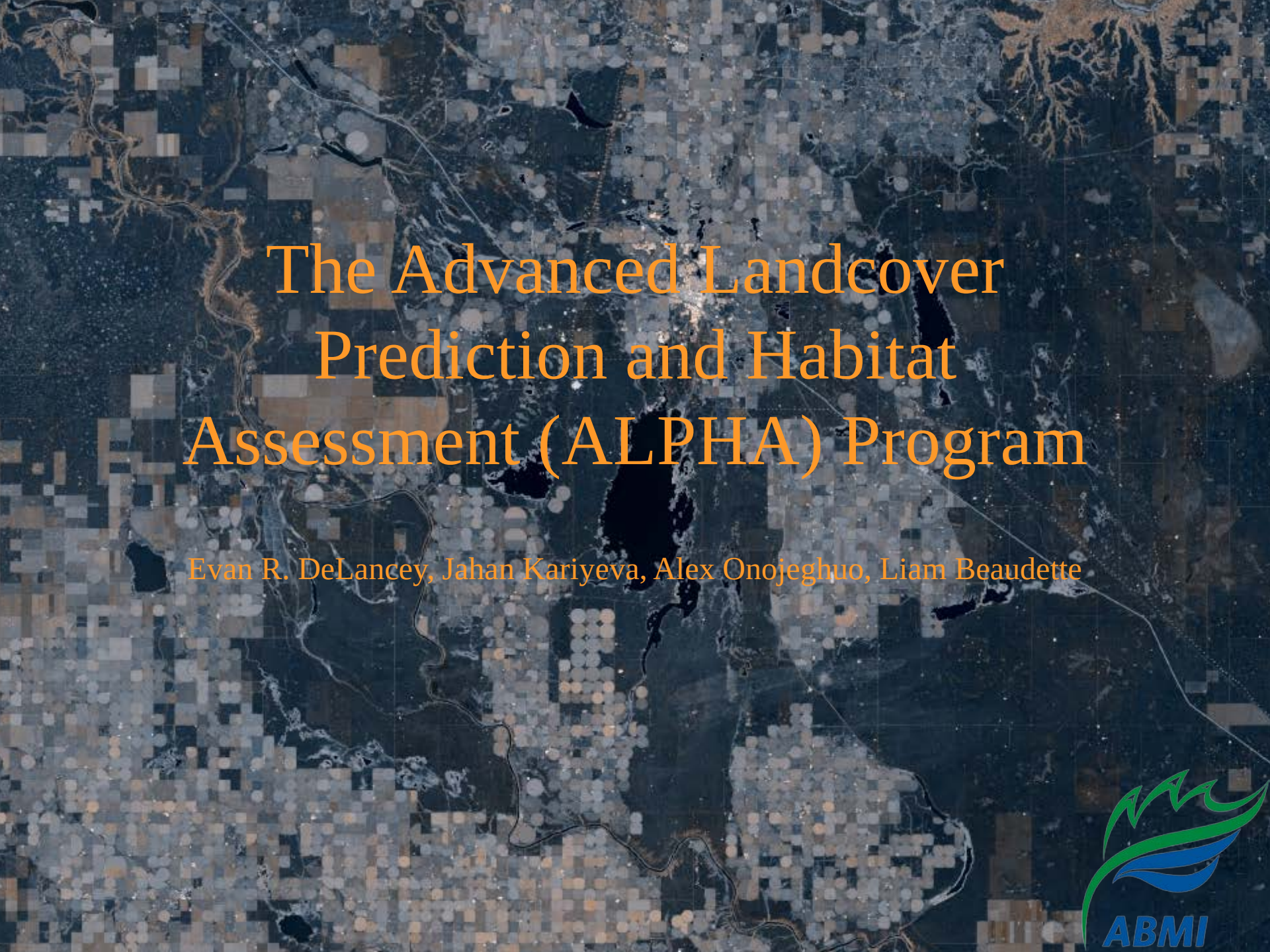

The Advanced Landcover Prediction and Habitat Assessment (ALPHA) Program

Evan R. DeLancey, Jahan Kariyeva, Alex Onojeghuo, Liam Beaudette

ABMI

ALPHA what is it?

- Using Earth observation and spatial data science to answer questions about Alberta's landscape
  1. Where are all the wetlands in Alberta?

