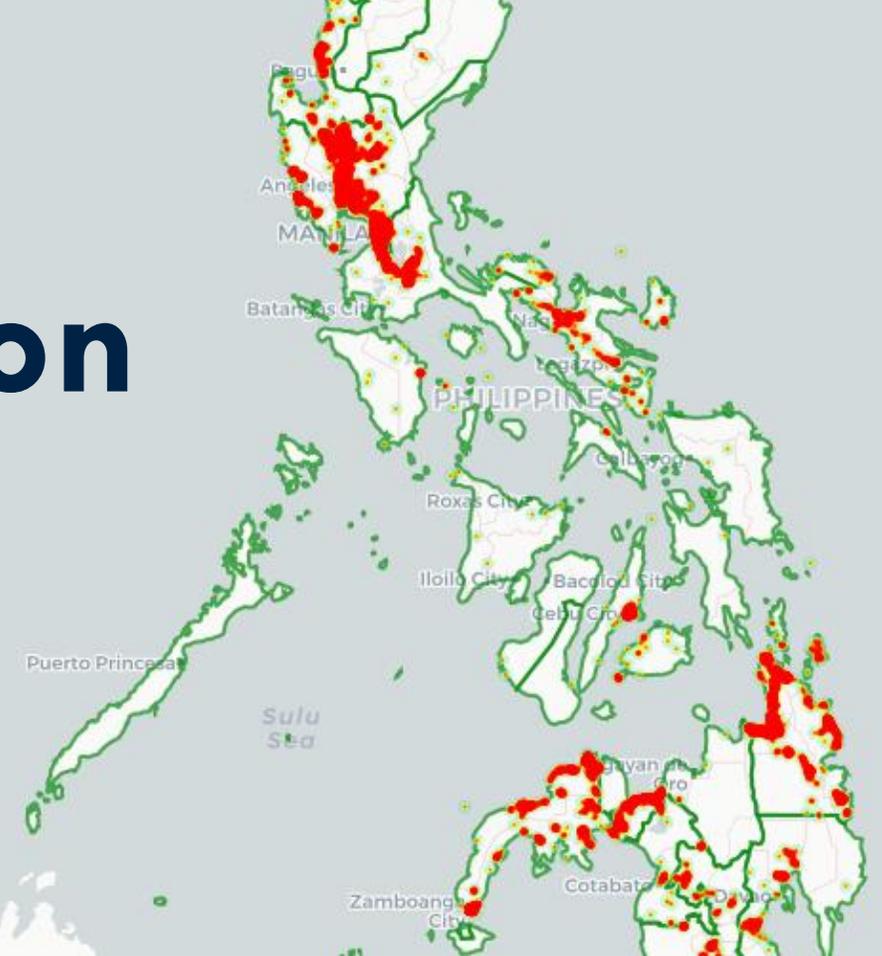


Data for Road Incident Visualization Evaluation And Reporting System

Intelligent Transport Systems Forum

25 October 2019



Quality Infrastructure
Investment Partnership



**Bloomberg
Philanthropies**



**“What is not measured
is unknown...
and what is unknown
cannot be managed”**

WHY DO WE NEED DATA

Reliable safety and traffic data is essential to:

- Prioritize road safety vis a vis other public health issues

- Assess the full nature of the road safety problem (who is at risk ? When ? Why ?)

- Assess the real economic costs associated with road crashes

 - If the problem is underreported, less likely to receive the right level of investment

- Design the most (cost) effective road safety interventions

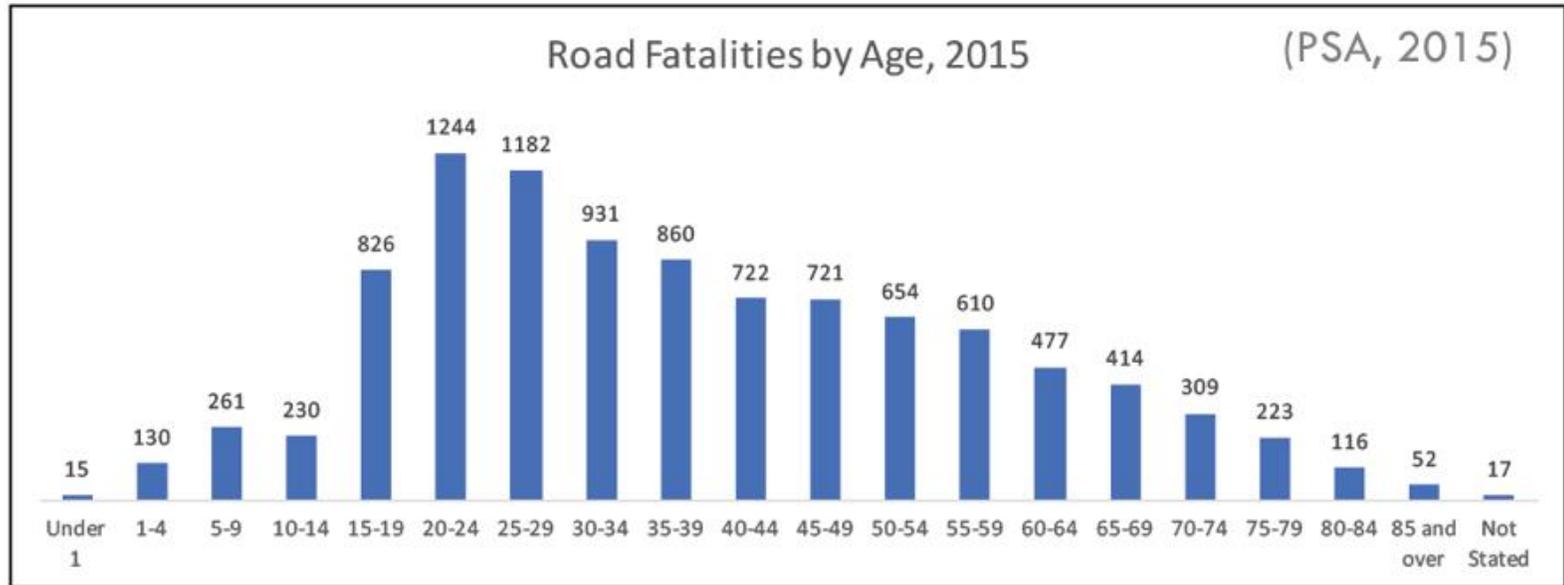
- Monitor progress and adjust work plan

Data on the magnitude of the problem and the risk factors are essential to develop a systematic approach to road safety: At the heart of a **SAFE SYSTEM APPROACH**

