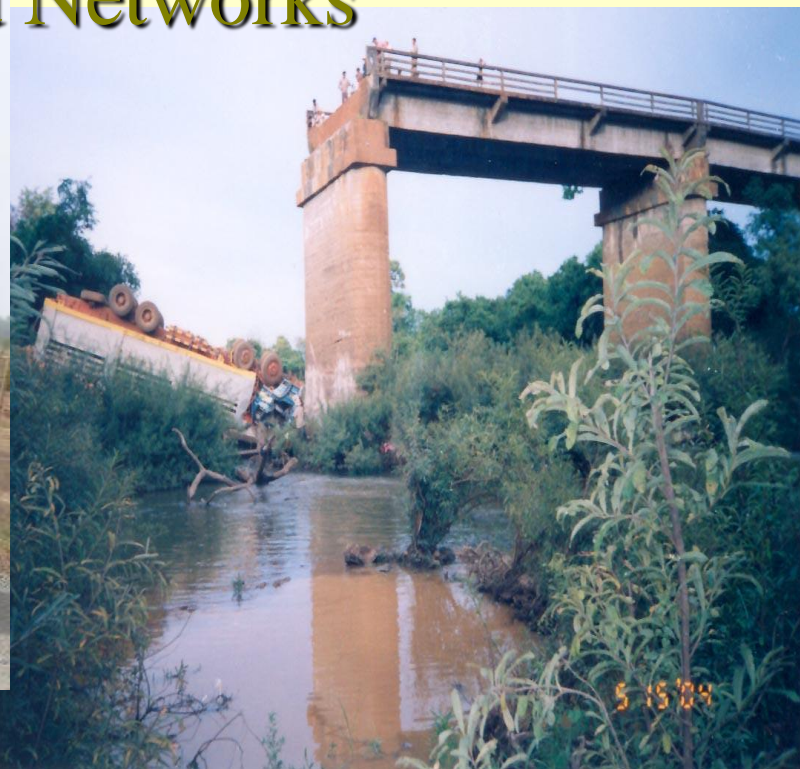




# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

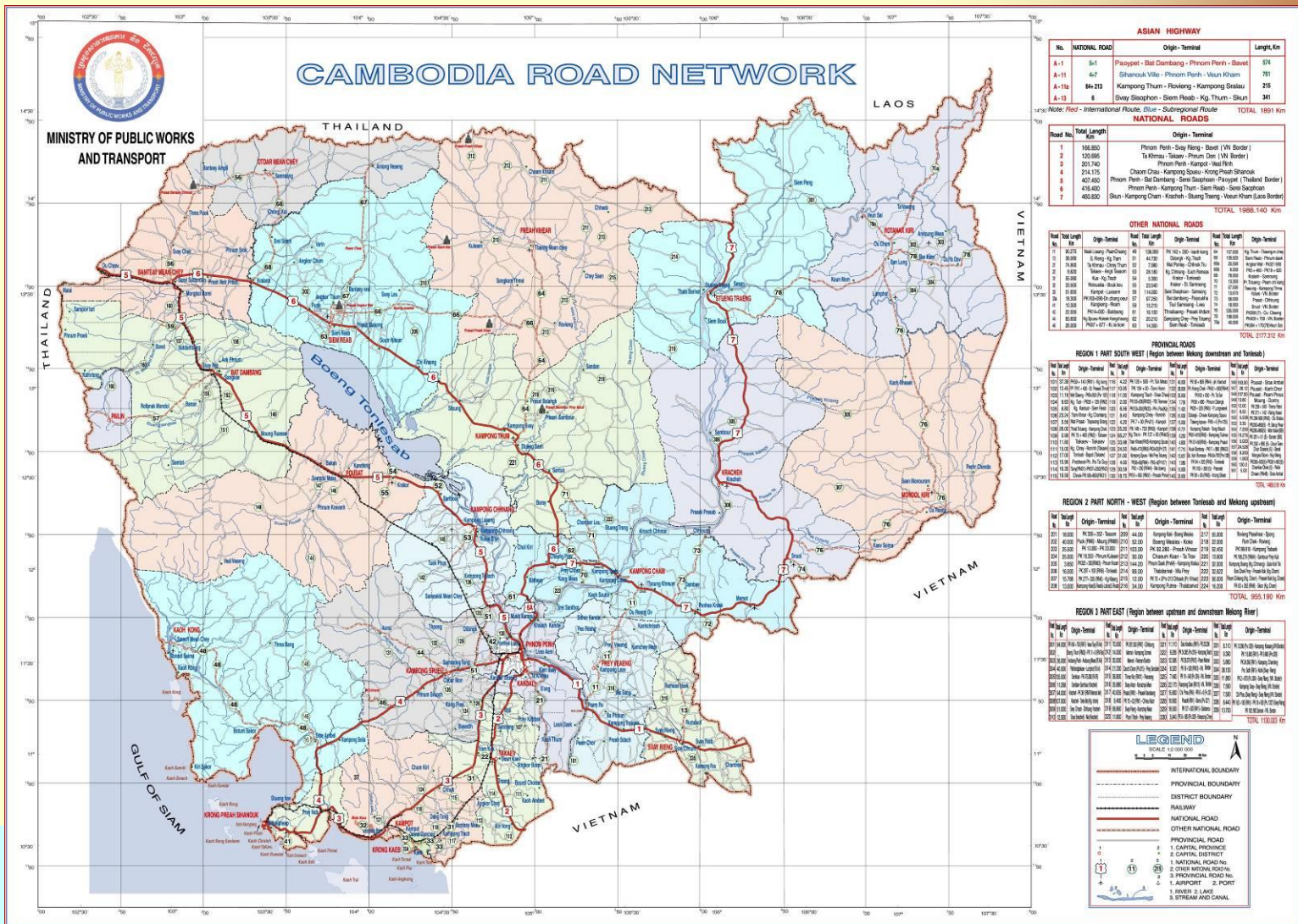
### Case of Overloading Damaged Pavement and Bridge on Cambodian Road Networks





