Disaster Statistics of Maldives

2023

NDMA

NATIONAL DISASTER MANAGEMENT AUTHORITY

Executive Summary

The National Disaster Management Authority (NDMA) of the Maldives collects data on damage-related incidents, hazard incidents, response activities, mitigation and adaptation activities, and financial assistance provided in response to hazardous events. This publication presents statistics on hazards and disasters in the Maldives in 2023 reported to the NDMA.

In 2023, there were documented cases of surges and weather-related events regarding monsoonal shifts occurring in July, October and December.

In 2023, a total of 183 incident cases were reported to the National Disaster Management Authority. The most common hazards reported to the NDMA are fire incidents, contributing to 52%, and flooding, contributing 30%. Most hazards were reported by Male' Atoll (51%), Seenu Atoll (10%), and Alif-Alif Atoll (7%). A total of 294 households and 12 Atolls were exposed to different hazards in 2023. The majority of incident cases were reported in the month of October. The occurrence of hazards by islands identified that the most hazard events were reported from the capital city Male' (59.6%), followed by Hulhumale' (16.3%) and Addu City Hithadhoo (5.8%). Government financial assistance was provided the most with the fire incident cases.

We acknowledge that there may be events that were not reported or reported to institutions other than the NDMA and hence not represented in this report. Agricultural hazards and tourism-related hazards are reported directly to the respective institutions. Damage and loss need to be quantified, and data on affected persons, missing persons, injured persons, and mortality needs to be disaggregated by gender, age, and for vulnerable populations. An integrated system of hazard reporting is needed to portray the big picture of disasters in the Maldives.

Contents

1. Occurrence of hazard

The data collected by the NDMA in 2023 highlights the varied nature and frequency of hazards experienced during the year. The reported incidents included fires, floods, boat capsizing, explosions, aviation incidents, strong winds, surges, and lightning strikes. In total, 183 incidents were recorded across 19 atolls. The graph below shows the number of incidents by type.

