



First Nations Food, Nutrition and Environment Study

Funding for this study is provided by Health Canada.

The information and opinions expressed in this presentation are those of the authors/researchers and do not necessarily reflect the official views of Health Canada.



Many sources of pollution



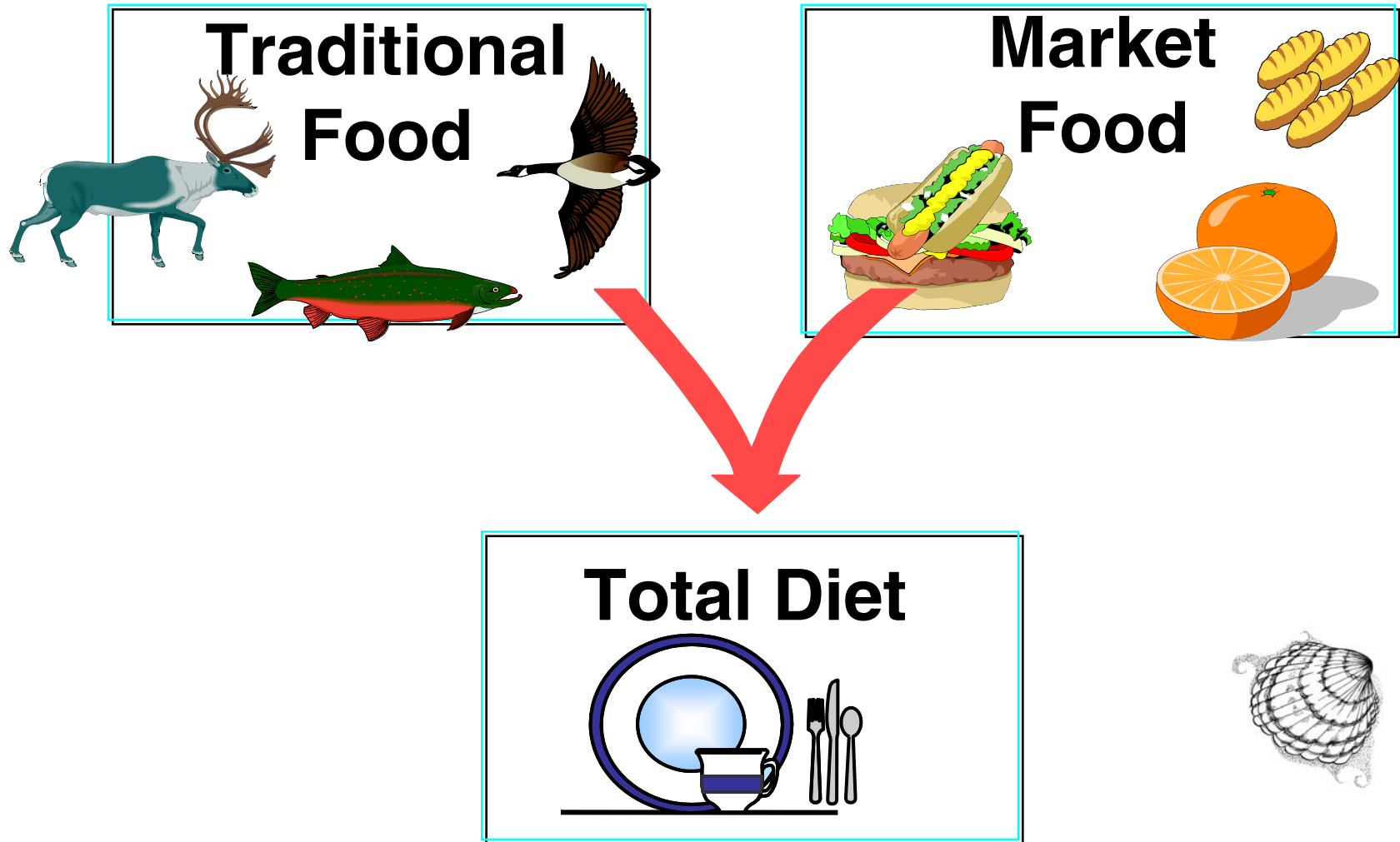
Is it safe to eat traditional food?

What and how much do people eat?

