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שלום עם הסביבה

ISRAEL Ministry of Environmental Protection

המשרד להגנת הסביבה

وزارة حماية البيئة

11

DPF retrofits and mitigation of particle emissions from transportation in Israel

Amir Zalzberg

Head of Transportation Division

Ministry of Environmental Protection

amirz@sviva.gov.il



Israel

- Area ~ 22,000 km²
- Population ~ 9 million inhabitants
- Population density – 410 inhabitants/km²
- 3.7 million vehicles
- 55·10⁹ km total annual mileage
- Vehicle split by fuel:
 - Gasoline: ~80%
 - Diesel : ~20%
- Air quality challenges: particles, NO₂, O₃



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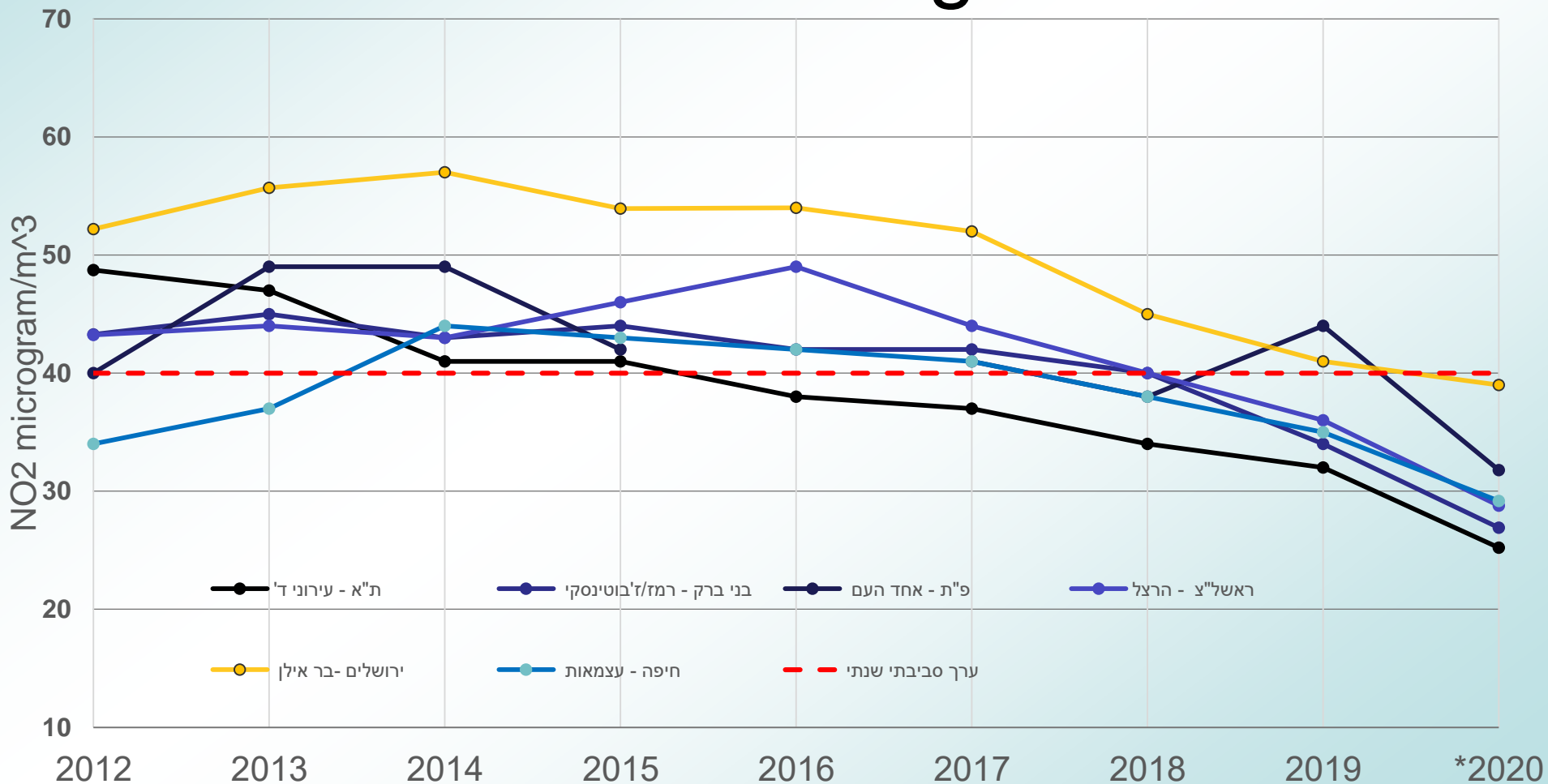
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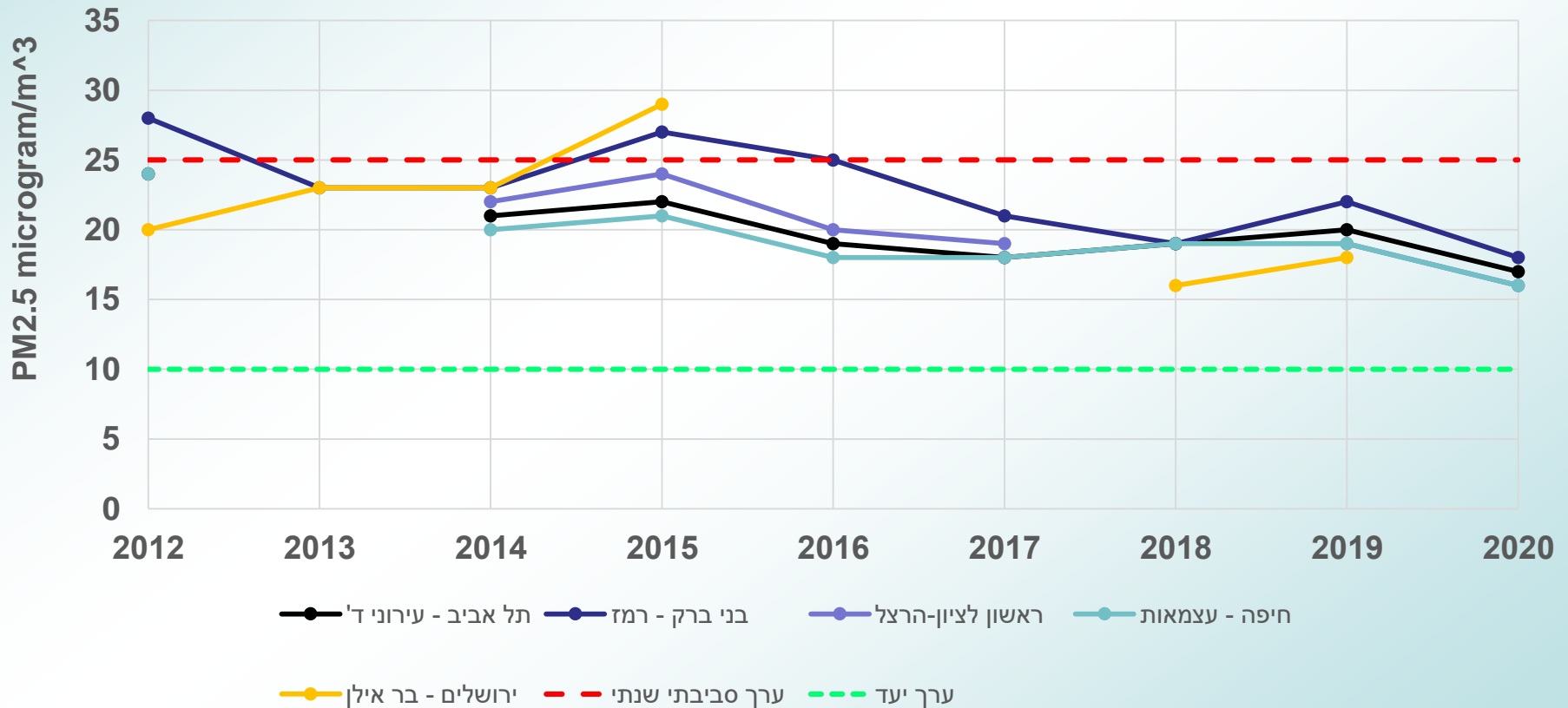