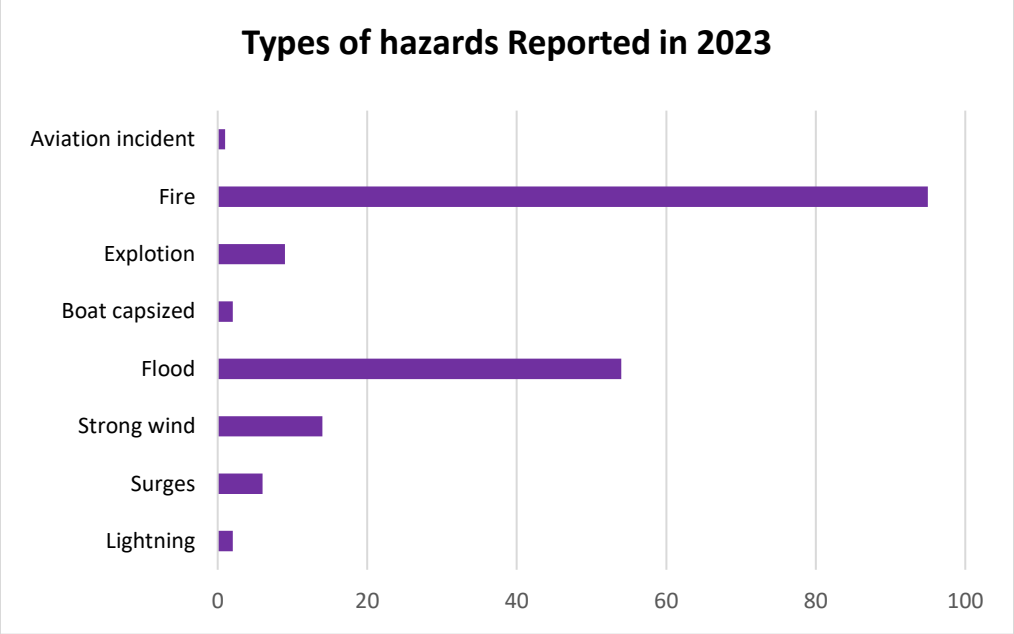


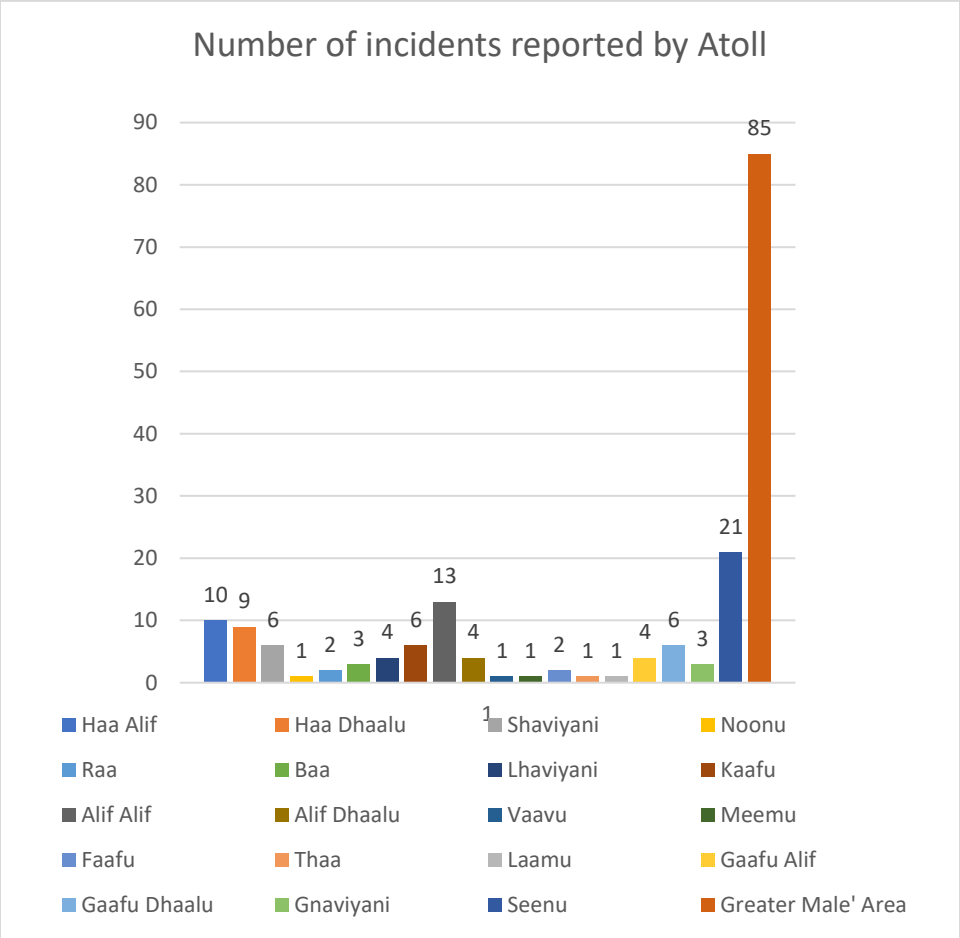
Figure 1; Type of Hazards reported to NDMA

In 2023, fire remained the most reported hazard, with 95 incidents recorded. Floods ranked second with 54 occurrences, followed by 14 instances of strong winds. There were 6 cases of surges, 9 explosions, 2 lightning incidents, and 2 boat capsizing events. Additionally, a single aviation incident was reported.

2. Number of Incidents by Atoll

It can be observed that Greater Male' Area reported the highest number of incidents in 2023, with a total of 85. This was followed by Seenu atoll, which recorded 21 incidents, and Alif Alif with 13 incidents. Other atolls reported a range of incidents, varying from 1 to 10. The graph below shows the number of incidents reported by each atoll.

