Aggarwal et al., 2010). Another key principle which comes out of this systematic literature review is the notion of equity. It is important to ensure equity in process and outcomes, as well as ensuring that all the principles of sustainable development are applied, including intra-generational and inter-generational equity. Equity is also directly linked with climate justice (Hernández-Delgado, 2015) and gender (Hattam et al., 2020) since natural disasters disproportionately affect the most vulnerable communities. This is also why the principle of subsidiarity is core to the governance of CCA and DRR. It infers that adaptation decisions and associated governance responsibilities should occur at the lowest level at which they can be	



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
		performed competently and positively impacts policy integration (Scobie, 2016). Preconditions In addition to the pillars and principles, preconditions are also necessary for good governance to prevail (n=14). They act as drivers and their absence impairs the governance system. They are democracy and the rule of law (n=4); religious and cultural values (n=6); and political commitment (n=6). What constitute the core pillars and principles of good governance need to be anchored in democracy (the rule of law). In fact, representative democracy is an essential tool for realising social, ecological and relational inclusiveness (Gupta and Bavinck, 2016). Good governance and the rule of law are mutually supportive of each other as in a virtuous circle. For instance, effective land administration systems enable the implementation of land policies and sustainable development (Mitchell, Enemark and Van der Molen, 2015). Religious and cultural values also support the implementation of effective adaptation measures. In fact, long traditions of interacting with, learning and observing the environment have enhanced the adaptive capacity and social resilience of islanders (Poti, 2022; Hernández-Delgado, 2015). This has been confirmed by studies on bottom-up adaptation in small island communities which have shown that adaptive capacities are strongly influenced by local social and cultural considerations (Narayana et al., 2020). It is thus essential that in contextualising CCA and DRR strategies, as recommended by the SENDAI framework (International Science Council, 2023), religious and cultural values are given due consideration so as to ensure ownership by the community. Additionally, Political will is essential to advance adaptation (Techera, 2023, Scandurra et al., 2020). The lack of high-level political commitment and national leadership are in fact detrimental to CCA and DRR (Lee, Pavola and Dessai, 2022). Politicians themselves, can sometimes be a barrier to national adaptation policy due the mismatch between the time horizons of adaptation and the political and management practices of government departments (Lee, Pavola and Dessai, 2022). Political commitment at highest level is therefore a key element in the success of policy coherence that should not be overlooked (Scobie, 2016). This literature review has found that by addressing the mismatch between political will and coherent policies, political leaders can ensure the smooth implementation of their programmes. An example is how effective land administration systems enable the implementation of land policies to fulfil political and social objectives and to achieve sustainable development outcomes (Mitchell, Enemark and Van der Molen, 2015).	
Results of syntheses	20a	We are only considering English-speaking published peer-reviewed papers, which may suffer from some bias but by being transparent about the search criteria and process we address that bias.	Page 15 of the manuscript
	20b	Not applicable as we exploit our data descriptively and qualitatively rather than through statistical (meta-)analysis.	Pages 6 to 8 of the manuscript
	20c	This is not applicable to our research since there was no quantitative analysis of data. Nevertheless, the systematic review that is presented is based on a wide scope of inclusion criteria for capturing studies that have been carried out in different geographical SIDS regions.	Page 6 of the manuscript
	20d	This is not applicable to our research since there was no quantitative analysis of data.	
Reporting biases	21	This is not applicable to our research since there was no quantitative analysis of data.	
Certainty of evidence	22	This is not applicable to our research since there was no quantitative analysis of data.	
DISCUSSION			
Discussion	23a	Governance is acknowledged as being central for the mainstreaming of CCA and DRR at all levels and in long-term integrated planning. Yet, studies reflect significant deficiencies in governance architecture in SIDS. These point to the need for better understanding governance of CCA and DRR, which, in turn, points to the need for a robust framing and conceptualisation of governance that will allow its critical evaluation. Based on our systematic review, we propose a three-tiered governance framework. The three tiers are nested as shown in Figure 2. The first tier (Tier 1) comprises	Pages 13 to 15 of the manuscript



