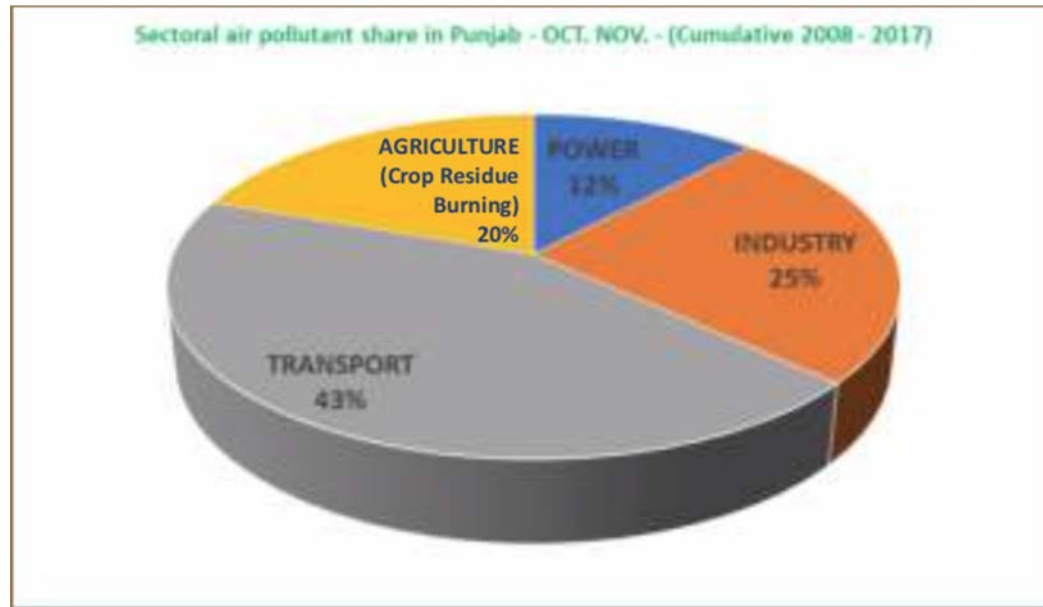


Decarbonizing Transport Systems

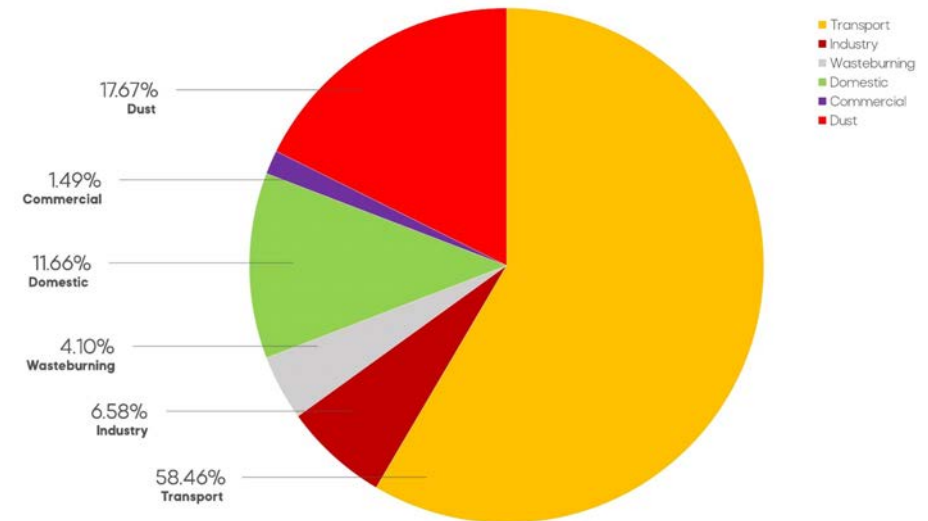
Ahmad Rafay Alam

Why?

