





UNITAR

**GEF UNEP** 

# Status of PRTR in Cambodia

Final Global Project on the Implementation of Pollutant Release and Transfer Registers (PRTR) as a Tool for Persistent Organic Pollutants (POP) Reporting, Dissemination and Awareness raising 25 – 27 March 2019, Siem Reap-Cambodia

Mr. <u>Uon Sokunthea</u>
Department of Hazardous Substance Management
General Directorate of Environmental Protection
Ministry of Environment
Kingdom of Cambodia

# Achievement of PRTR Implementation

# The main achievement

#### **Activities/National Service**

**Update National Executive Proposal and Legal** 

- Updating National Executive Proposal
- Sub-Decree on Pollutant Release and Transfer Register
- NCC meeting to consulting (face to face Meeting)

National Consultants to develop and Coordinate training to industrial, NGOs, Civil Society and media/Journalists

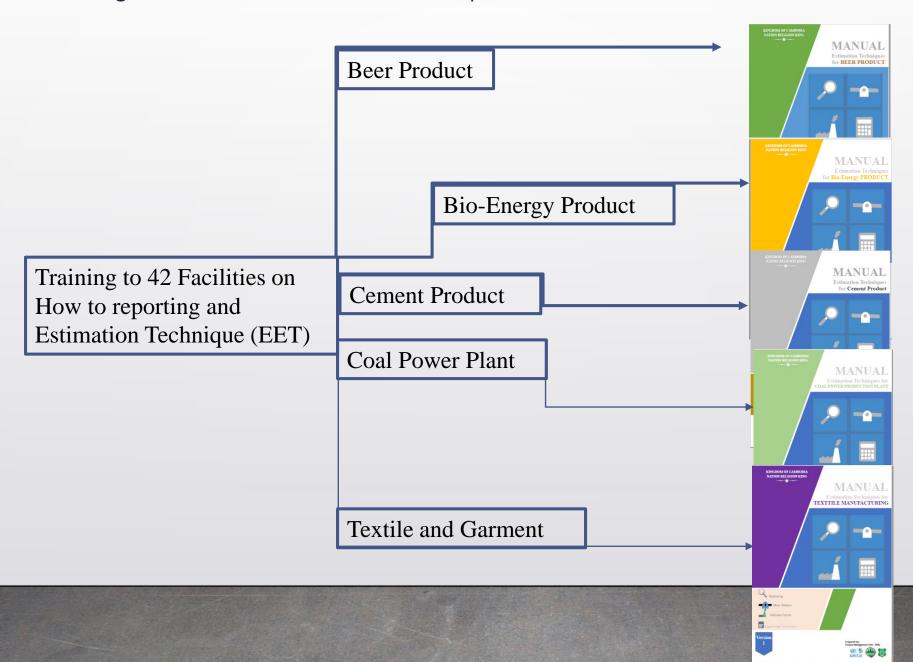
- National Strategy for Dissemination information and PRTR Data
- Implementation of National Strategy
  - Website: www.prtrcambodiamoe.gov.kh
  - Facebook PRTR Cambodia
  - Google form to conduct Survey in more than 1000 peoples
  - Conducting the Campaign Seminar

# Achievement of PRTR Implementation (cont....) The main achievement

#### **Pilot Trial**

- Conduct Survey to pollution sources (Selection of the pilot trial region)
- Obtain policy commitment by industrial and other pollution sourness's reporting
- Identify of threshold and chemical or pollution substances
- Implementing and POPs Reporting
- General Guideline on EET
- Specific Manual on EET
- Training to Trainer for industrial sectors resources

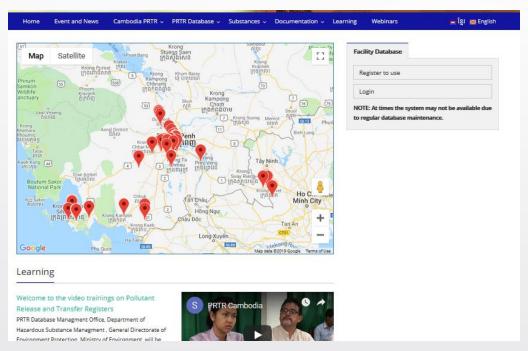
☐ Training to Industries on Estimation Technique to Pilot Trial Y2018