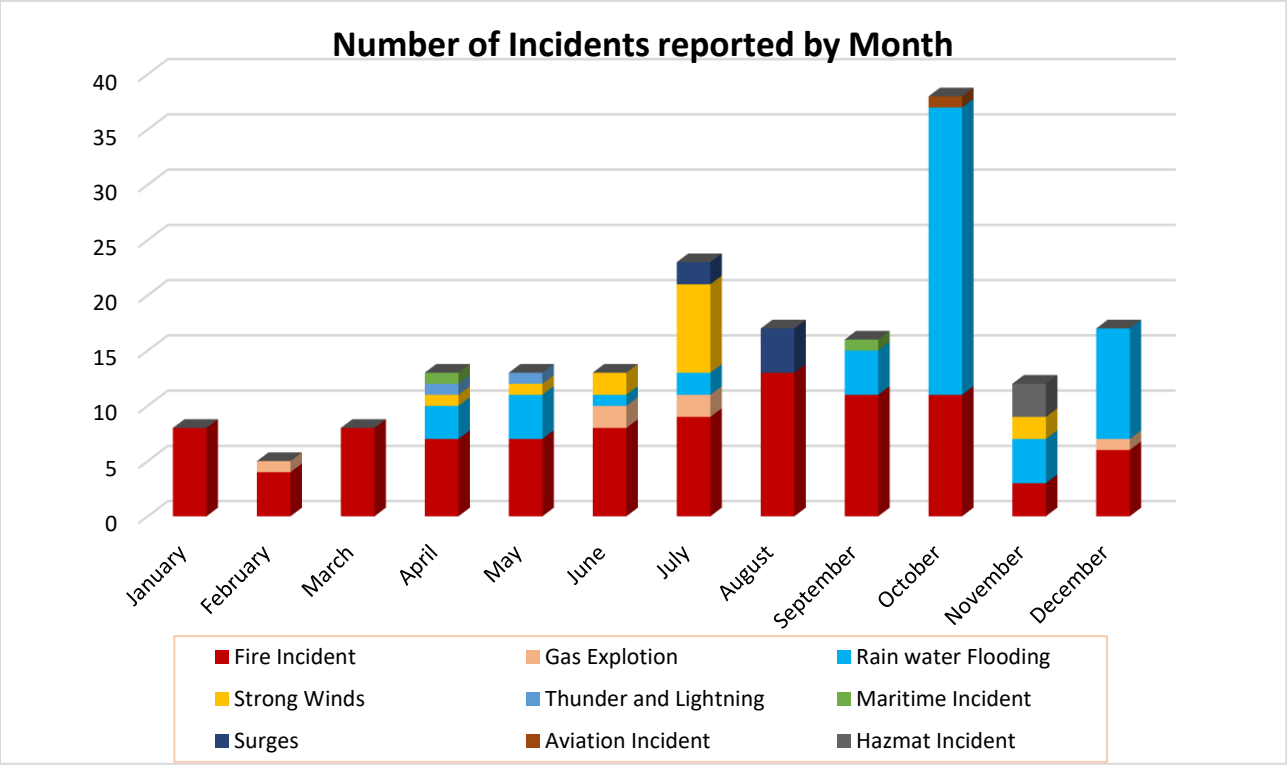
Figure 2; Number of incidents reported by atoll



3. Number of Incidents by Month

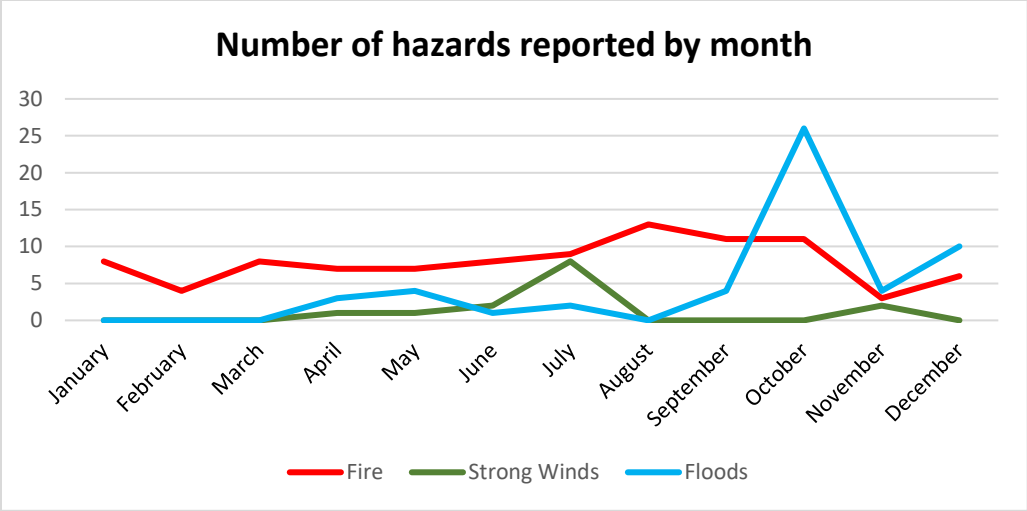
From the available data, it shows that more incidents were reported during the month of October. Out of 183 incidents reported, 38 (20.77%) incidents occurred in October, followed by 23 (12.57%) in August. The graph below shows the distribution of reported cases by month.