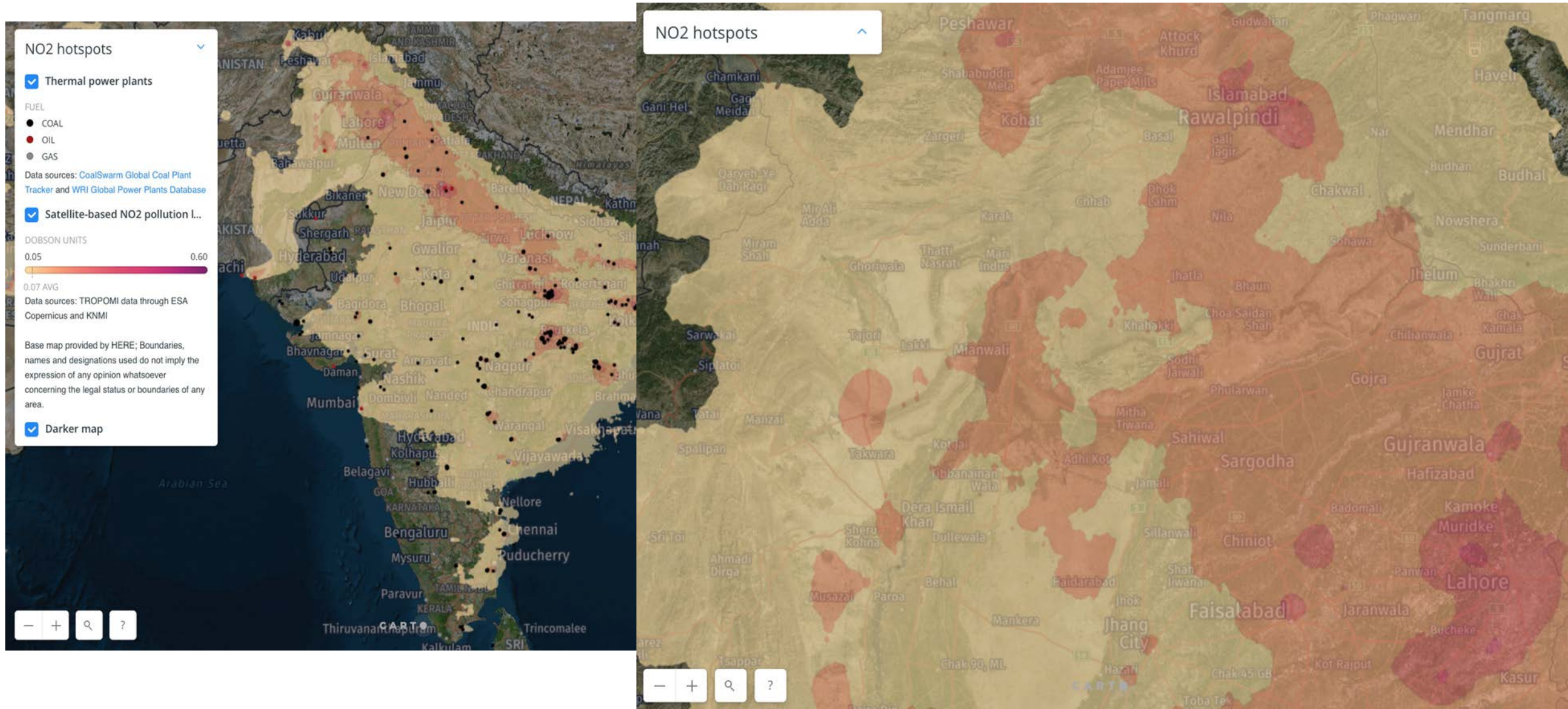


Overall Sources of Pollution in Peshawar

By adjusting for various unaccounted variables, the near-real Sectoral Emissions Inventory has been estimated for Source Apportionment. Analysis shows that emissions from the Transport sector make up 58.46% of overall pollution in Peshawar.