# Reporting System



#### Online Reporting Format

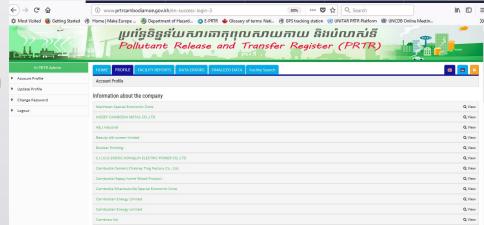


Pollution sources' reports will be received and evaluated. Each facility will generate account for their personal reports.

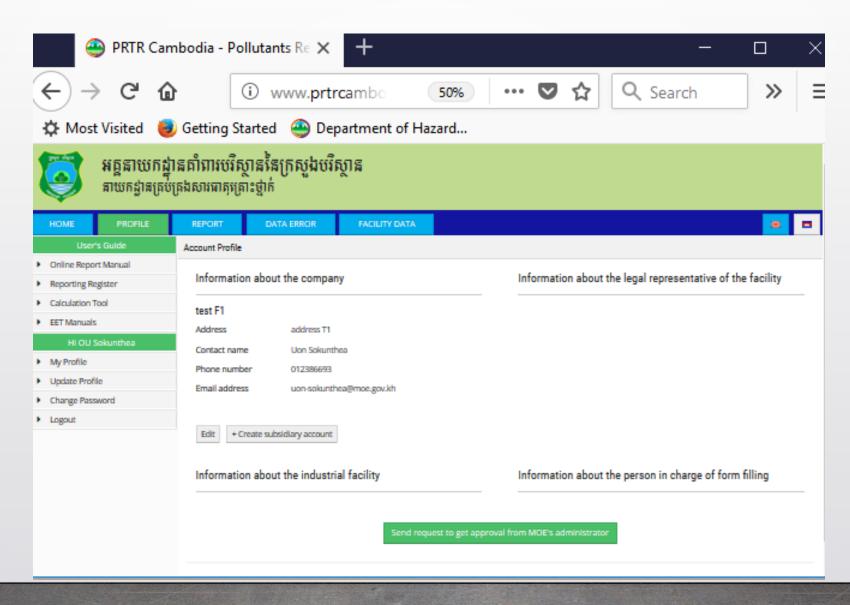
# Report of Emission/Transfer

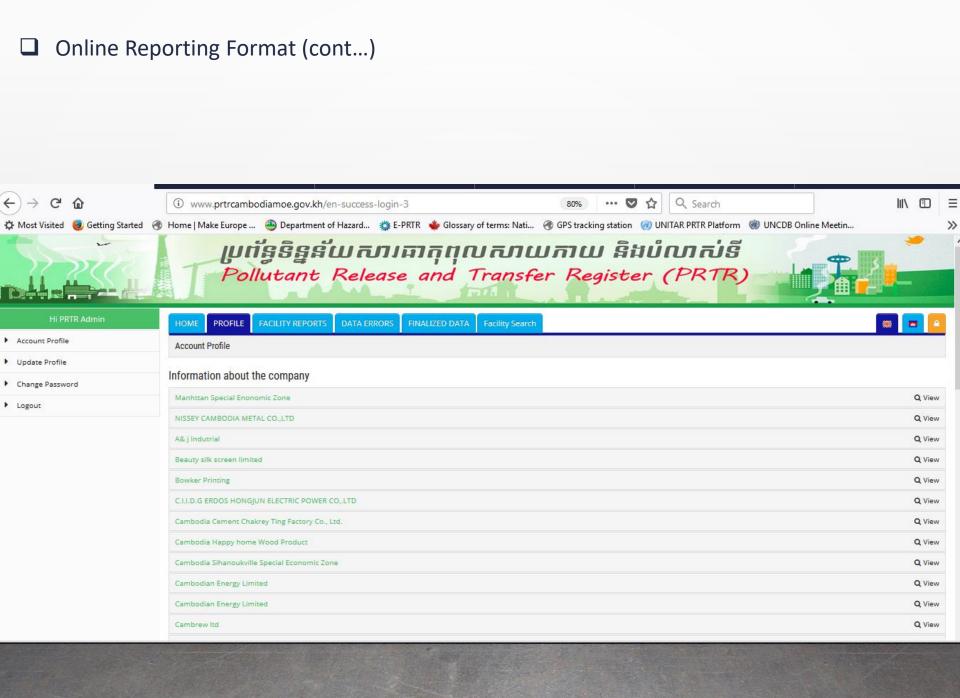
Pollution sources can use the manual in the web portal.

