Setting the Stage on Earth Observation Technologies and Other GIS Tools

JPAC Forum on Horizon 2030 Initiative, 4-5 December 2024

Regional Collaboration in the use of Earth Observation (EO) Technologies and GIS Tools to Address Climate Change

- **EO/GIS technologies allow continuous spatial and temporal large area coverage**
  - Climate pollutant's monitoring
  - Tracking of and responding climate-related events.
  - Visualization and analyses of climate change impacts.
  - Provide evidence for informed decision-making on climate mitigation/adaptation.

- **Importance of Regional Collaboration**
  - Shared environment and climate impacts.
  - Improving technical capacities and accessibility to data and tools.

Key 2030 Climate Goals

- **Climate Action** under UN Sustainable Development Goal (SDG) 13 and GHG emissions reductions under Paris Agreement

- **North American Leaders Summits 2021, 2023**

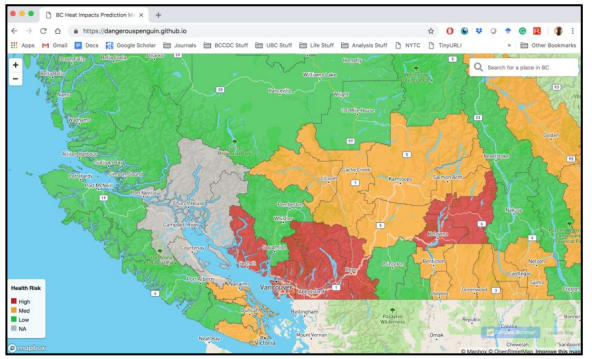
  - Pledge to reduce methane emissions from oil and gas sector by 60-75 percent by 2030 and black carbon emissions.

  - “Workplan under the Commission for Environmental Cooperation, which will work to improve early warning systems for extreme events and promote climate adaptation solutions”.

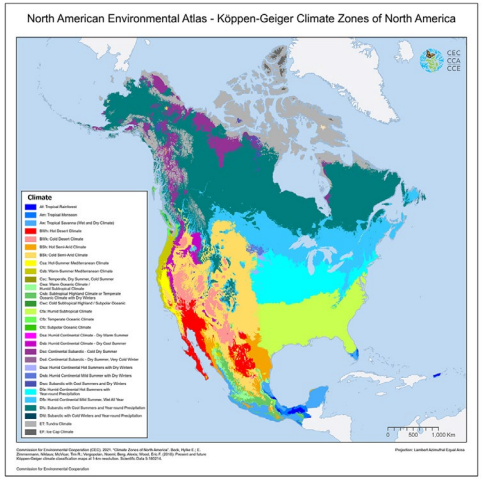
  - Reducing methane emissions in the waste sector by at least 15% from 2020 levels by 2030 and continuing to reduce methane and black carbon emissions in North America.”

CEC's work on Earth Observation (EO) Technologies and Other GIS Tools

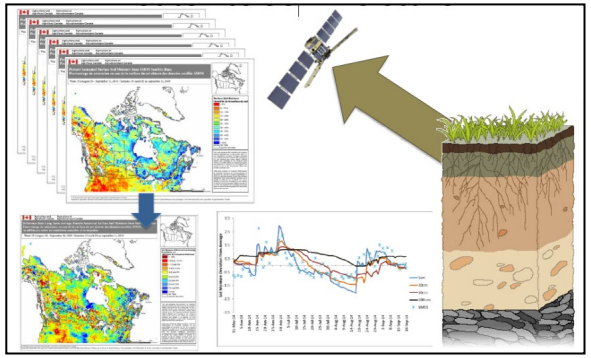
- **Monitoring Health Impacts from Extreme Heat Events**
  - Increased capacity of public health agencies to monitor health outcomes related to extreme heat events to identify and treat the most vulnerable populations.



- **Improving the Effectiveness of Early Warning Systems for Drought**
  - Developed guidelines on locally relevant drought indicators in North American climate regions and provided recommendations for improving access and use of drought information and best practices.