NO₂ concentrations at transport oriented monitoring stations





PM_{2.5} concentrations at transport oriented monitoring stations



PM_{2.5} Background concentrations 15 µg/m³



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הַמְשָׂרָד לְהַגַּנַּת הַסְּבִיבָה

وְזָרָةُ حֻמַּיָה הַבִּיئָה



Central government regulations

reducing emissions from in- use vehicle



In use vehicle emission regulations

Vehicle emission rating

- High emission - Diesel < Euro 4/IV
- Regular emission –
 - Euro 4/IV < Diesel > Euro 6/VI
 - Gasoline: <Euro 6
- Low emission – Euro 6/VI
- Zero emission



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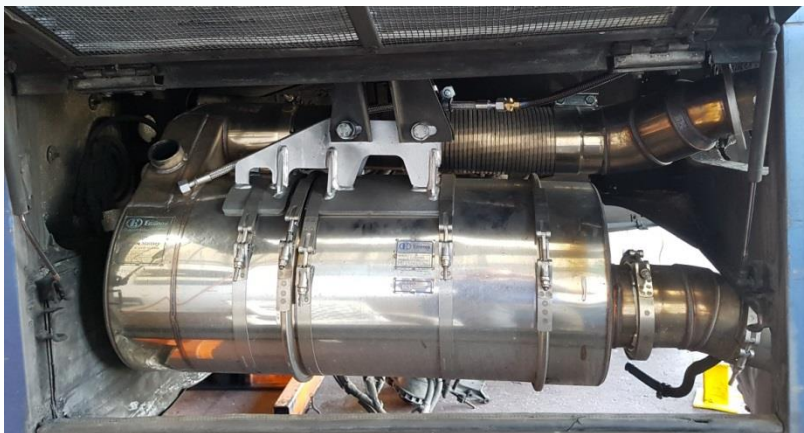
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In use vehicle emission regulations

From November 2018 –

- M2, M3, N3 high emitters to install DPF
- Other high emitters are marked with a sticker





Subsidies and grants

- Scraping grants: 1,000 – 5,000 €
- 6,500 retrofits completed ; 50 – 100% subsidies
- Total budget: 60 million €





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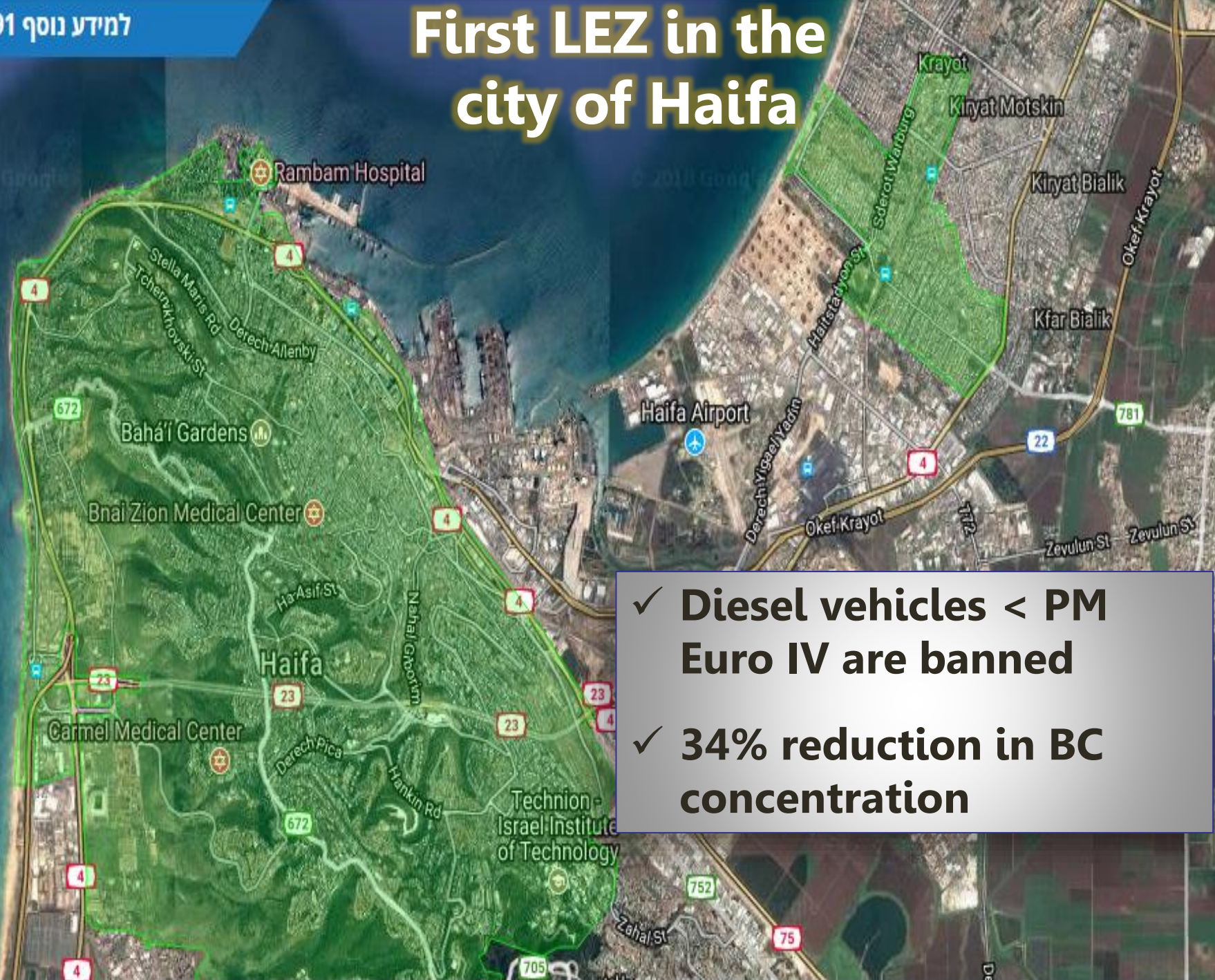
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Local activities to reduce vehicle emissions