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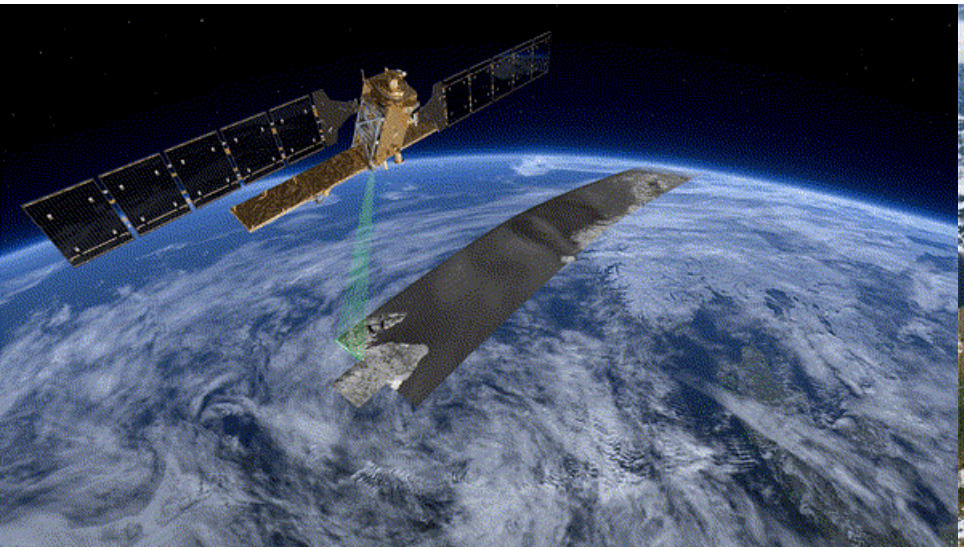
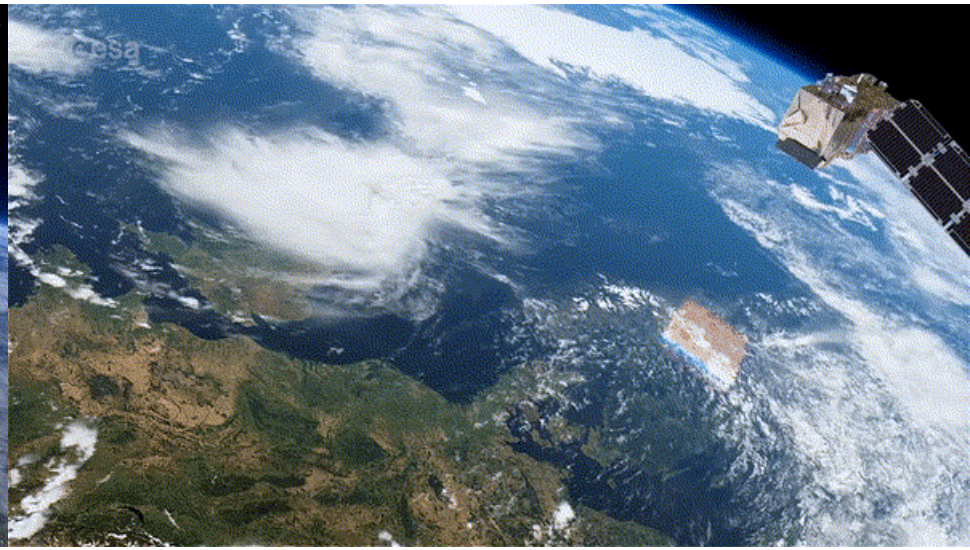
  1. Where are all the wetlands in Alberta?
  2. How often does this prairie pothole flood?
  3. What year was this harvest area cut?
  4. Where are under ground weapons facilities?

Why Earth observation data?