Greenpeace NO2 Report (2018)



How?

Transport fuel emissions comparison



AIR QUALITY ASIA
www.AirQualityAsia.org

Bottles of Diesel Soot Collected in One Hour by Beijing Environmental Protection Bureau



- Four heavy-duty diesel trucks tested for one hour.
- Trucks compliant with different emission standards (Euro II, III, IV and V).
- Largest improvement from Euro III to IV (75%, see next slide).

(1) Punjab Environment Protection Act, 1997

15. Regulation of motor vehicles.— (1) subject to the provisions of this Act and the rules and regulations made thereunder, no person shall operate a motor vehicle from which air pollutants or noise are being emitted in an amount, concentration or level which is in excess of the ⁷⁵[Punjab] Environmental Quality Standards, or where applicable the standards established under clause (g) of sub-section (1) of section 6.

(2) For ensuring compliance with the standards mentioned in sub-section (1), the ⁷⁶[Provincial Agency] may direct that any motor vehicle or class of vehicles shall install such pollution control devices or other equipment or use such fuels or undergo such maintenance or testing as may be prescribed.

(3) Where a direction has been issued by the ⁷⁷[Provincial Agency] under sub-section (2) in respect of any motor vehicles or class of motor vehicles, no person shall operate any such vehicle till such direction has been complied with.

(2) PEQS for Motor Vehicle Exhaust and Noise 2016

**Government of the Punjab
Environment Protection Department**

NOTIFICATION: No. SO(G)/EPD/7-26/2013. - In exercise of the power conferred under clause (c) of sub-section (1) of section 4 of the Punjab Environment Protection Act, 1997 (XXXIV of 1997), the Environmental Protection Council has approved the following as the Punjab Environmental Quality Standards for motor vehicle exhaust and noise:

Punjab Environmental Quality Standards for Motor Vehicle Exhaust and Noise

(i) For In-use Vehicles

No	Parameter	Standards (maximum permissible limit)	Measuring methods	Applicability
1	Smoke	40% or 2 on the Ringlemann Scale during engine acceleration mode	To be compared with Ringlemann Chart at a distance of 6 meters or more	Immediate effect
2	Carbon Monoxide	6%	Under idling conditions: Non dispersive infrared detection through gas analyzer	
3	Noise	85 dB(A)	Sound-meter at 7.5 meter from the source	

(ii) For New Vehicles

EMISSION STANDARDS FOR DIESEL VEHICLES

(a) For Passenger Cars and Light Commercial Vehicles (g/km)

Type of Vehicle	Category/Class	Tiers	CO	HC+NOx	PM	Measuring method	Applicability
1	2	3	4	5	6	7	8

Passenger Cars	M1: with reference mass (RW) upto 2500 kg	Pak-II DI	1.0	0.7	0.08	All imported and locally manufactured diesel vehicles with effect from 01-07-2012
	Cars with RW over 2500 kg to meet NI category standards	Pak-II, DI	1.0	0.9	0.10	NEDC (ECE 15+EUDCL)
Light Commercial Vehicles	NI-I (RW<1250kg)	Pak-II, IDI	1.0	0.70	0.08	
		Pak-II, DI	1.0	0.90	0.10	
	NI-II (1250kg< RW<1700kg)	Pak-II, IDI	1.25	1.0	0.12	
		Pak-II, DI	1.25	1.3	0.14	
NI-III (RW>1700kg)	Pak-II, IDI	1.50	1.2	0.17		
	Pak-II, DI	1.50	1.6	0.20		

Parameters	Standards (maximum permissible limit)	Measuring method
	85 dB(A)	Sound-meter at 7.5 meters from the source

(b) For Heavy Duty Diesel Engine and Large Goods Vehicles (g/KWh)

