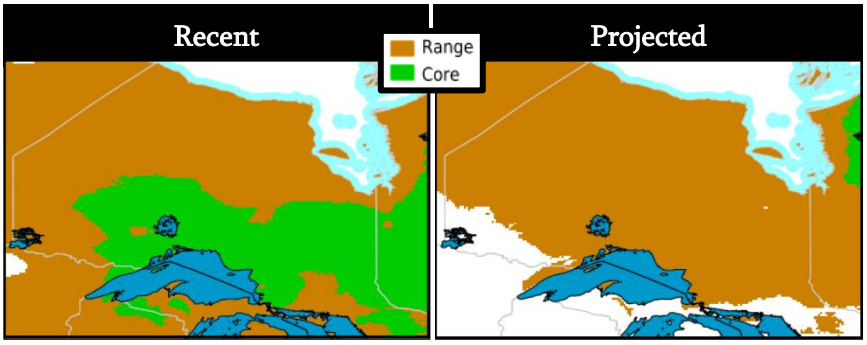
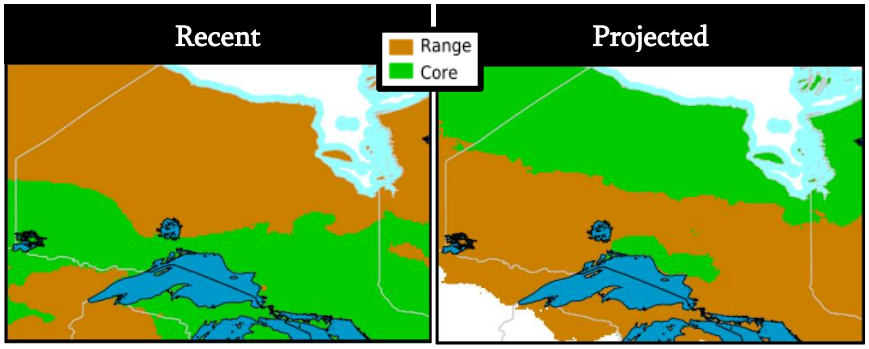
Shifting North: Berries & Plants

Climate change is likely to impact important traditional and medicinal plants as well as berries. For example, wetland plants like wild rice, cedar, cranberries, cloudberries and Labrador tea will be impacted by changing water levels, especially during extreme events of drought and severe rain. In the subarctic, permafrost decay is disrupting muskeg plant communities. The severity of these impacts may depend on the species ability to adapt. In some instances, climate change may benefit key berry producing plants or expand the types of berries and plants that can be cultivated in northern regions.

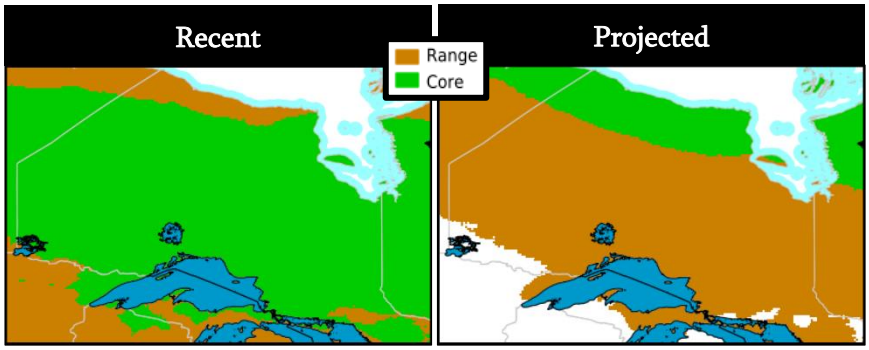
Lowbush Blueberry



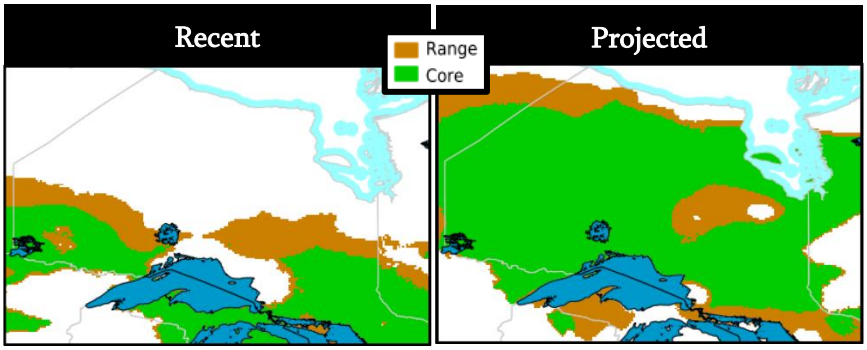
Wild Strawberry



Labrador Tea



Wild Rice



Core range (species is abundant) and range (species is found) in the recent past (1970-2000) and projected (2041-2070) of berries and plants with continued greenhouse gas emissions (Composite AR5 model RCP8.5). More info: http://www.planthardiness.gc.ca/?m=2b

How can we prepare?

Monitoring

Understanding the status of medicinal and berry plants and the threats to their continued availability is the first step in developing adaptation strategies. Targets and goals can be established by the community, as well as decisions about what needs to be monitored and how to monitor. A community-based monitoring approach can involve hunters, trappers, gatherers, and other land users in data collection and may include the following steps:

- Identify important plants and potential threats
- Use traditional knowledge to create a community baseline
- Collect data while out on the land and monitor changes (location, abundance, health, etc.)
- Consider collaborations with universities, governments or other groups to merge traditional knowledge with scientific study
- Consider using an online citizen science app (see box)

Citizen science apps

The Indigenous Knowledge Social Network created to facilitate self-determination for Indigenous communities. https://siku.org/#/about

iNaturalist

Create specialized projects, track your observations, connect with others. www.inaturalist.org

Habitat protection

The protection of areas where important plants are found should be considered. Plants often prefer specific conditions to grow, such as water depth, amount of light, and soil requirements. As climate changes, plants may shift their ranges to follow their preferred climate envelope. This may make it necessary to change the geographic boundaries of protected areas over time.

Assisted Migration

Assisted migration helps to establish plants that may grow and survive well in a warmer future climate. For instance, if lowbush blueberries are under threat from climate change in your community, the same species of blueberries that grows in a more southern climate can be transplanted. A more extreme case would be planting a blueberry species that grows in a more southern range, e.g. highbush blueberries, that may now survive further north. The movement of any plant species into a new location is not without risks; the plant could become invasive displacing native plants. All risks should be weighed carefully before any assisted migration plan is implemented. More information on the types of assisted migration can be found at: http://www.nrcan.gc.ca/node/13121.

Adjusting harvesting practices and community initiatives

Many harvesters are already saying they have had to adjust their time and methods to access traditional areas due to low water or trails being blocked by trees from downbursts. Many in First Nations communities have said they now have to travel further to gather traditional foods. This may require more costly means of transportation, such as a vehicle or ATV. Sharing harvested resources within the community can help ensure food security for those without the resources to harvest berries or plants.

The range of berry and medicinal plants is predicted to move further north in the next 50 years with the changing climate. If harvesting is to continue, communities should consider monitoring, protecting habitat, assisted migration and adjusting harvesting practices.

UP NORTH ON CLIMATE
Climate Change Impact and Adaptation Study for the North of Ontario