Air Pollution Resource List: TechCamp Kathmandu 2019

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1. Fundamentals of Air Pollution
   a. Air Pollution – a Global Threat to our Health ([MOOC](#))
   b. Air pollution: causes and impacts ([MOOC](#))
      - This MOOC focuses on issues related to air quality. Learn the basics of air pollution and its environmental, health, social and economic effects to better understand and address this problem.
   c. Open Data and Air Quality [Toolkit](#)
      - This toolkit is intended as a resource for people interested in working on air pollution and want to utilize open data. The toolkit provides a list of resources and examples from different parts of the world. Most sections of the toolkit are taken from different sources, and attributed individually.
   d. [Factsheet](#) on health effects of air pollution

2. Data on Air Quality
   a. WHO [Global Ambient Air Quality Database](#), updated in 2018
      - This dataset is compiled by WHO based on air quality data provided by governments around the world and is updated periodically.
   b. Annual air quality and health impacts datasets for more than 190 countries: [State of Global Air](#)
      - This dataset is prepared as part of the Global Burden of Disease project and uses a combination of satellite data, ground monitoring data (as described in 1a) and survey data to prepare air pollution exposure estimates. Gridded maps are available upon request.
   c. Real-time data on air quality from countries around the world: [OpenAQ](#)
   d. Real-time data on air quality index: AQICN (http://aqicn.org/city/beijing/) [data cannot be downloaded]
   e. IQAir AirVisual: https://www.airvisual.com/ (also check their 2018 [report](#))
   f. Satellite data/NASA- https://airquality.gsfc.nasa.gov/ ; https://earthdata.nasa.gov/ [Online training is also available- https://arset.gsfc.nasa.gov/]
   g. ResourceWatch (https://resourcewatch.org/)

      - Resource Watch is a dynamic platform that provides trusted and timely data for a sustainable future. Resource Watch features hundreds of data sets all in one place on the state of the planet's resources and citizens. Users can visualize challenges facing people and the planet, from climate change to poverty, water risk to state instability, air pollution to human migration, and more.

3. Monitoring Air Pollution
   a. Filling the Gaps: Improving Measurement of Air Quality in Developing Countries Workshop ([link](#))
   b. Air Sensor Toolbox for Citizen Scientists, Researchers and Developers ([link](#))
   c. Low-cost sensors for the measurement of atmospheric composition: overview of topic and future applications ([link](#))

4. Solutions to air pollution
   a. Air Pollution in Asia and the Pacific: Science-based solutions ([link](#))
   b. LMIC Urban Air Pollution Solutions Technical Document ([link](#))

    c.   Fighting for Clean Air Around the Globe: Air Quality Workshop Outcome Document ([link](#))
[good examples from around the world on activism, use of data and legal methods etc.]

    d.   Air Pollution and Health: A Science-Policy Statement ([link](#))

5. **Advocacy, awareness and campaigning**

    a.   BreatheLife- A global campaign to mobilize governments and individuals to take action on air pollution ([link](#))

    b.   Clean Air in London ([link](#))

    c.   Another creative example from London: *'Location, location, lung disease': pollution ads target property market* ([link](#))

    d.   India: Hawa Badlo [aka Change the Air] ([link](#))

    e.   Doctors for clean air leads India's medical community in fight against air pollution ([link](#))

          - People (generally) believe what their doctors tell them. What if the doctors talked about the health effects of air pollution?

    f.   Inspire: Health Advocates for Clean Air ([website](#))

    g.   Citizen Science for Air Pollution

          - How 20,000 citizen scientists are sniffing out their air pollution problem ([link](#))

          - Air Pollution Monitoring powered by Citizen Science in Kenya's Capital Nairobi ([video](#))

          - No PhDs needed: how citizen science is transforming research ([link](#))

6. **Applications of data**

    a.   AQ analysis: Air Pollution Knowledge Assessment (APnA) city program, UrbanEmissions ([link](#))

    b.   Journalism: Diabetes deaths due to air pollution highest in India ([link to article](#))

    c.   Journalism: The Weight of Numbers: Air Pollution and $PM_{2.5}$ ([link to article series](#))