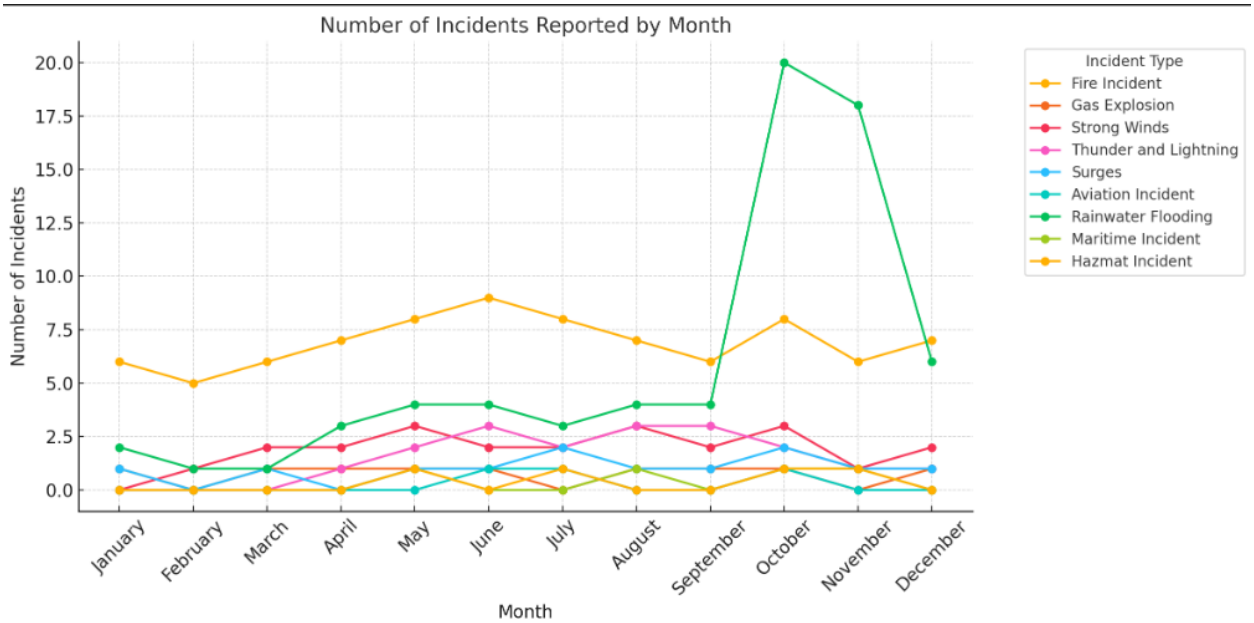
Figure 3; Number of incidents reported by month



Among the three most reported hazards, floods are more common during October, with a significant peak. While floods also show notable occurrences in May and December, a substantial number are reported during October. Fire incidents do not show a strong monthly pattern; however, the data indicates a minor increase around midyear, particularly in August. Strong winds are sporadic but peak significantly in July. The graph below shows the occurrence of these three main hazards by month.

Figure 4; Number of hazards reported by month

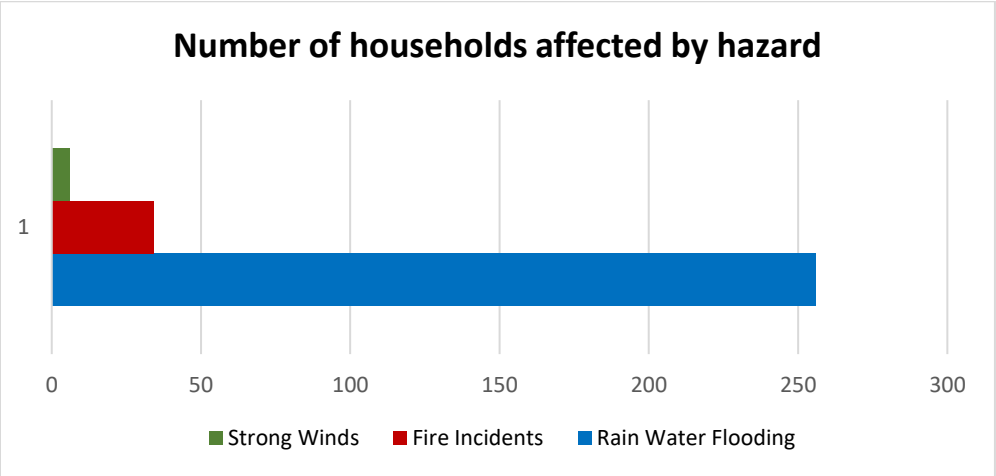




4. Number of households affected by hazard

In the records provided, a total of nine distinct incident categories were documented by the NDMA during the year 2023. These incidents collectively impacted a total of 296 households within the same timeframe. Notably, among the entirety of incident cases, rainwater flooding exhibited the most considerable influence on households, impacting 256 households. Fire incidents ranked as the subsequent leading cause, affecting 34 households, while strong winds accounted for 6 affected households.