ROAD SAFETY IN THE PHILIPPINES



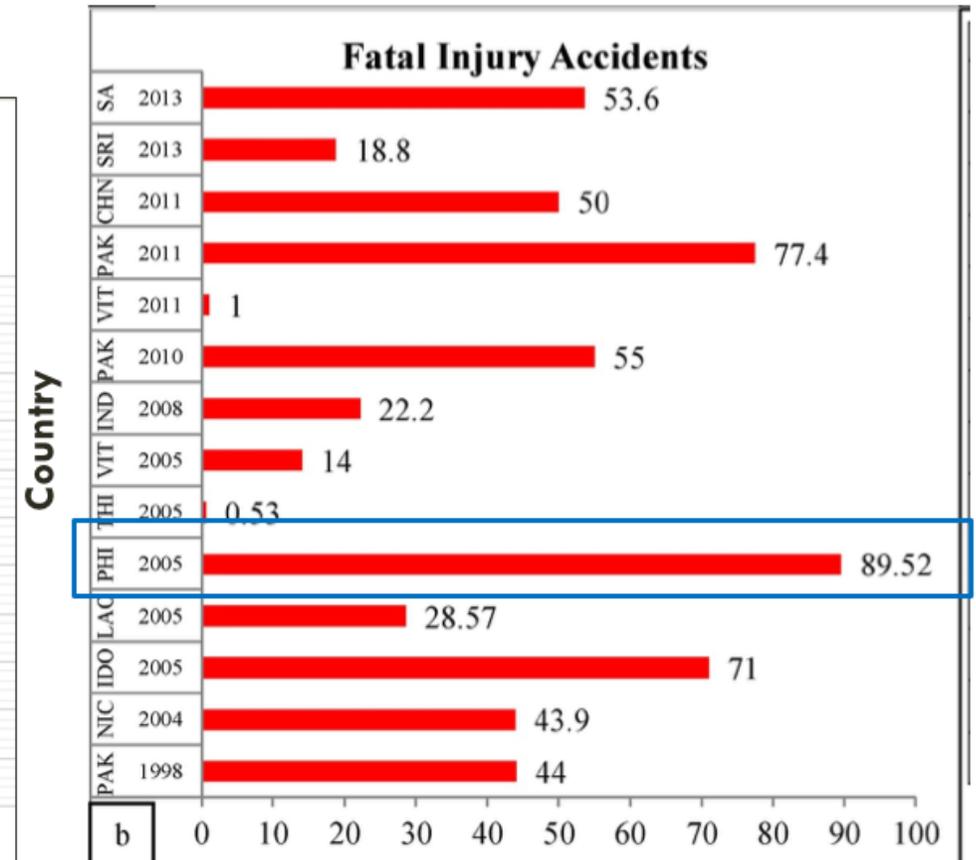
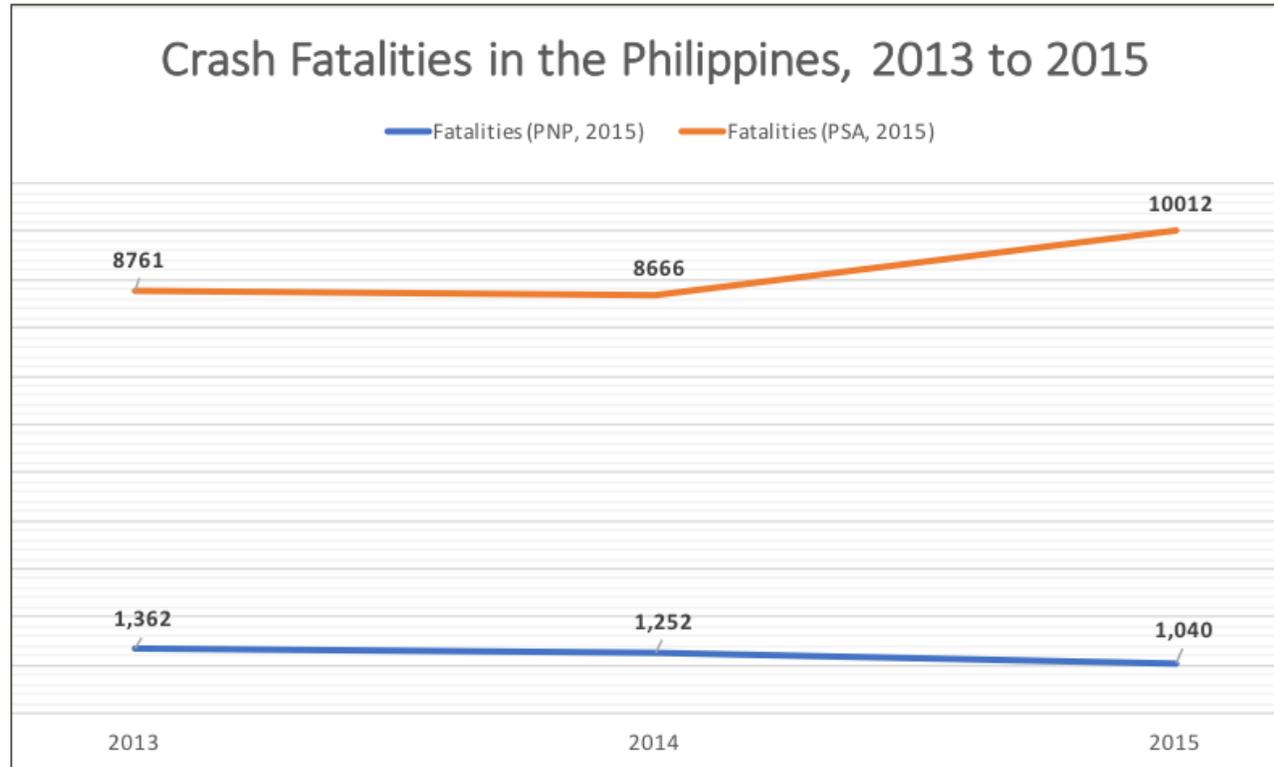
- **30 recorded fatality per day** (PSA, 2016)
- Majority are **20-29 year olds**
- Most fatalities involve: **53% Motorcycles** and **19% Pedestrians** (DPWH, 2013)

