



VOLUME 1 INTRODUCTION



KULHUDHUFFUSHI CITY, MALDIVES



AUGUST 2025

Project:

Disaster Management, Hazard
Mitigation and Climate Change
Adaptation Plan

Client:

Kulhudhuffushi City Council

Prepared by:

Charrette Studio

Hussain Ziyath
Hassaan Abdul Muhsin
Hassan Akram
Nadhuwa Mohamed
Aishath Ashiya Shathir
Aisha Abdulla
Mohamed Inayath
Ahmed Aiman Shareef
Suha Mohamed

Peer-reviewed by:

Sonath Abdul Sattar

CONTENTS

CONTENTS	3
MAYOR’S FOREWORD	4
EXECUTIVE SUMMARY	6



A portrait of a man with a beard and mustache, wearing a dark suit, white shirt, and a blue patterned tie. He is looking slightly to the right of the camera. The background is a light, textured grey.

Peace and blessings be upon the Holy Prophet Muhammad (PBUH), who came as a noble example for all of humanity, guiding us through his words and deeds. May peace and blessings also be upon his companions and followers who upheld his legacy.

Moreover, this initiative reflects our commitment to the global Making Cities Resilient 2030 campaign, under which we strive to build a resilient, inclusive, and sustainable future for Kulhudhuffushi City.

Our city's vulnerability to rising sea levels, extreme weather events, and other climate-related impacts necessitates a robust and forward-thinking approach to disaster management. This plan is a testament to our commitment to safeguarding the lives, livelihoods, and well-being of our citizens. It encompasses a wide range of strategies, from early warning systems and infrastructure improvements to community education and emergency response protocols.

This plan is not merely a document; it is a living commitment. It will guide our actions, inform our decisions, and serve as a roadmap for our ongoing efforts to adapt to the changing climate and build a safer, more resilient future for all residents of Kulhudhuffushi City.

[illegible][illegible][illegible]

رَدِّی سَدِّی اِرْزُوبِی یَرِ تَرِا رِا دِو الله سَدِّی تَرِی
 اِرْزُورْ سَاسَرِ سَدِّی دِو یَرِو اِرْزُورْ قِی سَدِّی سَاسَرِ،
 سَاسَرِ دِیو یَرِی، سَاسَرِ یَرِی سَاسَرِ دِو یَرِی دِو
 دِو یَرِی سَاسَرِ سَاسَرِ سَاسَرِ سَاسَرِ سَاسَرِ دِو یَرِی،
 اِرْزُورْ سَدِّی تَرِی سَاسَرِ یَرِی سَاسَرِ یَرِی،
 قِی سَدِّی تَرِی سَاسَرِ دِو یَرِی دِو یَرِی.



د بړه دندې چې
د دندې دندې دندې دندې

[illegible][illegible][illegible][illegible]

EXECUTIVE SUMMARY

Kulhudhuffushi City, the northernmost urban hub of the Maldives, is increasingly vulnerable to climate-related and disaster risks due to its low-lying geography, urban expansion, and ecological degradation. To address these growing challenges, a comprehensive and locally grounded planning framework has been developed comprising interlinked 5 volumes:

- Volume 1: Introduction
- Volume 2: the Hazard, Vulnerability, and Capacity Assessment (HVCA),
- Volume 3: the Climate Change Adaptation Plan (CCAP),
- Volume 4: the Disaster Management Plan (DMP), and
- Volume 5: the City Emergency Operations Plan (CEOP).

Together, these documents chart a forward-looking path to resilience, community safety, and sustainable urban development. For the purpose of clarity, this executive summary will focus on volume 2 to 5.

Volume 2: Hazard, Vulnerability, and Capacity Assessment (HVCA)

The HVCA serves as the foundation for all subsequent planning. Conducted through a participatory, data-driven approach, it assesses Kulhudhuffushi City's exposure to a wide range of hazards from extreme weather and tsunamis to social vulnerabilities and technological failures.