# ក្រសួងការងារសាងសង់ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



ASIAN HIGHWAY			
No.	NATIONAL ROAD	Origin - Terminal	Length Km
A-1	5-1	Passep - Bat Dambang - Phnom Penh - Borei	574
A-11	4-7	Shoreah Valla - Phnom Penh - Veun Chhnam	331
A-11a	84-215	Kampong Thom - Rosteing - Kampong Slatou	215
A-13	6	Svay Svaophon - Siem Reab - Kg Thum - Skun	341
TOTAL			1891 Km

NATIONAL ROADS			
Road No.	Total Length Km	Origin - Terminal	
1	168,800	Phnom Penh - Svay Rieng - Borei (VN Border) To Kamra - Siem Reap (VN Border)	
2	123,850	Phnom Penh - Kampong - Veal Peth	
4	214,175	Cham Chou - Kampong Speu - Kong Preah Phnom	
5	425,400	Phnom Penh - Bat Dambang - Siem Reap (Thailand Border)	
6	416,400	Phnom Penh - Kampong Thom - Siem Reab - Siem Sackon	
7	463,900	Siem - Kampong Cham - Kohat - Svay Trang - Veun Chhnam (Laos Border)	
TOTAL			1,968,740 Km

OTHER NATIONAL ROADS			
Road No.	Total Length Km	Origin - Terminal	
11	20,200	Phnom Penh - Svay Rieng - Borei	
12	10,000	Phnom Penh - Kampong - Veal Peth	
13	15,000	Phnom Penh - Kampong Speu - Kong Preah Phnom	
14	20,000	Phnom Penh - Bat Dambang - Siem Reap	
15	25,000	Phnom Penh - Kampong Thom - Siem Reab	
16	30,000	Phnom Penh - Kampong Cham - Kohat	
17	35,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
18	40,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
19	45,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
20	50,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
21	55,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
22	60,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
23	65,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
24	70,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
25	75,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
26	80,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
27	85,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
28	90,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
29	95,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
30	100,000	Phnom Penh - Kampong Speu - Kampong Chhnang	
TOTAL			2,772,312 Km

REGION 1 PART SOUTH WEST (Region between Mekong downstream and Tonle Sap)			
Road No.	Origin - Terminal	Length Km	
101	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
102	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
103	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
104	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
105	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
106	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
107	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
108	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
109	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
110	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
111	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
112	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
113	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
114	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
115	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
116	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
117	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
118	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
119	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
120	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
TOTAL			12,000 Km

REGION 2 PART NORTH - WEST (Region between Tonle Sap and Mekong upstream)			
Road No.	Origin - Terminal	Length Km	
201	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
202	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
203	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
204	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
205	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
206	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
207	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
208	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
209	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
210	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
211	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
212	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
213	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
214	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
215	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
216	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
217	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
218	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
219	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
220	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
TOTAL			24,000 Km

