



# Road safety in Thailand

Pananya Chuadamrong  
Traffic medicine physician,  
Department of disease control, Thai Ministry of public health



# OUTLINE



**1**

**Background of road  
safety management in  
Thailand**



**2**

**Accident investigation  
in Thailand**



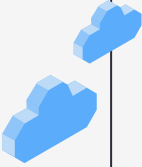
**3**

**Road Traffic Accident  
Data resources**



**4**

**Problems of individual and  
systemic factors in road  
safety and recommendation**



**1**

# **Background of Road safety management in Thailand**





# Background

- Thailand is within 10 countries with highest road traffic fatality rate in the world
- The facts of traffic injuries in Thailand
  - Two thirds of road traffic fatalities occur among people of working age (18–59 years)
  - Traffic injury also the leading cause of children and young adults aged 5–29 years.
  - Male has 3 times more risk than female
  - Low > High socioeconomic status



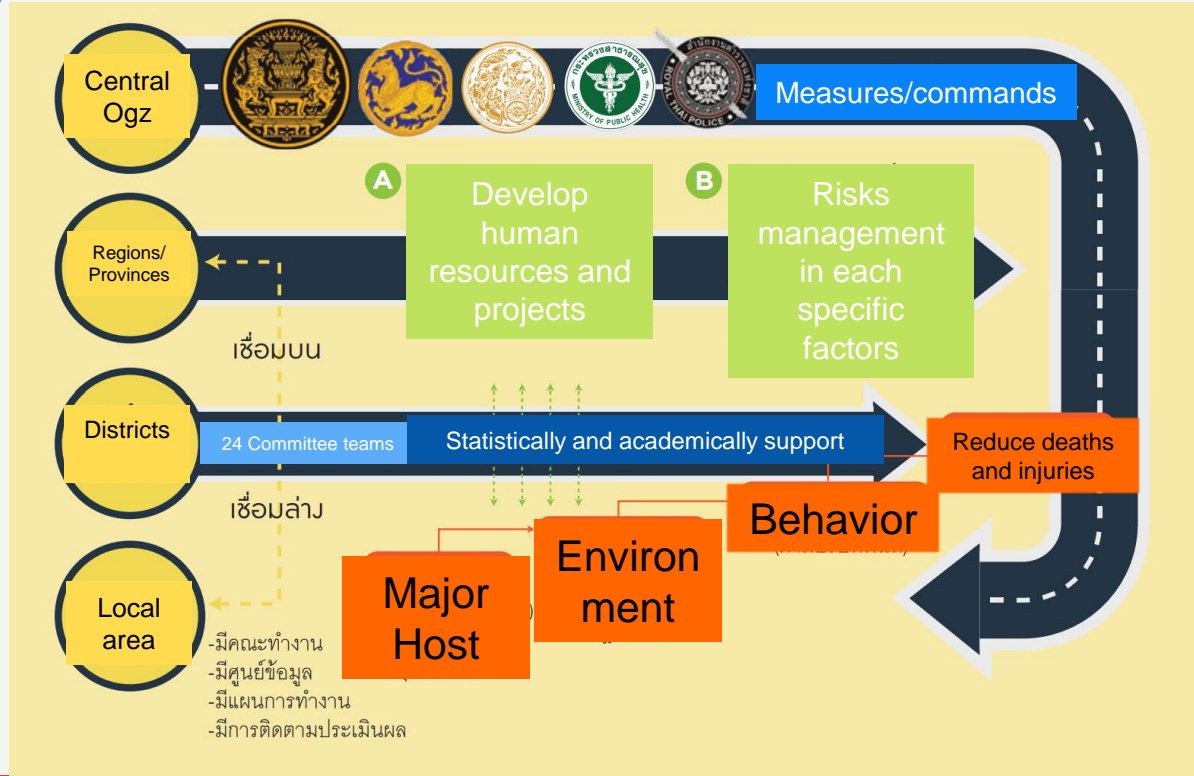
# Thailand road safety master plan

## Safe system approach

- Speeding
- Driving under alcohol and psychoactive substance
- No safety equipment
- Distracted driving
- Unsafe road infrastructure
- Unsafe vehicles
- Inadequate post crash care
- Inadequate law enforcement and traffic law