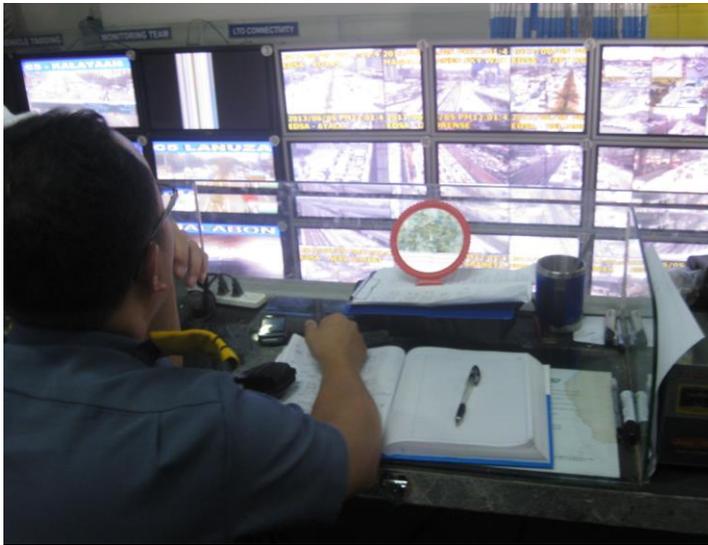
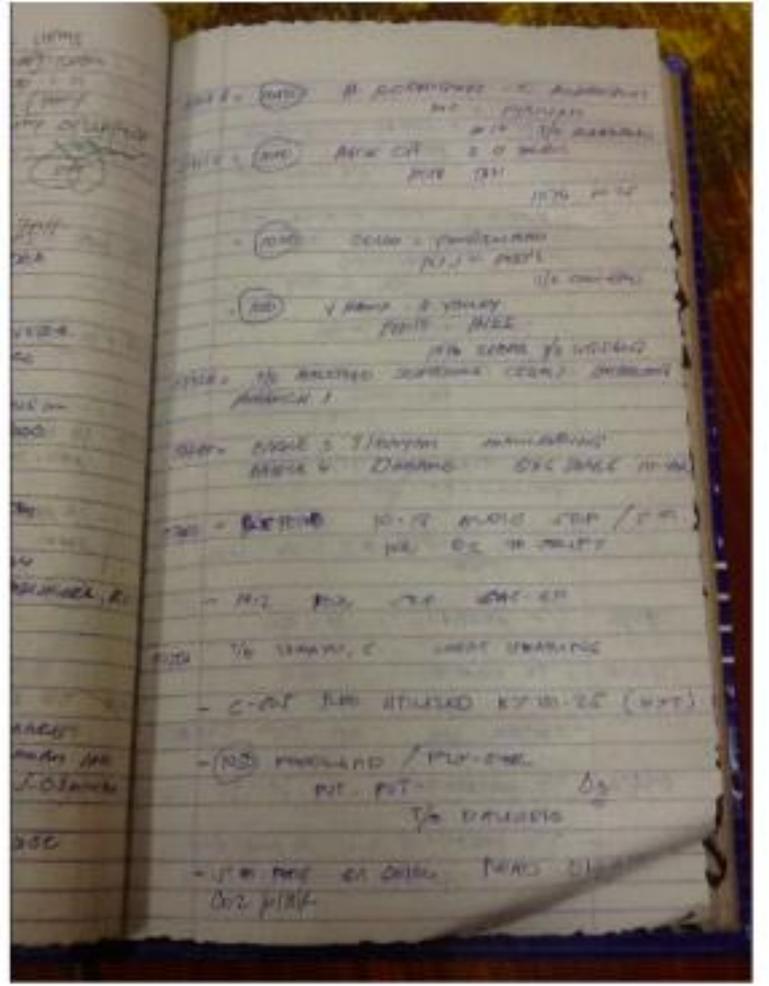
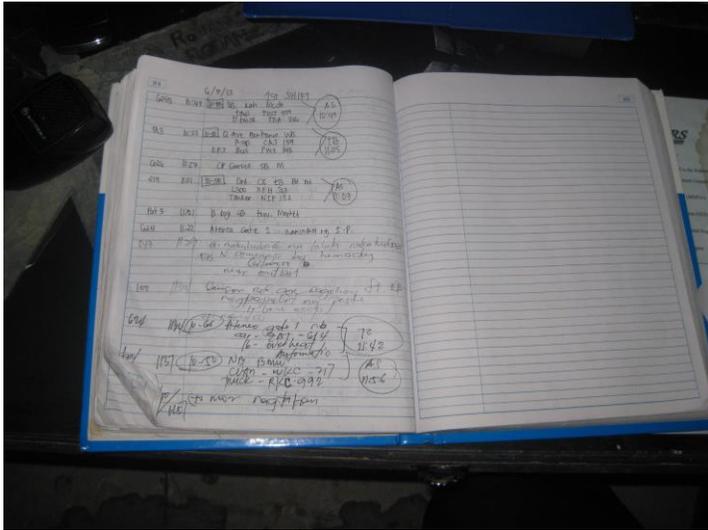


UNDERREPORTING

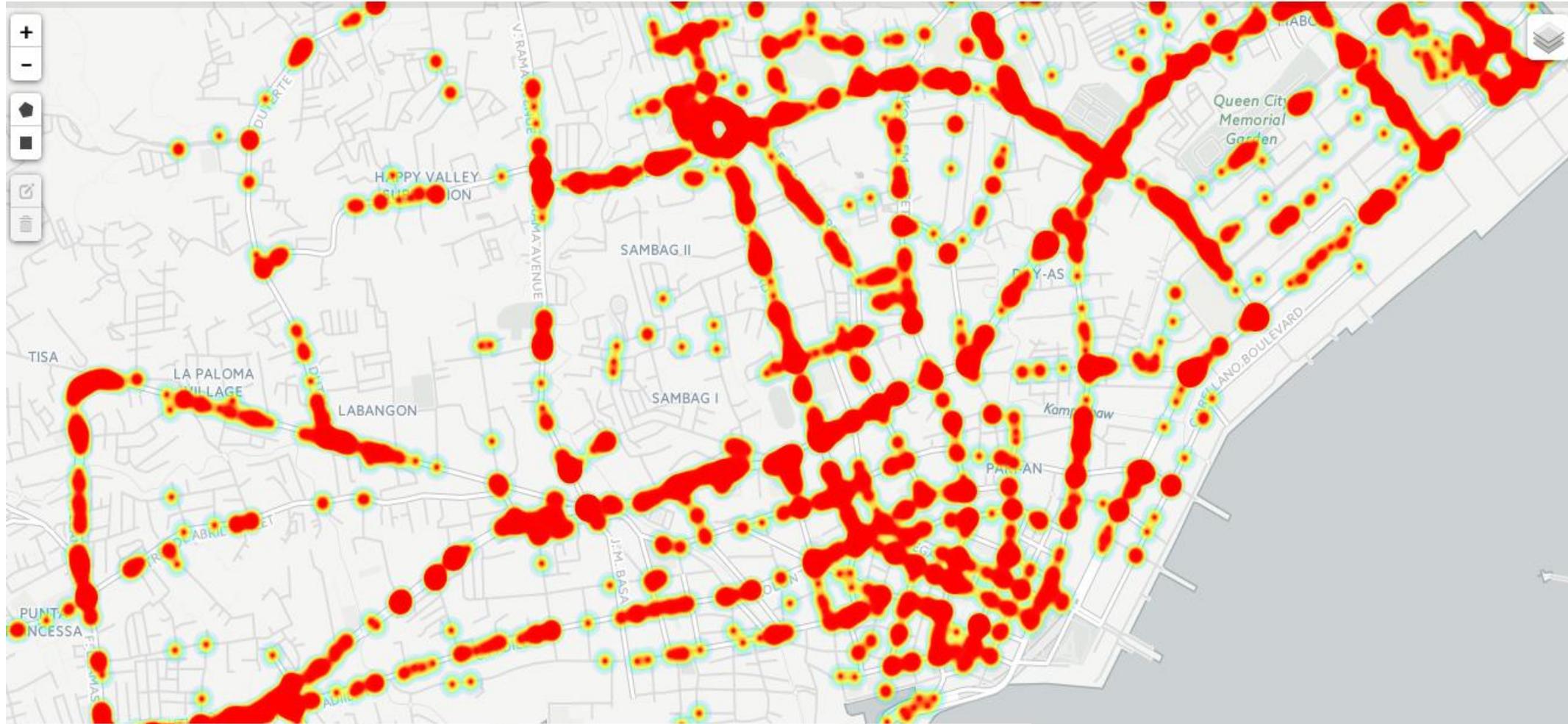
Percentage of Underreporting in Selected Countries