What and how much contaminants are in the food?



First Nations Unique Food System



What is known about contemporary food use in First Nation communities

- Limited number of nutrition studies that have provided a quantitative assessment of the **total diet** – what, how much, what nutrients are in short and adequate supply
- Major contributions come from community research projects



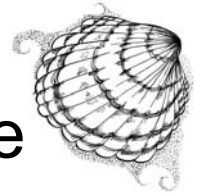
Current Nutrition Issues



- Nutrients of concern – Vitamin A, calcium, iron
- Food security
- Safety of water
- Safety of food

Diet related concerns

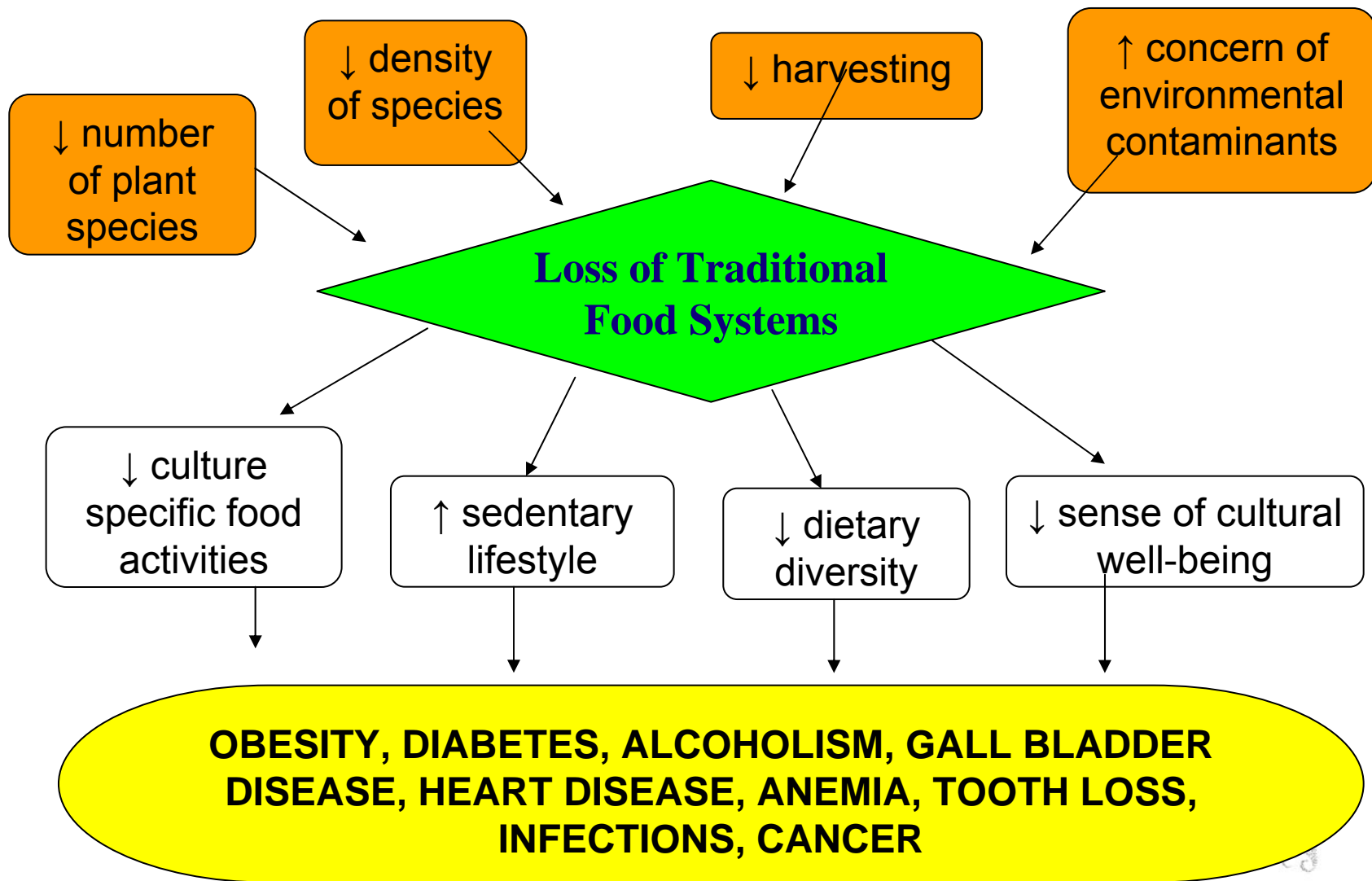
- Obesity
- Diabetes
- Heart disease
- Poor dental health