REGION 3 PART EAST (Region between upstream and downstream Mekong River)			
Road No.	Origin - Terminal	Length Km	
301	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
302	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
303	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
304	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
305	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
306	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
307	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
308	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
309	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
310	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
311	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
312	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
313	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
314	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
315	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
316	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
317	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
318	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
319	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
320	Phnom Penh - Kampong Speu - Kampong Chhnang	100	
TOTAL			24,000 Km

**LEGEND**

SCALE 1:1,000,000

- INTERNATIONAL BOUNDARY
- PROVINCIAL BOUNDARY
- DISTRICT BOUNDARY
- RAILWAY
- NATIONAL ROAD
- OTHER NATIONAL ROAD
- PROVINCIAL ROAD
- CAPITAL PROVINCE
- NATIONAL ROAD NO. 1
- PROVINCIAL ROAD NO. 1
- PROVINCIAL ROAD NO. 2
- PORT
- RIVER & LAKE
- STREAM AND CANAL



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

### ROAD ASSETS IN CAMBODIA

#### MINISTRY OF PUBLIC WORKS & TRANSPORT

##### National Road

Primary National Road 1,988 km

Secondary National Road 2,165 km

#### MINISTRY OF RURAL DEVELOPMENT

Rural Road 28,000 km

#### EACH PROVINCE & MUNICIPALS

Provincial Road 3,555 km

FERRY 4 locations






# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



### LEGEND

-  Existing/Under Rehabilitation
-  DBST
-  Hot AC



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Several of Road Sections were damaged.



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Several of Road Sections were damaged.



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridges on RN6 and RN7



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridges on RN6 and RN7



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridges on RN6 and RN7



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridges on RN6 and RN7



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridges on RN5



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridges on RN3



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridges on RN3



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridge on Rail Bridge



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridge on Rail Bridge



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridge along Secondary Roads



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Collapsed Bridge along Secondary Roads



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Existing Road Condition in year 2000, during the flood also Suffered with overloaded vehicles

**RN1  
C2 Section**



## **Sub-Degree on Maximum Weight of Transport Vehicles Circulating on National Roads of the Kingdom of Cambodia**

### **Chapter 3**

#### **MAXIMUM WEIGHT OF EACH AXLE OF TRANSPORT VEHICLE**

**Article 3:** The maximum weight of each Single Axle of transport vehicle circulating on the national roads shall NOT be exceeded 10 tons.

**Article 4:** The maximum weight of each Tandem Axle of transport vehicle circulating on the national roads shall NOT be exceeded 19 tons. The weight for each axle shall not be exceeded 10 tons in accordance with Article 3.



### Chapter 7

#### **PENALTIES**

**Article 14:** The penalties shall be administered as follows:

1. Any vehicles, which exceeds the authorized weight stated in Articles 4,5,6,7 by less than 5% shall be warned in writing without any fine.
2. Any vehicles, which exceeds the authorized weight stated in Articles 4,5,6,7, and 8 by 5% to 10% shall be fined 100,000 Riels.
3. Any vehicles, which exceeds the authorized weight stated in Articles 4,5,6,7 and 8 by 10% or more shall be fined 100,000 Riels for each ton over 10%. The exceeding weight shall be paid according to the authorized weight.



## Chapter 7

### **PENALTIES (Cont.)**

**Article 15:** The transport vehicle penalized as provided in this Sub-degree shall not be authorized to circulate, unless discharging the excess goods and payment of the fine.

**Article 16:** If an Overloaded Vehicle causes actual damage to state properties, the owners shall pay for such damage in addition to the fine.

**Article 17:** 60% of the revenue from fines shall go into the state budget and 40% as a reward to the competent agents for their efforts in performing their duties.



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

### Road Traffic Law

**Article 35:** All kinds of vehicles shall have 2.50meters of maximum width, and 3.50meters of maximum height. Loading of goods outside the side edge of vehicles is prohibited. In the case of transporting heavy materials or machineries, the vehicles shall have the width greater than 2.50meters. The goods, which are loaded on the flatbed vehicles and trailers, have not to protrude in the front and the rear greater than 3 meters.

For the tricycles, goods are not allowed to load higher than the driver.

House-drawn carriages are not allowed to load (goods or passengers) greater than 400 kilograms of weight.

Motorcycles with trailers are not allowed to load more than 6 people or goods exceeding 400 kilograms of total weight.



