SintMaarten TRUST FUND

Government of the Netherlands

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OPTIONS PAPER **FOR A DISASTER RESERVE FUND** *IN SINT MAARTEN*

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Abbreviations and acronyms

CAT DDO	Catastrophe Deferred Drawdown Option
CCRIF SPC	Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company
CERC	Contingent Emergency Response Component
DRF	Disaster Risk Fund
DRM	Disaster Risk Management
EIB	European Investment Bank
GoSXM	Government of Sint Maarten
MoF	Ministry of Finance
NRPB	National Recovery Program Bureau
PFM	Public Financial Management
PJIA	Princess Juliana International Airport
SCDM	Disaster Management Steering Committee
SXM	Sint Maarten
SXM TF	Sint Maarten Trust Fund
VROMI	Ministry of Public Housing, Spatial Planning, Environment and Infrastructure

Executive Summary

This report has been prepared at the request of the Steering Committee of the Sint Maarten Single Donor Trust Fund (SXM TF) and the Ministry of Finance in the Government of Sint Maarten (GoSXM). It aims to provide information on the options available to the GoSXM to establish a Disaster Reserve Fund (DRF) and demonstrates the key design choices that the GoSXM will need to consider and how these choices will impact the amount of finance that would be available for disaster response. This report has been informed by looking at good practices in establishing and implementing DRFs worldwide, discussion with stakeholders in Sint Maarten and leveraging the analysis of a catastrophe risk model to understand the frequency with which the GoSXM may be impacted by a disaster, resulting in a need to withdraw funds from the DRF.

The GoSXM proposed that the DRF be capitalized by the expected reflows from the loans from the Government (understood to be US$80 million) to Princess Juliana International Airport (PJIA) that were provided for its reconstruction. The financial analysis presented in this paper uses a tool that has been developed for the benefit of GoSXM to understand how key choices on the terms of the loan reflows will impact the amount of finance in the DRF at various points in time. The outputs provided in this paper are based on a set of assumptions which can be varied within the tool. The tool also aims to assist GoSXM in understanding the potential cost savings that can be achieved by utilising a proportion of the proposed DRF to purchase disaster insurance from the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC).

Three options have been identified and considered for establishment of a DRF in Sint Maarten:

1. DRF established as a contingency allocation in the budget with specific rules for how funds will be used.
2. DRF set up as a dedicated government agency institution, with the fund managed by a state-owned enterprise (SOE) to be defined.
3. DRF established as a fully independent entity that specialises in fund management.

A fourth option was considered with the DRF operationalized through a project managed by the World Bank/SXM TF. However, this option was not found to be a viable choice and is not discussed in detail in the report.

Comparative analysis

Analysis of the three options has been conducted using four criteria; (i) scope and purpose; (ii) tax and legal structure; (iii) governance; and, (iv) financing and sustainability.

Considering the information available, this paper recommends that the GoSXM should work towards operationalising Option 3: DRF established by a fully independent entity that specialises in fund management. Table 1 provides a summary of the options analysed against the four criteria.

It should however be noted that Sint Maarten will remain significantly exposed to disaster losses, regardless of which option is pursued to establish a DRF. While the establishment of a DRF can ensure the GoSXM has access to some level of immediate liquidity to finance the response to disaster events, the level of risk is such that the DRF will still need to be complemented with other instruments.

Table 1: Summary of options analyzed

Criteria	Option 1	Option 2	Option 3
Scope and Purpose	• No ability to accrue and/or earn any returns under this option if this option is to be pursued it is recommended that the scope of the DRF is reduced.	• Depending on the investment structure chosen this option should be able to meet the intended scope and purpose.	• Depending on the investment structure chosen this option should be able to meet the intended scope and purpose.
Tax & Legal Structure	• Requires an annual appropriation in the budget under the entity responsible for its management.	• From a legal perspective, the process of establishment is likely to be lengthy and will require strong engagement from a range of different stakeholders. • Need to create the DRF as an Independent Administrative Agency (IAA) through an ordinance. • From a tax perspective, pursuing Option 2 though creation of an IAA offers the highest level of certainty.	• From a legal perspective this is likely to quicker compared to Option 2. • Establishing the DRF as a private limited company (B.V), public limited company (N.V). or foundation is most advisable. However, discussions with relevant authorities are necessary to secure certainty on certain tax aspects to ensure that it remains the most advantageous route to take.
Governance	• If established as a contingency allocation in the budget, the GoSXM would have to draw up specific rules for how funds would be used and governed. Reporting would be in line with existing PFM legislation.	• If established as an IAA, the DRF's powers, administrative and governance arrangements would be outlined in the relevant ordinance.	• The deed of incorporation, containing the articles of association, would outline the rules and regulations governing the entity's structure and conduct of affairs.
Financing & Sustainability	• Lowest operating costs. • Needs to have the capacity to receive and manage additional funds beyond the initial capitalization and to invest and accrue funds quickly. • It is not clear that this experience and expertise is held within a line ministry who would hold the contingency budget line and if this is allowable within existing PFM legislation.	• Mid-range for operating costs. • The GoSXM will need to invest and accrue funds quickly for the long-term sustainability of the fund. • At this point in time, it is not clear that this experience and expertise is held within an existing government agency. • The DRF needs to have the capacity to receive and manage additional funds beyond the initial capitalization. This requirement should be considered in the procurement phase when selecting a suitable SOE.	• Highest operating costs. • Given the existing resource constraints within the GoSXM and the need to invest and accrue funds quickly for the long-term sustainability of the fund, a dedicated and experienced fund manager presents the best option. • Leveraging a firm that provides dedicated fund management will be more cost effective. • The DRF needs to have the capacity to receive and manage additional funds beyond the initial capitalization. This requirement should be considered in the procurement phase when procuring a Fund Manager.

The GoSXM can expect average annual losses of $US5.8m ($US4.1m from hurricanes, $US0.14m from earthquake, and $US1.5m from excess rainfall). This paper compares the potential size of the DRF against the potential losses from disasters as estimated by Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC), which shows that if the DRF is capitalized from the expected reflows of both principal and interest from the loans to the PJIA, the DRF can be built up to cover a 1-in-100 year loss by 2032-2036 depending on the agreed repayment terms. This means that if the DRF is built up from the loan repayments, the GoSXM faces the risk of not being able to respond to a major disaster for several years, regardless of the repayment terms.

To mitigate the risk of not having sufficient funds to respond to a disaster, GoSXM should consider ways to capitalize the DRF at the outset based on the anticipated loan repayment schedule. This could be achieved either through a separate arrangement with the Government of the Netherlands in anticipation of the reflows from the PJIA, or through securitization of the loan repayment schedule in the commercial market.

Full capitalization of the DRF at the outset would ensure that GoSXM has the resources to respond to a disaster following the establishment of the DRF, but it is still projected to decrease over time given the expected average disaster losses faced by GoSXM. A capital replenishment strategy should therefore be developed to recapitalize the DRF following major disaster events which would result in significant capital losses from the DRF. This highlights the need for GoSXM to consider the DRF as part of a comprehensive Disaster Risk Financing strategy which includes other instruments, such as the purchase of insurance from the CCRIF SPC.

Proposed next steps

Noting the analysis contained in this report, it is recommended that the following next steps are considered by the GoSXM:

1. Continue work towards establishing the fund as a fully independent entity that specialises in fund management. Setting up the DRF as a private limited company (B.V), public limited company (N.V). or foundation is most advisable. However, following refinement of the exact scope and purpose of the DRF, discussions with relevant authorities are necessary to secure certainty on certain tax aspects to ensure that it remains the most advantageous route to take.

2. Align the DRF to other DRF instruments in country. Establishment of the DRF should be aligned with the GoSXM's DRF strategy, and particularly the potential establishment of two other DRFs (the Souglia Fund and the Calamity Fund) which are currently under discussion. This will require internal discussion on the scope, purpose and implementation plan for each instrument to ensure alignment.

3. Agree the loan parameters. The GoSXM needs to agree the final amount of the loans to PJIA and develop a repayment schedule which includes any interest that the GoSXM may wish to levy.

4. Consider capitalization at the outset. To ensure that GoSXM is not overly exposed to the potential for disaster losses while the DRF is being built up, it is recommended that the DRF be capitalized at the outset. This can be achieved either through a separate arrangement with the Government of the Netherlands in anticipation of the reflows from the PJIA, or through securitization of the loan repayment schedule in the commercial market.

5. Continue with the purchase of disaster insurance from CCRIF SPC. The purchase of insurance would allow the DRF to take on a higher level of investment risk in search of higher long-term growth, and also reduces the probability that the DRF will suffer significant capital losses following major events. The purchase of this insurance could eventually be financed directly from the DRF.

1. Introduction

This chapter provides a background to the report and outlines the structure and methodology used to assess the options available to the GoSXM to establish a DRF.

1.1 Background

In 2017, Hurricanes Irma and Maria, struck Sint Maarten causing total damages and losses estimated to be US$2.7 billion. These two hurricanes affected 90 percent of all infrastructure and large parts of the natural environment. Sint Maarten made substantial efforts to address the most urgent needs. However, recovery needs were significant and exceeded the country's limited financial response capacity.

To help address such large financing shortfalls going forward the government expressed its intent to establish a dedicated source of reserves to facilitate disaster response activities. In July 2021, the Steering Committee of the Sint Maarten Single Donor Trust Fund (SXM TF) requested that the World Bank provide technical assistance to the Ministry of Finance (MoF) of the Government of Sint Maarten (GoSXM) to design a disaster reserve fund (DRF) to be capitalized by the substantial reflows expected from the GoSXM's loans (US$80 million) to the Princess Juliana International Airport (PJIA) reconstruction. These loans were made possible by a grant from the SXM TF. Reflows pertain to the principal of the loan plus interest at an interest rate to be agreed with the PJIA, and are expected to commence in 2028 and be repaid over a period of 15 years. Establishing a financial strategy, with income generated from investments, and a capital replenishment strategy in the event of a severe disaster, will be key to ensuring the long-term sustainability of the DRF.

This report is structured into seven chapters. Following this introduction, chapter two provides information on the context in which the DRF will be established. Chapters three to six present information on different aspects to consider when establishing a DRF. Chapter seven concludes the report with next steps for consideration.

1.2 Objective of the report

In response to the request to the World Bank to design a DRF, this paper presents options available to the GoSXM to establish such a fund. Three options have been identified, as follows:

1. DRF established as a contingency allocation in the budget with specific rules for how funds will be used.
2. DRF set up as a dedicated government agency institution, with the fund managed by a state-owned enterprise (SOE) to be defined.
3. DRF established as a fully independent entity that specialises in fund management.

A fourth option was considered with the DRF operationalized through a project managed by the World Bank/SXM TF. However, this option was not found to be a viable choice and is not discussed in detail in the report. In summary, option 1 and 2 require capacity within the GoSXM to set up and manage the DRF. Option 3 outsources the expertise to a procured service provider. Annex A outlines the key differences between each option.

Analysis of the options has been conducted using four criteria and associated questions, as described in Table 2. Where required, differences in selecting one option over another are highlighted. The references section provides details on the documents which were analyzed for this assessment. Alongside analysis of relevant information, the team who prepared this report also had a number of discussions with counterparts in the GoSXM and accessed legal support from a law firm.

Table 2: Assessment criteria and associated questions

Criteria	Associated questions
Scope and Purpose	• What is the purpose of the fund? • What is the scope of the fund?
Tax & Legal Structure	• How does establishing a DRF fit into existing government DRM/DRF policies? • What is the most efficient structure for the fund to minimize tax and legal costs? • How can existing laws support the establishment and operation of the fund?
Governance	• Who will manage and operate the fund? • Where will the fund be held? • How will/could money from the fund be access? E.g. pay-out criteria, triggers. • What will be the financial reporting procedures?
Financing & Sustainability	• Beyond an initial injection of funding what could be the sources of funds? • Could the fund receive proceeds from other instruments? • Can the DRF be capitalized at the outset, either through anticipation of the reflows from the loans to PJIA, or through securitization[1]? • How much should be held in the fund as cash to finance disaster response when needed? • What will be the investment policy? • Can GoSXM develop a strategy to replenish the DRF if there is a significant loss due to a severe disaster?