Figure 5; Number of households affected by hazard



5. Number of Incidents by Island

Based on the data, eight types of incidents were reported across the Maldives in 2023, with cases recorded from a total of 64 islands. The most frequently reported hazard was fire incidents, with Male' accounting for the highest number of cases, reporting 47 fire incidents. Other islands also reported fire incidents but in smaller numbers. In addition to fire, flooding was another common hazard, with incidents reported across multiple islands, including Male' and Hulhumale'. Hazards such as surges, strong winds, maritime incidents, and explosions were less frequent but distributed across various locations. These patterns highlight the concentration of fire incidents in urban areas like Male', while the islands face a broader range of hazards, particularly flooding and surges.

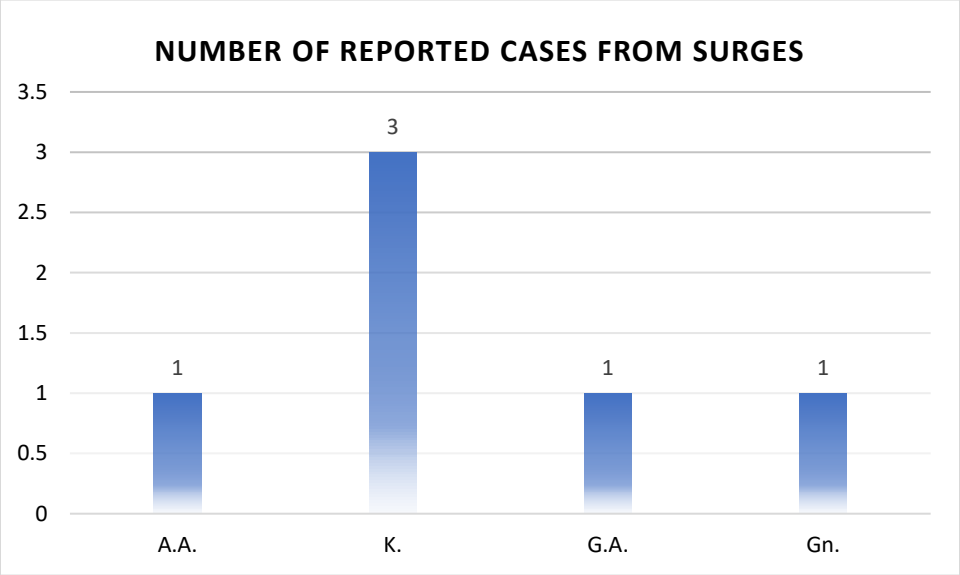
Table 1; Number of incidents by island

Atolls	Islands	Number of Incidents Reported: By Hazard							
		Lightning	Surges	Strong wind	Flood	Martime	Explotion	Fire	Aviation incident
K.	Male'	0	2	0	4	1	9	47	0
K.	Hulhumale'	0	0	0	0	0	1	16	0
S.	Feydhoo	0	0	0	3	0	0	1	0
H.Dh	Kulhuduffushi	0	0	0	0	0	0	4	0
G.Dh	Gadhdhoo	0	0	0	1	0	0	1	0
K.	Thilafushi	0	0	1	0	0	0	1	0
Gn.	Fuvahmulah City	0	1	0	2	0	0	0	0
Ga.	Kolamaafushi	0	0	0	0	0	0	1	0
G.Dh	Madaveli	0	0	1	1	0	0	0	0
Ga.	Dhaandhoo	0	0	1	0	0	0	0	0
S.	Meedhoo	0	0	0	2	0	0	1	0
S.	Maradhoo	0	0	0	2	0	0	0	0
S.	Hulhudhoo	0	0	0	2	0	0	2	0
S.	Hithadhoo	0	0	0	2	0	0	4	0
M.	Maduvvari	0	0	0	0	1	0	1	0