### Road Traffic Law (Cont.)

**Article 36:** The length of all kinds of vehicles including goods, equipment, or materials, which are loaded, has to be defined as follows:

- a. The vehicles with two axles or six wheels shall have 10meters of maximal length.
- b. The vehicles with three axles or ten wheels shall have 11meters of maximal length.
- c. The platform vehicles transporting equipment and heavy machines shall have 14meters of maximal length.
- d. The tractor-trailers shall have 15meters of maximal length.



### Current Institutions for the Overloaded Vehicle Weight Scaling and Regulatory Enforcement

#### The structure of the Committee as follows:

- Chairman : Advisor to the Minister of PWT
- Vice Chairman : A representative from the MPWT, responsible for the Technical Affairs on Weight Scaling
- Vice Chairman : A representative from the Ministry of Interior, responsible for the Traffic Law Enforcement
- Vice Chairman : A representative from the Ministry of Defense, responsible for the Security Affairs
- Treasury Chief : A representative from the Ministry of Economy and Finance, responsible for the Accounting Affairs



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

**The Committee also established a Sub-Committee as a Working Group to Implement the Weight Scaling Activities, which consists of;**

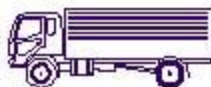
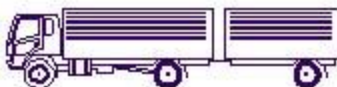


- 4 members from MPWT, Responsible for Weight Scaling
- 1 member from Ministry of Economy of Finance, Responsible for Penalty Fee Collection and Accounts
- 4 members from Ministry of Interior, Responsible for Road Traffic Law Enforcement
- 4 members from Ministry of Defense, Responsible for Security
- 2 or 3 members from Provincial Authority
- 1 member as the representative of the Provincial Governor



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

### MAXIMUM LOAD LIMIT FOR TRANSPORT VEHICLES ON ROADS NETWORK TYPE "A" AND TYPE "B"

No.	Type of Transport Vehicles	Permissible Gross Weight		General Condition
		Type A	Type B	
1		16 Tones	16 Tones	Single axle $\leq$ 10 Tones Tandem axle $\leq$ 19 Tones  Total weight of trailer should be less than 1.30 of total weight of the trailer vehicle.
2		25 Tones	20 Tones	
3		25 Tones	20 Tones	
4		35 Tones	30 Tones	



Single tire



Double tires









# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

### MAXIMUM LOAD LIMIT FOR TRANSPORT VEHICLES ON ROADS NETWORK TYPE "A" AND TYPE "B"

No.	Type of Transport Vehicles	Permissible Gross Weight		General Condition
		Type A	Type B	
5		35 Tones	30 Tones	Single axle $\leq$ 10 Tones Tandem axle $\leq$ 19 Tones  Total weight of trailer should be less than 1.30 of total weight of the trailer vehicle.
6		35 Tones	30 Tones	
7		40 Tones	35 Tones	
8		40 Tones	35 Tones	



Single tire



Double tires





**The Sub-Committee and its  
Working activities on the main  
Roads checkpoint below :**



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Location RN7, Gross weight: 45.23t



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Location RN6, Gross weight: 46.33t



