Nepal Air Quality Landscape

How is our air quality right now?

1. Department of Environment, Air Quality Monitoring Stations
   http://pollution.gov.np

2. Dristhi Kathmandu (my Republica)
   https://myrepublica.nagariknetwork.com/category/valley-pollution-index

3. # airairair Kathmandu
Research | Nepal Air Quality Landscape

- Studies of air pollution and health in Nepal (19)
  - Indoor air (15)
    - Measured indoor air (5)
    - Indirect measures for outdoor air (10)
  - Outdoor air (4)
    - Measured outdoor air (2)
- Studies based on exposure-response from other regions (4)
  - Occupation traffic police (2)
- Exposure / air quality studies, no link to health (66)
  - Indoor air (8)
  - Outdoor air (56)
    - Kathmandu Valley (31)
    - Higher Elevation (25)

Policy | Nepal Air Quality Landscape

1991  Banning diesel operated three wheeler
1993  Initiation of vehicle emission test (green sticker)
1994  Introduction of electric three wheelers
1995  Establishment of MoPE
1995  Tail Pipe Emission Standards
1996  Safa tempo brought in Kathmandu
1997  Lead free gasoline introduced
1999  Ban on two stroke engines and old vehicles
2001  10% additional tax per year for old vehicles
2001  National Transport Policy
2003  NAAQS introduced (updated in 2012)
Policy | Nepal Air Quality Landscape

2012  Euro III emission standards
2014  Livable Kathmandu Campaign
2015  Reduction in custom tax for EV
2017  Euro IV standard
2017  Ban twenty-year old public vehicles
2017  Air Pollution Control Taskforce
2017  Comprehensive work plan on minimizing air pollution in the capital city
Campaign | Nepal Air Quality Landscape

1. Media Coverage

1. Campaigns
   - Maskmandu: Campaign for Clean Air Rights
   - Swachchha Hawa
Policy | Nepal Air Quality Challenges

1. Lack of implementation

1. Weak institutional capacity

1. Lack of technical capacity

1. Poor long term planning
1. **Few studies** showcase the high air pollution present with potentially serious health consequences.

2. Need for **specific local studies**.

3. **Gaps present** in understanding the status of air pollution with key limitation on data availability.

4. Various **critical research requirements** for effective policy and intervention development.
1. Action that individuals can take

1. Long term health burden

1. Other impacts of air pollution
Stakeholders | Nepal Air Quality Landscape

1. Government
2. Private sector
3. Non-government organization
4. Academic institutions
5. Multilateral agencies
6. Health sector
7. Communities
8. Journalist
Thank you
1. Lack of data on exposure and health
2. Almost all studies conducted in rural areas
3. Focus on indoor air pollution and respiratory health
4. Short timeframes and sample sizes
Primary Sources of Air Pollution During Winter in Kathmandu Valley

Elemental Carbon
1. Brick kilns: 40%
2. Motor vehicles: 37%
3. Biomass/garbage burning: 22%

Organic Carbon
1. Motor vehicles: 47%
2. Biomass/garbage burning: 32%
3. Soil dust: 13%

PM$_{2.5}$
- Roadside, traffic related emissions, soil/dust/construction materials