# Organizations involved in Road safety in Thailand



## Government of Thailand

- Ministry of Interior
- Ministry of Transportation and communication
- Ministry of Public Health
- Royal Thai police department

ศูนย์อำนวยการความปลอดภัยทางถนน  
กระทรวงมหาดไทย (Road Safety  
Thailand)





2

# Accident investigation in Thailand

# General accident investigation system

For each individual in-depth investigation

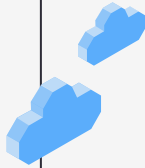
	Host	Equipment	Environment	
			Physical	Social
Pre-Event				
Event				
Post-Event				

For systemic vision investigation

แบบจำลองทฤษฎีเนยแข็ง (SWISS CHEESE MODEL): ศ.เจมส์ เรย์ลัน







# Criteria of accident investigation determined by department of disease control, ministry of public health

- District Ix  
at least : 1 Death  
              : 2 (Death(s)+ Admission(s))
- Provincial Ix  
at least : 2 Deaths  
              : 4 (Deaths+ Admissions)
- Regional Ix  
at least : 5 Deaths  
              : 10 (Deaths + Admissions)
- Country Ix  
at least : 10 Deaths  
              : 15 (Deaths + Admissions)

\*Death = dead at scene

\*\*Some specific interesting cases may be non-criteria-dependent investigated

Ix = Investigation



# Limitations in accident investigation in Thailand

- Many database resources
  - Are not linked to the same dashboard
  - Different department >> Different criteria, purposes of investigation
  - Types of data
- Data can not be analyzed effectively
  - Data missing
  - Variation symbols in drawing collision diagram
  - Lack of the specialists
- Less cooperation of local institution
- In-depth investigations are rarely done



3

# Road Traffic accident Data resources

# Summary of data resources

	Road			Vehicle			Human			Emergency Response		
	Scene	Dangerous spot	Environment	Type/Brand	Condition	Speed	Population factors	Risky behavior	Injuries /deaths	Transfer	Hosp care	Expense
TRAMS	✓	✓	✓	✓	✓	✓			✓			
POLIS	✓		✓	✓	✓	✓	✓	✓	✓			
Provincial police	✓		✓	✓	✓	✓	✓	✓	✓	✓		
E-Claim	✓			✓	✓		✓	✓	✓	✓		✓
ITEMS	✓			✓			✓		✓	✓	✓	
IS	✓			✓			✓	✓	✓	✓	✓	
Traumaregistry				✓			✓	✓	✓	✓	✓	✓
19 Causes							✓		✓			
43 Files							✓	✓	✓	✓	✓	✓
UCEP							✓		✓		✓	✓
มรณบัตร							✓		✓			





# Gaps and differences: Examples

- Road accident data during New Year Festival 2023-2024: 2 data sources comparison

