



S 2 0 H i g h L e v e l P o l i c y

W e b i n a r

A P P L Y I N G S C I E N C E A N D T E C H N O L O G Y F O R C
A I R A N D C L I M A T E C O - B E N E F I T S

D e t e r m i n e R e a l w o r l d E m i s s i o n U s i n g
R e m o t e S e n s i n g D a t a t o s u p p o r t D e c i
M a k i n g t o P r o m o t e A i r Q u a l i t y

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P u j i L e s t a r i
F a c u l t y O f C i v i l & E n v i r o n m e n t a l
E n g i n e e r i n g - I T B

Session: The role of Research and Technology for promoting Clean Air and Climate M

3 0 J u n e 2 0 2 2

Remote Sensing Data Collection in Jakarta (2021)

Research in Jakarta supported by ICCT, collected about

187.000 vehicle emission data from 20 toll & non toll roads

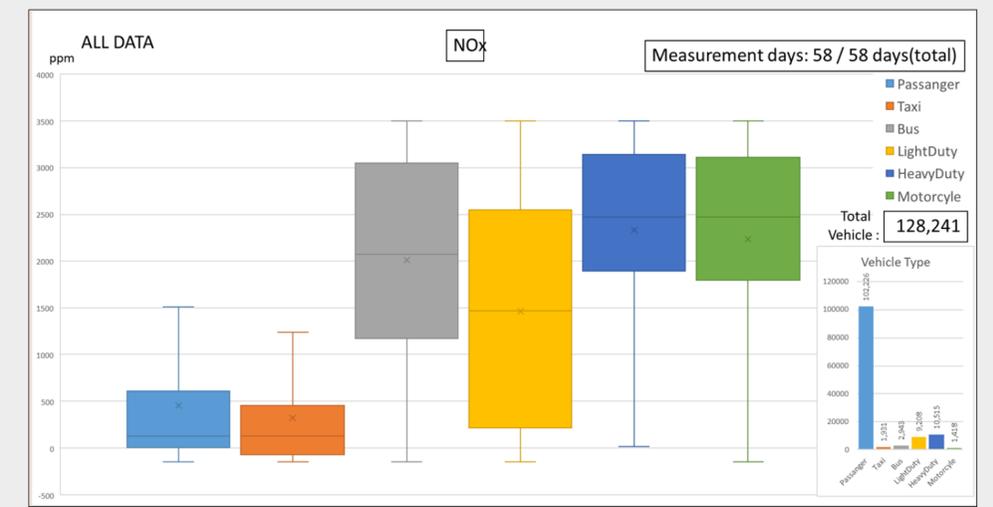
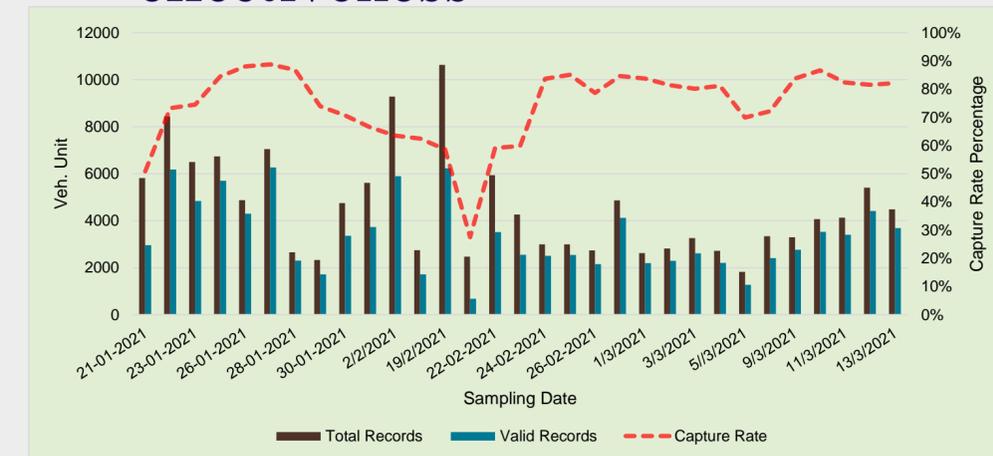
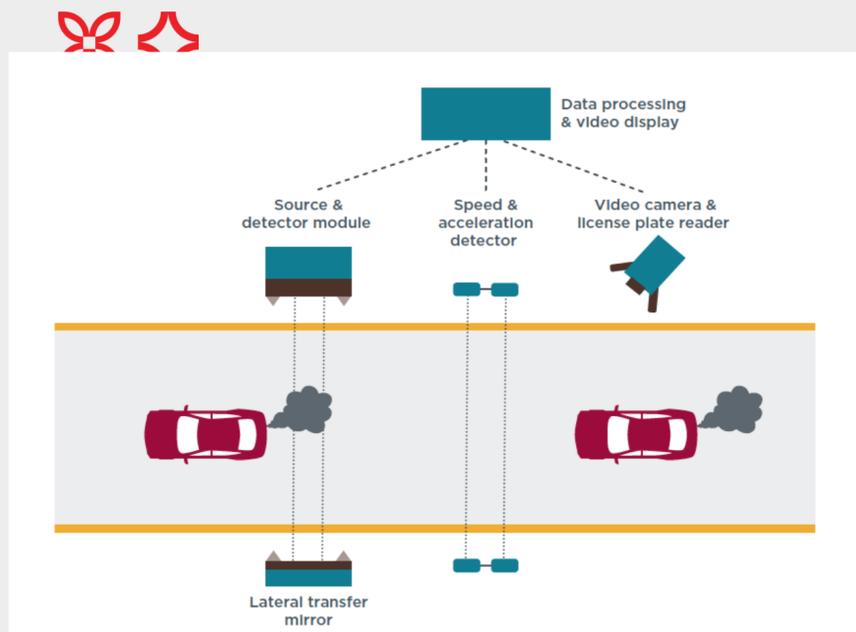
- High Capture rate 70-85%
- Identify individual Low and high Emitter
- Generating real world Emission Factors
- Identify current fleet
- Track technology effectiveness