Traditional Food

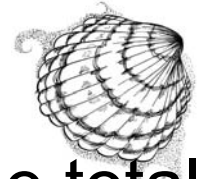
- Important source of many nutrients that are not consumed in sufficient amounts.
- Diets are healthier when traditional food is eaten than if just market foods are eaten





Introduction to the First Nations Food, Nutrition and Environment Study

- Why this study
 - There remains a gap in knowledge at the national and regional level on nutritional composition and the environmental safety of foods consumed by First Nations peoples living on reserve lands south of 60th parallel across Canada.
 - There is a lack of knowledge on the baseline levels of environmental pollutants in the traditional foods across Canada
 - There remains a gap in knowledge on the total diet of First Nations across Canada



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ANNUAL GENERAL ASSEMBLY
July 10, 11, & 12, 2007, Halifax, NS

Resolution no. 30 / 2007

SUBJECT: First Nations Food Safety Research Study

MOVED BY: Chief Isadore Day, Serpent River First Nation, ON

SECONDED BY: Doug Kelly, Proxy Kwaw-Kwaw-Apiti First Nation, BC

DECISION: Carried by consensus.

WHEREAS:

- A. Many First Nations Peoples continue to rely heavily on their traditional food systems for their socio-cultural, economic, physical and spiritual well-being; and
- B. First Nations traditional food systems are being threatened by environmental contaminants; and
- C. There is a growing concern among First Nations people regarding the presence of environmental contaminants, including heavy metals, in their traditional foods and the health implications of consuming such foods; and
- D. The AFN has recently completed a review of literature on this subject (2006-2007 Fiscal) and has determined that a research gap exists on the full health implications of consuming traditional foods which have been exposed to environmental contaminants; and
- E. The AFN has partnered with the University of British Columbia, the University of Montreal, FNIHB - Health Canada, and the Public Health Agency of Canada to collaborate, as full partners, on a research study related to traditional food safety and First Nations health; and

Certified copy of a resolution adopted on the 12th day of July, 2007 in Halifax, NS.

Phil Fontaine, National Chief

Head Office/Siège Social

30 - 2007
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First Nations Food, Nutrition and Environment Study

Resolution no. 30 at
the AFN Annual
General Assembly
July 12, 2007

Halifax, NS



This study is led by

- **Dr. Laurie Chan**, Toxicologist and Professor, **University of Northern BC**
- **Dr. Olivier Receveur**, Nutritionist and Professor, **Université de Montréal**
- **Dr. Donald Sharp**, **Assembly of First Nations**
- With contributions from: **Dr. Constantine Tikhonov**, **Dr. Harold Schwartz**, and **Dr. Caroline Mimeault**.



Objectives

In partnership with First Nation communities, the study will aim to :

- Document traditional and market food consumption
- Document food security and some water quality issues in communities
- Estimate exposure to contaminants and intake of nutrients of concern across communities
- Document self-reported health status and lifestyle habits across communities



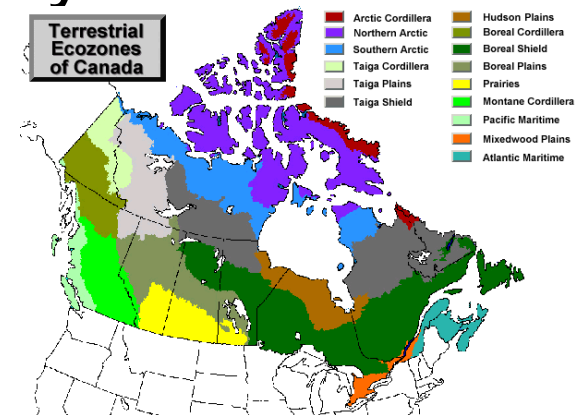
Partnership and Community Participation

- The project involves the participating communities at all stages of the project
- CIHR guidelines are respected
- Data is kept confidential