1. Consistent repeated data collection
   - Want to survey your study site daily?
2. Easy access to provincial – global scale data
3. #1 and 2 together!
   - Full coverage of Alberta every few days



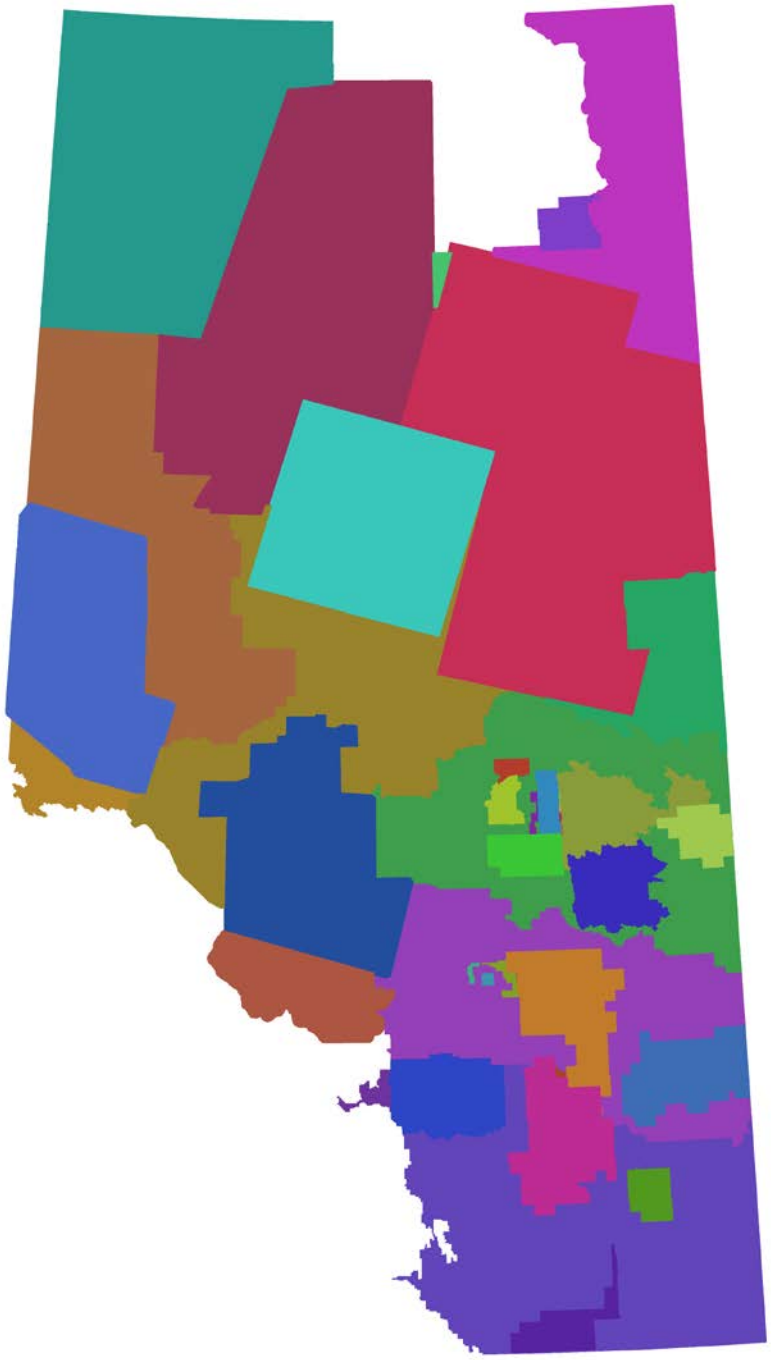


Why did we start this program?

- Need for:
  1. Spatially consistent inventories
  2. Large scale (provincial)
  3. Open access
  4. Consistently updated

Why did we start this program?

