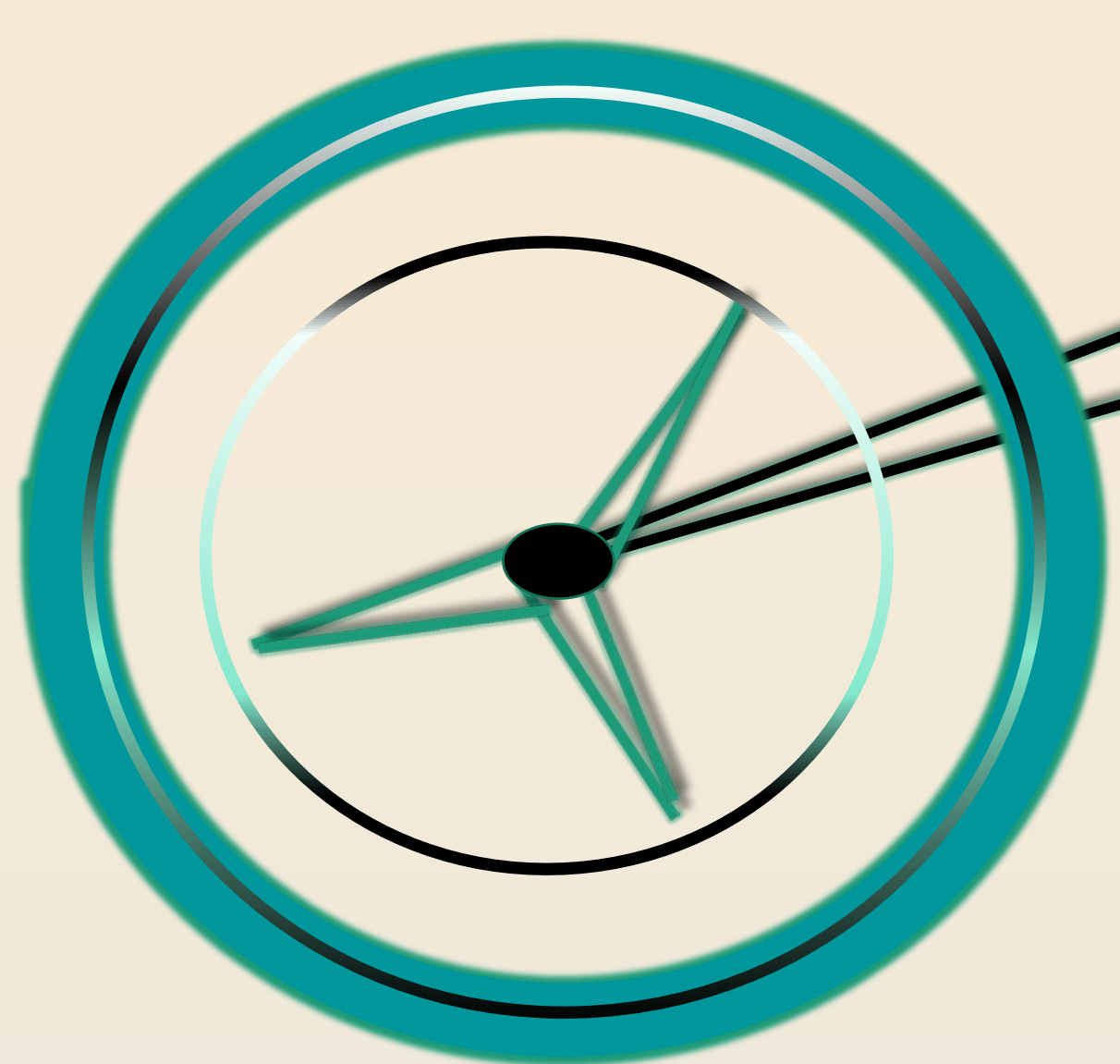# Environmental Assessment Using Drones: An Effective Tool

UZAYRABDULLAH SIDDIQUI
Honours Geomatics Major

Introduction

- Research directed for utilization of drones in climate control and monitoring.

- The ease in acquiring information efficiently using drones has increased their value in the geoscientific industries.

- UAVs**/Drones help in constant profile monitoring during climate variations which contributes and adds value to the comprehensive study of climate change.

- Drones can hover close to the subject which is otherwise more difficult to acquire quality data using other methods.

Typical Uses

- Uses low cost commercial Micro sensors
  - (any vector-monitoring technology)
  - Arduino platform-Controller
- Measures concentrations of air pollutants
- Carbon Dioxide, Carbon Monoxide, Methane
- Water quality, depth and flow rate.
  - Atmospheric composition and climate patterns
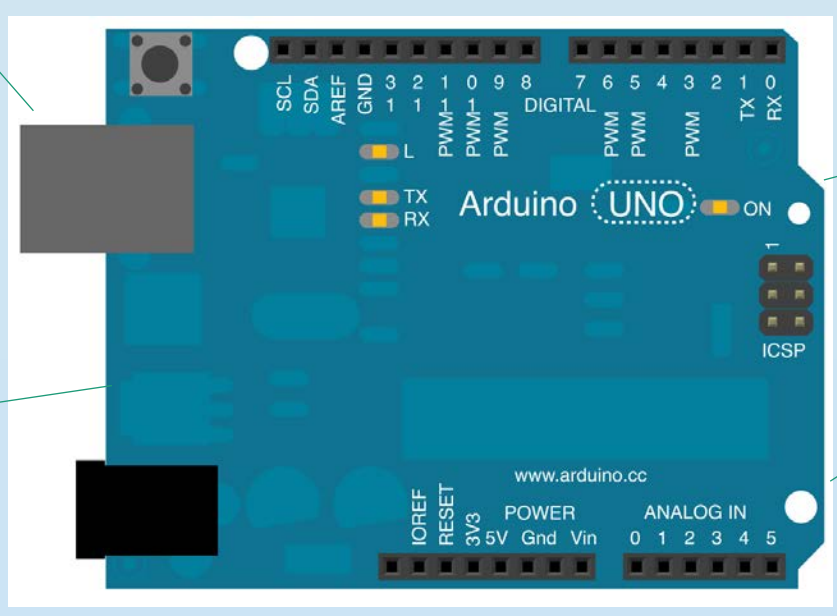
Design

IR Sensors (Infrared)

GPS Shield

Liquid Flow Meter

Wireless Transmitter

Tilt Sensor

SD Card

Arduino Chip

Advantages

- Faster data acquisition

- Economical and Efficient

- Customization Capability

- Pre Programmed Flight Plans

- Propulsion Systems

References

Supervisor : Steve Prashker, B.Sc, M.Sc

123d.circuits.io

www.arduino.cc

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Author Contact Info:
Uzayr Siddiqui
uzayrabdullah@gmail.com

**Unmanned aerial vehicles