Allow facilities to estimate their annual emissions through emission factors developed by National Consultant.

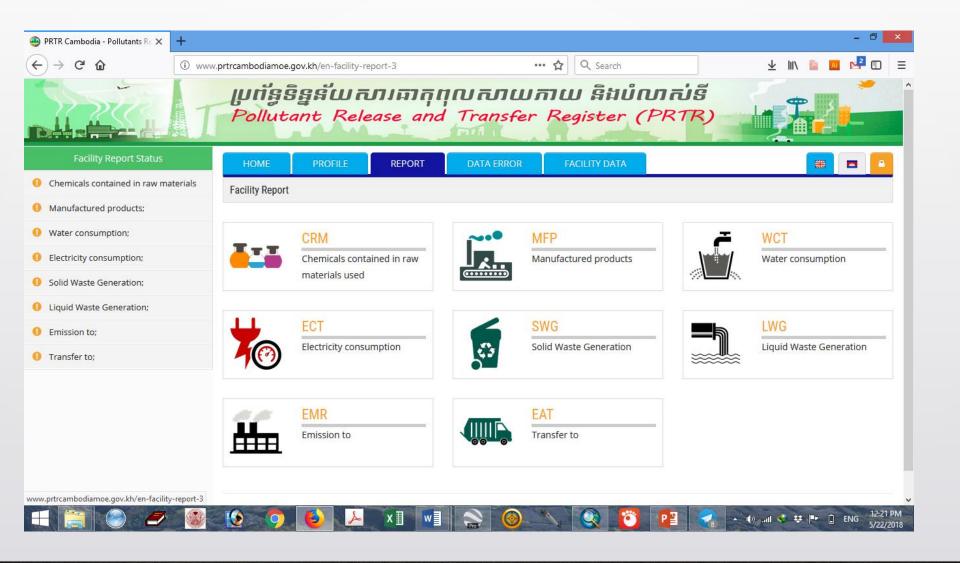


Online Reporting Format (cont...)