1 Securitization is the process in which the loan (asset) would be transferred to an issuer, such as a special purpose vehicle, who finances the acquisition of the asset by issuing tradable, interest-bearing securities that are sold to capital market investors. Such a transaction would allow the GoSXM to capitalize the DRF at the outset based on the expected future loan repayments.

2. Context

This chapter outlines the potential losses to the GoSXM due to disasters, the Government's current approach to disaster risk financing, and an overview of Disaster Reserve Funds from broader international experience. In presenting this context it is apparent that Sint Maarten is exposed to a number of hazards and the GoSXM has designed a DRF strategy to reduce the impact of disasters. Based on a review of good practices globally, there are several ways in which GoSXM may wish to design and establish a DRF capitalized by the reflows expected from the Government's loans to the PJIA.

2.1 Disaster risks and needs facing Sint Maarten

Sint Maarten is a constituent country of the Kingdom of the Netherlands. It encompasses the southern 40% of the divided island of Saint Martin; the northern 60% of the island constitutes the French overseas collectivity of Saint Martin. Sint Maarten has a population of 42,846 and GDP is around US$1.19 billion, equating to GDP per capita of US$28,988 (World Bank, 2023). The country's total built exposure is estimated to be US$1.5 billion (replacement value), with the greatest replacement value to be of hotels followed by residential buildings (World Bank, 2023).

The island is exposed to three major hazards: excess rainfall, earthquakes and tropical cyclones. Sint Maarten is at the front line of climate change impacts, and related hydrometeorological events are expected to increase in frequency and severity. During the period 1998-2018, 19 significant excess rainfall events affected Sint Maarten: all events were caused by tropical cyclones. In particular, in 2017, Sint Maarten was devastated by Hurricane Irma, followed by Hurricane Maria. During the period 1990-2017, 28 tropical cyclones hit Sint Maarten. During the period 1990-2017, no earthquakes hit Sint Maarten and only a few events with a magnitude greater than 5.4 have occurred within 30km of the island. It should also be noted that Sint Maarten also faces the risk of losses from tsunamis, health emergencies and other exogenous shocks. Annex B provides an overview of recent significant hazard events.

On a long-term average basis, the GoSXM is estimated to need to cover losses of approximately US$4.1 million annually for losses associated with hurricanes (CCRIF SPC, 2019). CCRIF SPC provides risk profiles for Sint Maarten based on the outputs of catastrophe models for different hazards (see Table 3). These risk profiles indicate that the average annual loss (AAL) for earthquakes is estimated at US$0.14 million, US$4.1 million for hurricanes and US$1.5 million for earthquakes.

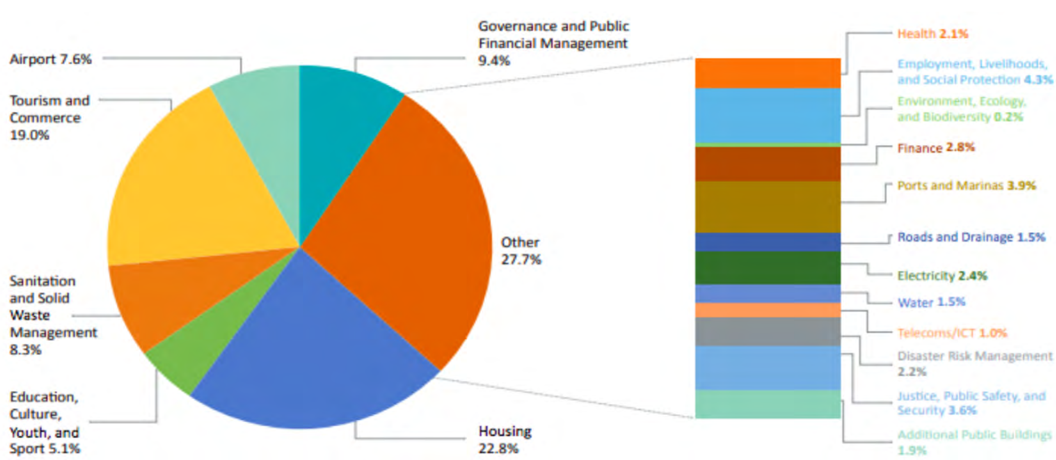
Table 3: Hazard Risk – Probabilistic government losses

	Hurricanes	Earthquakes	Excess rainfall
Average Annual Loss	US$4.1 million	US$1.5 million	US$1.5 million
Probable maximum loss for 50-year return period event	US$45.8 million	US$1.1 million	US$8.9 million
Probable maximum loss for 200-year return period event	US$76.7 million	US$7.5 million	US$12.2 million

Source: CCRIF SPC

The total damage and loss from Hurricane Irma and Hurricane Maria in 2017 however was estimated to be US$2.7 billion, according to an assessment by the GoSXM and the World Bank (NRRP, 2018). These events caused losses significantly higher than the long-term average annual loss from hurricanes. Moreover, to implement recovery and resilience interventions post-disaster, the GoSXM predicated a need for US$2.3 billion, between 2018 and 2025. The sectors that required the most funding after the 2017 hurricanes were calculated to be housing (22.8%) and tourism and commerce (19.0%) (see Figure 1).

Figure 1: Sectoral distribution of post-disaster needs



Source: National Recovery and Resilience Plan, 2018

Reconstruction costs accounted for 61% of the total costs required for recovery following the 2017 hurricanes. Reconstruction, households, and government entities were the three biggest expenditure categories in the disaster aftermath (see Table 4), while emergency relief activities were the smallest (2% of total costs). This breakdown of expenses, from a recent event, is useful information when considering the scope of the DRF. For the reconstruction efforts in Sint Maarten, housing was identified as the biggest expense, representing 34% of the total reconstruction costs, followed by tourism, at just over 27%.

Table 4: Category of expenses

Category	Estimated Cost
Reconstruction	US$1.3 billion
Households	US$533 million
Government entities	US$401 million
Relief	US$43 million

Source: National Recovery and Resilience Plan, 2018

The loss from the successive hurricanes saw revenues decline by approximately Naf 126.7 million and the GoSXM recorded a deficit. Moreover, following the 2017 hurricanes, a GDP decrease of 9.8 percent was projected (GoSXM, 2023). The Central Bank of Curacao and Sint Maarten projected that the economy of Sint Maarten would have grown by 0.6 percent in 2017 prior to the hurricane, and the government was projected to record a surplus of Naf 26.4 million on its 2016 budget. These realities underly the importance of designing and implementing DRF solutions that can respond effectively and efficiently after a disaster, minimising impacts.

2.2 Disaster Reserve Funds

Disaster reserve funds (DRFs) are an important part of an efficient risk-layering approach. They allow governments to retain risk as part of their budget but enable the pre-positioning of finance to facilitate rapid response in case of a shock, with clear pre-arranged processes and procedures for how the funds can be used.

A DRF can be established in different ways. In some countries the DRF is simply a contingency allocation in the budget with specific rules for how these funds will be used (Option 1 considered in this paper). In other countries, a DRF is established as a dedicated institution, either a government agency or a de facto semi-independent service agency (Options 2 and 3 respectively in this paper). In both cases, a DRF aims to improve disaster outcomes by (i) ensuring effective access to sufficient resources for disaster response; and (ii) streamlining execution and transparency of spending. DRFs can have multiple uses. They can:

- Fulfil key policy objectives by strengthening financial resilience and improving the financial management of disasters.
- Provide the government with readily available resources for post-disaster expenditure to enable emergency relief and response as well as long-term recovery, including rehabilitation and reconstruction.
- Complement other disaster risk financing approaches/instruments as part of the government's financial protection strategy, for example, they can facilitate effective risk transfer through the purchase of (re)insurance or other forms of risk transfer such as catastrophe bonds.
- Act in alignment with key processes and systems that enable the flow of funds to get to the point of need for effective recovery.
- Serve as a centre for promoting knowledge and building capacity on disaster risk financing within government, including to promote research and risk assessment.

Establishing a DRF generally involves three main components: establishing an operational framework, a policy framework, and a legal framework for the fund. There is no fixed format or sequence for developing these three components, this will vary depending on the country context. In reviewing the options available to the GoSXM to establish a DRF these core components have been considered and are discussed in the proceeding chapters (see Annex C for further information). For interest, 1 provides details of Jamaica's National Disaster Fund as an example DRF in the region.

Box 1: Jamaica's National Disaster Fund

Year established	1995 (under the Disaster Preparedness and Emergency Management Act, 1993) and subsequently re-defined under the 2015 National Disaster Management Act.
Mandate and legal structure	Establishment of the National Disaster Fund (NDF) was set out in the 2015 National Disaster Management Act (NDMA). The NDMA stipulates that funds are to be used for: Mitigation of disasters; The adoption and promotion of preventive and preparedness measures; Recovery or relief efforts in relation to the occurrence of a disaster in Jamaica.
Financial arrangements	As per the 2015 NDMA, the fund shall comprise: • Monies appropriated annually by Parliament; • An amount equivalent to 1% or such other prescribed percentage of the sum paid annually to each local authority as building fees; • Donations and grants as may be made by persons and organisations approved by the Minister; and • Other monies the Council may raise through activities organised by or on behalf of the Council. As per the NDMA, no money can be withdrawn from the Fund unless authorised by the Financial Secretary after consultation with the Fund Committee (details below). All monies credited to the Fund shall be kept in an account at such bank as the Financial Secretary may approve. Monies credited to the Fund may be invested in securities issued by the Bank of Jamaica or the Government of Jamaica and any interest or benefit received from such investment shall form part of the Fund. Since the NDMA was passed, the NDF has been funded through a budget allocation to the "contingencies fund". The contingencies fund is provided for in the Jamaican Constitution and was established under Section 13 of the Financial Administration and Audit Act. As at March 25th, 2019 the contingencies fund had a balance of US$95 million.
Operating framework	The NDMA stipulates that a Fund Committee shall be established and be responsible for the policy and general administration of the fund. The Fund Committee, acting in consultation with the Office of Disaster Preparedness and Emergency Management, is responsible for: • Determining the criteria to be applied in funding projects and programmes in relation to the mitigation of, prevention of, preparedness for, response to and recovery from emergencies and disasters; • Determining in consultation with the Minister responsible for social security, the criteria to be applied in providing financial assistance to persons for their relief and recovery from a disaster; • The keeping of proper books of accounts and other records; and • The preparation and submission of reports to the Minister relating to the administration of the Fund. The Chairman of the Fund Committee must, according to the NDMA, submit a report on the administration of the Fund within three months after the end of each financial year to the Director General (of the Office of Disaster Preparedness and Emergency Management). Work is underway to support operationalization of the NDF including definition of the objectives, institutional set-up, rules of accumulation and use, governance structure, investment directives and accountability and transparency frameworks for the Fund.
Links with disaster risk reduction measures	The Government of Jamaica's National Disaster Risk Policy sets out the mechanisms by which the country will develop fiscal resilience to natural disasters through designation of the NDF and build-up of a strong fiscal buffer, improved insurance of public assets and the incorporation of disaster risk analysis in public sector investments and planning. The Government has also taken steps to strengthen the country's disaster risk management, including production of the National Hazard-Risk Reduction Policy (2005) and the Building Code Bill (2013). The country's National Development Plan "Vision 2030 Jamaica" (2009-2030) also identifies disaster risk reduction and adaptation to climate change as a way to improve national mitigation and response and decrease risk vulnerabilities.
Sources of information/further reading	• Jamaica, National Disaster Risk Management Act, 2015: www.preventionweb.net/english/professional/policies/v.php?id=59576 • GFDRR, Jamaica: www.gfdrr.org/en/jamaica • Ministry of Finance and the Public Service: http://www.mof.gov.jm

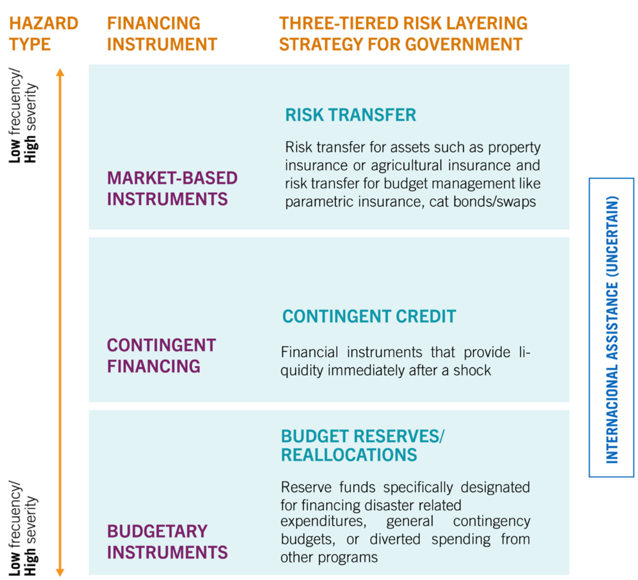
Source: World Bank, 2019

2.3 Sint Maarten's current risk financing approach

Designing and implementing a DRF should be part of a comprehensive Disaster Risk Financing Strategy. As illustrated in Figure 2, the liquidity of Disaster Reserve Funds means that they are best utilised for high frequency and low severity events. This complements other disaster risk financing instruments which the government has at its disposal.