F.	Feeali	0	0	2	0	0	0	0	0
G.Dh	Fiyoari	0	0	0	0	0	0	1	0
Aa.	Thoddoo	0	0	0	1	0	0	2	0
R.	Ungoofaaru	0	0	0	0	0	0	1	0
H.Dh	Nellaidhoo	0	0	0	1	0	0	1	0
H.Dh	Makunudhoo	0	0	0	0	0	0	2	0
Th.	Thimarafushi	0	0	1	0	0	0	0	0
S.	Maradhoo Feydhoo	0	0	1	1	0	0	0	0
Ha.	Thuraakunu	1	0	0	0	0	0	0	0
Dh.	Kudahuvadhoo	0	0	1	0	0	0	0	0
B.	Fehendhoo	1	0	0	0	0	0	0	0
Ha.	Filladhoo	0	0	0	0	0	0	1	0
Aa.	Feridhoo	0	0	1	2	0	0	0	0
Sh.	Feevah	0	0	1	1	0	0	0	0
Aa.	Himandhoo	0	1	1	1	0	0	0	0
Lh.	Naifaru	0	0	1	1	0	0	0	0
Ha.	Ihavandhoo	0	0	1	0	0	0	1	0
K.	Huraa	0	0	1	0	0	0	0	0
K.	Obloo select loabigili	0	0	0	1	0	0	0	0
Ga.	Villigili	0	1	1	0	0	0	0	0
K.	Hulhule	0	1	0	0	0	0	0	1
K.	Thulusdhoo	0	0	0	1	0	0	1	0
Sh.	Maaungoodhoo	0	0	0	0	0	0	1	0
Lh.	Kurendhoo	0	0	0	1	0	0	0	0
Aa.	Ukulhas	0	0	0	1	0	0	0	0
Aa.	Rasdhoo	0	0	0	1	0	0	0	0
B.	Maalhos	0	0	0	2	0	0	0	0
B.	Goidhoo	0	0	0	1	0	0	0	0
V.	Rakeedhoo	0	0	0	1	0	0	0	0
A.Dh	Mahibadhoo	0	0	0	1	0	0	0	0
A.Dh	Omadhoo	0	0	0	1	0	0	0	0
A.Dh	Mandhoo	0	0	0	1	0	0	0	0
A.Dh	Maamigili	0	0	0	1	0	0	0	0
B.	Thulhaadhoo	0	0	0	1	0	0	0	0
Ha.	Dhidhdhoo	0	0	0	1	0	0	0	0
H.Dh	Finey	0	0	0	1	0	0	0	0
Ha.	Kelaa	0	0	0	1	0	0	0	0
Ha.	Muraidhoo	0	0	0	1	0	0	0	0
Ha.	Thakandhoo	0	0	0	1	0	0	0	0
Ha.	Hoarafushi	0	0	0	1	0	0	0	0
Ha.	Utheemu	0	0	0	1	0	0	0	0
Lh.	Hinnavaru	0	0	0	0	0	0	1	0
B.	Kendhoo	0	0	0	1	0	0	0	0
K.	Vilimale'	0	0	0	0	0	0	2	0
K.	Ritz carlton fari island	0	0	0	0	0	0	1	0
N.	Maafaru	0	0	0	0	0	0	1	0
Sh.	Komandoo	0	0	0	1	0	0	0	0
K.	Guraidhoo	0	0	0	1	0	0	0	0
Sh.	Funadhoo	0	0	0	1	0	0	0	0

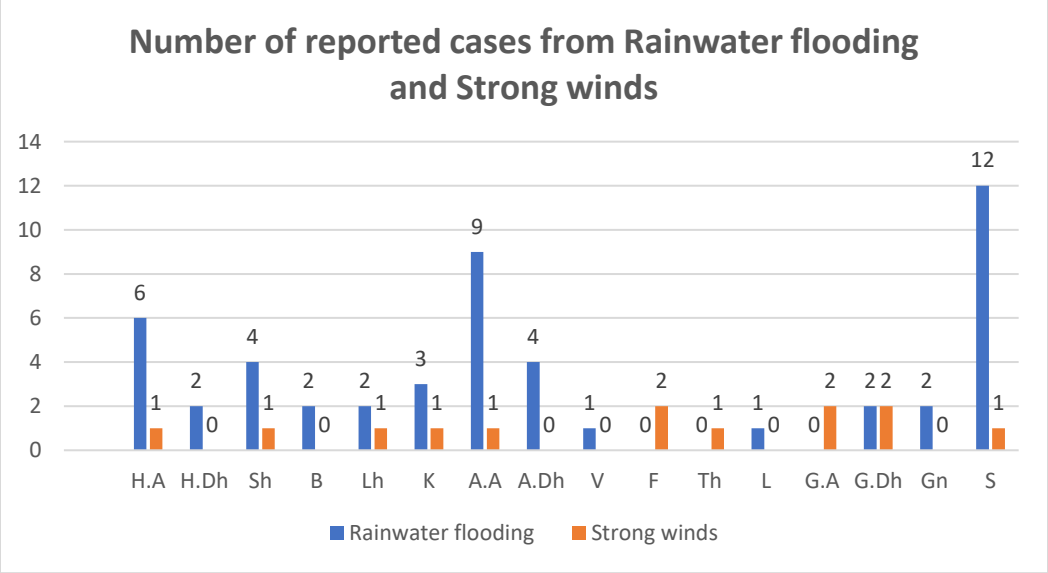
6. Number of reported cases from weather related events.

