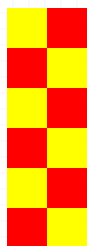




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FSM Seminar 2024

Fire Statistics & Case Studies

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Fire Investigator

Operations Department

Singapore Civil Defence Force



Scope

- Annual Fire Statistics 2023
 - ✓ Overview
 - ✓ Areas of concern
- Case Studies
 - ✓ Key takeaways

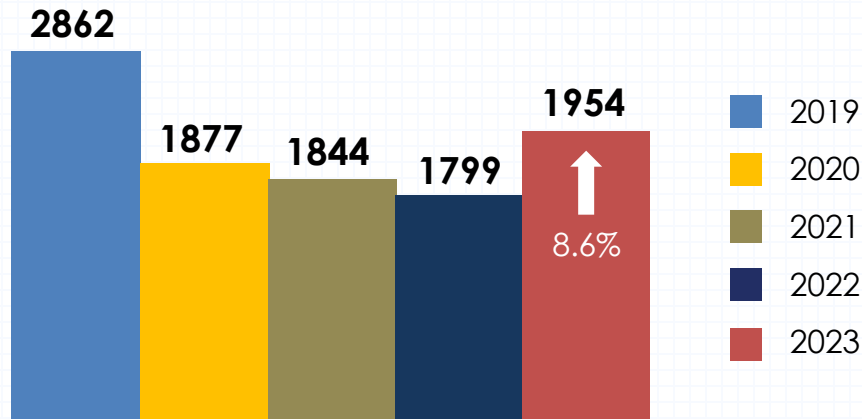


Photo courtesy of SCDF



Overview

Total Fire Calls

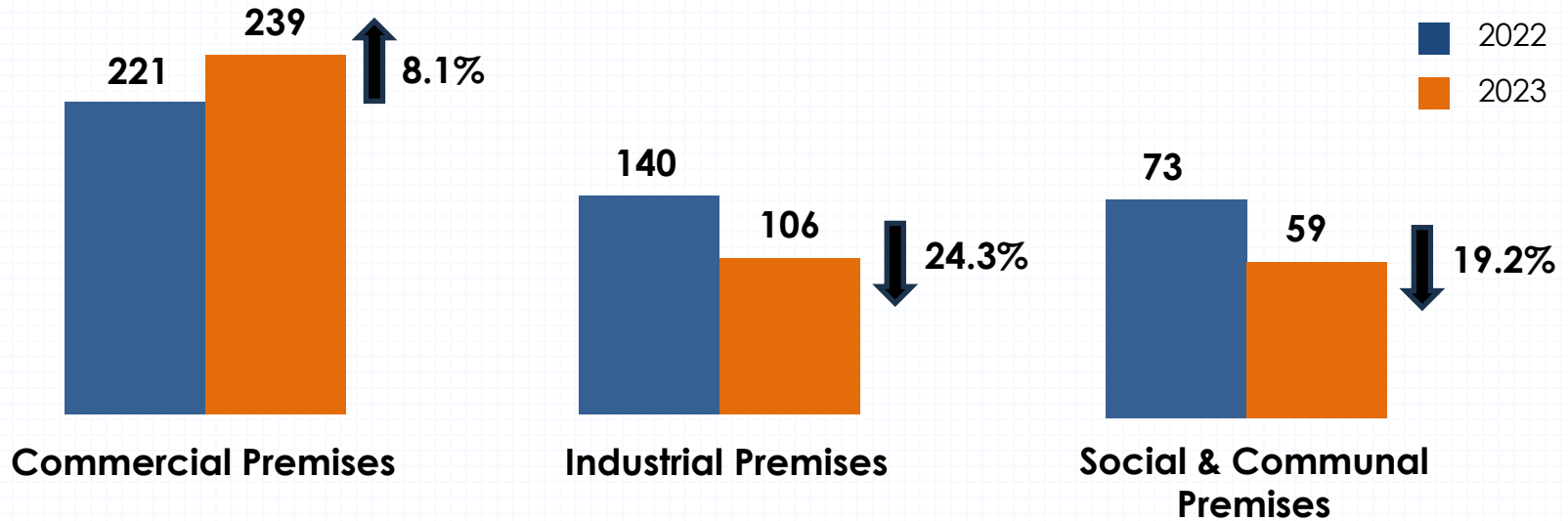


From SCDF Emergency Medical Services, Fire & Enforcement Statistics 2023

- Overall number of fires increased by **8.6%** from 2022
- Number of fires at non-residential premises fell by **6.9%**
 - Non-residential premises consist of buildings requiring FSM & CERT



Fires in Non-Residential Buildings



From SCDF Emergency Medical Services, Fire & Enforcement Statistics 2023

SCDF responded to 404 fires in non-residential buildings in 2023, a decrease of **6.9%** from 2022.