(Sigua and Palmiano, 2005)





Filter by name, keyword Date Range ▾ Reporting Agency ▾ Main cause ▾ Severity ▾



Graphs Interventions Export Traffic Enforcement Assignments ₱1,425,450,000

DRIVERS

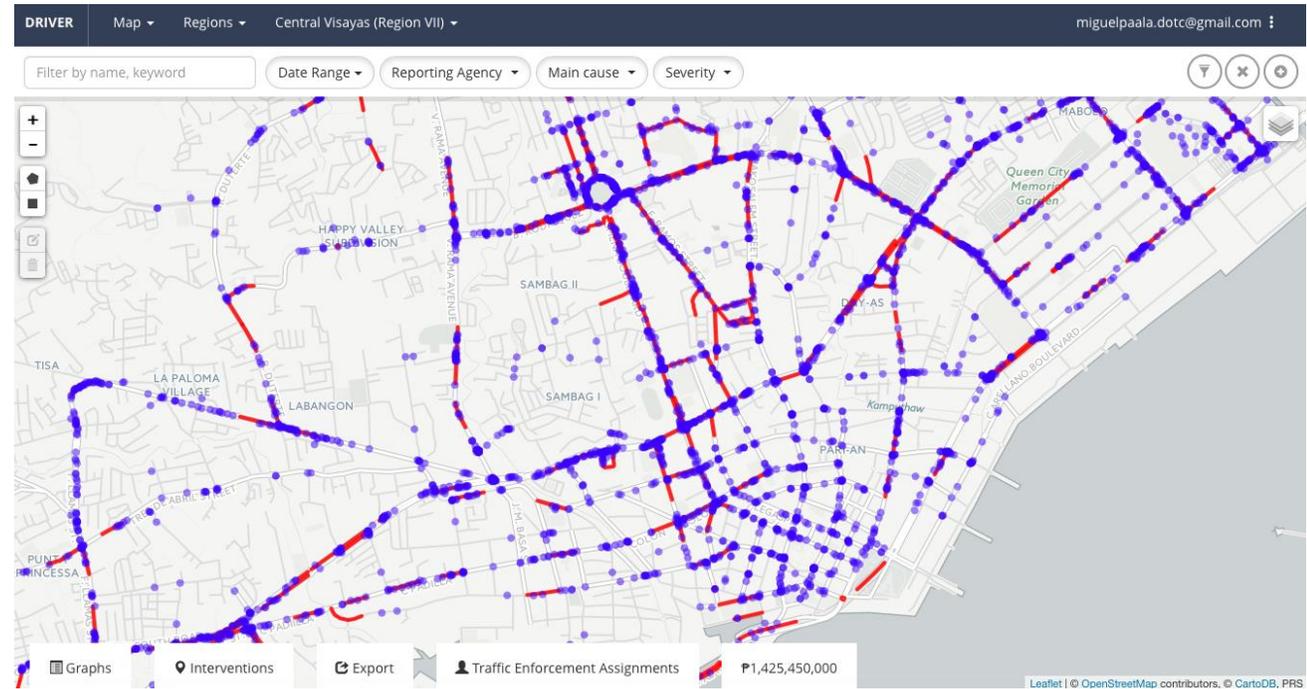
DRIVERS

DRIVER – Data for Road Incident Visualization, Evaluation, & Reporting System

Web-based and open source system for geo-spatially recording & analyzing road crashes

A way to link multiple agencies as well as a means to standardize terms & definitions for reporting crash data

A suite of analytical tools to support evidence-based investments & policies & a platform for monitoring the impact of interventions