The assessment highlights several major risks facing Kulhudhuffushi City. Hydrometeorological hazards are on the rise with increasing incidents of heatwaves, surface flooding, and storm surges. Chemical and technological hazards such as unsafe fuel storage and breakdowns in waste management systems pose additional threats. Environmental degradation including coastal erosion, mangrove loss, and wetland encroachment further weakens the city's natural defenses. Biological and social hazards such as the spread of contagious diseases and persistent socio-economic inequalities also contribute to

the city's vulnerability.

Several critical gaps hinder the city's ability to effectively manage these risks. There is a lack of comprehensive data on public health and ecosystems, limiting evidence-based decision-making. Public awareness of disaster preparedness remains low, and there are no fully developed early warning systems or standardized emergency procedures. Additionally, gaps exist in essential resources such as firefighting equipment, cooling infrastructure, and equitable access to services for vulnerable populations.

Using tools such as GIS mapping, drone surveys, and UNDRR's Quick Risk Estimation (QRE), the HVCA informed the design of all subsequent plans, ensuring contextual accuracy and community relevance.

Volume 3: Climate Change Adaptation Plan (CCAP)

The Climate Change Adaptation Plan addresses the city's growing climate vulnerabilities through ten strategic actions organized under four themes: Governance, Planning, Economic Resilience, and Social Empowerment. The plan promotes the adoption of climate-resilient land use practices, integration of green infrastructure, and application of Sponge City principles to manage urban flooding and restore natural ecosystems. It also emphasizes economic diversification, supports green finance initiatives, and strengthens community engagement and capacity-building, particularly for at-risk groups.

Rooted in the findings of the HVCA, the CCAP is aligned with the Climate Emergency Act, the Local Development Plan (2022–2026), and other national adaptation strategies to ensure coherence and implementation readiness.

Volume 4: Disaster Management Plan (DMP)

The Disaster Management Plan provides a comprehensive framework for disaster risk reduction (DRR) by integrating the full disaster cycle: prevention, preparedness, mitigation, response, and recovery. It clearly defines institutional roles, hazard-specific

protocols, and emphasizes inclusive planning, particularly for vulnerable populations such as persons with disabilities, migrant workers, the elderly, and low-income families.

Key actions outlined in the plan include strengthening institutional coordination through the City Disaster Management Committee (CDMC), implementing integrated hazard monitoring systems alongside public awareness campaigns, and localizing disaster risk reduction strategies to suit the unique island context of Kulhudhuffushi. These measures aim to enhance the city's preparedness, responsiveness, and resilience in the face of increasing climate and disaster-related risks.

Volume 5: City Emergency Operations Plan (CEOP)

The City Emergency Operations Plan serves as the operational arm of the Disaster Management Plan, outlining detailed protocols, roles, and responsibilities for managing emergency incidents. It includes provisions for the activation of the City Emergency Operations Center (CEOC), deployment of Emergency Support Functions (ESFs), and the use of established coordination systems such as the Incident Command System (ICS) and the Multi-Agency Coordination System (MACS) to ensure an organized and effective emergency response.

The CEOP establishes clear procedures for responding to natural disasters, pandemics, and infrastructure failures, ensuring the continuity of essential services. It also facilitates the rapid mobilization of resources across agencies, while maintaining full compliance with the National Disaster Management Act (Law No. 28/2015).

This volume brings together the shared directions, common themes, and opportunities for integration across the key planning documents prepared for Kulhudhuffushi City. These include the Hazard, Vulnerability, and Capacity Assessment, the Disaster Management Plan, the Climate Change Adaptation Plan, and the City Emergency Operations Plan. While each of these plans is operational and capable of standing alone, together they form an integrated resilience framework that can guide more effective and sustainable action for the city.

Common priorities reflected across the plans include protecting lives and infrastructure from a range of hazards, promoting inclusive approaches that consider the needs of vulnerable groups, strengthening governance and coordination, building public awareness and preparedness, and advancing evidence based planning informed by local knowledge and risk data.

Building on these shared priorities, the following cross cutting themes highlight practical opportunities to align efforts and strengthen integrated implementation across all plans.