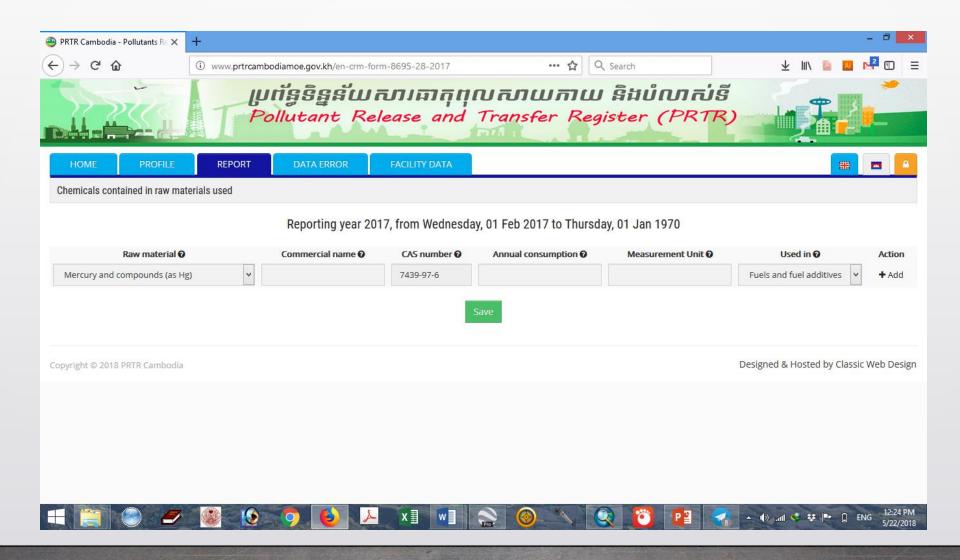




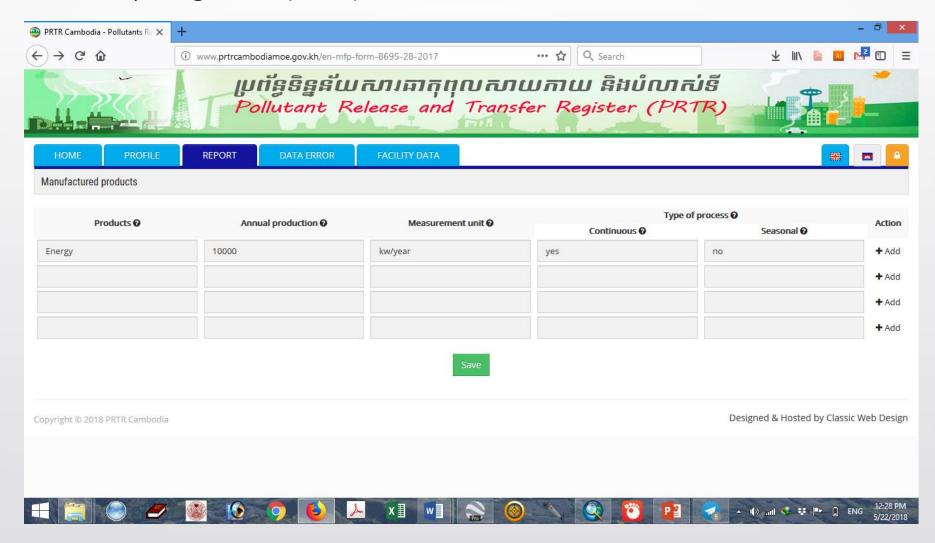
Online Reporting Format (cont...)



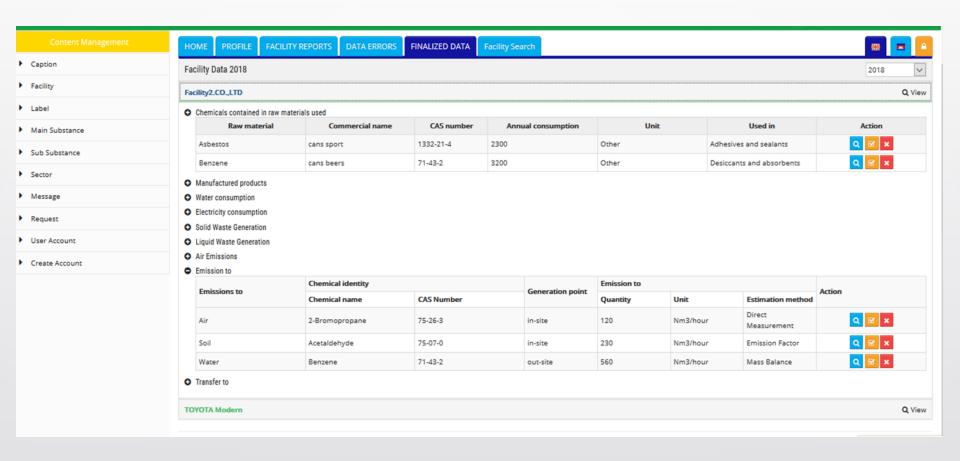
☐ Online Reporting Format (cont...)



☐ Online Reporting Format (cont...)