Moreover, in assessing and designing a DRF capitalized by reflows from the Government's loans to the PJIA, it would be prudent to consider how it will align to other funds that are currently being designed i.e. the Calamity Fund and the Soualiga Fund. This is of particular importance to see how the instruments can be aligned to provide finance when it is needed most and to ensure that the instruments meet the needs of the GoSXM's DRF strategy. At present it is unclear how the proposed DRF fund will work alongside other planned/designed disaster funds.

Figure 2: DRF as part of a comprehensive disaster financing strategy



Source: World Bank

The GoSXM currently utilises several disaster risk financing instruments (see Table 5) and has developed a Disaster Risk Financing Strategy (2023-2027)[2] which seeks to "provide the government with a combination of financial instruments that will alleviate the fiscal burden throughout the various phase of hazard risk management of the public and private sectors".

The DRF strategy has three policy priorities including:

- Layered ex-ante and ex-post financial instruments to support preparedness, mitigation, response and recovery activities.
- Pre-planned mitigations to reduce the impact post disasters.
- Awareness of the level of exposure/risks and effects of hazards.

2 The DRF strategy has incorporated several recommendations from the 2023 DRF diagnostic document. In reviewing and drafting the next iteration the GoSXM may wish to consider other actions outlined in Annex D.

Table 5: Current, past and future disaster risk financing instruments

Risk retention instruments		Status
Contingent budget provision	SXM's MoF has budget lines related to DRM e.g. 'Nood Rampen', Emergency Disasters; and some line ministries also have disaster related budget lines e.g. Min VROMI for 'clean-up activities' post-disasters. Line items related to disaster management have increased since Hurricane Irma.	**Operational** – but there is not always an allocation to the budget line due to recent budget deficits.
Contingent reserve fund	GoSXM maintained a reserve fund up until 2010, with an allocation of ANG 250,000. The Executive Council approved payments from the fund, following an assessment of the total damages and costs from disasters. Options are now being assessed to establish a Disaster Reserve Fund.	**Ceased.**
Calamity Fund	This fund will be under the Minister of General Affairs and will be managed by the Fire Chief, who is the National Hazard Coordinator. The calamity fund will be used specifically for preparedness activities.	**Under Development -** the calamity fund is currently in draft form.
The Soualiga Fund (SF)	A draft legislation has been completed to establish this fund (indicated in the DRF strategy). Comments on the draft legislation by the assessment team have been included in Appendix E of this report. Developed in 2022 the DRF strategy notes that the SF is for use during the reconstruction phase and will be used to 'invest and accumulated financial reserves that can be used post hazards'. The fund is limited to specific aspects of recovery and reconstruction and will be managed by a self-governing entity.	**Under development**
Contingent line of credit	SXM, as an autonomous constituent county of the Netherlands, is not eligible for several existing contingent lines of credit e.g. World Bank CAT DDO or the Interamerican Development Bank's Contingent Credit Facility. Exploring how to establish this financial instrument could allow for funding of medium-to-high intensity natural disasters that would exhaust a reserve fund.	**Under discussion** to understand where and how GoSXM may be able to utilize such an instrument.
Budget reallocations and supplementary budgets	SXM has historically used budget reallocations and supplementary budgets to meet post-disaster needs. The DRF strategy further notes that standard operating procedures have been drafted on how the manage the budget during emergencies.	**Operational** – these are ongoing on an needs only basis.
International donor funding	Sint Maarten, as an overseas territory of the Kingdom of the Netherlands, has access to EU funding for emergency response, recovery and reconstruction projects.	**Operational -** These arrangements are expected to remain on a needs only basis.

Source: World Bank, 2023 and the GoSXM, 2023

Table 5.1: Current, past and future disaster risk financing instruments

Risk transfer instruments		Status
Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC)	SXM has purchased parametric tropical cyclone, earthquake and excess rainfall coverage through the CCRIF SPC since 2019. A risk transfer mechanism such as CCRIF is most cost-effective for medium-to-high severity events.	**Operational** – the GoSXM continues to purchase parametric insurance from CCRIF SPC.
Insurance of public and private sector	The GoSXM currently purchases insurance for some public assets e.g. schools and an Insurance Committee has been established to co-ordinate the procurement of public sector insurance. Insurance expenditure represents on average (2014-2021) 0.6% of the national budget. The Ministry of General Affairs maintains the public asset registry. As of 2021, 31 companies were licensed for local non-life business in both St Maarten and Curaçao, with only 4 being based in St Maarten. NAGICO (National General Insurance Corporation NV), together with companies Ennia and Fatum represent 90% of the insurance market in the Dutch Caribbean. According to the St. Maarten Insurance Brokers Association, the insured social and economic losses from Irma amount to a total of around USD 3 billion. Around USD 1.1 billion constituted just insured property losses, most of which were absorbed by the reinsurance portfolios in St Maarten. Premiums increased between 30% and 60% after this devastating hurricane season.	**Operational** – **f**but with limited cover. However scope to streamline the adoption and effectiveness of insurance instruments within the public sector and to ensure that the government and the insurance sector together to ensure effective coverage of intended beneficiaries.

Source: World Bank, 2023 and the GoSXM, 2023

3. Scope and purpose

This chapter presents what the scope and purpose of the DRF could be, following discussions with the GoSXM, and considers how this may be impacted depending on which option the GoSXM pursues in establishing the DRF.

Noting the potential size of the fund and needs, the GoSXM may want to consider expanding the scope of the DRF in phases (relief, medium and long-term investments) and prioritising expenditures (see Table 6 for a summary).

Table 6: Options analysis - scope and purpose

Analysis criteria	Option 1	Option 2	Option 3
Scope and purpose: "to manage the increasing financial impact of climate and disaster risk to prevent people from falling into poverty, to enable recovery of businesses and critical infrastructure"	Given that there is no ability to accrue and/or earn any returns under this option if this option is to be pursued it is recommended that the scope of the DRF is reduced.	Depending on the investment structure chosen this option should be able to meet the intended scope and purpose.	Depending on the investment structure chosen this option should be able to meet the intended scope and purpose.

3.1 Potential scope and purpose

Following consultations with the GoSXM, the expected purpose of the DRF is "to manage the increasing financial impact of climate and disaster risk to prevent people from falling into poverty, to enable recovery of businesses and critical infrastructure". This purpose is aligned with the GoSXM's Disaster Risk Financing Strategy and National Resilience and Recovery Plan. The intended beneficiaries of the DRF are expected to be households, government companies and businesses. The scope of the DRF was noted by the GoSXM to ideally include relief and medium and long-term investments.

In comparing the different Options to establish the DRF in relation to the proposed scope and purpose, it is recommended that the scope is reduced should Option 1 be pursued. This recommendation is made on the basis that should the DRF be established as a contingency allocation in the budget, with specific rules for how funds will be used, there will be no ability to accrue and/or earn any returns. As such, the amount of the DRF is unlikely to be able to meet the desired purpose and scope. In contrast, depending on the investment structure chosen for either Option 2 or Option 3, the intended purpose and scope are more likely to be able to be met.

Noting the potential size of the fund and needs, the GoSXM may want to consider expanding the scope of the DRF in phases (relief, medium and long-term investments) and prioritising expenditures. As outlined in Table 3 (section 2.1) reconstruction costs represented 61% of the total costs required after the 2017 hurricanes at an estimated cost of US$1.5 billion. Relief in contrast was 2% of total costs at US$43 million. Any overlap in the use of different funds should be avoided.

Analysis of past expenditure categories and spending units can provide additional information on defining the scope of the fund. Disaster-related expenditure can be tracked through the GoSXM's budget, however codes are not used consistently across ministries[3]. Analysis of the Government's 'calamity account' from 2016-2021 (US$68 million) provides some useful information on where funds are being spent (World Bank, 2023). Over this period, 94.3% of the total calamity budget was allocated to VROMI, followed by public health (3.1 percent), MECYS (2.5 percent) and TEATT, for COVID-19 measures (0.1 percent). VROMI is responsible for public works, transportation and logistics, pre-disaster mitigation and resilience and post-disaster relief and response. It is not responsible for reconstruction and rehabilitation.

3 *Disaster expenditure is traceable through approximately 14 codes and sub-codes.*

In definining the purpose and scope, the GoSXM should define which agencies or organisations can receive the funds or use the funds. For example, which line ministries and/or whether direct transfer and use of funds by service suppliers is allowable. Moreover, within each expenditure grouping the GoSXM should consider the types of eligible goods, works or services that the fund can be used to purchase, for example within reconstruction the rebuilding of low-income housing and rehabilitation of the natural environment.

Regardless of which Option is pursued to establish the DRF, the scope and purpose of the DRF will need to be clearly defined. In the procurement and selection of a fund manager (Option 3) it will be important to ensure that tender documents are clear in setting the expectations of the fund manager and the varied needs and stakeholders the fund will need to serve.

4. Tax and Legal Structure

This chapter considers how existing disaster risk mangement (DRM) and disaster risk financing laws and policies can support establishment and operation of the DRF, and tax and legal advice on the best way to establish a DRF domiciled in Sint Maarten.

Establishment of a DRF should take into consideration exisiting DRM and disaster risk financing-related legislation: National Ordinance on Disaster Risk Reduction, 2010 Constitution, National Accountability Ordinance and the Consensus Kingdom Law on Financial Supervision for Curaçao and Sint Maarten. Table 7 provides a summary of the analysis.

Table 7: Options analysis – tax and legal structure

Analysis criteria	Option 1	Option 2	Option 3
Tax and legal structure	Establishing the DRF as a continency allocation would require an annual appropriation in the budget under the entity responsible for its management.	From a legal perspective, the process of establishment is likely to be lengthy and will require strong engagement from a range of different stakeholders. Setting up a DRF as a dedicated government agency would involve creating the DRF as an Independent Administrative Agency (IAA) through an ordinance. From a tax perspective, pursuing Option 2 though creation of an IAA offers the highest level of certainty.	From a legal perspective this is likely to be more straightforward and quick in comparison to Option 2. Setting up the DRF as a private limited company (B.V), public limited company (N.V). or foundation is most advisable. However, following refinement of the exact scope and purpose of the DRF, discussions with relevant authorities are necessary to secure certainty on certain tax aspects to ensure that it remains the most advantageous route to take.

4.1 Existing DRM and disaster risk financing legislative framework

Establishment of a DRF should be in line with existing legislation related to disaster risk management and disaster risk financing. This section outlines what existing legislation is known to be in place in Sint Maarten and highlights where considerations should be made to ensure the successful establishment of a DRF.

The National Ordinance Disaster Risk Reduction (Landsverordening Rampenbestrijding: AB 2013, GT no. 7 - AB 2015, no. 9), passed in 2000, contains details on what must be done to prepare for and how to respond to disasters. Article 2 states that the Minister of General Affairs has the responsibility for disaster prevention. Article 8 further stipulates that the Minister of General Affairs has the supreme command in the event of a disaster or serious fear of its occurrence and is to evaluate the disaster within six months of its occurrence and inform the Parliament on the results of the evaluation. Noting these responsibilities, unless stated in separate legislation, establishment of a DRF would need to come under the purview of the Minister of General Affairs.