Type of Vehicle	Category/Class	Tiers	CO	HC	NOx	PM	Measuring method	Applicability
1	2	3	4	5	6	7	8	9
Heavy Duty Diesel Engine	Trucks & Buses	Pak-II	4.0	1.1	7.0	0.15	ECE-R-49	All imported and locally manufactured diesel vehicles with effect from 01-07-2012
Large Goods Vehicle	N2(2000 and up)	Pak-II	4.0	7.0	1.1	0.15	ECE	

Parameters	Standards (maximum permissible limit)	Measuring methods
Noise	85 dB(A)	Sound-meter at 7.5 meters from the source

EMISSION STANDARDS FOR PETROL VEHICLES (g/km)

Type of Vehicle	Category/Class	Tiers	CO	HC+NOx	Measuring method	Applicability
1	2	3	4	5	6	7
Passenger Cars	M1: with reference mass (RW) upto 2500kg. Cars with RW over 2500kg to meet NI category standards	Pak-II	2.20	0.5	NEDC(ECE 15+EUDCL)	All imported and new models * locally manufactured petrol vehicles with effect from 01-07-2009**
Light Commercial Vehicles	NI-I (RW<1250kg)	Pak-II	2.20	0.5		
	NI-II (1250kg> RW<1700kg)	Pak-II	4.0	0.65		
	NI-III (RW>1700kg)	Pak-II	5.0	0.08		
Motor Rickshaws & Motor Cycles	2.4 strokes<150cc	Pak-II	5.5	1.5	ECER 40	
	2.4 strokes>150cc	Pak-II	5.5	1.3		

Parameters	Standards (maximum permissible limit)	Measuring method
Noise	85 dB(A)	Sound-meter at 7.5 meters from the source

Explanations:

- DI: Direct Injection
- IDI: Indirect Injection
- EUDCL: Extra Urban Driving Cycle
- NEDC: New European Driving Cycle
- ECE: Urban Driving Cycle
- M: Vehicles designed and constructed for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat.
- N: Motor vehicles with at least four wheels designed and constructed for the carriage of goods
- ** Now Model means both model and design type change
- The existing Model of petrol driven vehicles locally manufactured with immediately switched over to Pak-II emission standards but not later than 30th June 2012

(Signature)
 IQBAL MOHAMMED CHAUHAN
 Secretary, Government of the Punjab
 Environment Protection Department

(3) Euro V Distribution Requirements

DAWN

TODAY'S PAPER | FEBRUARY 27, 2023

Govt orders all petrol, diesel imports be Euro-V compliant as oil companies protest move

Khaleeq Kiani | Published July 9, 2020



(4) Upgrade Refineries

Much-awaited refinery policy finalised

It will offer tax exemptions, other incentives for upgrading processing plants

Zafar Bhutta | January 26, 2023



(5) Vehicle Inspection & Testing

Vehicle Fitness Certificate

As per the Punjab Motor Vehicle Ordinance, 1965 and Motor Vehicles Rules, 1969, Transport Vehicles (Public Service Vehicles and Goods Transport) registered in Punjab and operating in Punjab must obtain a Vehicle Fitness Certificate. All commercial vehicles must be tested every six months.

Procedure to Get Appointment for Vehicle Inspection from VICS

The said procedure is detailed hereunder:

- 📞 Any vehicle owner can get an appointment by calling the Vehicle Inspection and Certification System (VICS) Customer Service Center, UAN 042-111-678-711
- 📞 Appointments can also be made through VICS website, please provide the following information when you call:
 - 📞 The station you want to visit for the test
 - 📞 Vehicle registration number
 - 📞 Type of vehicle
 - 📞 Name

(6) Electric Vehicles

- Federal Policy but vehicle registration Provincially regulated by Excise & Taxation Department
 - Revenue driven; not in alignment with policy
 - Develop a Provincial Policy
- Huge potenital in 2- and 3-Wheelers
 - Replacable batteries on rent-and-pay-as-you-go model
- Motor Vehicle Ordinance to be amended to allow registration of EV

Thank You – Be Green!