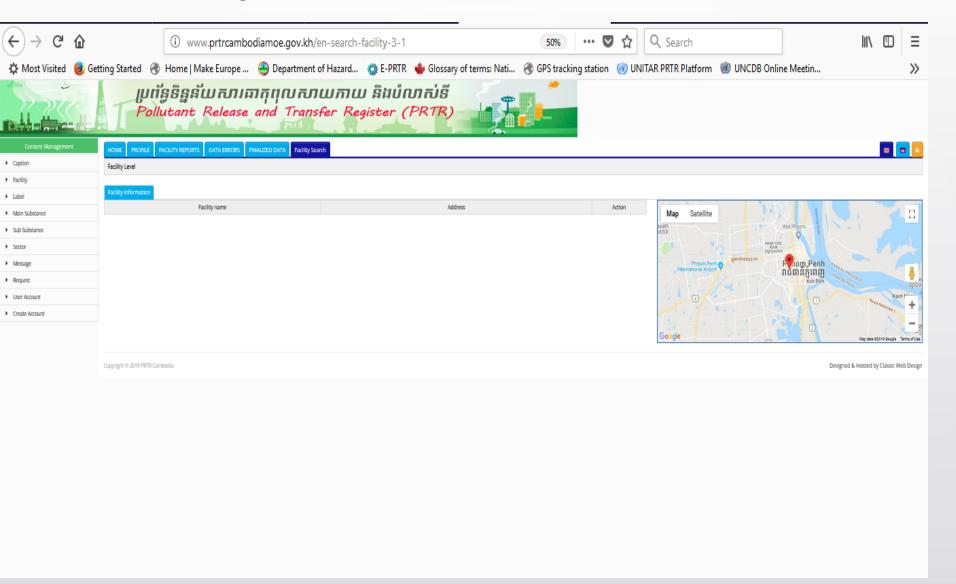
## ☐ Completing and Final Data Format



# ☐ Searching Data Format

FACILITY REPORTS DATA ERRORS FINALIZED DATA Facility Search Facility Level -0001 Reporting year All Locations City/Province All Facilities Facility name Activities All main activities Main Activity Sub Activity All sub activities Pollutant Releases All Main Pollutants Group Pollutant All Sub Pollutants Pollutant Pollutant Releases Air Soil Water Pollutant Transfers All Main Pollutants Group Pollutant All Sub Pollutants Pollutant Coprocessing Final disposal Recycle Reuse Chemical Treatment Incineration Sewage Chem Transfer to Waste Transfer General Waste Hazardous Waste Infectious Waste Type of waste Recycle Reuse Chemical Treatment Incineration Chem Treated directly in-site Recycle Reuse Chemical Treatment Incineration Chem Treated directly out-site

### ☐ Result of Searching Data



# As PRTR System- Coal Power Plant



☐ Cambodia Energy Limited

# 2. Description of Facilities

# 2.1. Chemical contained in raw materials used

Raw Material	Commercial Name	e CAS Number	Annual Consumption	Measurement Unit	Used in <sup>1</sup>
Ammonia (NH3)	Ammonia	7664-41-7	880	Kg	Water Treatment Process
Hydrochloric Acid (HCl)		-	11,200	Kg	WTP Process
Sodium hydroxide (NaOH)		-	17,280	Kg	WTP Process
Tri Sodium Phosphate - TSP (Na3PO4·12H2O)		-	50	Kg	WWTP Process
Poly Aluminum Chloride (PAC)		-	1600	Kg	WWTP Process
Polyacrylamide (PAM)		-	150	Kg	WWTP Process

☐ Cambodia Energy Limited (Cont...)