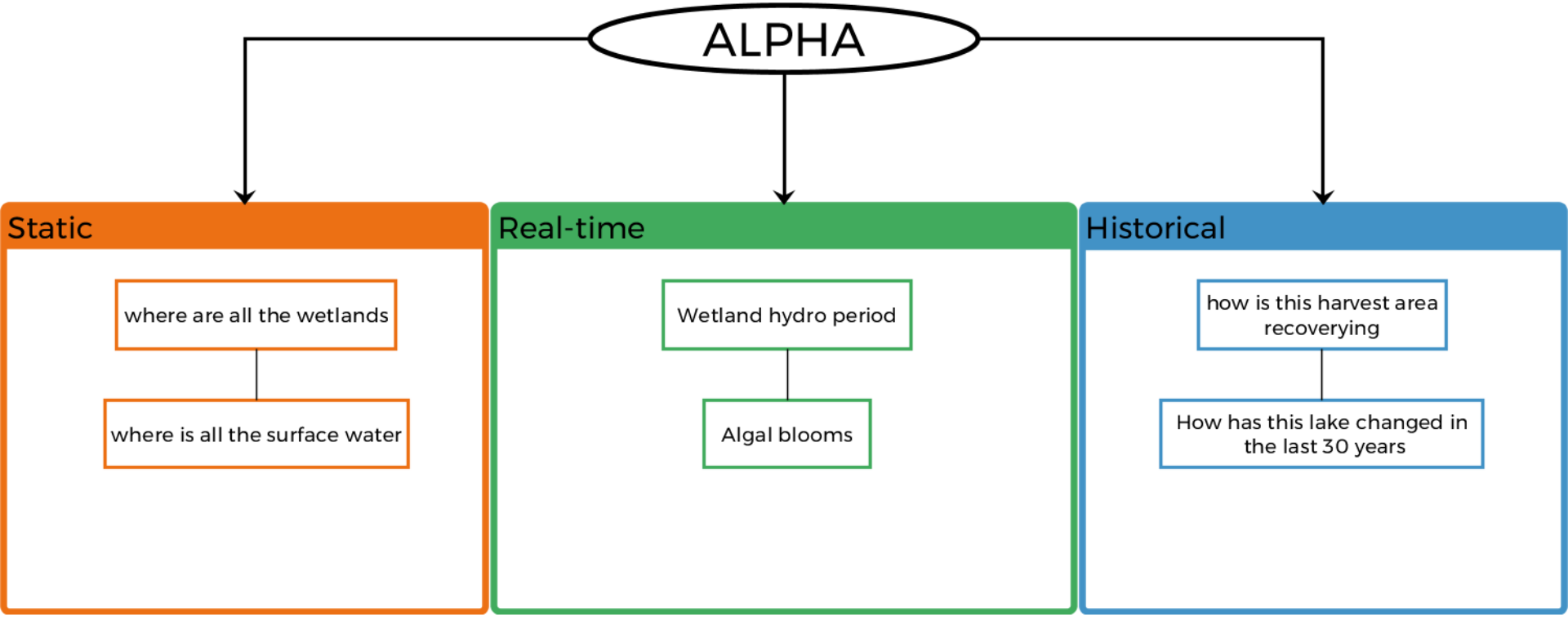
- Alberta landcover inventories
  - Alberta Vegetation Inventory – AVI
  - Grassland Vegetation Inventory – GVI
  - Alberta Merged Wetland Inventory – AMWI
  - Derived Ecosite Phase – DEP
  - Base feature HydroPolys



Why did we start this program?