Article 3 of the National Ordinance Disaster Risk Reduction further notes that a Disaster Management Plan should be established. A Disaster Management Plan was established by National Decree (Rampenplan Sint Maarten: AB 2013, GT no. 150). Sub-plans are then to be prepared by small, specialized teams, called the ESF groups, in consultation with the fire department and the disaster response coordinator; the operational leader is the head of the fire department unless otherwise indicated by the Minister of General Affairs. The costs arising from the tasks of the EFS groups are then noted to be financed from the budget of the responsible service or sector. Article 3 of the National Ordinance Disaster Risk Reduction further stipulates that the Disaster Management Plan is to be aligned with the contingency plan of the Collectivité de Saint-Martin and is to be updated on an annual basis. In establishing the DRF, regardless of which Option is pursued, it would be prudent to ensure that the scope and purpose of the fund is aligned with the Diaster Management Plan(s) and to clearly specify if the tasks of the EFS groups are within the scope of funding by the DRF.

In relation to disaster risk financing, there are three main legislative instruments that provide a PFM framework in which DRF can be operationalized by the GoSXM. These are the 2010 Constitution of Sint Maarten, National Accountability Ordinance (NAO) of 2010 (Comptabiliteitslandsverordening), and the Consensus Kingdom Law on Financial Supervision for Curaçao and Sint Maarten. Establishment and operationalisation of a Disaster Reserve Fund should be informed by these key documents.

Sections of the Constitution, relevant for establishment of the DRF include the function of the Council of Advice which would review a new national ordinance, and the right of the General Audit Chamber to conduct due diligence on GoSXM revenue and expenditures. Article 100 defines the process for approving the annual budget, including that post-disaster expenditures should be managed and planned for. Establishment of a fund appears to be in-line with this sentient in the Constitution.

The Consensus Kingdom Law on Financial Supervision for Curaçao and Sint Maarten only allows borrowing for capital investments (Article 102). As the DRF will be capitalized by the expected reflows from the Government's loans to PJIA, this law is likely to apply and should be considered when defining the scope and purpose of the DRF. The Consensus Kingdom Law further notes that the annual budget and long-term budget shall be balanced, but exception options are allowable due to extraordinary events, including disasters (Article 25). Again, this is an important point to note should the DRF fund be in-part financed by public revenue, expenditure post disasters is allowable to move away from a balanced overall budget.

The NAO establishes the parameters under which budgeting and public procurement takes place within the GoSXM. This document is of relevance to the DRF as it sets out how central government and state-owned enterprises are to operate regarding their respective financial operations and preparation of standard financial documentation, including annual financial statements. Moreover, the NAO sets out guidance on procurement procedures, which unless legislated differently, the DRF would have to adhere to.[4] Lastly, relief items, financial and technical support received by development partners and NGOs are not legally required to be accounted for the budget. Should the DRF receive funding from these actors there is no legal requirement for the amount to be recorded in the budget, however good practice is for these amounts to be recorded in the budget and accounted for.

4.2 Tax and legal considerations in establishing the DRF

Establishing the DRF as a continency allocation in the budget (Option 1) would require an annual appropriation in the budget under the entity responsible for its management. This would follow existing budget preparation processes and would need to be approved by Parliament annually.

There are several different ways of establishing a DRF under Option 2 and 3. Taxxa and Lexwell were engaged by the World Bank to provide tax and legal advice on the best way to establish a DRF domiciled in Sint Maarten. Taxxa provided guidance on Option 2 (DRF set up as a dedicated government agency) and Option 3 (DRF established as a fully independent entity). In conducting the analysis, the following assumptions were made:

4 Public tender is not required for goods and services procurement that does not exceed US$28,000 (ANG 50,000). Similarly, no public tender is required for works procurement that does not exceed US$84.000 (ANG 150,000). There is an implicit emergency procurement clause.

- The analysis primarily considered Profit Tax, Turnover Tax, Payroll Tax and Succession Tax.
- Funds will be distributed to the Government and not to any arbitrary third party (entity or natural person[5]). The Government will then allocate funds accordingly.
- Further discussions will need to take place with the GoSXM and relevant tax authorities prior to establishment depending on the exact scope and purpose of the DRF.

Having considered the two options, from a legal perspective, it can be concluded that Option 3 is likely to be the most straightforward and quick way to establish a DRF in Sint Maarten. Setting up the DRF as a private limited company (B.V.), public limited company (N.V.) or foundation is most advisable. The decision on the optimal structure hinges on balancing operational efficiency, legal compliance, and financial management. Following refinement of the exact scope and purpose of the DRF, discussions with relevant authorities post-establishment are necessary to secure certainty on certain tax aspects to ensure that it remains an advantageous route to take.

From a purely tax perspective, pursuing Option 2 by creating the DRF as an Independent Administrative Agency (IAA) incorporated through an ordinance offers the highest level of certainty. From a legal perspective, however, the process of establishment is likely to be lengthy and will require strong engagement from a range of different stakeholders.

Option 2: DRF set up as a dedicated government agency.

Setting up the DRF as a dedicated government agency institution would involve creating the DRF as an IAA, incorporated through an ordinance[6]. IAAs are entities entrusted with an administrative responsibility or public task and authority established by law. Box 2 provides an overview of the 15-step ordinance process. The complexity and involvement of various stakeholders makes it a lengthy process – from several months to potentially extending over several years. There is also the possibility of deadlock if consensus is not achieved among involved parties.

During the legislative process to establish the IAA, stakeholders would typically negotiate and agree upon provisions regarding the IAA's tax treatment. It is not uncommon for tax exemptions to be included in the ordinance at the outset of creating an IAA. An IAA is generally not subject to Profit Tax as it is not listed in the article covering the entities which are subject to Profit Tax. Payroll Tax resulting from employment however remains applicable.

Overall, this option guarantees tax certainty as negotiations of tax provisions would be made during the legislative process. However, the complex nature of the ordinance process necessitates meticulous coordination among stakeholders. This may hinder the speed with which the DRF can be established.

Box 2: Ordinance process

1. **Drafting Process –** The relevant minister may ask for input from interested stakeholders on the draft of the ordinance.
2. **Submission Council of Ministers –** Once a final draft is available, the relevant minister submits the draft ordinance to the Council of Ministers for approval.
3. **Council of Advice –** Once approval from the Council of Ministers is obtained, the draft ordinance will be sent to the Council of Advice through the Governor. The Council of Advice will then review the draft ordinance and render advice on the draft.
4. **Amendments Ordinance –** The relevant minister reviews the advice given by the Council of Advice and will make any amendments if necessary.
5. **Re-submission Council of Ministers –** The relevant minister will then resubmit the amended version of the ordinance

5 For instance, should natural persons resident in Sint Maarten (as opposed to government entities) receive money through the fund it would be important to clarify if income tax of up to 47.5% would apply on funds received.

6 Examples of IAAs currently in existence in Sint Maarten includes the Integrity Chamber, the National Reconstruction Program Bureau, the Central Bank of Curaçao and Sint Maarten and the Social and Health Insurance Implementation Agency.

to the Council of Ministers for approval to be sent to Parliament.

6. **Submission to Parliament** – If the Council of Ministers approves the draft ordinance, the Governor will send it to Parliament.
7. **Discussion Central Committee** – The Central Committee will then discuss the draft ordinance during a meeting without the relevant minister present. A report with their findings will be made and sent to all the Government (including the relevant minister) with questions and comments on the draft.
8. **Memorandum of Modification** – The other ministers will then have the opportunity to suggest amendments through one or more memorandums of modification.
9. **Discussion Parliament** – The draft ordinance is then discussed in a public meeting of Parliament in which the relevant minister is present.
10. **Amendments Parliament** – Members of Parliament may then submit any suggested amendments. The relevant minister will make the necessary amendments and prepare a final draft.
11. **Voting** – Parliament will then vote on the ordinance.
12. **Approved** – If the ordinance is endorsed by Parliament, a notification will be sent to the Governor confirming the approval. The Governor and the relevant minister will subsequently ratify the ordinance by signing the ordinance.
13. **Ombudsman** – The Ombudsman has the right to submit a written request to the Constitutional Court to assess the compatibility of an enacted but not yet in force ordinance with the Constitution within six weeks of the enactment of the legal regulation. The relevant ordinance cannot enter into force before a judgment of the Constitutional Court is available.
14. **Publication** – The newly adopted ordinance will be published in the National Gazette, allowing the public to take notice of its provision
15. **Entry into force** – The effective date of implementation is specified within the ordinace itself but also after publication.

Option 3: DRF established as a fully independent entity

Establishment of the DRF as a fully independent entity could be done in three different ways. These are:

1. As a private limited company (B.V.), public limited company (N.V.), or foundation.
2. Through the coexistence of a Private Fund Foundation (PFF) alongside an operating N.V. or B.V. The PFF holds the funds to establish bankruptcy protection from the operating entity; the N.V. or B.V. operates the entity.
3. Through the introduction of a limited partnership arrangment where a PFF assumes the rols of the limited partner, alongside an operating entity (N.V. or B.V.)

The first way (as a B.V., N.V., or foundation) is the quickest legal path, balancing operational efficiency, legal compliance and financial management. It is also a conventional approach, evidenced by existing state-owned enterprises such as the Airport. Once incorporation of the entity has taken place, the entity must be registered with the Chamber of Commerce and a CRIB number must be requested for tax purposes. If established as a foundation any distribution from the fund would be restricted to being only for a charitable or social purpose.

In relation to possible Profit Tax and TOT implications, the anticipated inflows resulting from the Government's loan extended to Princess Juliana International Airport is, in principle – as an injection by the shareholder - not considered as a taxable event for Profit Tax purposes. According to case law, should the DRF be set up as a foundation, it is not the intention of the legislator to tax the profits of foundations that exclusively pursue a general social interest. In relation to TOT tax, it is expected that no TOT will be due (on the assumption of the expected types of transactions) but discussions with the relevant governmental authorities post-establishment would be crucial for tax certainty. Moreover, there could be scope to include bespoke tax exemptions tailored to the profit streams generated by the DRF; this process could however be lengthy.

The second way of establishing a DRF as an independent entity brings in the option of having a PFF to hold the funds, establishing bankruptcy protection from the operating entity (N.V. or B.V.). The PFF has assets and liabilities in its name and can make distributions to incorporators or others (which a 'normal' foundation cannot do). The PFF is incorporated by means of a deed of incorporation executed by a notary. Beneficiaries of distributions from the PFF can – but are not required to – be appointed in the articles of association. This form of establishment is however not common practice; a PFF is typically used by the private sector rather than by government. Moreover, should this form of establishment be pursued there is a need to seek confirmation on tax liabilities from the relevant government authorities.

The last option investigated when establishing a DRF as an independent entity considers the inclusion of a limited partnership arrangement where a PFF assumes the roles of the limited partner, alongside the operating entity (N.V. or B.V.). A limited partnership, with no legal personality, can be formed through a private contract or notarial deed. Both partners have to contribute something. In the case of the DRF, the operating N.V. or B.V. will manage the DRF and the PFF will provide the funds for the DRF. The silent partner (PFF) does not share in the losses of the partnership beyond the amount contributed and it is excluded from the authority to perform legal transactions on behalf of the limited partnership. In this set-up there are no separate corporate bodies such as a Board, General Meeting or Supervisory Board and it is therefore crucial to make additional governance measures such as agreements and protocols to ensure the security of the fund, and clauses to prevent their transfer without adhering to corporate governance principles. The managing partner (N.V. or B.V) is required to prepare annual financial statements within eight months after the close of each financial year. Should the GoSXM pursue this option, it is recommended that the N.V or B.V represents the limited partnership in all commercial transactions to ensure that the PFF does not lose its tax-exempt status[7].

7 Book 2 of the Civil Code states that a PFF's purpose clause may not involve profit pursuit through business activities; thus, if a PFF engages in such activities, it will lose its profit tax-exempt status.

5. Governance

This chapter considers questions related to governance, reporting and access to funding. Table 8 provides a summary of the analysis.

