

# Remoteness and Its Implications for Remote Communities

## Understanding Remoteness

Remoteness refers to geographical isolation, which significantly impacts the costs of living and service delivery in remote areas. Due to their distance from population centers, and associated services and economic activities, these communities face higher costs for transportation, goods, and services.

## Cost Implications of Remoteness

The unit costs implied by remoteness for remote communities are substantially higher, primarily due to:

- **Transportation Costs:** Remote communities often rely on expensive modes of transportation such as air or ferry, increasing the cost of goods and services.
- **Goods and Services:** Higher transportation costs lead to increased prices for everyday goods and materials, impacting the overall cost of living.
- **Service Delivery:** Providing healthcare, education, and other essential services in remote areas requires additional resources and logistical efforts, further driving up costs.
- **Employment Costs:** Attracting and retaining skilled workers in remote areas often necessitates higher wages and additional allowances.

## Measuring Remoteness

To measure remoteness and its associated costs, Statistics Canada and Indigenous Services Canada (ISC), partnered to develop the Canadian Index of Remoteness (IR) in 2017. This continuous index ranges from 0 to 1, where 0 represents the lowest level of remoteness and the closest proximity to population centers. It is based on two main dimensions:

- **Distance:** The distance of a community to population centers within a 2.5-hour travel time.
- **Population Size:** The size of the population centers within this travel range. Size serves as a proxy for service availability.

While a continuous scale is informative, a threshold for classifying communities as remote and non-remote is often more practical. To this end, ISC commissioned a study with Statistics Canada to determine an appropriate threshold for identifying remote communities. The study, which considered population size, identified a score of 0.40. Accordingly, communities with an IR score of 0.4 or higher would classify as remote, while those below this score would be considered non-remote.

The development of the IR and remoteness threshold aims to classify communities by level of remoteness. Since the Index itself cannot be used directly to adjust funding, additional methodologies were needed to translate the Index into a tool to adjust funding.

## Adjusting for Remoteness Costs

ISC and Nishnawbe Aski Nation (NAN) worked closely to translate remoteness measures into a practical tool to adjust funding for remote First Nations communities.

Focusing on all First Nations communities in Canada, ISC developed the Cost Adjustment Factor (CAF). The CAF uses Index of Remoteness scores and national data on transportation costs (derived from Canada Post shipping data) and employment allowances (based on the National Joint Council on Isolated Posts and Government

Housing Directive). The CAF formula reflects the statistical relationships between transportation costs, employment allowances, and the Index of Remoteness.

Independently, NAN developed the Remoteness Quotient. This First Nations-focused, evidence-based, statistical method estimates the increased costs associated with remoteness in the provision of child and family services to First Nations, using cost data from FNCFS agencies in Ontario.

Recognizing the value of combining ISC's CAF, which uses national-level data, with NAN's Remoteness Quotient, which leverages region-specific data, the recent Final Agreement on Long-Term Reform of the First Nations Child and Family Services (FNCFS) Program established the Remote Quotient Adjustment Factor (RQAF). The RQAF integrates features from both approaches to more accurately estimate increased costs due to remoteness.

**The Remote Quotient Adjustment Factor Calculation**

The calculation of the RQAF for a First Nation depends on data quality and availability. For NAN First Nations connected by all-weather roads to the main road network, data from FNCFS Agencies allow ISC and NAN to produce a more accurate estimate of remoteness costs. In these cases, the RQAF is calculated by multiplying the Cost Adjustment Factor (CAF) by 1.089.

For other First Nations, where comparable data is not available, a more generalized approach is necessary. ISC and NAN's comparison of remoteness cost estimates for First Nations in Ontario—using both child and family services data and the CAF—shows that, generally, the CAF's estimates are slightly higher for child and family services than the RQ values, except for road-connected NAN First Nations. Therefore, to determine RQAF values for all First Nations other than road-connected NAN First Nations, the CAF should be multiplied by 0.879.

**Calculation of the Reformed FNCFS Program's Remoteness Adjustment**

**1. For a First Nation:**

- a. Identify the First Nation's Remoteness Index score using the 2021 Census data.
- b. For First Nations with a 2021 Index of Remoteness score at or above 0.40, determine if the First Nation is connected by an all-weather road.
- c. Compute the RQAF:
  - o **If a NAN First Nation connected by all-weather road:**  $RQAF = (0.709 \times \text{Remoteness Index}) \times 1.089$
  - o **If any other First Nation:**  $RQAF = [(0.709 \times \text{Remoteness Index}) + (0.704 \times \text{Fly-In Status})] \times 0.879$

**2. For an FNCFS Agency:** Calculate the population-weighted average RQAF for all affiliated First Nations, assigning an RQAF of 0 for those with a Remoteness Index score below 0.40.

**Examples**

First Nation	Agency	Index of Remoteness	Population	NAN	Fly-in (No=0, Yes=1)	RQAF
Community 1	Agency 1	0.1	100	Yes	No	0
Community 2	Agency 2	0.5	200	Yes	No	$(0.709 \times 0.5) \times 1.089 = 0.386$
Community 3	Agency 1	0.7	300	No	Yes	$(0.709 \times 0.7 + 0.704) \times 0.879 = 0.501$
Community 4	Agency 2	0.1	400	No	No	0
Community 5	Agency 1	0.5	500	No	No	$(0.709 \times 0.5 + 0) \times 0.879 = 0.311$
Community 6	Agency 2	0.6	600	No	Yes	$(0.709 \times 0.6 + 0.704) \times 0.879 = 0.439$

$$\text{Agency 1: } (100 \times 0 + 300 \times 0.501 + 500 \times 0.311) / 900 = 0.340$$

$$\text{Agency 2: } (200 \times 0.386 + 400 \times 0 + 600 \times 0.439) / 1200 = 0.283$$