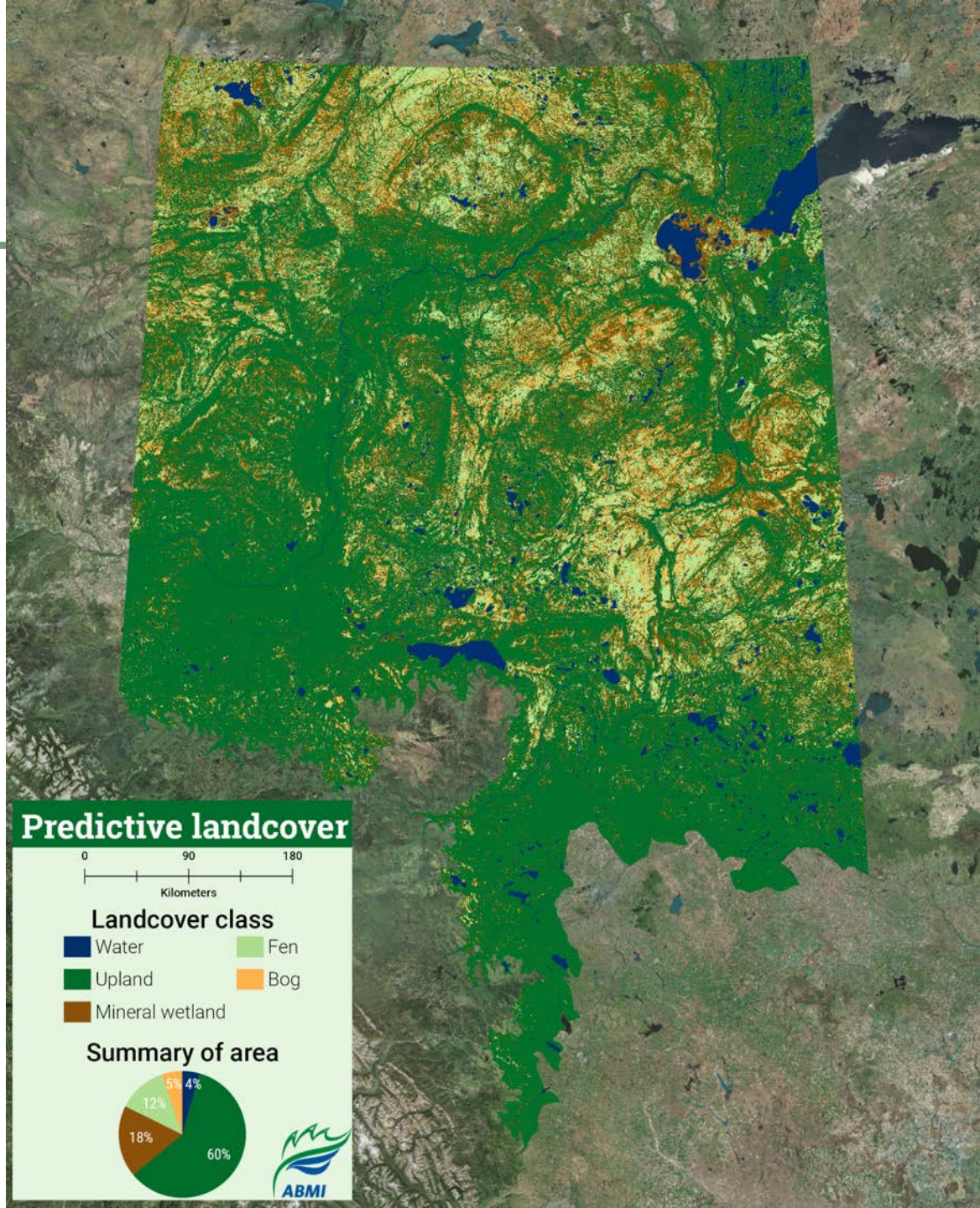
- The need to capture dynamic aspects of the environment
  - Historical change
  - Real-time change

What questions have we tried to answer?



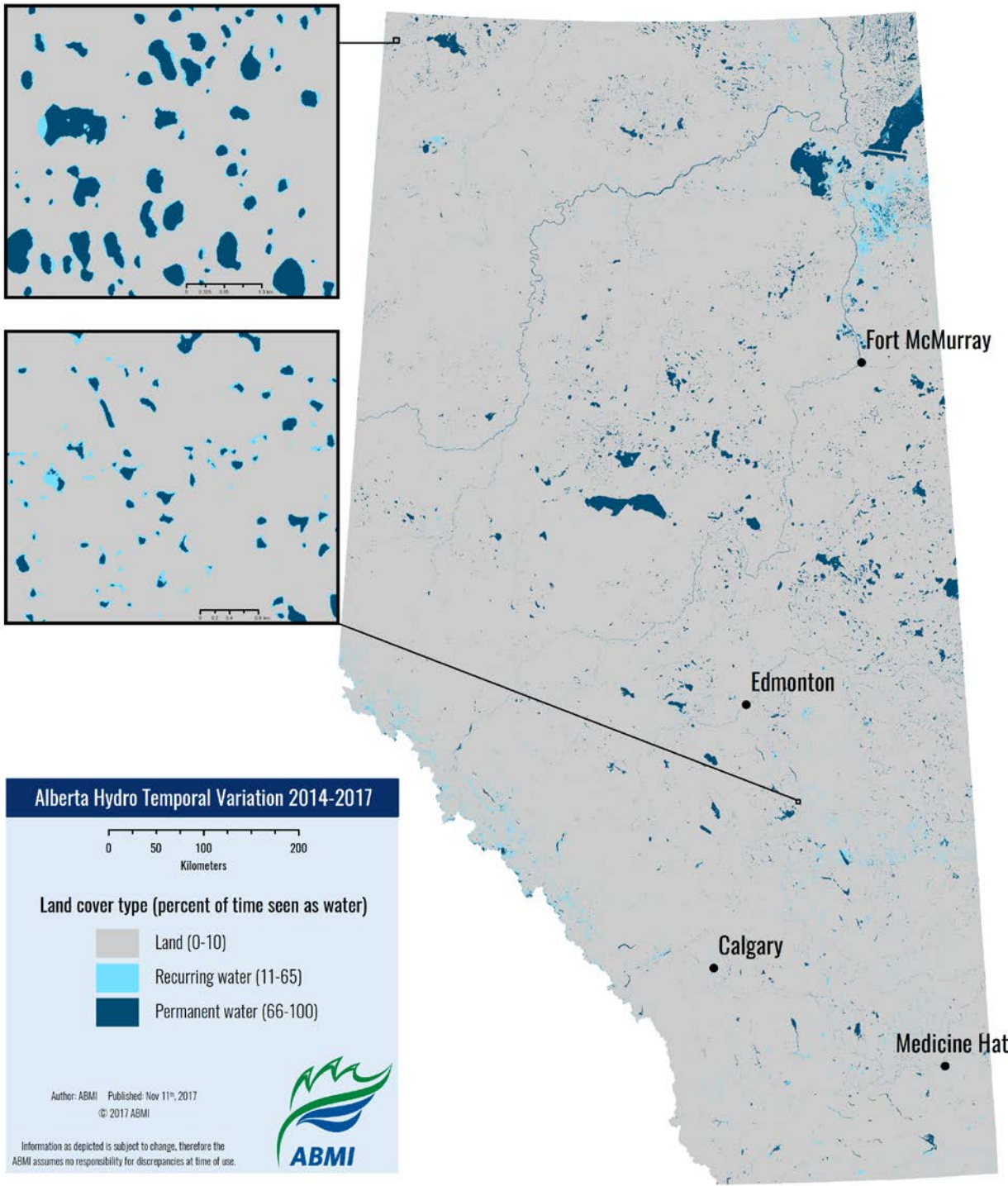
Products!

