

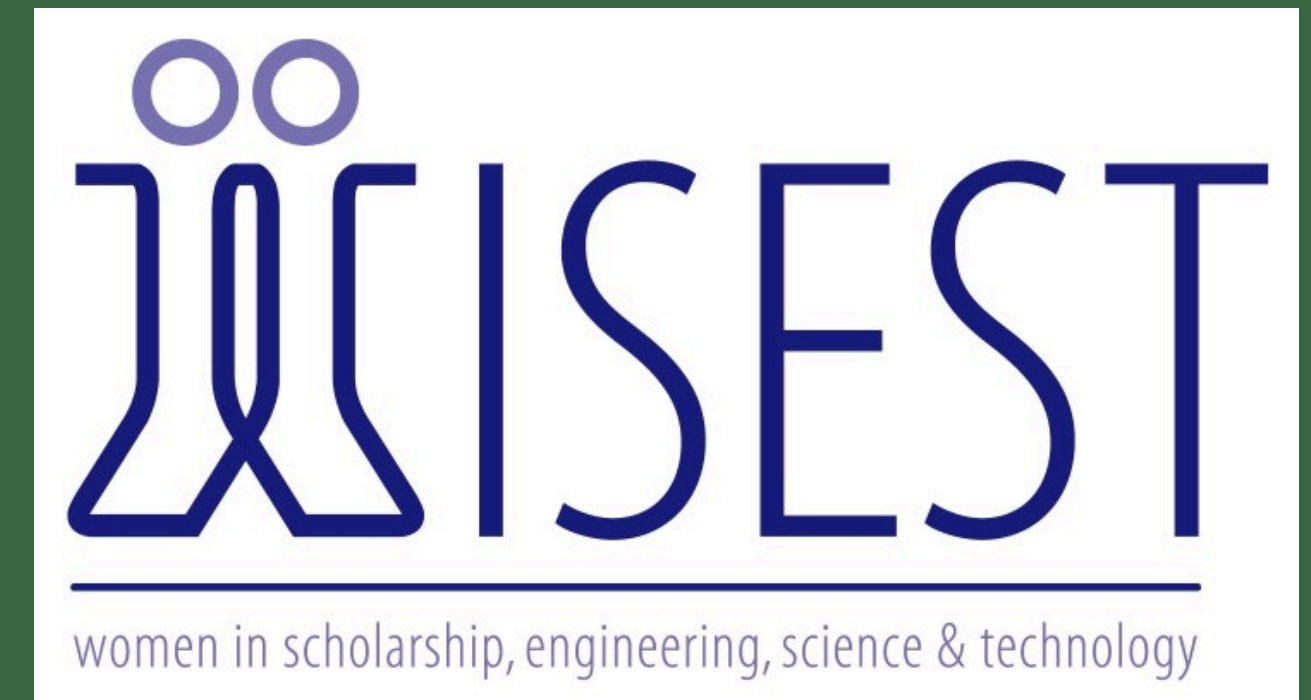


# The NWSAR Project and the Data Processing Cycle at the ABMI

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## What is the ABMI?<sup>3</sup>

- The Alberta Biodiversity Monitoring Institute is a non-profit biodiversity tracking organization
- This research poster is intended to explain how information moves through the ABMI's 8 centres
- Organizational values: Unbiased, Accessible, Collaborative
- The ABMI processes data to catalogue and monitor information about Alberta's ecosystems
- What is the NWSAR (Northwest Species at Risk) project?

## The ABMI's 8 Centres<sup>4</sup>

### Executive Office

- Face of the ABMI
- Monitors other centres
- Manages the ABMI's image

### Monitoring Centre

- Manages operations in the field
- Sets up data monitoring locations

### Science Centre

- Encourages scientific excellence
- Manages data collection protocols

### Processing Centre

- Manages ABMI's laboratories and archives
- In charge of specimen identification

### Information Centre

- Facilitates access to data
- Develops ABMI's software

### Imaging Centre<sup>2</sup>

- Uses LiDAR (Light Detection and Ranging) to create maps
- Uses AI to inventory plants and predict habitats

### Geospatial Centre

- Uses GIS (Geographic Informational System) software to monitor habitats
- Creates land cover maps

### Operations Centre

- Oversees field project logistics
- Manages media relations

## The Data Processing Cycle at the ABMI<sup>1</sup>

### Step 1: Choose Data Collecting Location

- Sites are chosen based on what is being monitored
- NWSAR sites were mostly in Northern Alberta