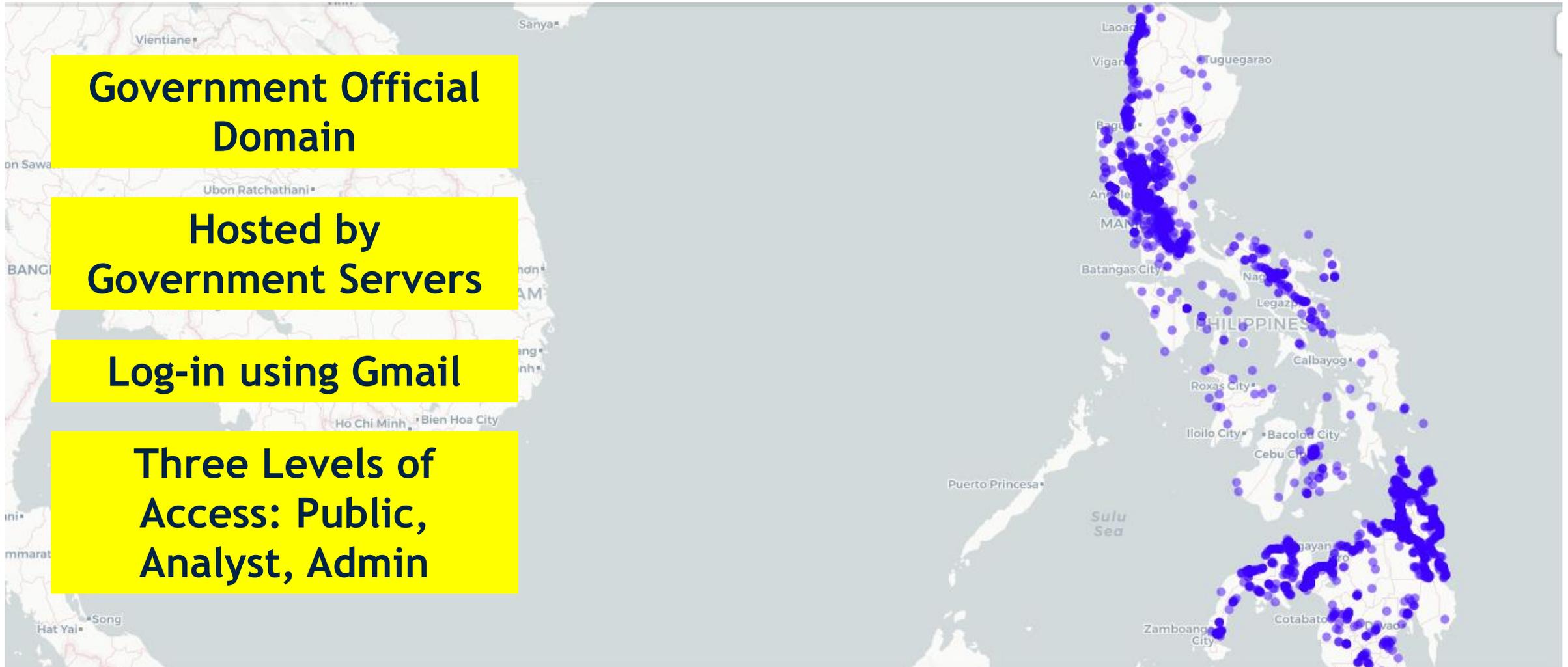
ROADSAFETY.GOV.PH

**Government Official
Domain**

**Hosted by
Government Servers**

Log-in using Gmail

**Three Levels of
Access: Public,
Analyst, Admin**

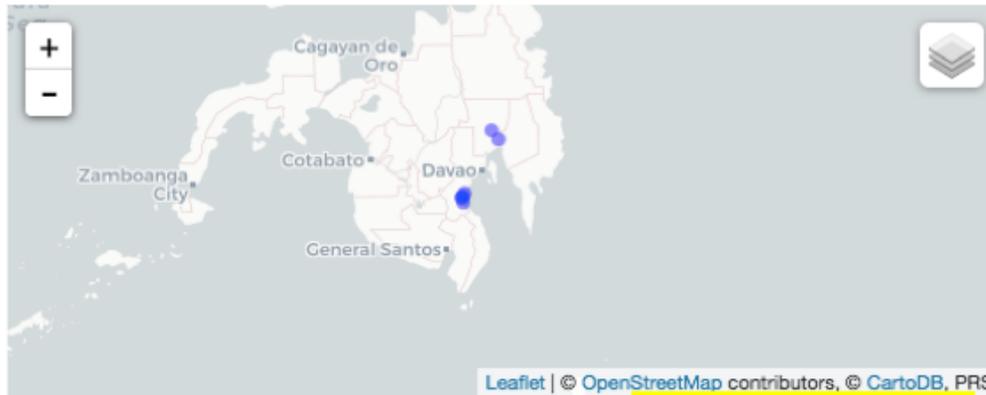




Black Spots by Severity

Blackspot

Analyze & filter



Incidents: Last Two Weeks

Map of Incidents

Economic Cost

₱258,340,000

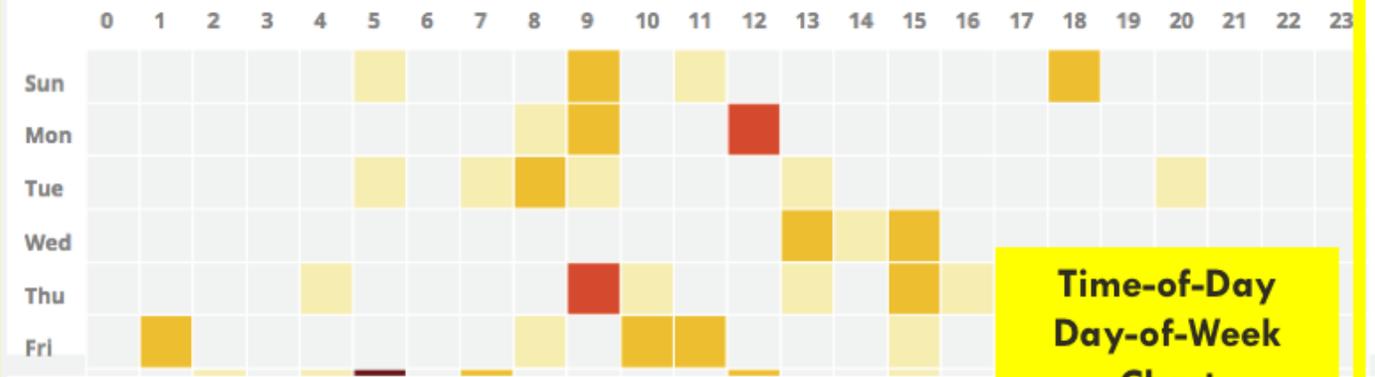
Total economic loss and societal harm: Last 90 days

Number of incidents

58

Incidents

30 Days 90 Days **365 Days**



Time-of-Day Day-of-Week Chart

Saved Filters

Pasig River Bike Fatalities

Veh type: **Bike**

Pasig River Bike

Veh type: **Bike**

DASHBOARD

**Adding Records,
Saving Filters**

Spatial Filters
Date
Vehicle Type
Severity
Reporting Agency
Main Cause

Layers



Graphs **Interventions** **Reports** **Assignments** **Economic Cost**

MAP

Filter by name, keyword

Date Range ▾

Reporting Agency ▾

Main cause ▾

Severity ▾



DATE & TIME	SEVERITY	MAIN CAUSE	COLLISION TYPE	DESCRIPTION		
10/09/2015, 5:38:00	Property			Collision Between Mo ...	View	Edit
10/09/2015, 4:21:00	Property			Collision Between Va ...	View	Edit
10/09/2015, 3:18:00	Property			Collision Between Pi ...	View	Edit
10/09/2015, 3:13:00	Property			Collision Between Bo ...	View	Edit
10/09/2015, 2:38:00	Property			Collision Between Ta ...	View	Edit
10/09/2015, 2:23:00	Property			Collision Between Se ...	View	Edit
10/09/2015, 1:14:00	Property			Collision Between Ta ...	View	Edit
10/09/2015, 1:03:00	Property			Collision Between Mu ...	View	Edit
10/08/2015, 23:49:00	Injury			Collision Between Mo ...	View	Edit
10/08/2015, 23:07:00	Property			Collision Between Bo ...	View	Edit
10/08/2015, 22:20:00	Property			Collision Between Bi ...	View	Edit
10/08/2015, 5:52:00	Property			Collision Between Se ...	View	Edit
10/08/2015, 5:50:00	Property			Collision Between Bo ...	View	Edit
10/08/2015, 5:12:00	Property			Collision Between Ta ...	View	Edit