1. Predictive landcover
   - 4 wetland classes



Products!

1. Predictive landcover
   - 4 wetland classes
2. Hydro period



Products!

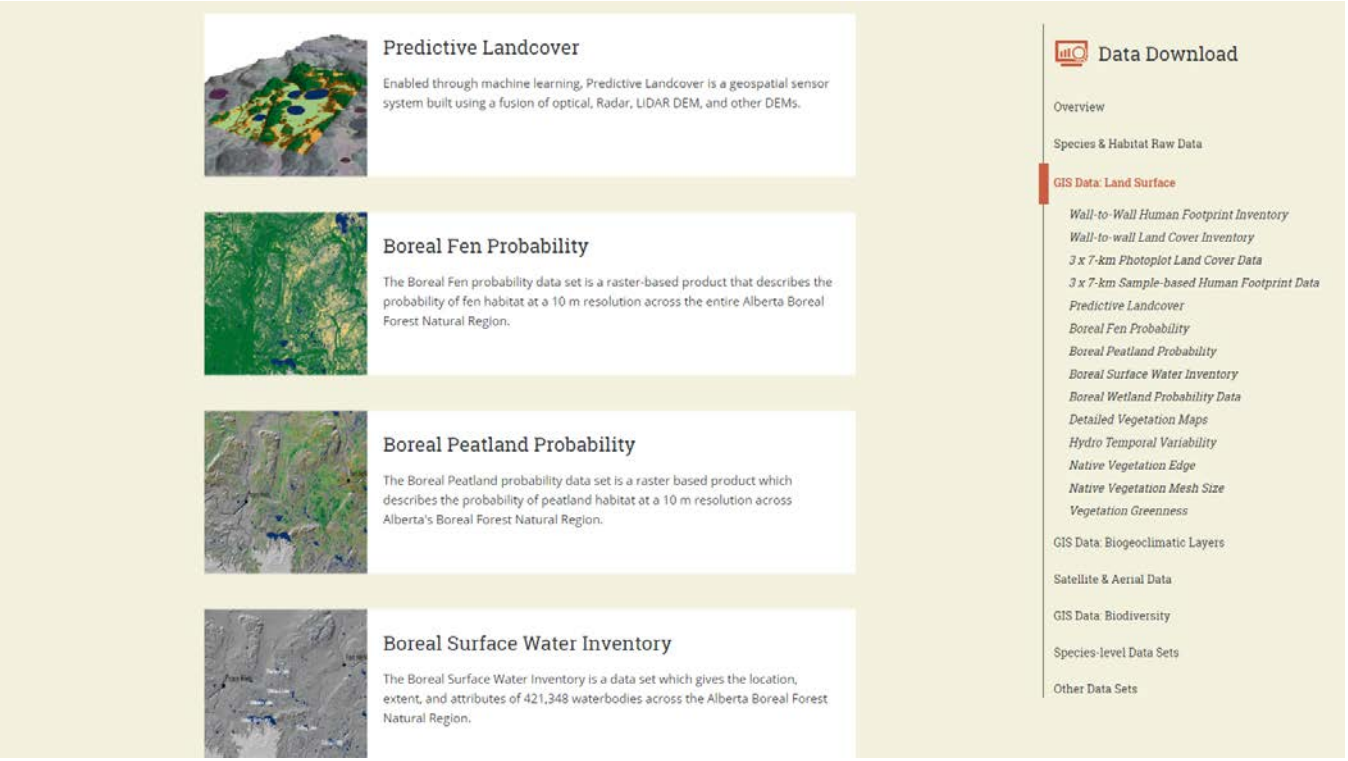
3. Historical surface water web application