3. Waste Generation 3.1. Solid Waste Generation								
Process or sub-process	Type of waste	Quantity (ton/year)	Quantity of waste in stock (ton/year)	Treated directly in site		Treated directly out side		
				Quantity (ton/year)	Treated Method	Quantity (ton/year)	Treated Method	Name of landfill or company
Energy Production	Hazardous Waste	15256	397	0	Recycle	. 14859	Reuse	Shi Mao

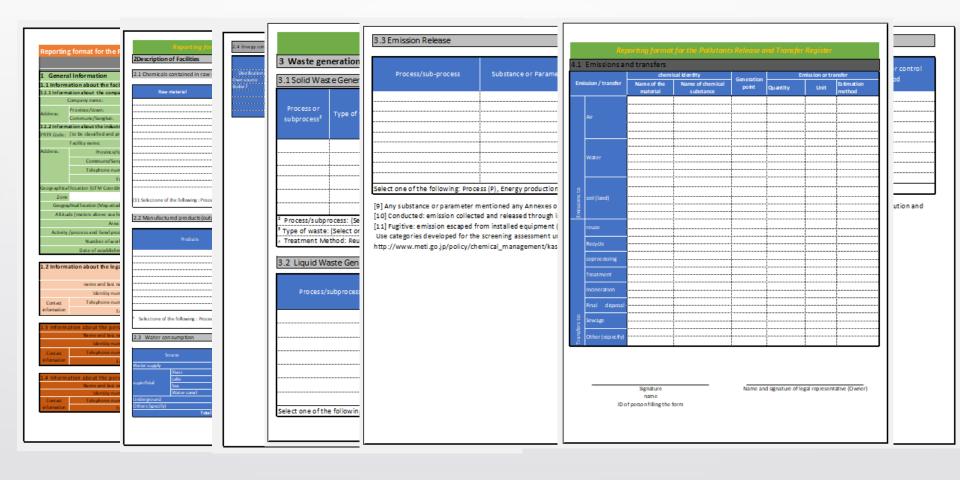
Note: Total ash was taken by Shi Mao is 14859 ton/year which contain fly ash material is 8859 ton and bottom ash is 6000 ton/year

☐ Cambodia Energy Limited (Cont...)

4.1. Emission to						
Emission to	Chemical Identity			Emission to		
	Chemical Name	CAS Number	Generation Point	Quantity (ton/year)	Unit	Estimation Method
Air	Sulfur Dioxide	9-5-7446	Boiler Flue Gas	713	mg/Nm3	
Air	Nitrogen Dioxide		Boiler Flue Gas	315	mg/Nm3	
Air	Particluate Matter		Boiler Flue Gas	22	mg/Nm3	

Note: Result taken from average CEMS reading

#### Excel Format



☐ Dissemination and Publication on the System and Disclose the data

✓ 3 channel of national TV, Radio...