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
		three core dimensions namely, Policy Planning, Institutional Arrangements, and Laws and Regulations. The second tier (Tier 2) consists of the principles that establish the enabling environment for efficiency and effectiveness of the Tier 1 dimensions. The principles include transparency, accountability, equity (including with respect to gender), legitimacy and subsidiarity. These principles are in line with the preamble of the Paris Agreement. The two tiers are further nested within a broader set that contextualizes their application (or country context). The outer set (Tier 3) comprises the manifestation of democratic processes (rule of law), religious and cultural values, and political commitment. The three-tiered framework is inspired by the lotus flower which comprises the core elements, the pillars, they comprise the main organs of the flower, if they don't exist there is no flower as there is no good governance. They are protected by the petals of the flower, here our analogy links to the five principles. They are protective of the pillars. However, without the receptacle, which support the petals and holds the whole structure of the flower. Without these three dimensions, good governance cannot flourish. Policy is a common element of a governance framework to effectively address CCA and DRR, and it is also mentioned in previous research (Anisimov, Magnan and Duvat, 2020; Aggarwal et al. 2010). For instance, coherent policies are important for SIDS to identify and assess their vulnerabilities and hence better clarify their financial needs for adaptation action (Anisimov, Magnan and Duvat, 2020). However, for this to happen, it is imperative that proper vulnerability assessments are carried out to establish an evidence-based approach to integrated policy planning. This would require a shift from the quantification of the vulnerability of a site or a region to assessing the vulnerability of a set of selected variables to specific stressors (Aggarwal et al., 2010). This approach focuses on the sensitivity of a given system to different stressors and identifies a threshold at which the system is considered to be damaged. Then the susceptibility is measured in terms of the system's sensitivity and exposure to stressors. The system's ability to modify its vulnerable conditions by adapting and responding to changing circumstances is then estimated. Evidence-based policy planning, in the ambit of good governance can also help in addressing the problem of mobilizing climate finance for adaptation and DRR. In fact, according to (Friedman, 2023), SIDS can go even further in capitalising on proper vulnerability assessments. Based on his work in watershed areas in Antigua and Barbuda, he unveiled how vulnerability is economized through climate resilient development. His findings shed light on the construction of 'adaptation economies' which are economies that can capitalise upon climate challenges within areas of highest vulnerability through fee-for-climate services. Coherent policies and effective institutions mutually support each other. Coherent policies are formulated, implemented, and monitored and evaluated by effective institutions. The papers highlight the fact that climate change being a collective action problem, the solution should be multi-pronged and requiring the contribution of multiple actors across sectors (i.e., horizontally) and all levels of society (i.e., vertically). Most papers depict a government-centric type of climate governance, wherein government has the primary role of leading the policy planning process and setting the legal and regulatory frameworks including the constitution.	