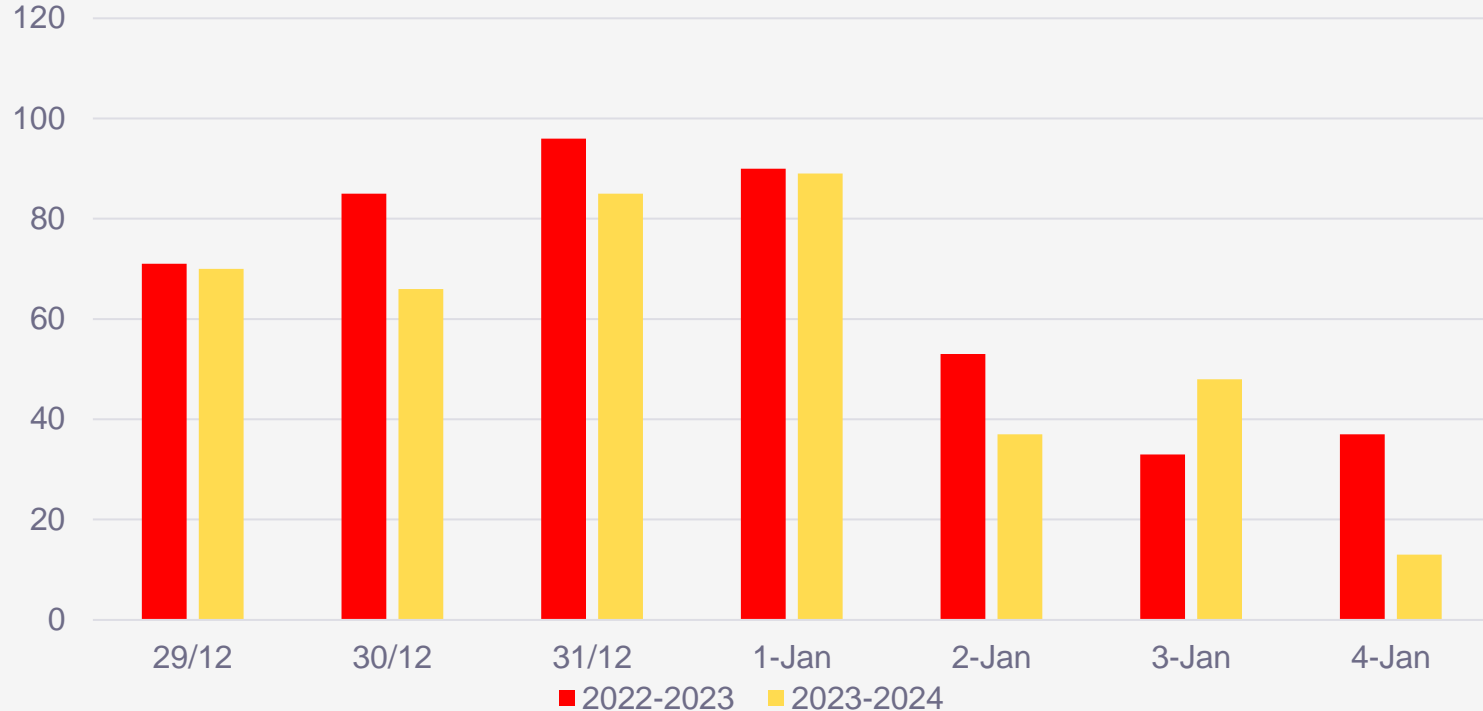
Date	Death	Injured
29/12/2023	70	2609
30/12/2023	66	2486
31/12/2023	85	2920
1/1/2024	89	3296
2/1/2024	37	2641
3/1/2024	48	2431
4/1/2024	13	1470

Date	Incidences	Death	Injured
29/12/2023	339	34	335
30/12/2023	385	37	404
31/12/2023	385	37	404
1/1/2024	419	62	422
2/1/2024	266	21	284
3/1/2024	239	35	250
4/1/2024	200	17	205



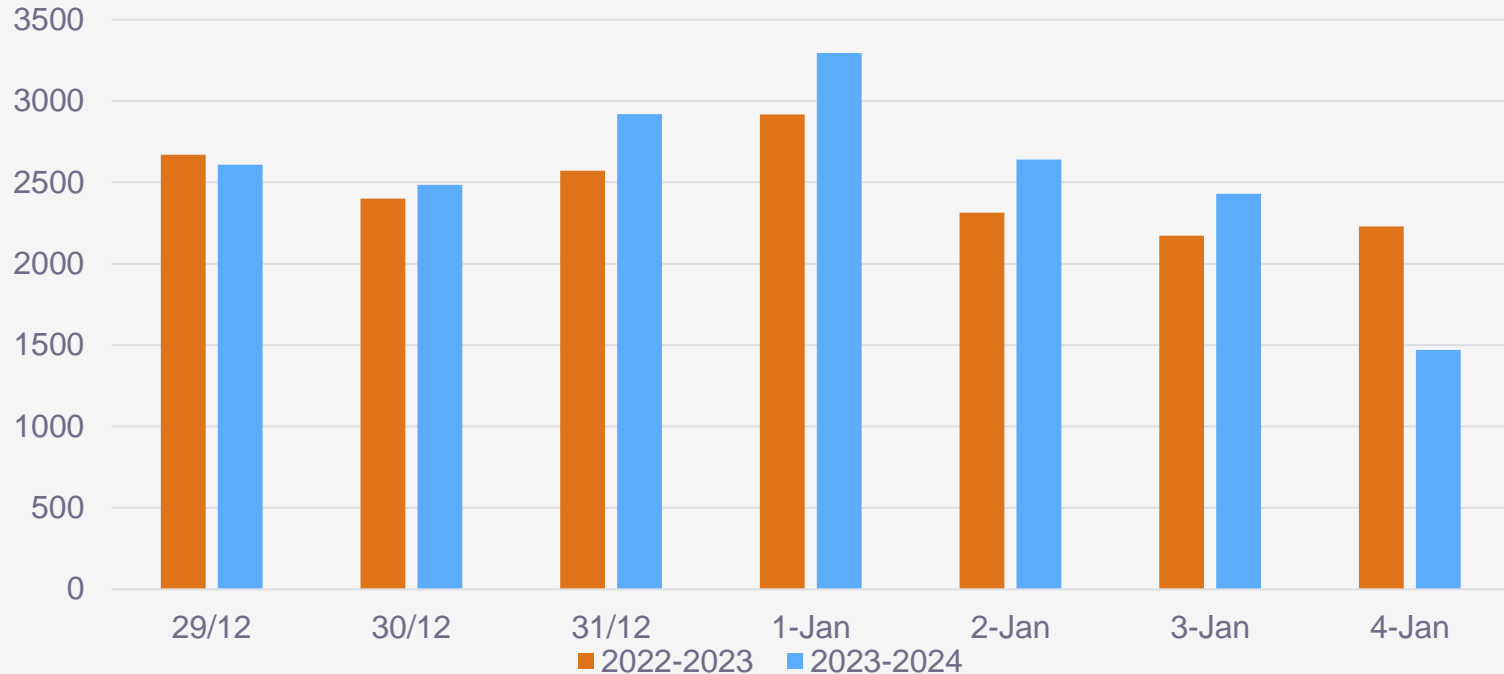
# Trends of traffic injuries statistic in Thailand