What questions need answering?

- Questions that can be solved through Earth observation data
  - Provincial to country scale questions
  - Questions that require weekly observations
  - Data for remote areas

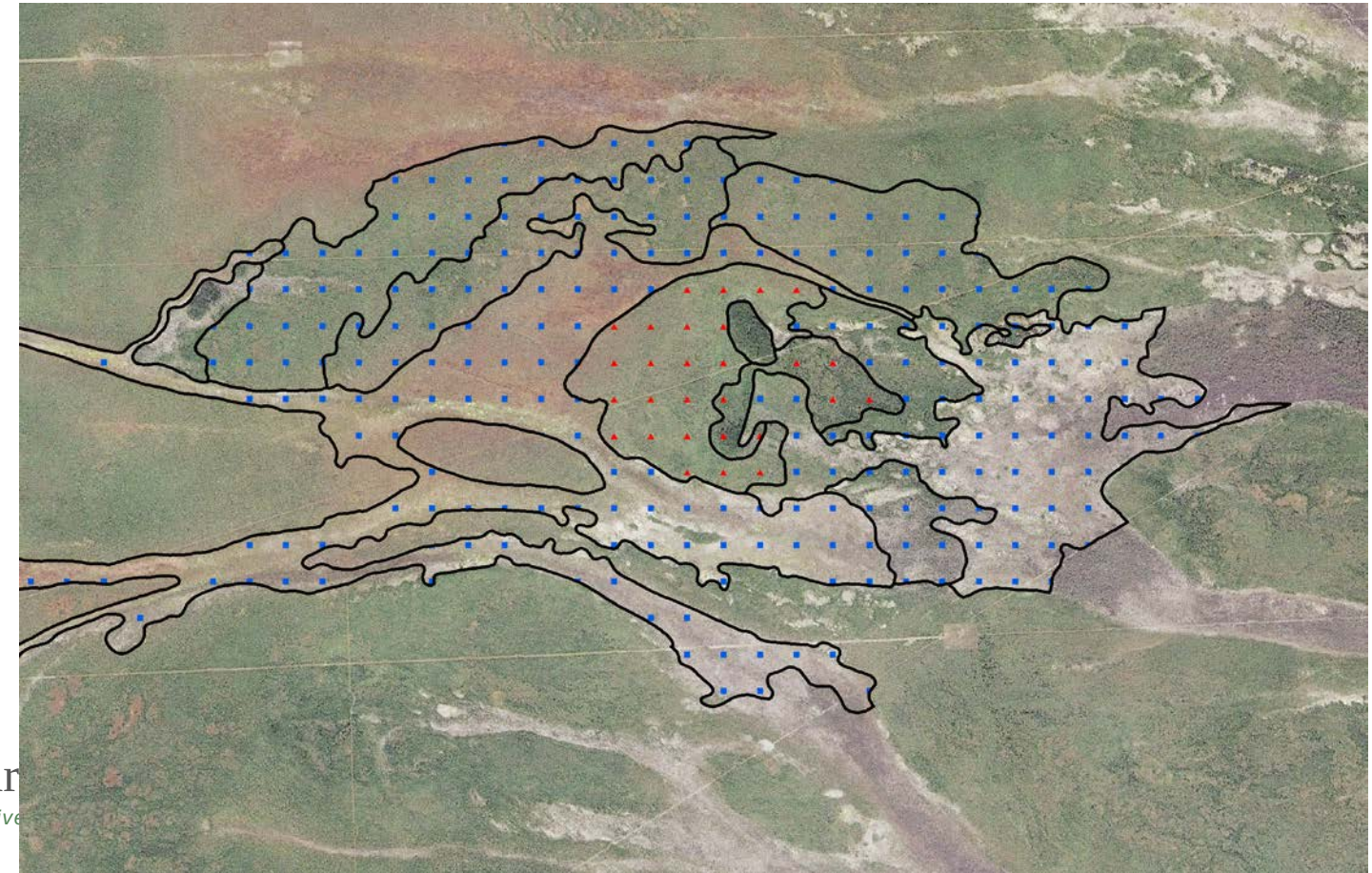
How can we improve?