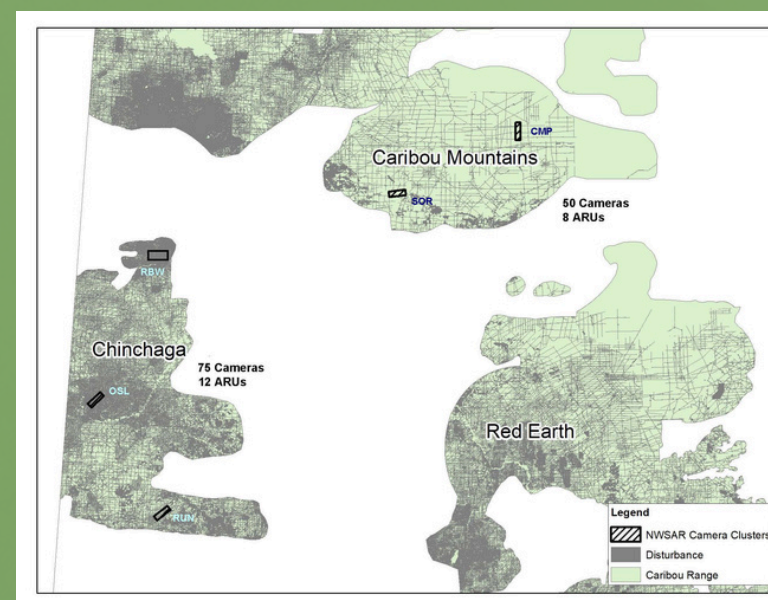


Fig. 1 A map of some of the regions monitored by the NWSAR project  
Retrieved from NWSAR + ABMI + ATA - 3 Year Camera Project

### Step 3: Retrieve Collection Units

- Data units left in the field are collected
- NWSAR leaves units for up to 1 year



### Step 5: Analyze Data

- Data is accessible to ABMI staff
- Any necessary analysis may be performed

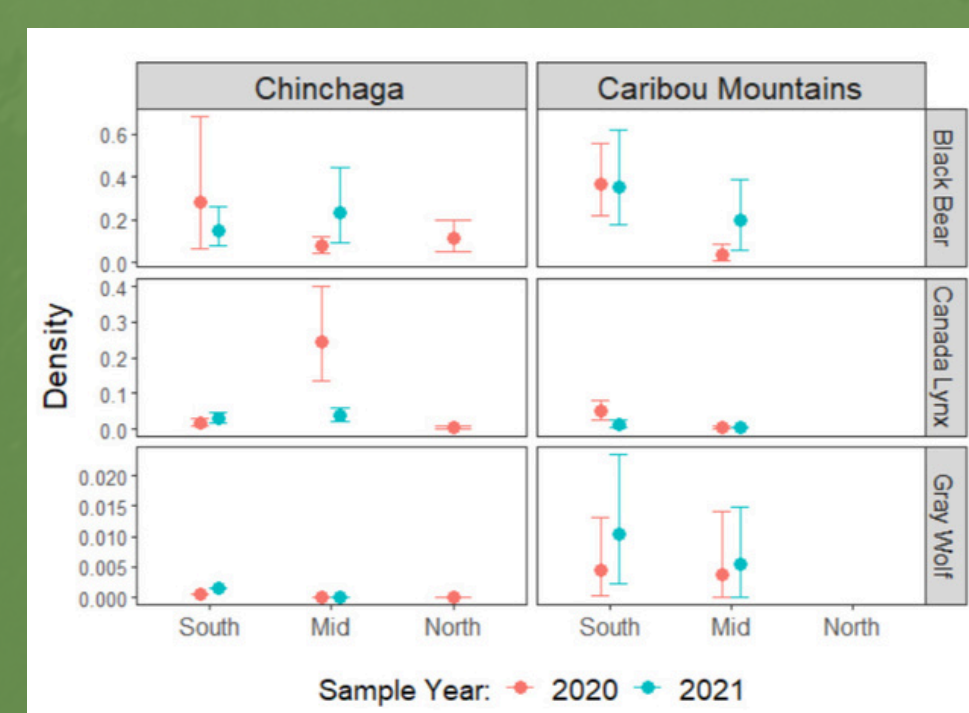


Fig. 3 A graph with an estimate of large mammal populations done for the NWSAR project for the years of 2020 to 2021.  
Retrieved from Estimating Ungulate and Predator Population Densities in Chinchaga and Caribou Mountains



### Step 2: Deploy Data Collection Units

- Data collection units are deployed
- Camera/audio unit, physical specimen collection



Fig. 2 An image of members of the ATA setting up data collecting units in the field for the NWSAR project  
Retrieved from NWSAR + ABMI + ATA - 3 Year Camera Project

### Step 4: Upload Data to ABMI Databases

- Data is deposited into ABMI databases
- One example of a database used is WildTrax



### Step 6: Release Data

- The data is published to the ABMI's public website
- It is now free for anyone to download and use

## Why is the ABMI's Work Relevant?

- The ABMI was created with the intention to inform Albertans about the land they live on
- Monitors and records ecosystems, which can help see how environmental factors affect them
- The ABMI's data may also be used by persons outside of the ABMI (civilians/government/industry)

## Social Media Communication

Beyond learning about the flow of information within the ABMI, another large component of this research project was the scientific communication aspect. This portion of the project required me to make a social media post focusing on the data monitoring cycle and the NWSAR project. It can be accessed through the attached QR code.



## Acknowledgements

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## Citations

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Wildlife photos taken from image capture units from the NWSAR project