Compared Road traffic Death tolls in Thai New Year festival



# Trends of traffic injuries statistic in Thailand 🚗

## Compared Road traffic Injuries in Thai New Year festival





4

## **Problems of improving road safety in Thailand**



# Systemic problems

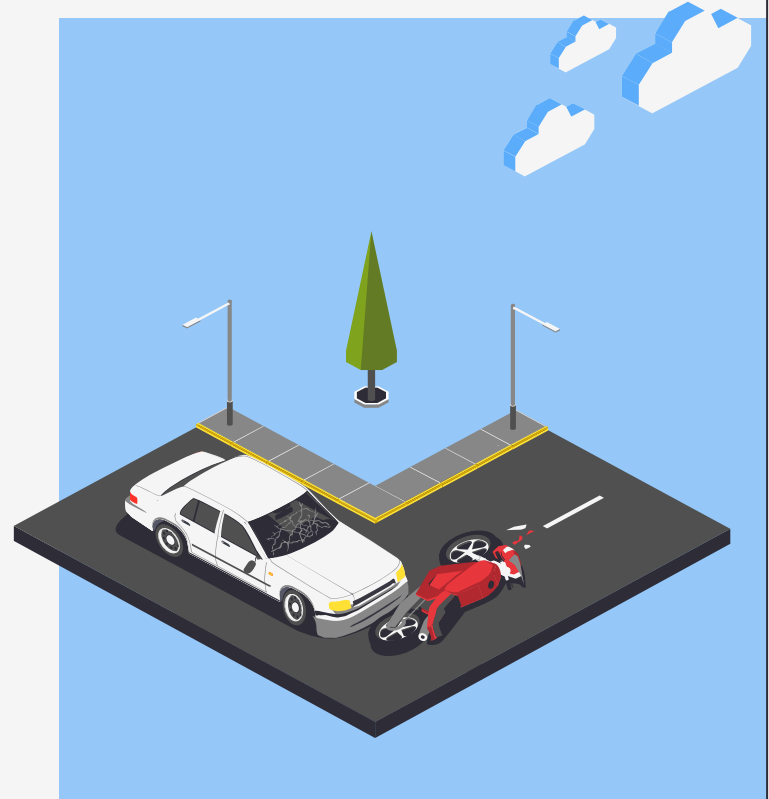
## Law enforcement in Thailand

- Less effective
- Gaps in law
- Law infraction and inappropriate behavior



# Each individual problem

- Human factor
  - No health and behavior screening system by physicians before earning driving license or driving
- Vehicle factor
  - Some vehicle regulations enforcement are still ignored
- Environment factors
  - Inappropriate number of RSA team in local road



**Road Traffic  
injuries are  
preventable, not  
coincidences.**





**Thank you for  
your kind attention**