- Most of our data products and multiple publications are freely available on the ABMI website – www.abmi.ca



How can we improve?

- New data
  - Example: how do you distinguish bog from fen?

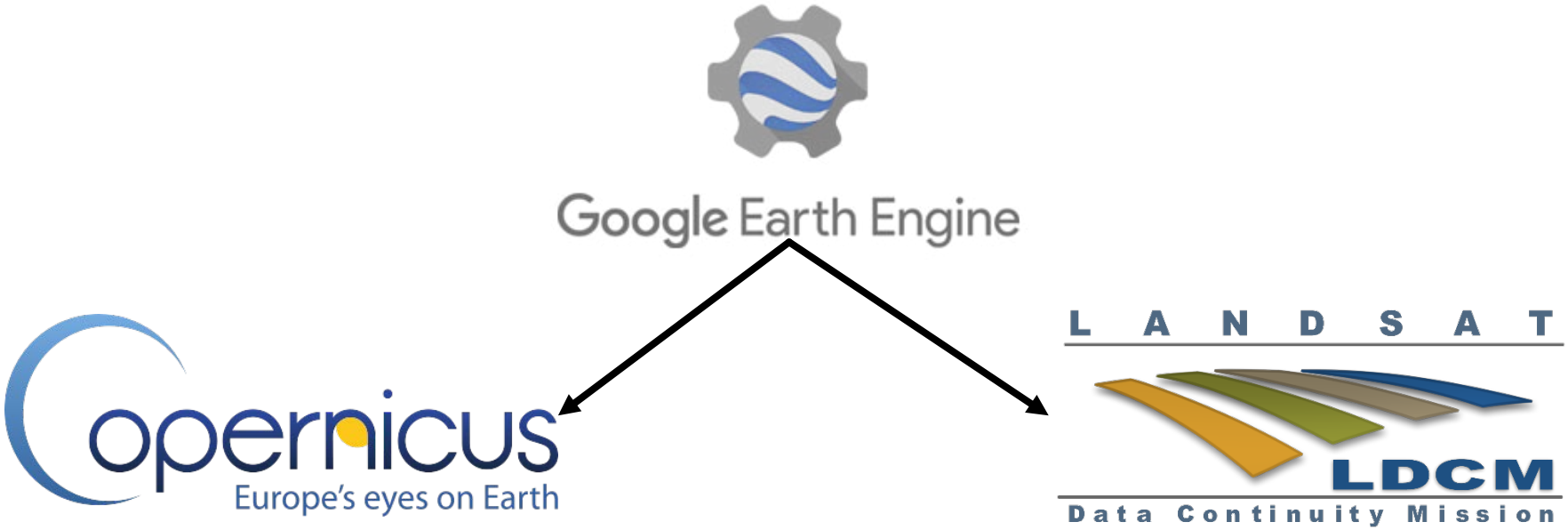


How can we improve?

- More user friendly data products

Take home message

- New technologies allow for easy large scale mapping
  - Real time and historical mapping and monitoring



Take home message

- ALPHA program

  Current state/static maps + historical EO + real-time EO

  =

  Holistic view/data of Alberta's landscape

Feedback

1. What question do you need answered?
2. How can we collaborate to produce better products?
3. How can we improve our products?

Landcover is dynamic!

Thanks to the team – Jahan, Alex, Liam


Questions?
Feedback?
ABMI