INSTITUTIONAL ARRANGEMENT

Dept. of Transportation

Focal Point for Road Safety
DRIVER administration

Data Providers

Philippines National
Police

LGU Traffic
Management Agencies

Department of Health

Data Users

DPWH, DOH, PNP

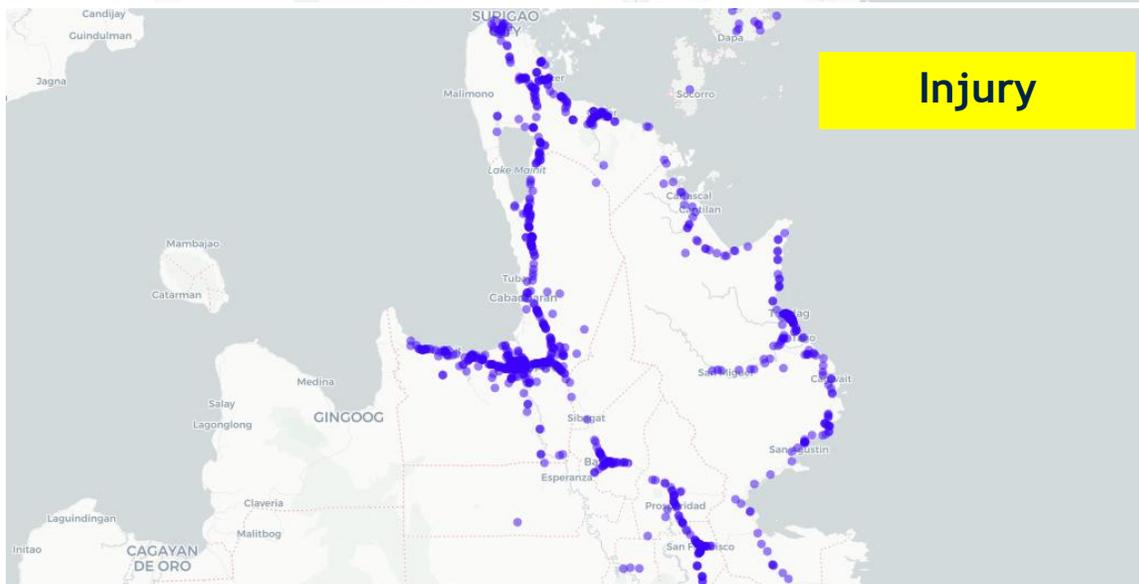
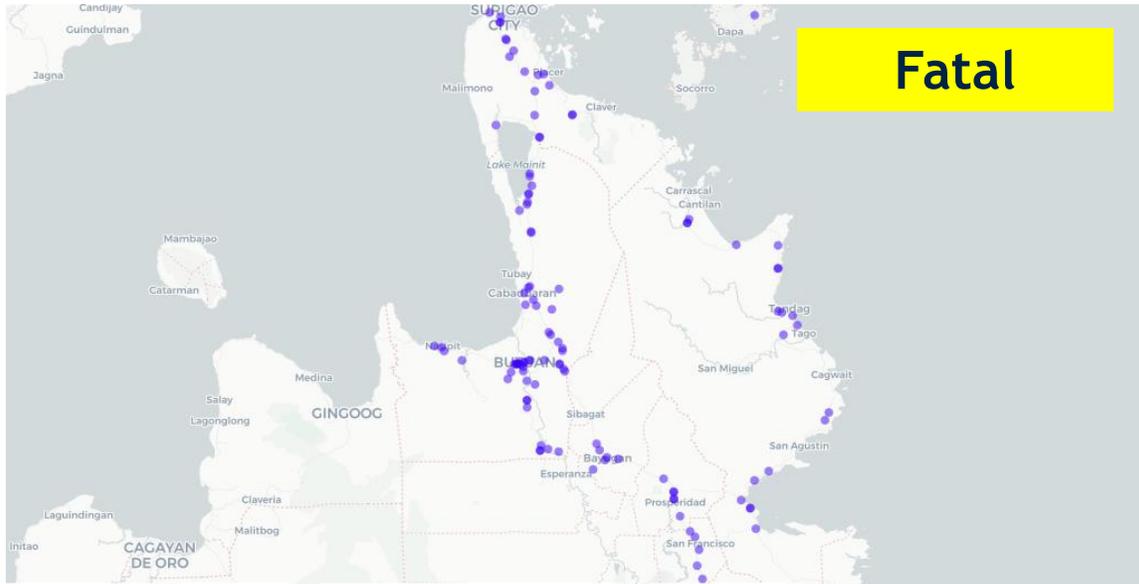
LGU Planning and
Engineering Units