Cross-Cutting themes

1. Governance and Institutional Coordination

Strong coordination mechanisms such as the City Disaster Management Committee (CDMC) and multi-agency response frameworks are emphasized in all plans. These can be unified to support streamlined decision-making across disaster risk reduction, emergency operations, and climate adaptation.

2. Data and Information Systems

All plans rely on robust data systems and mapping tools. Shared use of Geographic Information Systems (GIS), hazard databases, and early warning tools can improve monitoring, reduce duplication, and ensure more consistent and timely responses.

3. Community Engagement and Capacity Building

Community engagement is a cornerstone of the CEOP, DMP, and CCAP. A unified outreach and training strategy can raise awareness, equip citizens with knowledge, and build stronger relationships between local authorities and residents.

4. Resilient Infrastructure and Urban Planning

Both the CCAP and DMP emphasize infrastructure resilience, particularly around flood protection and urban design. Concepts such as Sponge City and hazard-sensitive planning can be integrated across implementation projects.

To enhance coordination and efficiency, the plans recommend several integrated actions, such as using shared risk maps and early warning platforms across all departments, conducting joint emergency drills that combine climate and disaster scenarios such as urban flooding and disease outbreaks, aligning public communication strategies for both climate adaptation and disaster readiness, organizing combined training and refresher programs for council staff, responders, and community leaders, and establishing an interplan coordination committee to monitor overlapping targets and reporting schedules.

Way Forward

With a strong foundation laid through the HVCA, CCAP, DMP, and CEOP, Kulhudhuffushi City is now equipped to move from planning to action. The challenge ahead is to operationalize this collective vision through effective coordination, resource mobilization, and sustained engagement with stakeholders.

The next stages should prioritize setting up institutional mechanisms to oversee integrated implementation, establishing monitoring systems to track progress, and fostering partnerships across government, civil society, and the private sector. Continuous learning, capacity building, and adaptive management will be key to keeping pace with evolving risks and emerging opportunities.

By embracing these steps, the city can steadily advance toward the vision of “Fini Fehi City,” creating a greener, cooler, and safer environment for all residents.



Kulhudhuffushi City
Image Source: Charrette Team



三三三

٢٠٠٠ / ٢٠٠٠ ٢٠٠٠ / ٢٠٠٠ ٢٠٠٠ / ٢٠٠٠ ٢٠٠٠ / ٢٠٠٠ ٢٠٠٠ / ٢٠٠٠

[illegible]

- [illegible]

۱. ۲. ۳. ۴. ۵. ۶. ۷. ۸. ۹. ۱۰. ۱۱. ۱۲. ۱۳. ۱۴. ۱۵. ۱۶. ۱۷. ۱۸. ۱۹. ۲۰. ۲۱. ۲۲. ۲۳. ۲۴. ۲۵. ۲۶. ۲۷. ۲۸. ۲۹. ۳۰. ۳۱. ۳۲. ۳۳. ۳۴. ۳۵. ۳۶. ۳۷. ۳۸. ۳۹. ۴۰. ۴۱. ۴۲. ۴۳. ۴۴. ۴۵. ۴۶. ۴۷. ۴۸. ۴۹. ۵۰. ۵۱. ۵۲. ۵۳. ۵۴. ۵۵. ۵۶. ۵۷. ۵۸. ۵۹. ۶۰. ۶۱. ۶۲. ۶۳. ۶۴. ۶۵. ۶۶. ۶۷. ۶۸. ۶۹. ۷۰. ۷۱. ۷۲. ۷۳. ۷۴. ۷۵. ۷۶. ۷۷. ۷۸. ۷۹. ۸۰. ۸۱. ۸۲. ۸۳. ۸۴. ۸۵. ۸۶. ۸۷. ۸۸. ۸۹. ۹۰. ۹۱. ۹۲. ۹۳. ۹۴. ۹۵. ۹۶. ۹۷. ۹۸. ۹۹. ۱۰۰.