First LEZ in the city of Haifa



- ✓ Diesel vehicles < PM Euro IV are banned
- ✓ 34% reduction in BC concentration



The Ministry of Environmental Protection
and the Jerusalem Municipality announce:

**Polluting vehicles
are banned from
entering Jerusalem**

**We love
Jerusalem
with clean air**

The Ministry of Environmental Protection and the Jerusalem Municipality

CLEANING THE CITY FROM AIR POLLUTION



Jerusalem LEZ



September 2020

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ReVeAL 



Future challenges

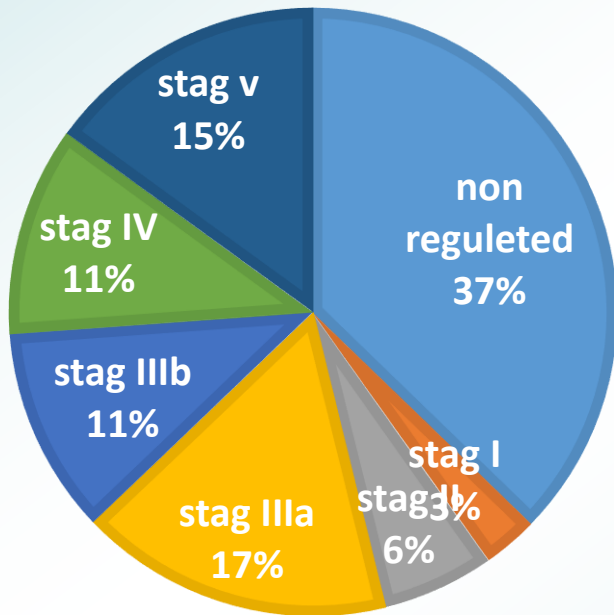
- Retrofitting LCV and cars
- Construction machines
- Improve PTI
- Electronic enforcement in LEZ
- Maritime emissions
- Diesel trains



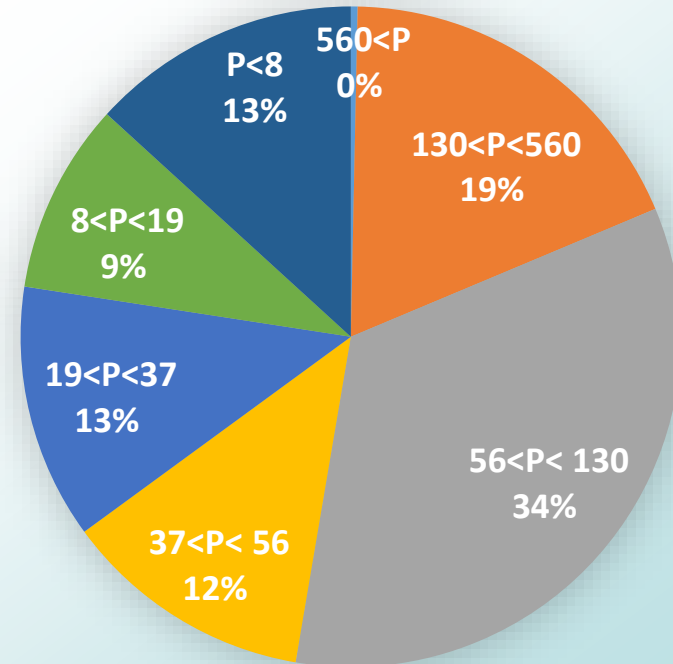
Non Road Mobile Machinery

66,000 diesel construction machinery in Israel

NRMM EMISSION STANDARDS IN ISRAEL 2020



NRMM POWER IN ISRAEL 2020 [KW]





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Maritime emissions

- ~60% of NO_x and PM emissions at port cities
- Visible smoke





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Electronic enforcement in LEZ



Diesel trains

- ~ 100 diesel 4 stroke 300

kW power generators

retrofitted

- ~ 90 diesel 2 stroke

engines 2,000 – 3,000 kW





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Thank You