6.1 Surges

Figure 6.1; Number of reported cases from surges



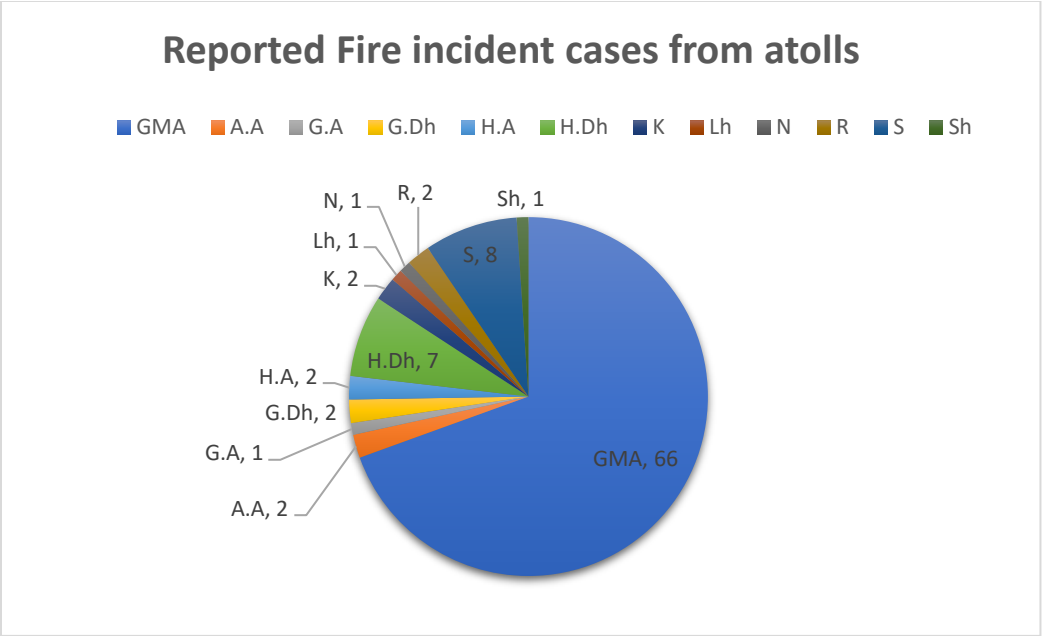
6.2 Rainwater flooding and Strong winds



7. Number of reported fire incident cases from atoll

In 2023, fire incidents were reported across a total of 11 atolls. Most of these incidents were recorded in Kaafu (K.) Atoll, accounting for a substantial 68 cases, which is approximately 72% of the total reported fire incidents. The remaining atolls reported comparatively fewer incidents: Haa Dhaalu (H.Dh.) Atoll recorded 7 cases (7.4%), Seenu (S.) Atoll reported 8 cases (8.5%), and Alif Alif (A.A.), Gaafu Dhaalu (G.Dh.), Haa Alif (H.A.), and Raa (R.) Atolls each reported 2 cases (2.1%). The lowest numbers, with 1 case (1.1%) each, were reported in Lhaviyani (Lh.), Noonu (N.), and Shaviyani (Sh.) Atolls.