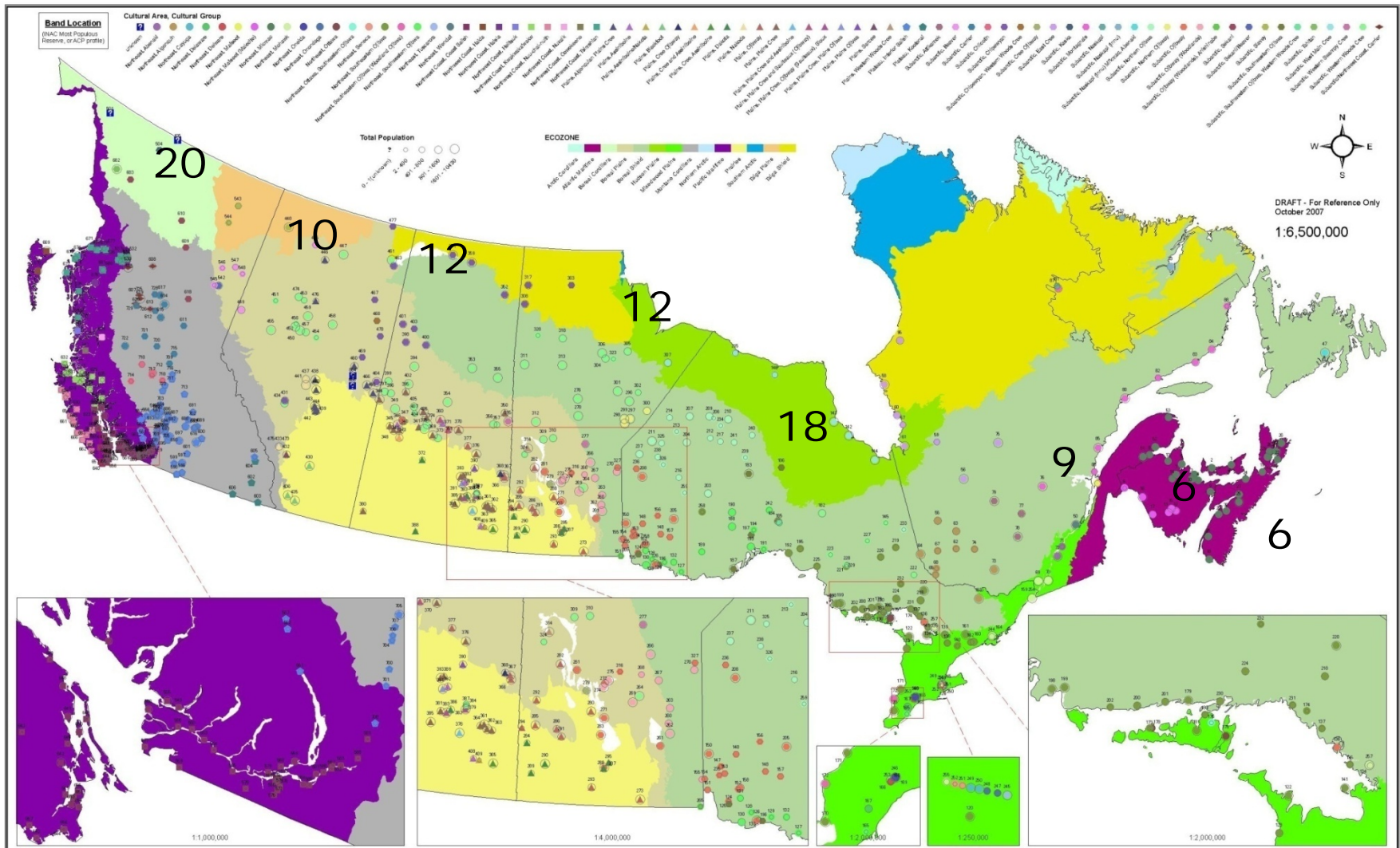


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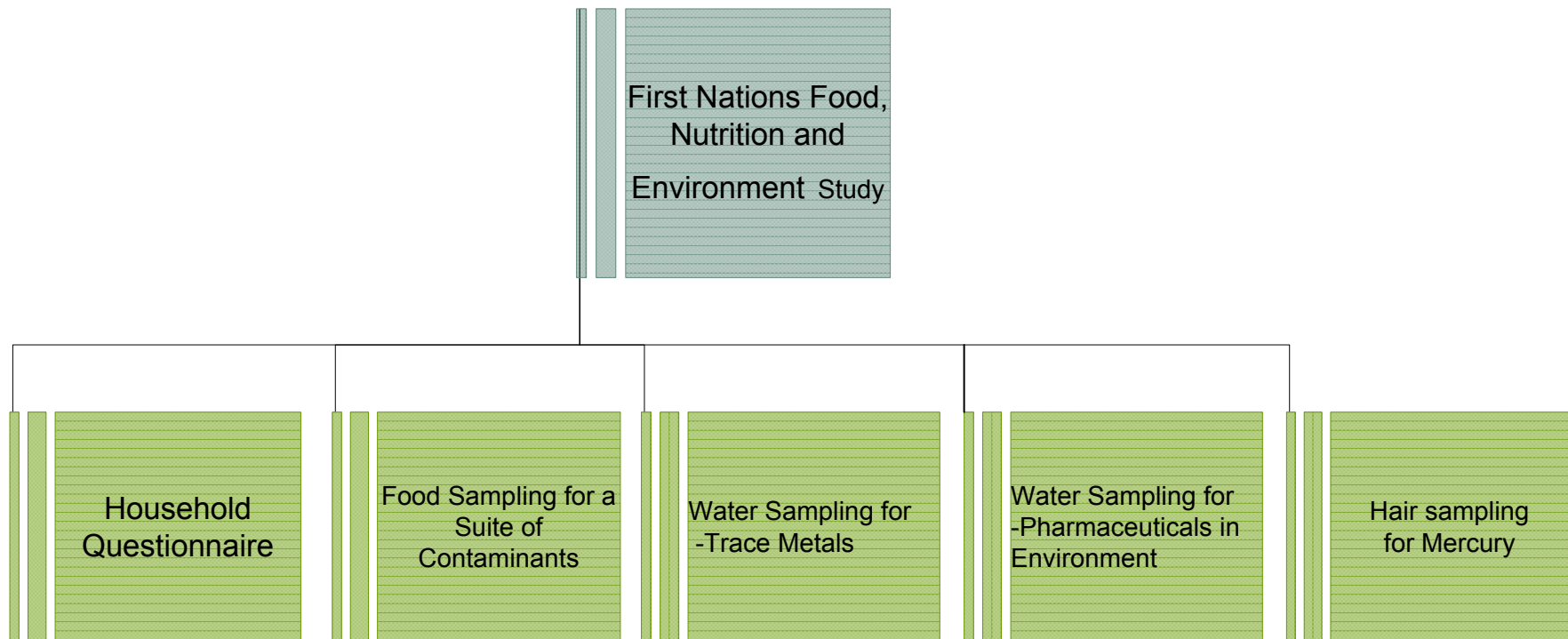
- 100 communities from 2008-2018
- ~8 - 12 communities per year and returning back in the last 2 years