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
		A robust legal framework is equally important so as to allow the key institutions to operate within clearly defined boundaries and mandates with demarcated roles and responsibilities. It is expected to provide the equitable allocation of power to government and also other actors. Climate action becomes inclusive by engaging a wide range of stakeholders in the process of designing policies that are fair and accessible and equitably distributing policy impacts. This results in an adaptable and scalable approach that provides economic, environmental, and social benefits (Hossain et al., 2023). There is a tendency towards inclusive governance which calls for explicit efforts to engage with public-private and formal-informal stakeholders; each with their own needs, priorities, political interests and decision-making processes. Inclusiveness is pertinent, especially for SIDS, because in addressing adaptation and DRR, it is important to avail of all potential support both locally and from foreign sources, while harnessing opportunities and co-benefits.	
	23b	Our systematic literature review provides a snapshot in time of how CCA and DRR are studied and theoretically understood in SIDS. We here reviewed 37 papers in detail and this relatively low number shows that governance of CCA and DRR in SIDS is not widely studied, highlighting the same previous concern by Robinson et al. (2022), and further justifying the present research. Out of the initial 7,530 papers initially identified, most did not meet the inclusion criteria because they focused on assessments of single projects or other non-governance aspects. We also note that only 12 papers research governance in a specific SIDS, which is indicative of a gap in research on country-level governance in specific SIDS. Such country-specific research would be helpful as country contexts are different and matter for policy and governance, as noted in key international agreements like the Sendai Framework (UNISDR, 2015) and the Paris Agreement (UNFCCC, 2015). Of note, while we find an overall balance across the three SIDS regions, we also see that some SIDS are not studied at all (at least through a climate governance prism). Such geographical biases were already remarked in prior research (Klöck and Nunn, 2019; Kuruppu and Willie, 2015) and still exist. Of course, these biases may also reflect the small number of studies retained and result from the limits of our approach.	Page 15 of the manuscript
	23c	Our systematic literature review focuses on English literature recorded in the ScienceDirect database. We hence potentially miss out on sources of data in other languages and databases. For example, work on Lusophone or Francophone SIDS in particular may rather be published in Portuguese and French, respectively.	Page 15 of the manuscript
	23d	Despite these limitations, we were able to capture a wide range of aspects of climate governance. Good climate governance is crucial for SIDS in building their resilience against the adverse impacts of climate change. Yet, as we see from the high proportion of studies focused on deficiencies in the governance mechanisms in SIDS, there is still ample room for improvements. Our study reveals three pillars of governance on which SIDS need to improve. These include policy planning, institutional arrangement, laws and regulations. These core pillars need to be founded on the principles of transparency, accountability, equity, legitimacy, and subsidiarity. In turn, the pillars and principles operate in the macro-level context of the rule of law, cultural and religious values and political commitment. However, the literature tends to place all of these elements on the same footing. Whereas they are all important, they operate at different levels. We instead propose that these elements operate at different levels; not all of these elements have the same bearing on way CCA and DRR are governed. We therefore used our systematic literature review to conceptualise a framework for good climate governance in SIDS in three tiers. The first tier (Tier 1) contains the three core pillars (or dimensions) of governance. It contains the Policy dimension, wherein policies need to be cross-sectoral and coherent. Policies also need to guide decision-makers, including through long-term planning. The Institutional Arrangement dimension is needed to ensure a participative approach where all stakeholders (horizontally and vertically) are parties to the process and their views are not only considered but discussed to find trade-offs and compromise. Having adequate Laws and Regulations (the third dimension) is also a determining factor that ensures the effective functioning of the other two pillars. For these pillars to function effectively and efficiently, there should be a culture of transparency, accountability, equity, legitimacy, aligned with the principle of subsidiarity (the principles underlying the good functioning of the three pillars of governance). In turn, the pillars and principles of governance are nested in the rule of law, and political commitment and religious and cultural values. Climate change is a collective problem and the solution depends to a large extent on the ability of key stakeholders to work together and	Page 16 of the manuscript



PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
		ensure a certain level of resilience against the adverse impacts of climate change. Good governance is the cement that connects and holds the building blocks of a resilient society. It is not about set of actions that are applied as recipe but a culture that needs to be instilled. The proposed framework set the contours of the governance mechanism in dotted lines but the dots need to be linked through future studies in specific countries' contexts. Hence, the proposed conceptualisation and framing of governance for CCA and DRR provides the foundation for assessing the effectiveness of governance frameworks in SIDS (and elsewhere).	
OTHER INFORMATION			
Registration and protocol	24a	The protocol involved developing a database / matrix containing the codified results of the review. The matrix is developed in Excel and is submitted as Supplementary Material.	Pages 5 and 6 of the manuscript and matrix/database
	24b	The protocol is described under paragraph 2 titled 'Materials and Methods' at page 5 of the manuscript.	Pages 5 and 6 of the manuscript and matrix/database
	24c	Not applicable	
Support	25	This work was financially supported by the Agence Française de Développement under its Facilité 2050 programme on formulation of long-term strategy for the Republic of Mauritius. "The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results", hence, "The authors declare no conflicts of interest."	Page 17 of the manuscript
Competing interests	26	None	
Availability of data, code and other materials	27	Our database/matrix is provided as supplementary material and can eventually be displayed on the journal website, when/if accepted	Matrix/Database

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71