Figure 7; Number of fire incidents reported by atoll

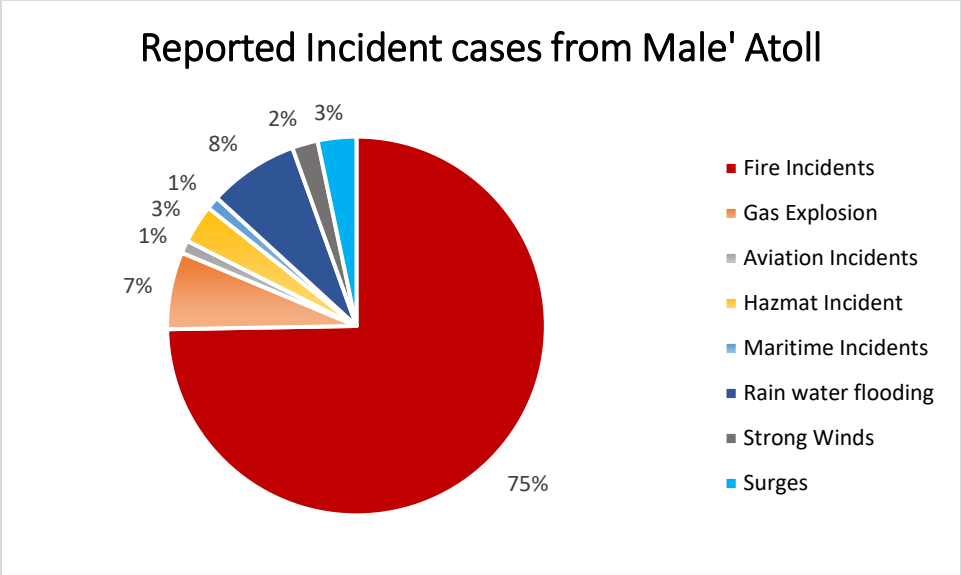


8. Reported incident cases from Male' atoll

In 2023, Male' atoll had the highest number of reported fire incidents. A total of 68 fire cases were documented, making up approximately 75% of all incidents reported in the atoll. Three major

incident types were documented in Male's atoll: fire, explosion, and rainwater flooding. Among these, fire had the highest number of reported cases, significantly surpassing the others.

Figure 8; Number of incident reported cases from Male' atoll



9. Government financial assistance by type of hazard

In 2023, fire incidents received the highest amount of government funding for economic and infrastructure damage. A total of 390,717.00 MVR was provided as relief aid to 59 individuals from 15 households, and an additional 1,948,833.10 MVR was allocated as recovery aid to 22 households.

For rainwater flooding incidents, the government allocated 938,240.00 MVR as recovery aid, benefiting 218 households across 17 different islands.

Additionally, for strong wind incidents, 10,900 MVR was granted as relief aid to one household, while 456,169.00 MVR was disbursed as recovery aid to six households.

Table 2; Financial assistance by type of hazard

Types of hazards	Total Financial Aid (MVR)

Fire	2,339,550.10
Rainwater flood	938,240.00
Strong winds	467,069.00
Total	**3,744,859.10**

10. Government financial assistance provided by islands

Fifty islands out of the 189 inhabited islands received government financial assistance for hazard events in 2023. Islands that received assistance for the majority of hazard events include Male' city, Addu City Hithadhoo, and Addu City Feydhoo.

Table 3; Financial assistance by island

Island name	Number of events provided
Aa. Thoddoo	2
Aa. Feridhoo	2
Male' City	6
Aa. Ukulhas	1
Aa. Rashoo	1
Aa.Maalhos	2
B. Kendhoo	1
F. Feeali	1
GDh. Gadhdhoo	2
GDh. Madaveli	2
Dh. Kudahuvadhoo	1
Ha. Filladhoo	1
Ha. Ihavandhoo	1
HDh. Kulhudhuffushi	2
HDh. Nellaidhoo	2
HDh. Makunudhoo	1
Hulhumale'	1
Lh. Naifaru	1
Lh. Hinnavaru	1
N. Maafaru	1
R. Ungoofaaru	1
R. Maduvvari	1
S. Feydhoo	3

S. Meedhoo	2
S. Hithadhoo	4
S. Maradhoo	1
S. Hulhudhoo	1
Sh. Feevah	2
Sh. Komandoo	2
Sh. Maaungoodhoo	1
Total	**50**

11. Challenges and Recommendations

11.1 Challenges

Valuation: Disaster total valuation cannot be done with the limited information rather we do loss to the critical and basic needs and furniture's

Manual reporting: manual form filling and reporting is a challenge during incidents

11.2 Recommendation

Standardize Data Collection: Develop standardized data collection protocols and reporting formats to ensure consistency and comparability of data across different regions of Maldives and time periods.

Enhance Data Quality: Implement data validation and quality control mechanisms to minimize errors and inconsistencies in the data. Provide clear guidance to data collectors on reporting criteria.

Multi-year Reporting: Consider producing reports on a multi-year basis to capture trends and changes in disaster patterns over time.

By implementing these recommendations, the Maldives NDMA can produce a more robust and informative Disaster Statistical Report that serves as a valuable resource for disaster risk reduction, policy development, and response planning.

Conclusion

In conclusion, implementing these recommendations will enable the creation of a comprehensive and dependable Maldives Disaster Statistical Report. By standardizing data collection, improving data accuracy, strengthening hazard identification, and fostering greater community involvement, this report will become an essential resource for mitigating disaster risks, enhancing resilience, and shaping inforsmed policy decisions in the Maldives.

Notably, weather-related events are increasing day by day, forming a recurring and concerning pattern. A significant amount of money has been spent on recovery aid in response to these events, underlining the economic impact of disasters. This emphasizes the urgent need to establish a robust insurance mechanism to reduce the financial burden on affected communities and ensure timely recovery and support.