[illegible][illegible]

١٢٣٤٥٦٧٨٩١٠١١١٢١٣١٤١٥١٦١٧١٨١٩٢٠٢١٢٢٢٣٢٤٢٥٢٦٢٧٢٨٢٩٣٠٣١٣٢٣٣٣٤٣٥٣٦٣٧٣٨٣٩٤٠٤١٤٢٤٣٤٤٤٥٤٦٤٧٤٨٤٩٥٠٥١٥٢٥٣٥٤٥٥٥٦٥٧٥٨٥٩٦٠٦١٦٢٦٣٦٤٦٥٦٦٦٦٧٦٨٦٩٧٠٧١٧٢٧٣٧٤٧٥٧٦٧٧٧٨٧٩٨٠٨١٨٢٨٣٨٤٨٥٨٦٨٧٨٨٨٩٩٠٩١٩٢٩٣٩٤٩٥٩٦٩٧٩٨٩٩١٠١١١٢١٣١٤١٥١٦١٧١٨١٩٢٠٢١٢٢٢٣٢٤٢٥٢٦٢٧٢٨٢٩٣٠٣١٣٢٣٣٣٤٣٥٣٦٣٧٣٨٣٩٤٠٤١٤٢٤٣٤٤٤٥٤٦٤٧٤٨٤٩٥٠٥١٥٢٥٣٥٤٥٥٥٦٥٧٥٨٥٩٦٠٦١٦٢٦٣٦٤٦٥٦٦٦٦٧٦٨٦٩٧٠٧١٧٢٧٣٧٤٧٥٧٦٧٧٧٨٧٩٨٠٨١٨٢٨٣٨٤٨٥٨٦٨٧٨٨٨٩٩٠٩١٩٢٩٣٩٤٩٥٩٦٩٧٩٨٩٩

[illegible]

۱. ۲. ۳. ۴. ۵. ۶. ۷. ۸. ۹. ۱۰. ۱۱. ۱۲. ۱۳. ۱۴. ۱۵. ۱۶. ۱۷. ۱۸. ۱۹. ۲۰. ۲۱. ۲۲. ۲۳. ۲۴. ۲۵. ۲۶. ۲۷. ۲۸. ۲۹. ۳۰. ۳۱. ۳۲. ۳۳. ۳۴. ۳۵. ۳۶. ۳۷. ۳۸. ۳۹. ۴۰. ۴۱. ۴۲. ۴۳. ۴۴. ۴۵. ۴۶. ۴۷. ۴۸. ۴۹. ۵۰. ۵۱. ۵۲. ۵۳. ۵۴. ۵۵. ۵۶. ۵۷. ۵۸. ۵۹. ۶۰. ۶۱. ۶۲. ۶۳. ۶۴. ۶۵. ۶۶. ۶۷. ۶۸. ۶۹. ۷۰. ۷۱. ۷۲. ۷۳. ۷۴. ۷۵. ۷۶. ۷۷. ۷۸. ۷۹. ۸۰. ۸۱. ۸۲. ۸۳. ۸۴. ۸۵. ۸۶. ۸۷. ۸۸. ۸۹. ۹۰. ۹۱. ۹۲. ۹۳. ۹۴. ۹۵. ۹۶. ۹۷. ۹۸. ۹۹. ۱۰۰.

[illegible][illegible][illegible]

۳: دښور وټو د ښارونو ترمنځ
 جوړونو (ناروړونو) جوړول شوي دي -
 س.و.ز.ي.

[illegible][illegible][illegible][illegible]

၂၀၁၆ ခုနှစ် ဇူလိုင်လ ၁ ရက်နေ့မှ ၂၀၁၆ ခုနှစ် ဇူလိုင်လ ၃၁ ရက်နေ့
 အထိ အချုပ်အခြာခံရသူ ၄ ဦး (၂၀၁၆ ခုနှစ် ဇူလိုင်လ ၁ ရက်နေ့မှ ၂၀၁၆ ခုနှစ် ဇူလိုင်လ ၃၁ ရက်နေ့)

[illegible]

۱. قَوْلُ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ
 ۲. قَوْلُ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ
 ۳. قَوْلُ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ
 ۴. قَوْلُ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ
 ۵. قَوْلُ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ (لَا إِلَهَ إِلَّا اللَّهُ) بِحَرْفِ نُونٍ

[illegible][illegible]



Kulhudhuffushi City Council
2025