Table 8: Options analysis – governance

Analysis criteria	Option 1	Option 2	Option 3
Governance	If established as a contingency allocation in the budget, the GoSXM would have to draw up specific rules for how funds would be used and governed. Reporting would be in line with existing PFM legislation.	If established as an IAA, the DRF's powers, administrative and governance arrangements would be outlined in the relevant ordinance.	The deed of incorporation, containing the articles of association, would outline the rules and regulations governing the entity's structure and conduct of affairs

5.1 DRF governance and reporting

If established as a contingency allocation in the budget (Option 1), the GoSXM would have to devise specific rules for how funds will be governed, used, and reported. Reporting would align to existing government accounting, audit or acquittal legislation or processes.

For Option 2, if established as an IAA, the DRF's powers, administrative and governance arrangements including reporting would be outlined in the relevant ordinance; Book 2 of the Civil Code does not apply. Book 2 of the Civil Code of Sint Maarten contains provisions covering the formation, rights, obligations, governance, dissolution, and other legal aspects of various legal entities within the jurisdiction. Alongside the ordinance detailed standards operating procedures would need to drafted to support the day-to-day affairs of the DRF. The ordinance may set out operationalisation of a Board to support effective governance of the DRF.

For Option 3, the deed of incorporation, containing the articles of association, would outline the rules and regulations governing the entity's structure and conduct of affairs. If established as a foundation, the DRF would lack members, shareholders or a capital structure divided into shares. It would be established by means of a deed of incorporation executed by a notary which would set out its purpose and governance structure.

If established as either a N.V. or B.V a Board of Managing Directors would manage the day-to-day affairs of the DRF. The Articles of Association may outline specific requirements regarding the individual Directors. For instance, the articles of association could stipulate that potential Board members are nominated by the Council of Ministers and/or the Minister of Finance. A Supervisory Board (in line with Art. 2:19 Civil Code) may also be established to advise and supervise the Board of Directors. For a foundation, a Board comprising one of more members, would oversee management of the entity. The corporate governance ordinance and corporate governance code provides additional rules for the corporate governance of N.V.'s, B.V.'s, and foundations and should be reviewed should the Government of SXM wish to establish the DRF through this mechanism.

Each year the Board of an N.V. or B.V. has to draw up financial statements within eight months after the lapse of the financial year.[8] The financial statements must comply with generally acceptable standards and be in compliance with the Corporate Governance Code. If established as a foundation, within eight months after the close of each financial year, the Board must prepare and approve a comprehensive annual report which should include financial statements. To ensure accountability, the annual report and financial statements are public documents which must be published online and

8 If the N.V. constitutes as 'large' e.g. net turnover of more than ANG 10 million, annual accounts must be drawn up by the Board within six months instead of eight and an external expert should be engaged to review the annual accounts.

submitted to the Chamber of Commerce and Industry and the Reporting Unusual Transactions Office within one week after all Board members have signed them.

If the DRF is established in this way, there would be a need for specific arrangements between the GoSXM, the tax authorities and the N.V, B.V. or foundation to be documented in an agreement. Provisions from the Ordinance on Disaster Management, the Disaster Plan Sint Maarten and the National Ordinance State of Emergency documents could be a good starting point, alongside a review of other state-owned entities. Under this structure there is scope, if requested, to delegate directorial functions to a specialised fund management company. In order to retain control and quality this is best done through procuring through competition and then engaging a specialized entity through an agreement rather than appointing it as the Board of the operating entity. If this approach is taken, it would be important to specify what autonomy the fund specialist would have and when Board approval would be needed.

Reporting, transparency and accountability should be a priority in fund execution, and in designing the DRF it would be prudent to ensure that activities are carefully monitored and publicly reported. The financial reporting and audit requirements related to operations of the DRF should be clearly outlined (including reporting requirements by whom, what type of financial documentation needs to be maintained, financial statements, receipts, etc). The frequency of reporting required should also be specified, e.g. quarterly, annual, and align to existing government accounting, audit or acquittal legislation or processes in relation to options 1 and 2. For Option 3, reporting should also ideally be in line with government legislation in order to report on extrabudgetary activities in a timely and accurate manner. The GoSXM may also wish to request regular submissions of progress reports from contractors and service suppliers implementing the activities financed by the fund. Reporting requirements from any fund managers should be included in their contract.

A specialized coordination unit – either within MoF, a SoE, or fund manager – could be mandated to keep track of all expenditures from the fund and associated emergency response and reconstruction activities (i.e. responsible for monitoring and evaluation). Such a unit can help ensure an appropriate allocation of fund resources and recording/tracking of expenditures to line ministries, service providers, or beneficiaries (e.g. through electronic payment systems and record keeping). The unit can also be responsible for technical inspections of reconstructed infrastructure, assess the benefits of expenditures, etc.

5.2 Access to funding

Regardless of which option is selected as part of good governance it will be important to develop (and publish) priorities that set clear guidelines and definitions on what the fund will finance, for example the type of disaster event, scale of disaster, types of expenditures, eligible goods and services to be purchased with funds, who will manage and operate the fund, and whether it is on budget or off-budget.

The DRF should also have a clearly defined step-by-step process for the disbursement of funds, including activities/tasks to compete, responsibility and timelines. The processes for accessing the fund can be tailored depending on the category of fund use. For example, for emergency response uses a more streamlined approval process for rapid release of funds should be considered. In relation to pay-out criteria, it was agreed that the fund could make disbursements based on three triggers as follows:

- **Parametric trigger:** upon the occurrence of events of a pre-agreed magnitude.
- **Statement of Emergency:** upon the GoSXM issuing a statement of emergency.
- **Kingdom Council agrees a disaster:** upon the agreement of a disaster.

Following these triggers, disbursements from the DRF would be based on either an initial assessment of the disaster impact immediately after the event for emergency relief uses, or a more detailed assessment some weeks later (e.g. post disaster needs assessment) for reconstruction uses. For any of the options selected it is advisable to develop a process to then check proposed expenditures from the fund are suitable, and linked to the scope of use.

6. Financing and sustainability

Financing and sustainability is the fourth criteria, with associated questions, that has been considered in assessing options to establish a DRF in Sint Maarten[9]. This chapter discusses the repayment terms of the GoSXM's loans to the PJIA, potential options to capitalize the fund at the outset, and the potential cost savings in using a proportion of the fund to purchase disaster insurance from CCRIF. It concludes with recommendations on further questions which should be explored during the implementation phase.

If the DRF is built up from the loan repayments, then the GoSXM faces the risk of not being able to respond to a major disaster for several years, regardless of the repayment terms. It is therefore recommended that the GoSXM both i) continues with the purchase of disaster insurance from CCRIF SPC; and ii) seeks to fully capitalize the DRF by 2028 based on the anticipated loan repayment schedule. A summary of the analysis is contained in Table 9.

Table 9: Options analysis – financing and sustainability

Analysis criteria	Option 1	Option 2	Option 3
Scope and purpose: "to manage the increasing financial impact of climate and disaster risk to prevent people from falling into poverty, to enable recovery of businesses and critical infrastructure"	• Lowest operating costs. • The DRF needs to have the capacity to receive and manage additional funds beyond the initial capitalization and to invest and accrue funds quickly. It is not clear that this experience and expertise is held within a line ministry who would hold the contingency budget line and is this is allowable within existing PFM legislation.	• Middle option in relation to operating costs. • The GoSXM will need to invest and accrue funds quickly for the long-term sustainability of the fund. At this point in time it is not clear that this experience and expertise is held within an existing governemnt agency. • The DRF needs to have the capacity to receive and manage additional funds beyond the initial capitalization. This requirement should be considered in the procurement phase when selecting a suitable SOE.	• Middle option in relation to operating costs. • The GoSXM will need to invest and accrue funds quickly for the long-term sustainability of the fund. At this point in time it is not clear that this experience and expertise is held within an existing governemnt agency. • The DRF needs to have the capacity to receive and manage additional funds beyond the initial capitalization. This requirement should be considered in the procurement phase when selecting a suitable SOE.

6.1 Principal and interest of the GoSXM's loans to the PJIA

As a matter of priority, the GoSXM should clarify the amount to be repaid by the PJIA. During consultations throughout this work different amounts for repayment were provided, both US$80 million and US$90 million were cited as the outstanding principal amounts of the loan from the GoSXM and PJIA.

Due consideration needs to be given to the amount of interest to be applied to the outstanding loan. There is a need to balance affordability of the loan repayments from the PJIA and the current high interest environment. Further, it should be noted that normal practice sees interest applied from the moment a loan is issued until the principal is repaid. With the repayments expected to commence in 2028, an agreement must be reached on whether interest is also due on the initial loan amount from 2019. The tool provided to GoSXM along with this report allows the GoSXM to consider the various options to understand the potential size of the DRF relative to the potential losses from disasters. Three alternative options are highlighted in Table 10.

9 An excel-based tool has been developed and provided to the GoSXM along with this report to facilitate internal discussion for key decisions that must be made in the set up and design of the DRF. The financial analysis presented in this chapter is based on a set of assumptions regarding various aspects of the DRF, although the tool allows for a variety of different inputs to be considered.

All options shown in Table 10 assume the initial loan amount was US$80m, although this is variable in the accompanying Excel-based tool provided. Options 1 and 2 assume that back-dated interest over 2019-2027 will not apply, whereas option 3 assumes backdated interest will apply at the current World Bank interest rate of 2.634%. The interest rates for the remainder of the 15-year term of loan are as follows:

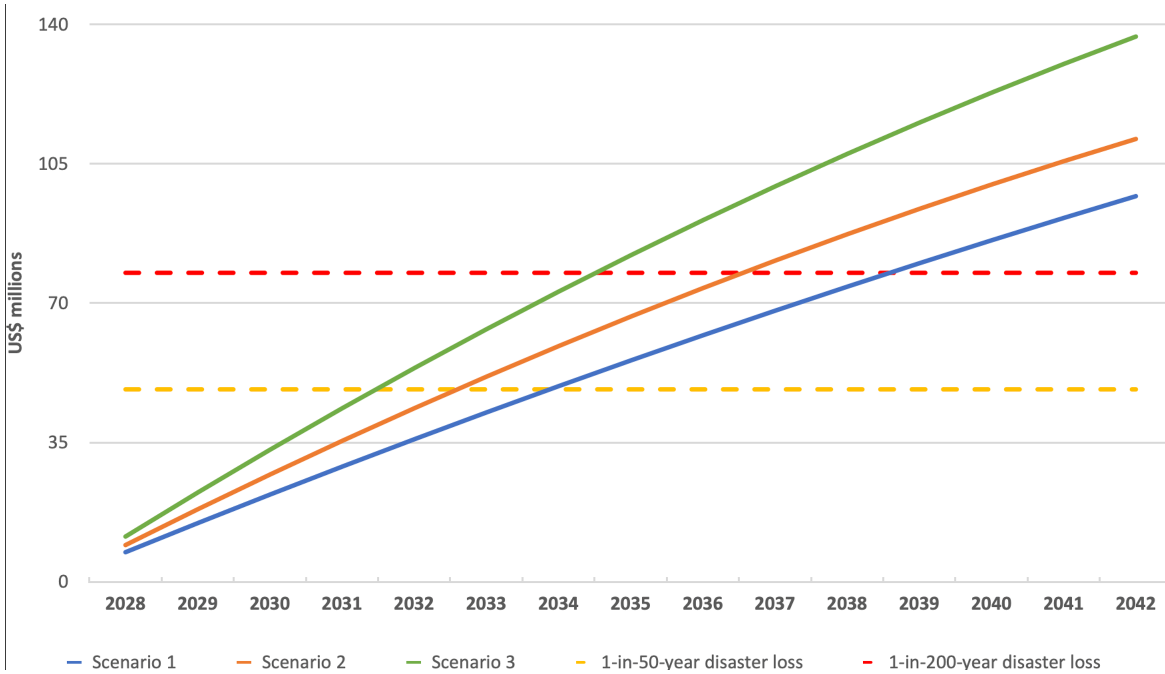
- Option 1 assumes the same rate of interest of 2.634%.
- Option 2 assumes the interest rate applied to the loan is 4.879%, equal to the highest rate currently charged by the European Investment Bank (EIB).
- Option 3 is the same as option 2 and assumes the interest rate applied to the loan is 4.879%.