- Systematic Random Sampling by region and ecozone



FNFNES Sampling Framework



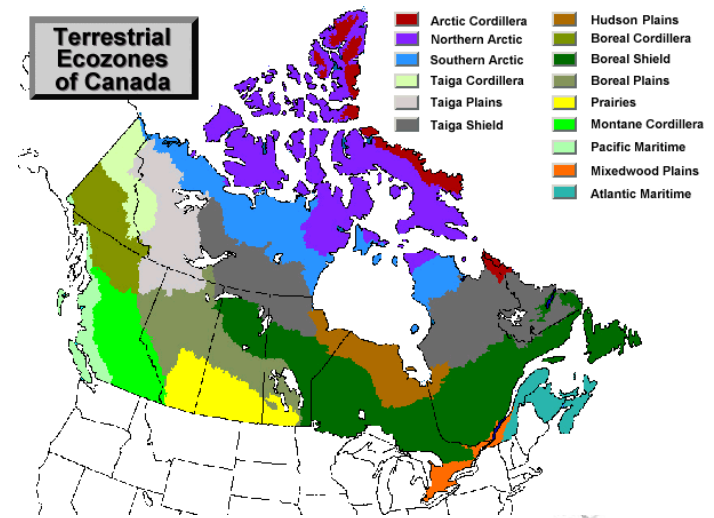
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PART 1-DIETARY SURVEY