DOTr, LTO, LTFRB

Server Support

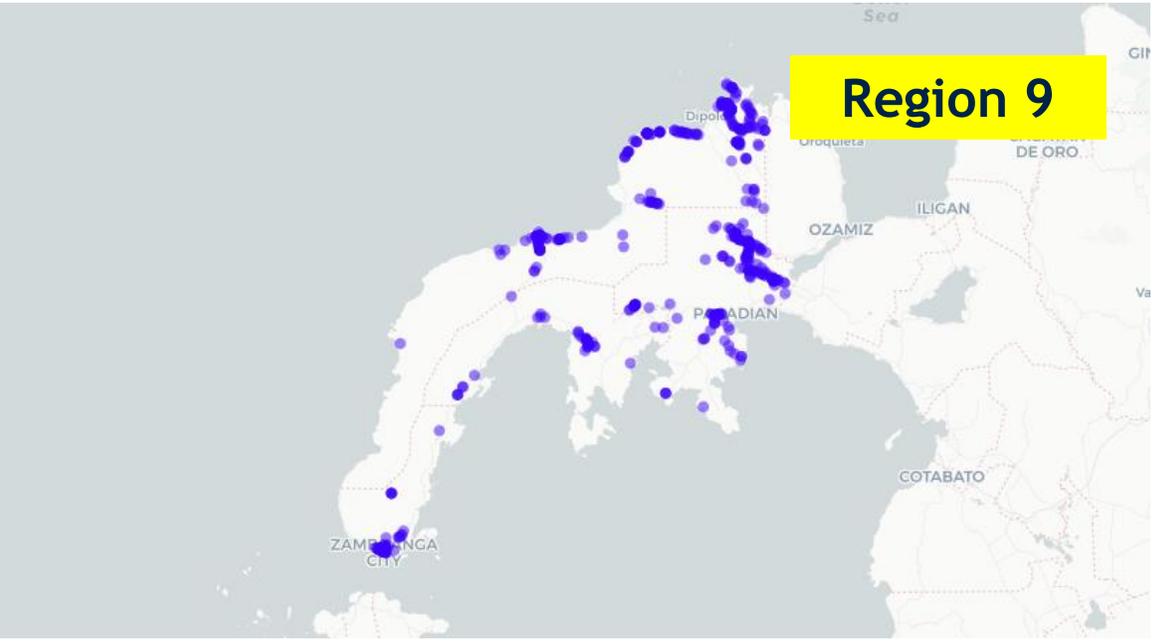
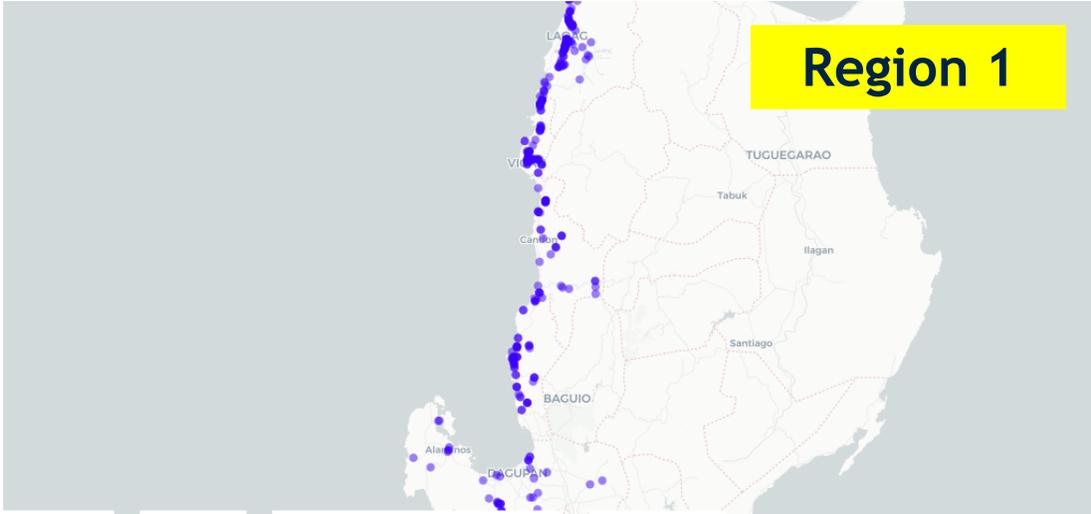
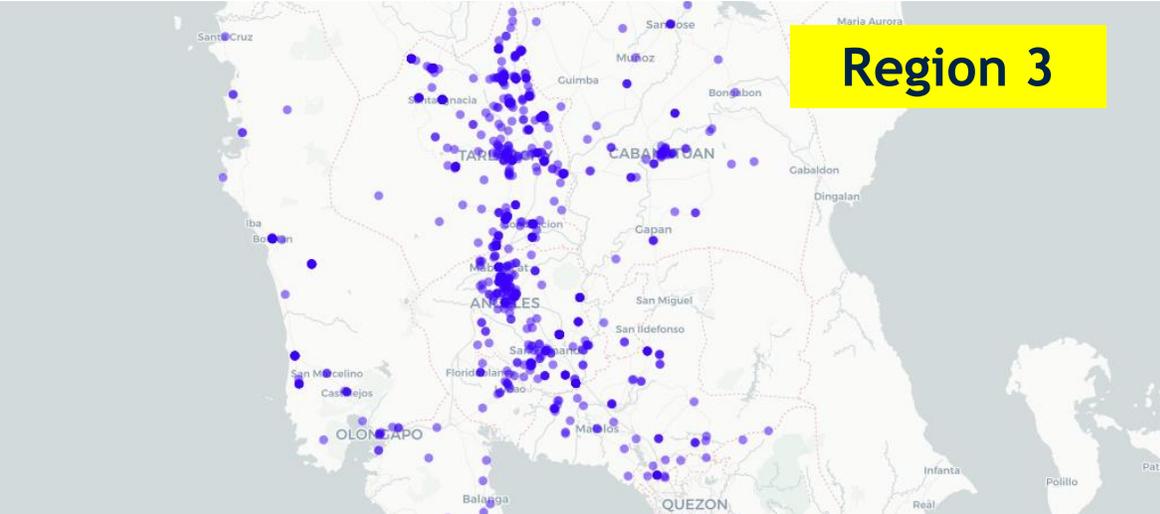
DOST-ASTI
DICT

MANAGING BLACKSPOTS/BLACKLENGTH



**Crashes in Region XIII by
Severity
January 2018 - present**

MANAGING BLACKSPOTS/BLACKLENGTH



MANAGING BLACKSPOTS/BLACK LENGTH



20 Fatal and Injury, **Head-on, Motorcycle** Crashes in Butuan-CDO-Iligan and Davao-Agusan (33km), 2018

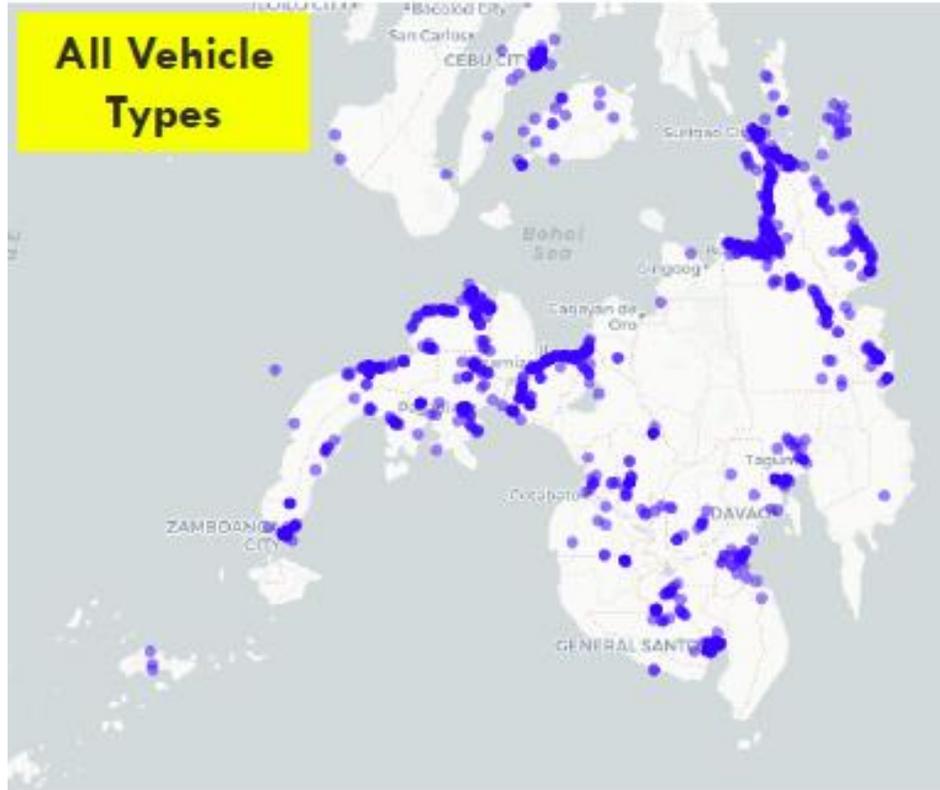
MANAGING BLACKSPOTS/BLACKLENGTH



Hit-Pedestrian
Crashes in
Dipolog-
Oroquieta
National Road
(8km), 2019



MASS ACTION TREATMENTS



**Crashes in Mindanao
by Vehicle Type**
May 2018 - present

SCHOOL ZONES

DRIVER | Map | City/Province | Cebu | miguelpaala@gmail.com

Cebu Eastern College, Cebu City, Philippines

Main cause | Severity

The heatmap graph shows traffic volume data for the school zone area. The x-axis represents the time of day from 0 to 23 hours, and the y-axis represents the days of the week from Sunday to Saturday. The color scale ranges from yellow (low volume) to dark red (high volume). High traffic is concentrated during school hours (approximately 7:00 AM to 5:00 PM) on weekdays, with the highest volume occurring on Tuesdays and Wednesdays.

Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Mon	Low	Low	Low	Low	Low	Low	Low	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Tue	Low	Low	Low	Low	Low	Low	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Wed	Low	Low	Low	Low	Low	Low	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Thu	Low	Low	Low	Low	Low	Low	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Fri	Low	Low	Low	Low	Low	Low	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Sat	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

Graphs | Interventions | Export | Traffic Enforcement Assignments | ₱75,660,000

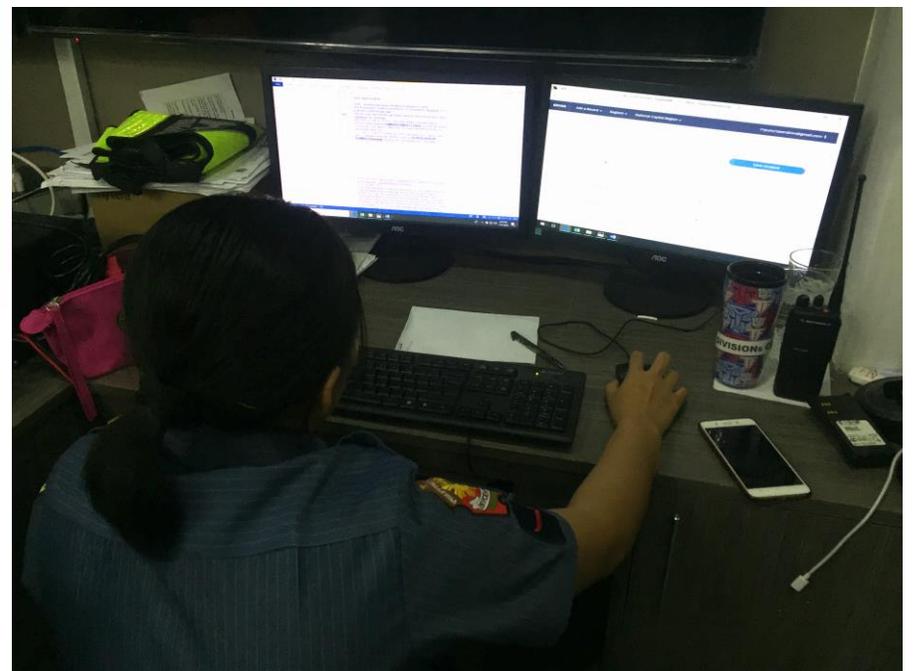
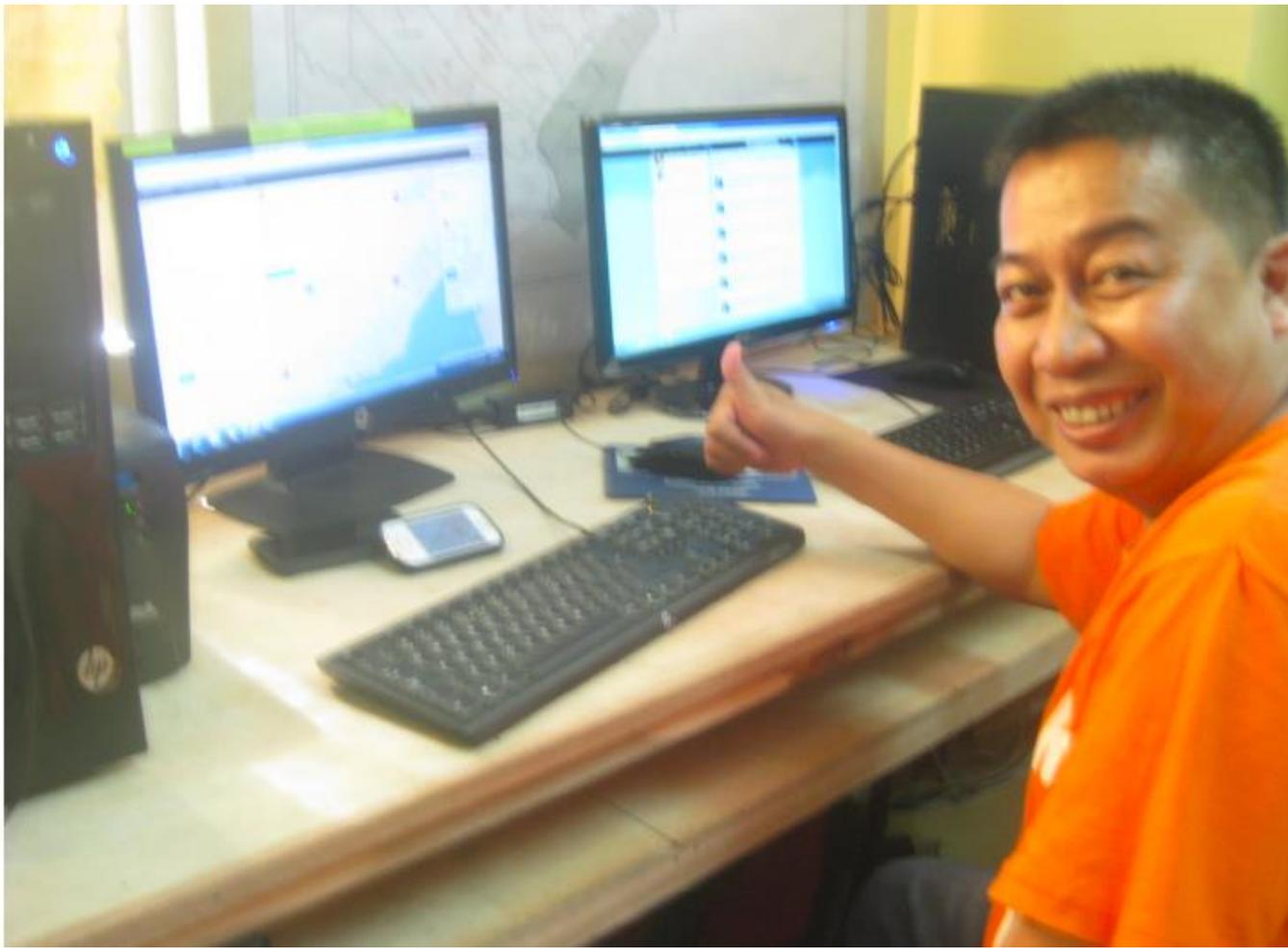
Leaflet | © OpenStreetMap contributors. © CartoDB. PRS



TRAININGS



TRAININGS



THANK YOU!

Requesting for Analyst Access and/or additional training?

Email roadsafetydrivers@gmail.com

Any more questions?

Online User Manual - roadsafety.ph

Email miguelpaala@gmail.com or
mpaala@worldbank.org