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Location RN4



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport



Location RN5,  
Gross weight: 51.67t



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

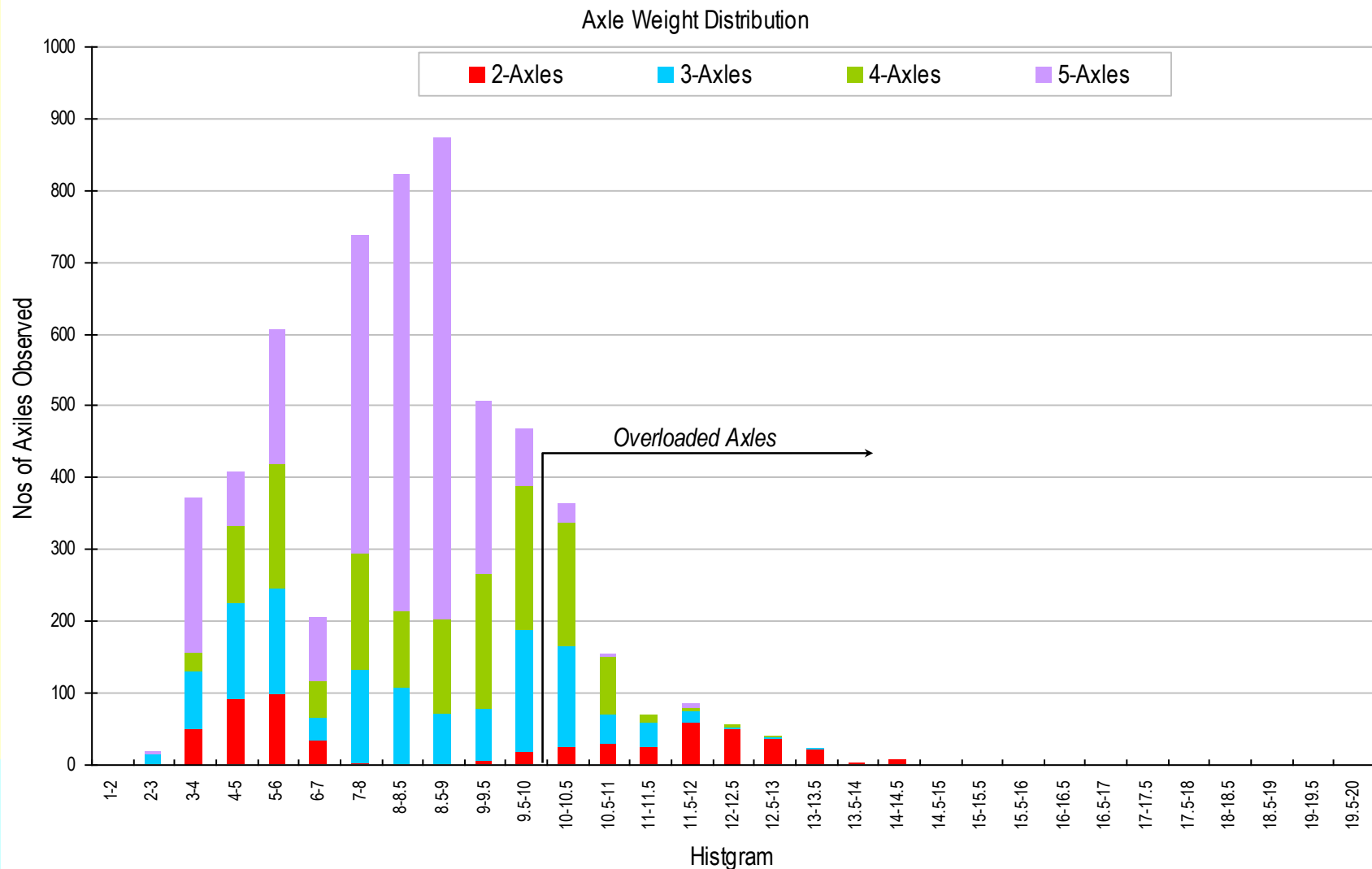
### Results of Overloaded Vehicles inspection at one selected checkpoint (RN6, Skun)

Gross Vehicles Weight				Axle Weights (10t Limit)		
	Observed Vehicles	Excess	Ratio	Observed Axles	Excess	Ratio
2 Axles	275	162	58.91%	550	252	45.82%
3 Axles	398	112	28.14%	1194	237	19.85%
4 Axles	354	75	21.19%	1416	274	19.35%
5 Axles	531	114	21.47%	2655	39	1.47%
6 Axles	3	1	33.33%	18	0	0.00%
<b>All</b>	<b>1561</b>	<b>464</b>	<b>29.72%</b>	<b>5833</b>	<b>802</b>	<b>13.75%</b>



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport





# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

### Axle Weight Assumption corresponding to MPWT Sub-degree

Vehicle Type	Gross Weight	Front	Rear1	Rear2	rear3	Rear4
2-Axles-Truck	16	6	10			
3-Axles-Truck	25	6	9.5	9.5		
3-Axles-Truck	25	6	9.5	9.5		
4-Axles-Truck	35	6	10	9.5	9.5	
4-Axles-Truck	35	6	10	9.5	9.5	
4-Axles-Truck	35	6	10	9.5	9.5	
5-Axles-Truck	40	5	9.5	9.5	8	8
5-Axles-Truck	40	5	8	8	9.5	9.5

Yellow Shaded means 'Tandem Axle'



## Conclusions and Recommendations

- 1- Law Enforcement and Regulation against Overloading Vehicle by Setting up Mechanism Control and System for Monitoring.
- 2- Coordination Design of Road between Road User and Road Builder in Response to Socio-economic Condition.



# ក្រសួងសាធារណការ និង ដឹកជញ្ជូន

## Ministry of Public Works and Transport

# THE END