Table 10: Potential repayment terms of loans to the PJIA

Potential repayment terms			
	Option 1	**Option 2**	**Option 3**
Total initial loan amount (US$)	$80,000,000	$80,000,000	$80,000,000
Repayment to include back-dated interest from 2019-2027	No	No	Yes
Interest rate for back-dated interest	-	-	2.634%
Loan to be repaid starting 2028 (US$)	$80,000,000	$80,000,000	$98,496,325
Annual interest rate starting 2028	2.634%	4.879%	4.879%

The cumulative repayments over time for each option are shown in Figure 3 below. The total loan repayments are indicated for each option, with a comparison to a 1-in-100-year loss to the GoSXM as estimated by CCRIF SPC (that is the loss to GoSXM expected to occur with annual probability of 1%).

Figure 3: Potential loan repayments compared to a 1-in-100 year disaster loss to the GoSXM



Source: CCRIF SPC

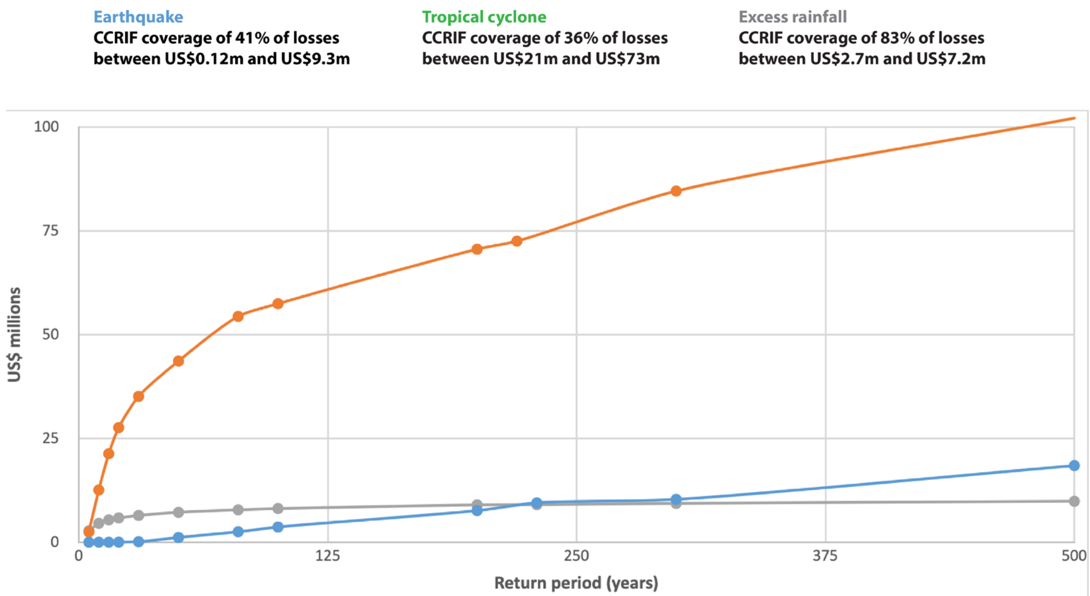
Option 3 which includes back-dated interest from 2019-2027 and the highest EIB interest rate from 2028 onwards allows for the DRF to be built up to cover a 1-in-100-year loss by 2032, while Option 1 with no back-dated interest and the lower World Bank interest rate ovf 2.634% requires an additional 4 years of repayments to 2036 before the DRF could withstand a disaster loss of this magnitude.

One clear observation is that if the DRF is built up from the loan repayments, then GoSXM faces the risk of not being able to respond to a major disaster for several years, regardless of the repayment terms. It is therefore recommended that the GoSXM both i) continues with the purchase of disaster insurance from CCRIF SPC; and ii) seek the capitalize the DRF by 2028 based on the anticipated loan repayment schedule.

6.2 Potential disaster losses to GoSXM and insurance protection through CCRIF SPC

The analysis presented in this chapter and the tool provided to the GoSXM is based on the potential disaster losses from Tropical Cyclone (TC), Earthquake (EQ) and Excess Rainfall (XSR) risks, with losses based on the stochastic event of the CCRIF SPC models from the 2022-23 policy year. The CCRIF policies used in this analysis are therefore the policies held by Sint Martin in 2022-23, as illustrated in Figure 4 below.

Figure 4: Risk profile for tropical cyclones, earthquakes and excess rainfall)



Source: CCRIF SPC

Between the 2022/23 and 2023/24 policy years there were minimal changes to GoSXM's policies, with the attachment and exhaustion points maintained in terms of return period. A covison of GoSXM policies with CCRIF SPC for the 2022/23 policy year compared to 2023/24 is provided in Table 11. Each year CCRIF SPC consider whether updates are required to their catastrophe models to ensure they remain representative of the risk faced by their member countries, and countries are also presented with an opportunity to change the parameters of their policies to ensure they continue to meet their needs and objectives. There were updates to both the TC and XSR models in 2023, resulting in the changes in the equivalent $ value of the attachment and exhaustion points, which also resulted in a slight increase in the overall coverage for both TC and XSR.

As the coverage limits for Sint Maarten are very similar between the 2022/23 and 2023/24 policy years, it is appropriate to use the model output and corresponding policies from either 2022/23 or 2023/24 as the basis of the financial analysis.

Table 11: Comparison of GoSXM's CCRIF policies

Policy	Attach (US$)	Attach (yrs)	Exhaust (US$)	Exhaust (yrs)	Full Loss Limit US$	Coverage Limit	Ceding%
TC 2022/23	$21,390,000	15	$72,800,000	220	$51,410,000	$18,456,190	35.90%
TC 2023/24	$7,266,000	15	$70,251,296	250	$62,985,296	$20,700,109	32.86%
EQ 2022/23	$121,000	30	$9,410,626	230	$9,289,626	$3,850,558	41.45%
EQ 2023/24	$121,000	30	$9,410,626	230	$9,289,626	$3,850,404	41.45%
XSR 2022/23	$2,732,682	5	$7,200,739	50	$4,468,057	$3,711,133	83.06%
XSR 2023/24	$5,003,000	5	$11,470,000	50	$6,467,000	$3,941,019	60.94%

Source: CCRIF SPC

6.3 Initial capitalization of the DRF

To provide the GoSXM with financial protection against disaster losses immediately, the DRF is expected to be capitalized in anticipation of the expected repayments from the PJIA. Two possibilities are considered to achieve this:

1. **The Government of the Netherlands could provide a new loan to GoSXM, in anticipation of the loan repayments from PJIA. Such a loan from the Government of the Netherlands would not necessarily have to be on the same terms as the loan made from GoSXM to PJIA.** However, as the repayment terms of the initial loan are still to be determined, it would be most efficient to include the Government of the Netherlands in those discussions, and agree on a loan structure that is amenable to all parties. Should an agreement be met, the Government of Netherlands could capitalize the DRF, and PJIA could make the loan repayments directly to Government of Netherlands without having to go through GoSXM.If the Government of the Netherlands do agree to provide a loan to GoSXM on the same terms as the loan made to PJIA, then the amount provided to capitalize the DRF will be equal to the amount of the initial loan.
2. **Securitization of the loan repayment schedule can allow the GoSXM to effectively 'sell' the loan in the financial markets to investors.** This option would be undertaken by the GoSXM, although it may be possible for the Government of Netherlands to provide a guarantee to investors, thereby reducing the counterparty risk associated with the GoSXM and/or PJIA, which would help to reduce the amount of compensation that investors would require.

Three options are presented for discussion here and demonstrate clearly the impact that the selection of the interest rate will have on any loan or securitization arrangements. Under option 2 it is assumed that investors will require the current market interest rate, taking into account compensation for the risk of default on the original loan, which would result in the initial capitalization of the DRF being lower than option 1. The tool provided to GoSXM along with this report allows for a variety of interest rates to be considered, which may be higher or lower than the agreed terms of the original loan to PJIA. Table 12 provides three options, consistent with the loan repayment terms indicated in Table 10.

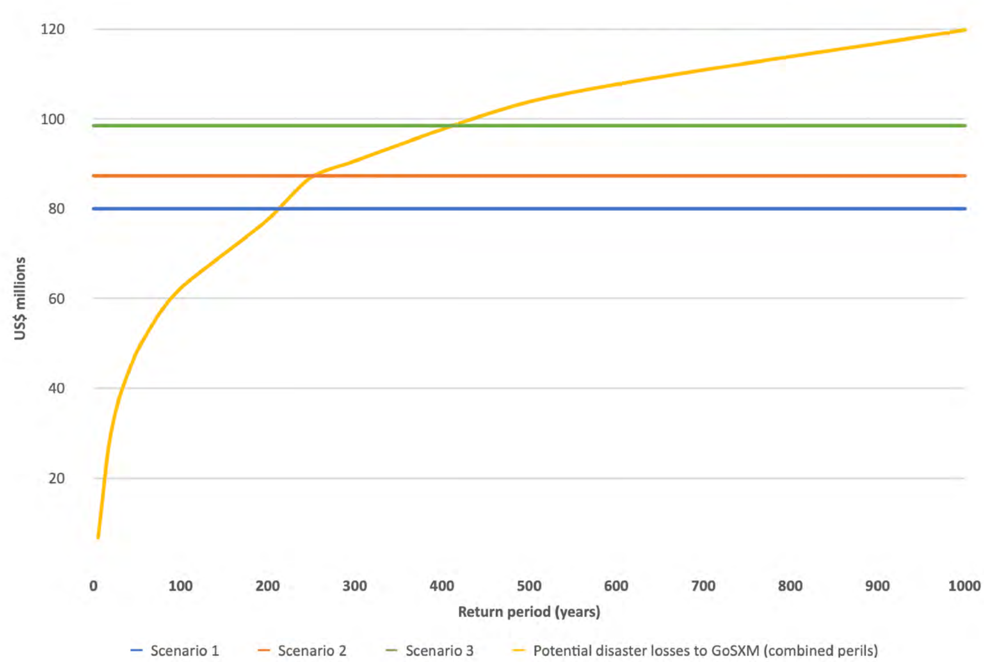
The capitalization of the DRF in 2028 is equal to the size of the initial loan amount plus backdated interest, if applicable, and varies between approximately US$80 million to US$98 million depending on the interest rate applied. For each option the total loan repayments made by the end of the loan term are determined by the repayment terms as indicated in Table 10. The capitalization of the DRF in 2028 is based on the net present value of the loan repayment schedule, at the interest rate indicated in Table 12. For options 1 and 3 the interest rate is set exactly equal to the interest rate of the original loan, meaning that the capitalization of the DRF in 2028 is equal to the size of the initial loan amount plus backdated interest where applicable. As a comparison, Option 2 has a lower interest rate (3.5%) than the original repayment terms (4.879%), meaning the capitalization of the DRF at the outset is higher than the original loan amount.

Table 12: Potential capitalization options

Potential capitalization options			
	Option 1	**Option 2**	**Option 3**
Total initial loan amount (US$)	$80,000,000	$80,000,000	$80,000,000
Loan to be repaid with backdated interest (US$)	$80,000,000	$80,000,000	$103,753,448
Total repayments made by end of loan term (US$)	$96,857,600	$111,225,600	$136, 941, 411
Interest rate for either a loan from Gov. of Netherlands or securitization of the loan repayments	2.634%	3.5%	4.879%
Capitalization of DRF in 2028 (US$)	$80,000,000	$87,318,081	$98, 496, 325

The analysis finds that with initial capitalization of $80m or greater, the DRF could withstand up to a 1-in-200-year loss on an annual basis, which is equal to a probability of exhaustion of 0.5%. While this suggests a DRF of this size is appropriate for the disaster risks faced by Sint Maarten, the potential losses to the GoSXM indicated in the graph are emergency relief costs only. The total losses from a major disaster are expected to be far higher, as evidenced by hurricanes Irma and Maria. Figure 4 compares the capitalization amounts under each option with the potential disaster losses as calculated by CCRIF SPC (all perils combined).