Top Causes of Fire



Electrical origin

Accounted for **30.6%**
of fire cases

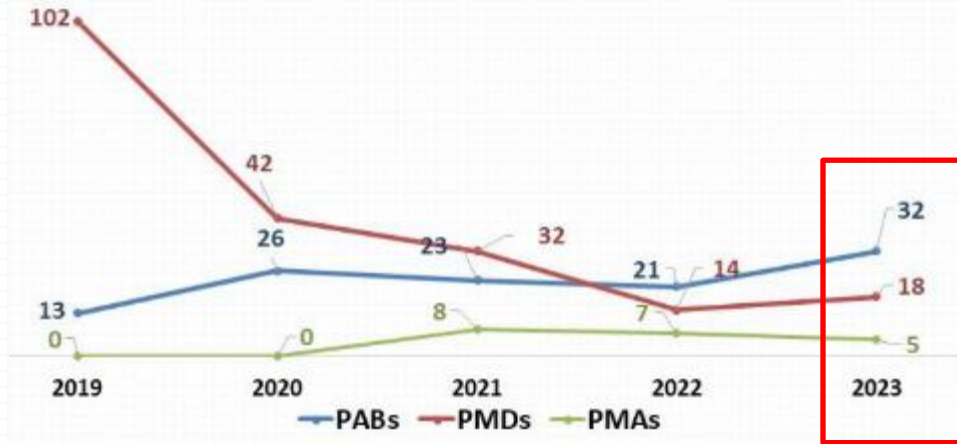


Unattended cooking

Accounted for **23.3%**
of fire cases



Fires involving PABs, PMDs, & PMAs



From SCDF Emergency Medical Services, Fire & Enforcement Statistics 2023

2 separate fire incidents caused by active mobility devices put out by SCDF in single day; 3 taken to hospital



Screenshot courtesy of TODAYonline

SCDF responded to 55 fires involving Active Mobility Devices in 2023, an increase of **31%** from 2022.



Fires involving PABs, PMDs, & PMAAs



Photo courtesy of SCDF



Check for **certification marks** (EN15194 for PABs, UL2272 for PMDs)



Do use a power adaptor that carries the **Safety Mark** and is recommended by the manufacturer



Do charge PAB/PMD on **a hard, flat surface**



Do **regularly examine batteries** for any damage/deformities



Fires involving PABs, PMDs, & PMAs



Photo courtesy of TODAYonline



Do not buy or use non-original batteries



Do not charge immediately after use



Do not charge a PAB/PMD or its batteries near combustible materials or along an escape path



Do not leave batteries or devices to charge unattended for an extended time

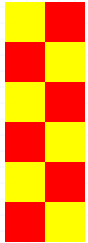




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Case Studies



Case Study #1: Fire in industrial premises

- Fire involved 1x paper shredder machine
- Extinguished by sprinkler system



Photo courtesy of SCDF



Case Study #1: Areas done well

- **Maintenance of fire safety measures**
 - ✓ Sprinkler activated and in working order to extinguish fire promptly
- **Fire hazards removed**
 - ✓ Area is not cluttered



Photo courtesy of SCDF



Case Study #2: Fire in shopping center

- Fire involved electrical switches
- Extinguished by sprinkler system



Photo courtesy of SCDF



Case Study #2: Areas done well

- **Maintenance of fire safety measures**
 - ✓ Fire alarm activated to alert occupants
 - ✓ Sprinkler activated and in working order to extinguish fire promptly
- **Swift response**



Photo courtesy of SCDF



Case Study #3: Fire in basement carpark

- Fire involved a parked car in the basement
- Extinguished by CERT by internal hose reel and dry powder fire extinguishers before SCDF arrival



Photo courtesy of SCDF



Case Study #3: Areas done well

- **Maintenance of fire safety measures**
 - ✓ Sprinkler activated and in working order to extinguish fire promptly
 - ✓ Availability of working fire extinguishers
- **Swift response**
 - ✓ Fire was quickly extinguished
- **Follow-up actions to limit damage**
 - ✓ Shut off the sprinkler after the fire was extinguished to prevent further water damage



Reference photo of water damage caused by sprinkler system, courtesy of SCDF



Role of FSM

- **Peacetime**

- ✓ Maintenance of all fire safety measures
- ✓ Conduct daily checks and remove any fire hazard
- ✓ Train, co-ordinate and supervise the CERT exercises annually

- **During incidents**

- ✓ Notify SCDF immediately upon the occurrence of any fire incident in the premises

- **Post-incident**

- ✓ Providing additional info – floor plans



Conclusion



Photo courtesy of SCDF

- The role of the FSM goes beyond firefighting – they are crucial colleagues of SCDF in preventing and minimizing danger/damages
- Knowledge & proficiency is key to keep yourself and others safe



Thank You