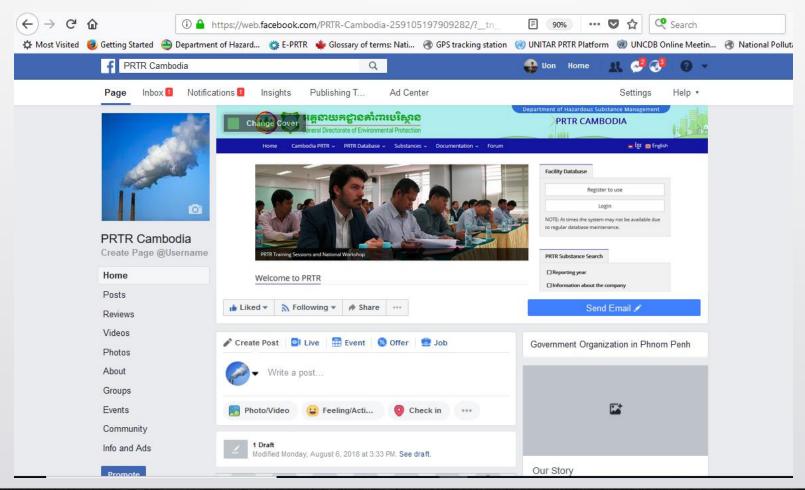
☐ Dissemination and Publication

✓ more than 300 students from Academe

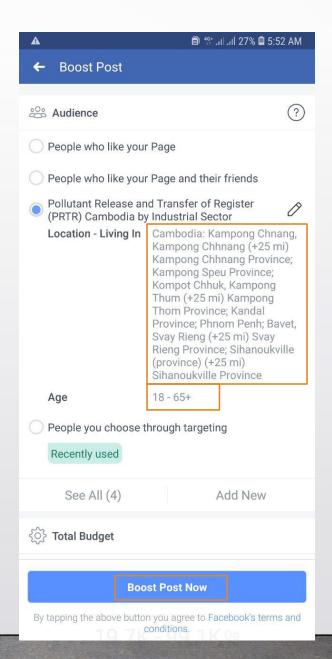


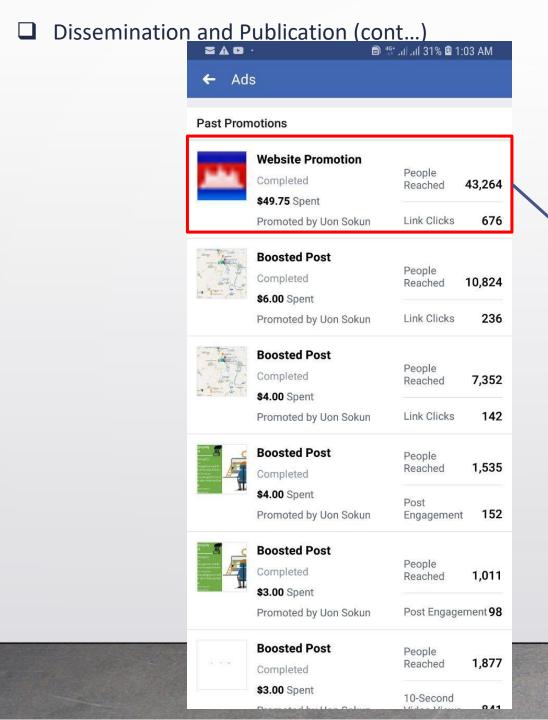
☐ Dissemination and Publication (cont...)

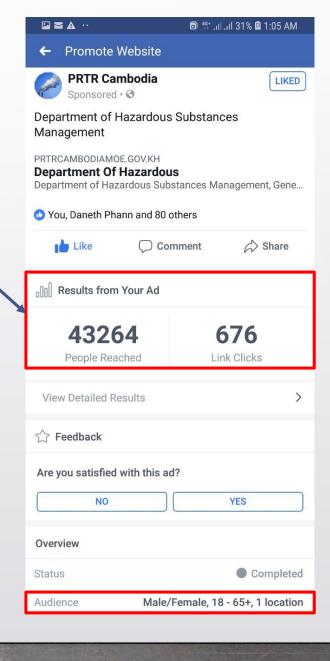
### ✓ Through social media



☐ Dissemination and Publication (cont...)