Addressed issues:

- One of key sector contributing to air pollution in Urban areas is transportation
 - There is a gap in data collection (lab & on road) limited # of vehicle emission data
 - Lack of inadequate & Reliable data to support decision making
- Remote Sensing could collect data in 0.5 s. (reliable & fast):

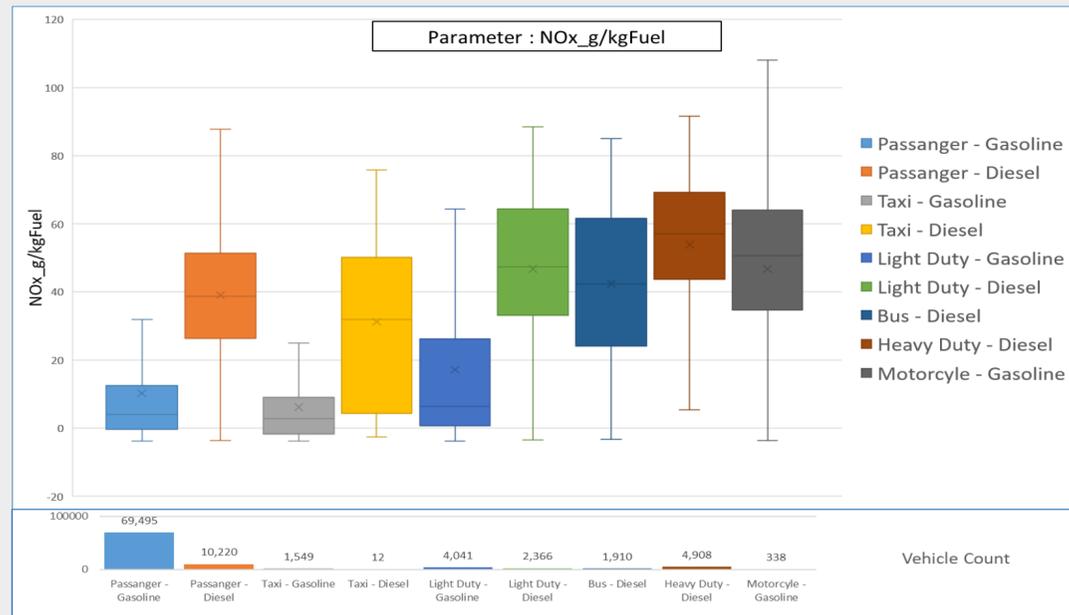
Concentrations of pollutants in

Job Num: 210227093447-HK-A01-S0001
 Site Code: HK-A01-S0001
 Location: HK Site 01
 Time: 27/02/2021 13:27
 LPN:
 Speed: 34.5km/h Accel: 0.01m/s²
 CO: 1.14% CO₂: 14% HC: 671ppm
 NO₂: 1486ppm NO_x: 3087ppm Smoke: 23.5%



ROLE OF REMOTE SENSING DATA TO SUPPORT DECISION MAKING

**Remote Sensing Data-Determine
Real world Emission**



**Improve Air
Pollutant Emission
Inventory**

**GHGs Emission
Inventory (CO2)**

**Source of air
Pollution ?**

**Source of GHGs are
they similar?**

- Create new Policies to address both
- Tracking Technology Effectiveness
- Tracking Policy Effectiveness

Remote sensing data can be used to provide significant information to policy makers to Reduce Air pollution & GHG Emission from transport sector

Thank You