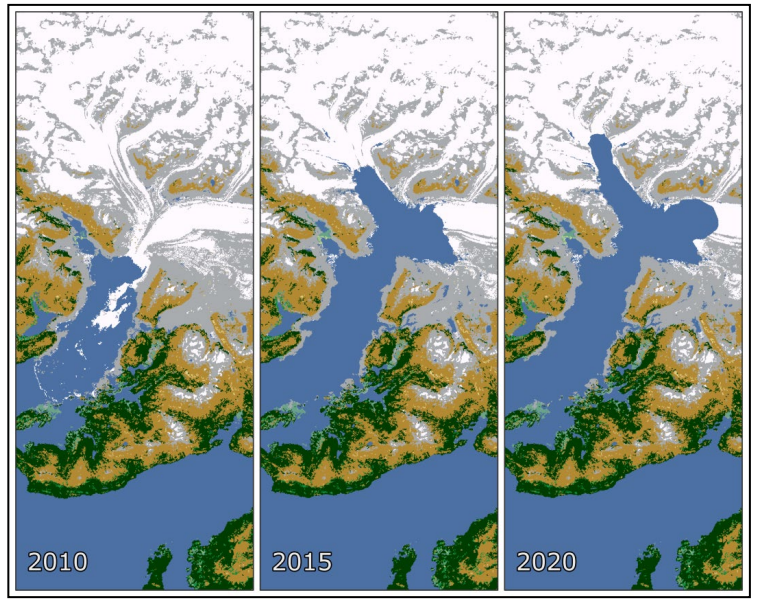


- **Using remote sensing to prepare for and respond to extreme events**
  - Identified best available options for early warning systems that would benefit from enhanced access to satellite imagery.
  - Conducted workshops and developed recommendations on the use of satellite imagery and response tools for floods, drought, and forest fires.

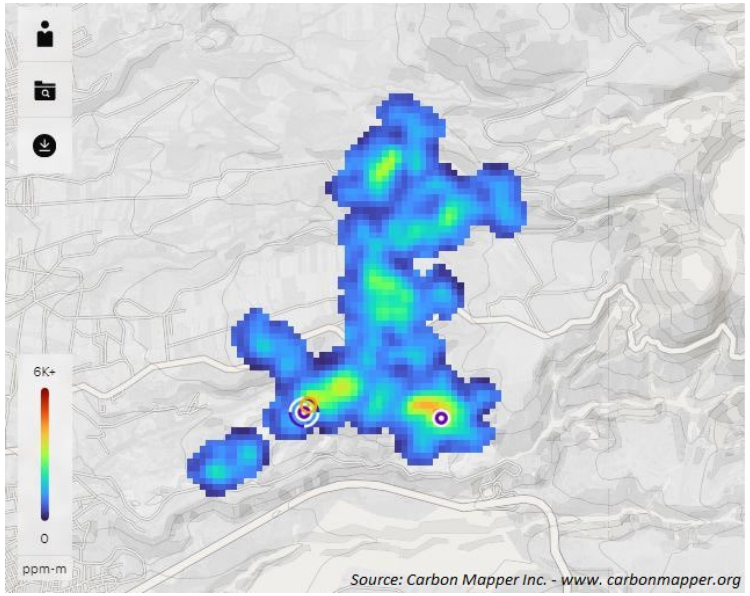


CEC's work on Earth Observation (EO) Technologies and Other GIS Tools (Cont'd)

- **North American Land Change Monitoring System**
  - NALCMS products can be used for a variety of applications, including carbon sequestration analysis, wildlife habitat mapping, ecosystem monitoring, environmental planning, water quality assessments, and evaluation of biofuels production potential.



- **Fast Mitigation Strategies for Short-Lived Climate Pollutants (New)**
  - Develop recommendations for enhanced methane emission quantification, measurement approaches, and inventories in North America, leveraging advancements in remote detection technologies to support targeted methane emissions mitigation actions.



Looking ahead: Key questions

- How can we improve the availability and accessibility of EO/GIS technologies, tools and information to better understand the changes impacting us so we can make better place-based decisions?

- How can EO/GIS solutions better integrate Indigenous Knowledge and promote environmental justice?

- What opportunities exist for the three countries to leverage EO/GIS technologies to address climate impacts and support mitigation efforts?

Three countries. One environment.
Tres países. Un medio ambiente.
Trois pays. Un environnement.

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