- Randomly select 100 households in each community
- At the household level - 1 adult
- QUESTIONNAIRE
 - Food Frequency of Traditional Food Use
 - 24 hour recall
 - Food security (Wild harvested food and store food)
 - Health and Lifestyle Questionnaire



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PART 2 - Sampling of traditional food (30 samples/community)

For nutrients, as needed

For chemical analysis

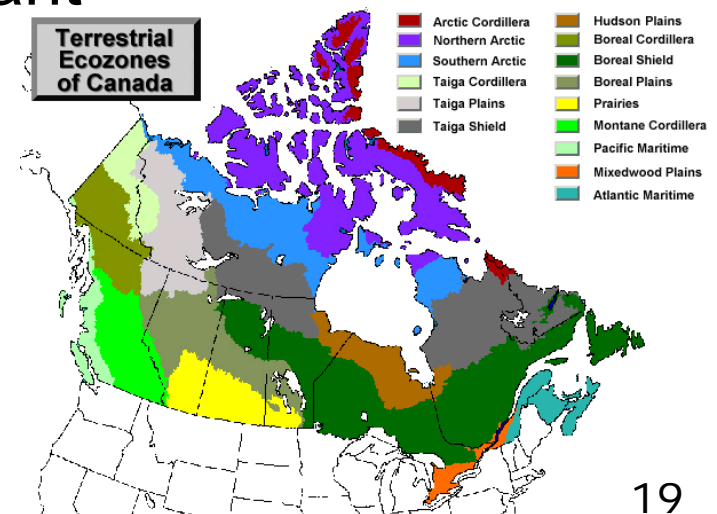
- Proposed analytes include:
 - pesticide residues,
 - polychlorinated biphenyls (PCBs),
 - polychlorinated dibenzo-p-dioxins
dibenzofurans,
 - Trace elements and heavy metals
 - PBDE
 - PFOS/PFOA
 - PAH



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PART 3

- Hair sampling for mercury
 - To verify the mercury exposure estimate from food intake
 - About 20 pieces of hair are requested from each participant



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PART 4

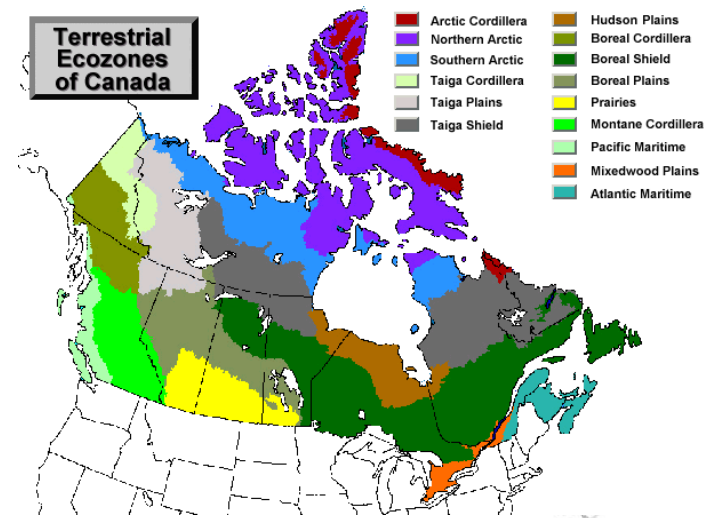
- Sampling of drinking water (households)
 - Trace metals



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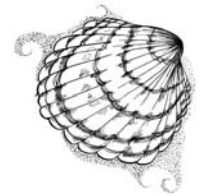
PART 5

- Sampling surface water for pharmaceuticals and their metabolites.



Approach

- Methodology workshop
- Community visits and negotiation of Research Agreement
- Hiring of research assistants in communities
- Collecting seasonal food samples
- Training of research assistants
- Interviews, hair and drinking water collection
- Data and sample analysis
- Result reporting and communications



Contact Information

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