Figure 5: Potential starting capital amounts of the DRF as compared to potential disaster losses (combined perils)



Source: World Bank

Further, experience has shown that it is possible for Sint Maarten to suffer several disasters in a relatively short time-frame. The 0.5% probability of exhaustion indicated above is an annual probability based on the starting capitalization of the DRF. To understand the long-term sustainability of the fund a more detailed analysis is required, which considers the projected balance of the DRF over several years, allowing for the possibility of a sequence of disaster events during the projection period. This analysis is presented in Section 6.6.

6.4 Investment strategy

Assuming the DRF is capitalized prior to 2028 through either of the options outlined above, the GoSXM will have the opportunity to invest a proportion of the funds to generate positive investment income. Given the objective of the DRF is to finance immediate relief activities, a significant proportion must be held in cash or near-cash instruments which attract a relatively low rate of interest. The remainder of the funds may be invested in fixed interest assets such as treasury bills or corporate bonds, or in equities.

Assuming that the DRF should hold sufficient cash to finance a 1-in-30-year event, this results in a cash requirement of approximately US$40m if no insurance is purchased, i.e. 50% of the DRF if the starting value is US$80m. The potential disaster losses funded by the DRF should be used as a guide for the amount held as cash. The tool provided to the GoSXM allows for an estimation of the cash requirement based on disaster losses of a selected return period.

v As the disaster insurance policies issued by CCRIF SPC are designed to provide a rapid payout in the event of a disaster, the DRF can hold a lower proportion of the fund as cash, depending on its risk appetite, but finance the same response costs as in the case without insurance protection. The purchase of insurance also allows the DRF to take on more investment risk to generate greater average investment returns. Table 13 provides a basic suggested investment strategy for the DRF, assuming initial capitalization of US$80m, with and without insurance.

Table 13: Basic suggested investment strategy for the DRF

Basic suggested investment strategy for the DRF		
	Without insurance	**With insurance**
Capitalization of DRF in 2028 (US$)	$80,000,000	$80,000,000
Cash reserves required to finance a 1-in-30 year loss (US$)	$40,000,000	$32,000,000
Cash reserves as % of starting balance	50%	40%
Invested in bonds	50%	30%
Invested in equities	0%	30%
Assumed average annual investment return		
Cash	1%	1%
Bond	4%	4%
Equities	8%	8%
Estimated investment return		
Annual investment return on starting fund value (US$)	$2,000,0000	$3,200,000
Annual insurance premium paid (US$)	-	$1,270,000
Annual investment return on starting fund value less insurance premium (US$)	$2,000,000	$1,930,000

Insurance from CCRIF SPC allows for a higher risk-taking investment strategy, and based on average expected returns the insurance premium can be financed through this investment income. The purchase of insurance provides the DRF with additional liquidity to finance disaster losses, and also provides the fund with some level of protection against significant capital losses. This allows for the DRF to take on more investment risk, which can be used to cover almost 100% of the current insurance premium charged by CCRIF SPC.

The proposed split between cash, bonds and equities should be considered indicative only, but is useful for considering what an appropriate strategy may be for the DRF. As part of the establishment of the DRF a full analysis needs to be completed, including the procurement of a fund manager, in order to set an appropriate investment policy as part of a broader capital management plan for the DRF. As the DRF is established a detailed investment strategy needs to be developed, considering the liquidity requirements for financing disaster losses and other administrative costs, and the potential investments available to the DRF within the applicable legal and regulatory framework.

In relation to investments, there are several considerations to keep in mind while the risk appetite for the fund is established. For example: (i) should the DRF invest in government/non-government securities/premium to maitain a stable fund balance?; (ii) will investments in domestic and/or hard currencies be permitted?; (iii) should investments be in the local and/or external market?; (iv) is there a minimum credit rating for investments?; (v)what term should be considered? This could differ across the portfolio and should be carefully managed to ensure that the DRF can make rapid payments after an event; (vi) understand the projected cash disbursements of the DRF and structure investments according to those needs, and (vii) pay attention to the tax regime to ensure funds are not subject to detrimental levels of taxation that could jeopardize the sustainability of the fund.

Given the existing resource constraints within the GoSXM and the need to invest and accrue funds quickly for the long-term sustainability of the fund, a dedicated and experienced fund manager presents the best option. Further, leveraging a firm that provides dedicated fund management will be more cost effective.

6.5 Indicative operating costs

In considering the different options to establish the fund it should be noted that the operating costs are likely to differ. Option 1 is likely to be the most cost effective as it is assumed that it will largely utilise existing resources (staff and equipment) within the chosen line ministry. Option 3, externally managed, is likely to be the most expensive through contracting an external fund manager. A DRF is not a mutual fund but to give an example of costs in running a fund, it is likely to be around 10% in annual costs. Table 14 provides an example of a mutual fund with US$10 million in assets in the US.

Table 14: Indicative operating costs

Description	Estimate (US$)
Bank Custody	$7,000
Legal Services	$12,000
Accounting fee	$32,000
Administration fee	$30,000
Audit	$13,000
Trustee fee	$3,000
Securities Commission fee	$1,000
Compliance	$5,000
Misc. expenses	$10,000
Total	**$113,000**

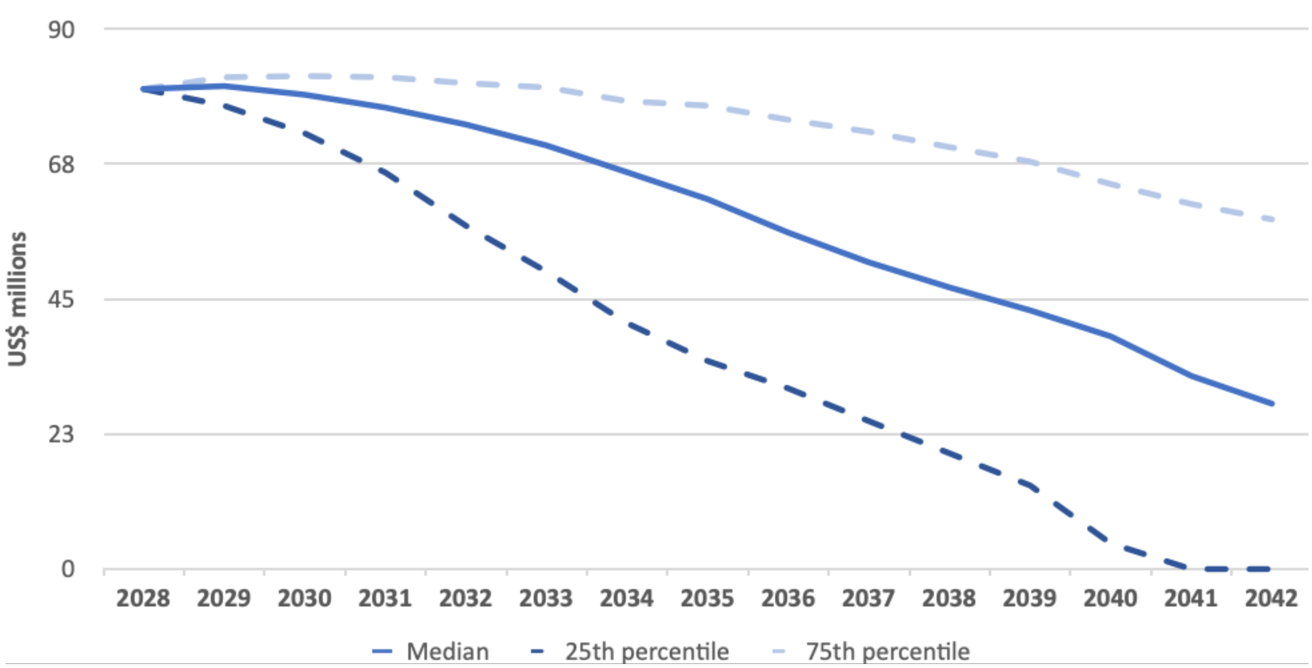
6.6 Projected fund balance and capital replenishment requirement

Establishing a financial strategy, with clarity on projected disbursements and income generated from investments, will be key to ensuring the long-term sustainability of the fund. Disbursements can be estimated based on the historical experience of disaster losses in previous years, although should be complemented with the output of a catastrophe model such as that used by CCRIF SPC.

A thorough investigation of past expenditures is advisable to provide guidance on expenditures the DRF could finance in the future. Expenditure data from previous events was not provided for this assessment, but this is an important consideration when establishing the rules around what the DRF may or may not finance. Given this information was not available for this assessment, the potential disaster losses to GoSXM are based on the model used by CCRIF SPC, as outlined in section 6.2 above.

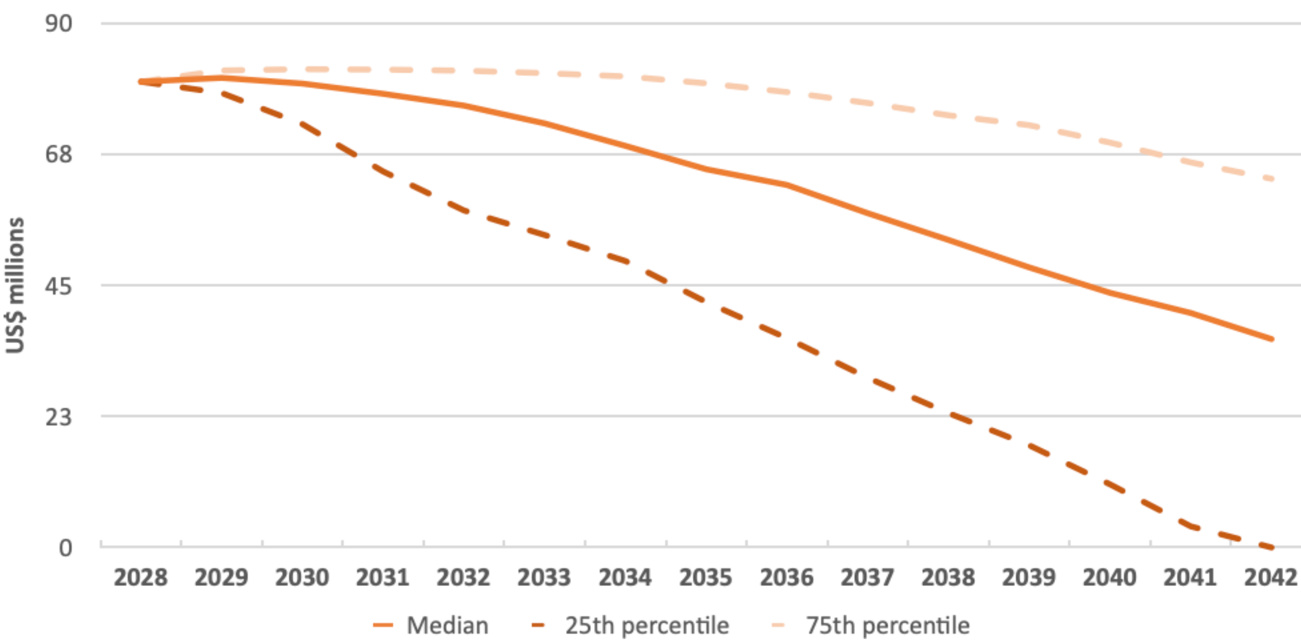
Projections of the balance of the DRF are shown in Figures 5 and 6 below. The projections assume starting capital of $80m and the DRF adopts the basic investment strategy as indicated in Table 12. The projections allow for a large number of simulations of possible disaster experience over the period 2028-2042 based on the CCRIF SPC model. Figure 5 assumes the DRF will not purchase insurance from CCRIF SPC, whereas Figure 6 assumes the DRF purchases insurance as per the current policies held by the GoSXM.

Figure 6: DRF projected balance, without insurance



Source: World Bank

Figure 7: DRF projected balance, with insurance



Source: World Bank, 2023

On an average basis the DRF is expected to be depleted over time, due to the difference between the average expected disaster losses (US$5.8m) being significantly higher than the average expected investment return (US$2m based on starting capital of US$80m), see Figures 5 and 6. In practice the DRF will not experience the average losses, but rather will see many years with no disaster losses when the DRF accumulates, and then large capital losses when a disaster occurs. This is captured by the 25th and 75th percentiles, which show how large the DRF may be in 2042 based on better or worse than average disaster experience.