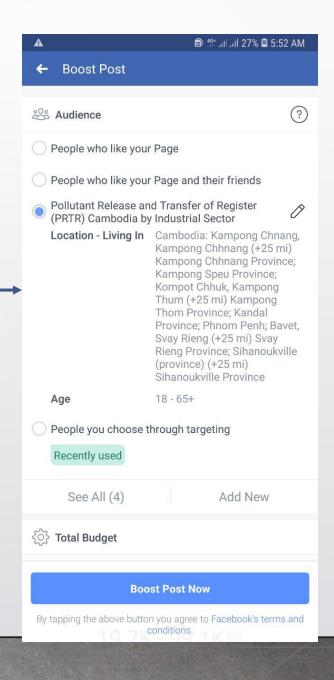




Conduct the survey through to Google form as follow

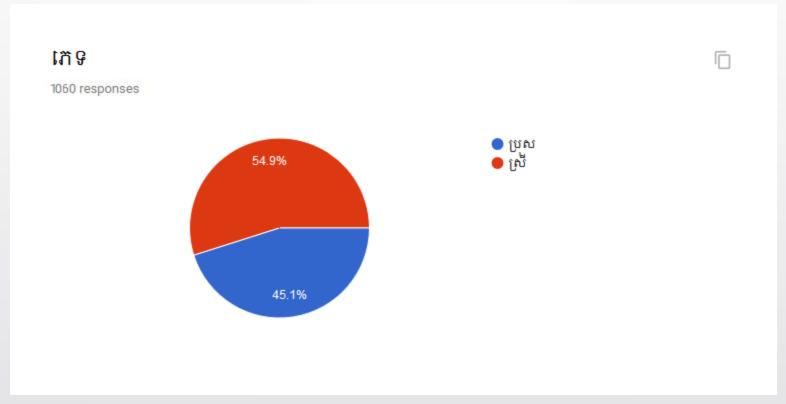
#### ☐ Sharing Google Form





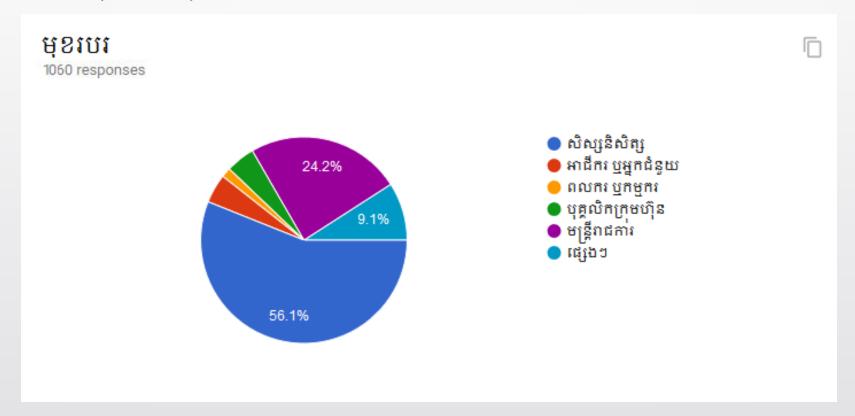
# ☐ Result Survey

✓ Gender



☐ Result Survey (Cont...)

# ✓ Group of occupation

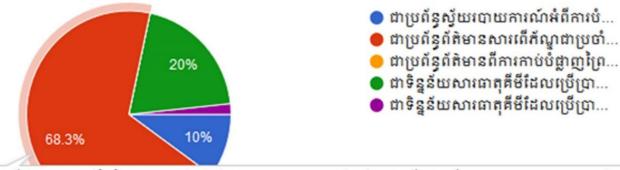


Result Survey (Cont...)

✓ Group of occupation

៦.តើប្រព័ន្ធទិន្នន័យ PRTR ជាអ្វី? (ចូលជ្រើសរើសចម្លើយមួយដែលត្រឹមត្រូវបំផុត)

1060 responses



ជាប្រព័ន្ធព័ត៌មានសារពើក៍ណ្ឌជាប្រចាំថ្ងៃនៃសារធាតុចំពុលដែលបានសាយកាយនិងចំលាស់ទីចេញពីប្រភពនានាចូលទៅក្នុងបរិស្ថាន 41 (68.3%)

# Challenge

### Challenges

- Limited regulation to foster the PRTR implementation as well as mechanism and coordination and cooperation between Industrial...etc
- Time constrained for PRTR Legislation development as during national election and establishment new government Y2018
- Limited time, cooperation, Knowledge of personnel at both public and private sectors regarding to PRTR system
- IT expert was not clearing and has a background with the PRTR system
- Limited database storage and facilities which the online reporting system;

- ☐ Challenges (Cont...)
- ✓ Facilities reporting of data emission calculations for data search
  forms was limited
- ✓ Some facilities were not regular for testing of liquid waste regular
  and keeping their data reporting
- ✓ PRTR reporting format shall be coming along with guideline on how to fill the form as well providing emission factors, calculation methods, and released media,
- ✓ There is the need for more national consultants in various fields of chemical expertise;
- ✓ There is knowledge barrier among personnel regarding chemicals wastes management, even consultants;
- ✓ There were hardly to engage with focal facilities to be participated in the PRTR trials;
  - There was an obstacle for project implementation which related to delayed budget allocation as well as limited supports,

# ស្ទីមឝ៊ុលា

thank you very much for your attention!