The purchase of insurance leads to better outcomes, as the insurance premium can be almost 100% covered with expected investment return, the purchase of insurance limits the losses to the DRF resulting in better outcomes on an average basis, and especially if disaster experience is worse than expected. As indicated in Figure 5, without the purchase of insurance the DRF would be fully depleted around 2040-41 at the 25th percentile (i.e. with 25% probability), and losses could be much more severe than this scenario. The purchase of insurance allows for the DRF to be maintained until 2042, although it is still expected to be depleted over time if there are no further capital injections.

Even with insurance, there is still a need to establish a capital replenishment strategy. As indicated in the projections, the DRF is expected to be depleted over time, based on the average expected disaster losses as estimated by CCRIF SPC. The DRF is essential in providing GoSXM with financial protection against the possibility of disaster events, and the GoSXM should seek to capitalize the DRF prior to 2028 as per Section 6.3. However, the financial projections show that there remains a clear need for a sustainable source of finance for the DRF to replenish the fund in case of severe losses. Some potential options for this are discussed in Section 6.7.

6.7 Additional sources of funding

Given the above projections, the GoSXM should consider additional sources of funding for the DRF to ensure its financial sustainability. A review of other DRFs established around the world has shown that common sources of funding include:

- A fixed annual allocation from the national budget. For example, Mexico's budget law states that 0.4% of federal budget expenditure should be allocated to its disaster fund.

- A proportion of revenue from a particular tax. For example, Jamaica's National Disaster Management Act stipulates the fund shall be, in part, funded through an amount equivalent to 1% of the sum paid annually to each local authorities as building fees.
- Endowments/Donations from international donors, private sector and/or individuals.
- A fixed amount from end of year budget surplus (if any).

Consideration should be given to the size of the fund and the optimal annual amount to be allocated to the fund, considering the risks/needs and the opportunity cost of saving public money (i.e. foregone current expenditure). It is also recognised that a fixed annual allocation from the national budget for the DRF may, at present, be difficult for the GoSXM. Since Hurricane Irma in 2017, the GoSXM has struggled to achieve a balanced budget. This is a challenge as the GoSXM, in its Financial Recovery Plan 2018-2022, signalled its intent to use budget surpluses to create reserves to meet unplanned needs. Moreover, the GoSXM has increased its loans and interest costs have risen (see Figure 8), placing additional constraints on the fiscal space to meet unplanned needs, and contribute to a DRF.

Figure 8: GoSXM total outstanding loans and new loans, 2016-2021

	2016	2017	2018	2019	2020	2021
Total Loans Outstanding in FY	546578335.00	569521000.00	659182875.00	944640760.00	933848079.00	1080870189.00
Amount of New Loan	38357335.00	40000000.00	84543375.00	380952095.00	362329750.00	297337905.00

Source: World Bank, 2023

Notwithstanding these realities, there may be merit in further exploring if an earmarked amount from tourism revenue could be used to 'top-up' the DRF following initial capitalization. In 2018, the tourism sector contributed approximately 85 percent of all national revenues (World Bank, 2023). If the fund is to be partly funded by tax income, the earmarked tax income would have to be approved through a national ordinance.

The DRF needs to have the capacity to receive and manage additional funds beyond the initial capitalization. This requirement should be considered in the procurement phase when selecting a suitable SOE (Option 2) or procuring a Fund Manager (Option 3).

7. Next steps for consideration

Noting the analysis contained in this report, it is recommended that the following next steps are considered by the GoSXM:

1. **Continue work towards establishing the fund as a fully independent entity that specialises in fund management.** This recommendation is given on the basis of a review against the four criteria. Setting up the DRF as a private limited company (B.V), public limited company (N.V). or foundation is most advisable. However, following refinement of the exact scope and purpose of the DRF, discussions with relevant authorities are necessary to secure certainty on certain tax aspects to ensure that it remains the most advantageous route to take.
2. **Align the DRF to other DRF instruments in country.** Establishment of the DRF should be aligned with the GoSXM's DRF strategy, and in particular the potential establishment of two other DRFs (the Souglia Fund and the Calamity Fund) which are currently under discussion. This will require internal discussion on the scope, purpose and implementation plan for each instrument to ensure alignment.
3. **Agree the loan parameters.** The GoSXM needs to agree the final amount of the loan and develop a repayment schedule with the PJIA which includes any interest that the GoSXM may wish to levy.
4. **Consider capitalization at the outset.** To ensure that GoSXM is not overly exposed to the potential for disaster losses while the DRF is being built up, it is recommended that the DRF be capitalized at the outset. Either through a separate arrangement with the Government of the Netherlands in anticipation of the reflows from the PJIA, or through securitization of the loan in the commercial market.
5. **Continue with the purchase of disaster insurance from CCRIF SPC.** The purchase of insurance would allow the DRF to take on a higher level of investment risk in search of higher long-term growth, and also reduces the probability that the DRF will suffer significant capital losses following major events. The purchase of this insurance could eventually be financed directly from the DRF.

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Annex A: Key differences between four options considered

The table below provides an overview of the key differences between the different options being considered.

DRF establishment considerations	Option 1: Contingency allocation in the budget	Option 2: Dedicated government agency	Option 3: Independent service agency	Option 4: Project managed by World Bank*
Define specific goals and needs	Yes	Yes	Yes	Yes
Establish an entity	No	No	No	TBD
Legal and regulatory framework (disbursements and investments)	Yes	Yes	Yes	TBD
Office expenses (rental fee, utilities, other necessary expenses)	Diluted with other costs in the ministry	Diluted with other costs in the SOE	Diluted with other costs in the SOE	TBD
Initial and ongoing legal and administrative fees and staff salaries	Diluted with other activities in the ministry	Yes	Yes	Yes
Operational costs (bank custody, clearing and settlement, transaction fee, etc.)	Only costs inherent to disbursements	Yes	Yes	Yes
Disbursement strategy	Yes	Yes	Yes	Yes
Investment committee and strategy	No	Yes	Yes	Yes
IT infrastructure (computer network, software, website etc.)	TBD	TBD	TBD	Yes
Risk management	Yes, but only for disbursements	Yes	Yes	Yes
Accounting and auditing	TBD	Yes	Yes	TBD
Service provider selection	No	No	No	Yes

*** *This would require additional financial support from the MDTF including the provisions of capital to establish the fund.**

Annex B: Past weather events

Weather event	Date	Wind speed	Rainfall
Tropical disturbance	7-8 November 2014	n/a	255.5mm
Hurricane Gonzalo	13 October 2014	69 KT / 79 mph	144.7mm
Hurricane Earl	30 August 2010	56 KT / 64 mph	41.1mm
Hurricane Omar	16 October 2008	66 KT / 76 mph	139.4mm (15th)
Tropical Storm Jose	20 October 1999	87 KT / 100 mph	n/a
Hurricane Lenny	19 November 1999	90 KT / 104 mph	212.8mm/254.2mm (17th/18th)
Hurricane Georges	21 September 1998	88 KT / 101 mph	45.7mm
Hurricane Marilyn	15 September 1995	53 KT / 61 mph	61.4mm
Hurricane Luis	5 September 1995	99 KT / 114 mph	165.8mm
Hurricane Hugo	17 September 1989	68 KT / 78 mph	177.6mm
Tropical Storm Klaus	7 November 1984	50 KT / 58mph	n/a
Hurricane Fredric	3-4 September 1979	n/a	258.4mm
Hurricane David	29 August 1979	n/a	27.0mm
Tropical Storm Claudette	17-18 July 1979	n/a	21.0mm

Source: Meteorological Department, 2014, 2015

Annex C: Summary of considerations when establishing a DRF

No.	Item/ Activity
1	Component 1: Operational Framework (final output: standard operating procedures or operations manual)
1.1	Assign responsibilities to a government body for managing the fund
1.2	Open the trust fund account e.g. in the central bank or national treasury
1.3	Develop clear guidelines and definitions on what the fund will finance, e.g. type of disaster event, scale of disaster, types of expenditures, eligible goods and services, etc
1.4	Define which types of agencies or organisations can receive the funds or use the funds, e.g. central/local government, goods and service providers
1.5	Define how the reserve fund will interact with funds at the sub-national level
1.6	Determine eligible sources of funds and accumulation of funds
1.7	Design a step by step process of how to access the fund, including activities/tasks to complete, responsibilities, and timeline. Consider different processes depending on use of the funds (i.e. urgent/ non-urgent).
1.8	Determine who is authorised to give final approval for use of the fund, and which signatories are required
1.9	Establish a post-disaster budget execution mechanism and procedures for transfer of funds (following approval) from the national to subnational level and from the Ministry of Finance to line ministries and beneficiaries
1.10	Provide clear financial reporting requirements related to fund operation
1.11	Assign a specialized coordination/ monitoring and evaluation unit to keep track of all expenditures from the fund and associated emergency response and reconstruction activities
1.12	Specify audit requirements of the fund by the State Audit Organisations or Auditor General
1.13	Raise awareness among stakeholders of the fund, and how it can be accessed and used
1.14	Look at how the reserve fund can interact with other DRFI instruments, as part of the overall DRFI strategy
2	Component 2: Policy Framework (final output: policy document and dissemination)
2.1	Review existing government policy on DRFI, including use of existing DRFI instruments
2.2	Develop an overarching disaster risk financing and insurance policy framework, to guide establishing and operating the fund, and link to other DRFI instruments
3	Component 3: Legal Framework (final output: legislation applicable to the fund e.g. law, decree, implementing regulations)
3.1	Review existing laws in relation to DRFI
3.2	Legal basis defined for establishing and governing a disaster reserve fund (in existing, amended, or new laws)
3.3	Legal basis exists for source of funds (as revenue to the fund)
3.4	Link to other laws and regulations for operation of the fund identified, e.g. use of procurement laws

Annex D: Recommendations for National DRF Strategy in Sint Maarten

Time Frame		Instruments and Strategy Recommendations for DRF
Sovereign Protection		
Short term (< 1 year)	1	Streamline and institutionalize loss and damage data collection and reporting system for all severities of events.
	2	Explicitly address contingent liabilities/fiscal risks arising from natural hazards in the GoSXM's fiscal legislation and regulations.
	3	Detail standard operating procedures (SOPs) for estimating economic losses from direct and indirect shocks.
	4	Consider capitalizing and earmarking a provision of a contingencies fund for natural hazard response—consistent with the AAL of hurricanes events (US$42.3 million).
	5	Start seeking access to a contingent line of credit that covers contingent liabilities of prominent events of at least a 10-year return period.
	6	Optimize sovereign parametric insurance (such as the CCRIF SPC) coverage to include existing immediate liquidity gaps.
	7	Adopt a national strategy for DRF and a subsequent implementation plan.
	8	Develop and institutionalize disaster-responsive Post-Disaster Budget Execution Guidelines.
	9	Ensure that existing capital projects have CERCs that can redirect uncommitted financing to emergency needs.
Medium term (1–3 years	10	Develop a risk-based asset management system, based on a comprehensive inventory of public fixed assets.
	11	Institutionalize guidelines for centralized public procurement of insurance to achieve cost efficiency and economies of scale, to the extent possible.
	12	Investigate the viability of earmarking a designated levy on tourism to capitalize a disaster and resiliency fund
	13	Improve the COA by integrating disaster management and climate change considerations to enable and improve tracking of disaster-related expenditure.
	14	Develop or subscribe to a livelihood protection mechanism for vulnerable populations such as fisherfolk, small business owners , and self-employed workers active in tourism of supportive of that sector.
	15	Strengthen technical capacity for DRF within the MoF and Ministry of General Affairs, including on parametric insurance policies.
Commercial Insurance		
Short term (< 1 year)	16	Strengthen transparency and consumer protection, the preconditions for increased demand.
	17	Explore opportunities for the public sector to encourage the public to better understand and appreciate insurance.
	18	Disaggregate insurance data collected by the supervisor (the Central Bank of Curaçao and Sint Maarten [CBCS]) and currently consolidated for both countries, including premium volumes, claims payments, profits, assets, and liabilities for SXM.
	19	Assess the barriers to and the potential of inclusive and other sector-specific insurance.

Source: World Bank, 2023