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First Nations Early Learning and Child Care (ELCC): Options for funding allocation

Summary
Indigenous Early Learning and Child Care had a $1.02B allocation over 10-years to support First Nations early learning and child care (ELCC) programming.

*The available **funding is fixed**, and the amount must be divided among recipients. The allocation of this funding will be determined by First Nations leadership.*

*Currently, ELCC funding for First Nations is allocated using the **Modified Berger Formula (MBF),** which was the approach approved by the First Nations-in-Assembly via Assembly of First Nations (AFN) resolutions.*

IFSD was asked by AFN the to define potential alternative approaches to the MBF to allocate the current, fixed amount ELCC funding from Budgets 2018 and 2022 to regions. In its work, IFSD defined nine options to allocate the fixed amount of funding.

It is for leadership to determine the most relevant principles to allocate the funding.

*There are important **limitations and considerations** for leadership:*

1) IFSD worked with the best available national data. Data developed by First Nations, for First Nations is limited or nonexistent. The options analysis is restricted by the national-level information that could be accessed for this work. The following information was used:
   a. Population: Indian Registry (2022), ages 0-6, on- and off-reserve
   b. Poverty: Statistics Canada, median household income (after tax) from Census 2016 (Census 2021 was not used because median household income data is artificially inflated principally due to COVID-19 supplements), and Market Basket Measure (2022) by province, to assess the income-based gap against the poverty line
   c. Remoteness: Statistics Canada's Remoteness Index (2021)
   d. Education: Statistics Canada, Census 2021, educational attainment
2) A fixed amount of funding means that a gain for one region, represents a loss for another.
3) There is a difference between allocating funding, i.e., determining a region's funding, and the distribution of funding, i.e., how funding reaches recipients. Regions may choose to distribute funding differently, with respect to principles and tools, than the national allocation.
4) Any future ELCC funding should be defined with bottom-up data from First Nations with consideration of different needs and starting points.

Context: ELCC funding
Indigenous Early Learning and Child Care had a $1.02B allocation over 10-years to support First Nations early learning and child care (ELCC) programming.

The available **funding is fixed**, and the amount must be divided among recipients.

There are different ways a fixed amount of funding can be divided among recipients, each with their own trade-offs:

Approach	Considerations
- Equal per capita allocation	- Every person receives the same amount of funding without consideration of differentiated needs or contexts
- Application-based allocations	- Opportunity to apply for as much or as little funding as needed; no guarantee of receiving it - Applications can be resource-intensive
- Allocation based on weighted factors	- Allocations are tied to contextual factors, e.g., remoteness, poverty, and are weighted to determine funding amounts - Requires related information for calculations
- Some combination of #1-3	- Different approaches can be combined, e.g., some equal per capita allocation for a guaranteed minimum with an application for supplements; some equal per capita allocation with a supplement based on weighted factors, etc.

At this time, ELCC funding for First Nations is allocated using the **Modified Berger Formula (MBF)**. The MBF uses: Population (ages 0-6) on-reserve and off-reserve, plus a remoteness adjustment (from 2005) to determine regional allocations. There is no consideration of contextual factors, e.g., poverty, potentially, an overweighting of off-reserve populations, and a remoteness index that has not been updated in over 15 years. However, the MBF is the preferred approach for some regions.

IFSD was asked by the Assembly of First Nations (AFN) to define potential approaches to allocate ELCC funding to regions. In its work, IFSD defined nine options, including the current MBF allocation.

To apply the contextual factors for funding allocation, i.e., remoteness, poverty gap, educational attainment, four quotients were developed.

A quotient is a numerical expression of the relevance of a particular characteristic. Applying a quotient as part of the funding allocation formula is intended to adjust the allocation based on the relative weight of the quotients.

See Appendix A for more information on quotients.

There are important **limitations and considerations** for leadership:

-   IFSD worked with the best available national data. Data developed by First Nations, for First Nations is limited or nonexistent. The options analysis is restricted by the national-level information that could be accessed for this work. The following information was used:
-   Population: Indian Registry (2022), ages 0-6, on- and off-reserve
-   Poverty: Statistics Canada, median household income (after tax) from Census 2016 (Census 2021 was not used because median household income data is artificially inflated principally due to COVID-19 supplements), and Market Basket Measure (2022) by province, to assess the income-based gap against the poverty line
-   Remoteness: Statistics Canada's Remoteness Index (2021)
-   Education: Statistics Canada, Census 2016, educational attainment
-   Number of communities: The number of First Nations (bands/communities) in a region
-   A fixed amount of funding means that a gain for one region, represents a loss for another.
-   Any future ELCC funding should be defined with bottom-up data from First Nations with consideration of different needs and starting points.

IFSD recognizes the limitations of the available data. Should alternative data suitable for a national funding allocation exercise be available, IFSD can revise the estimates.

Each option represents a different approach to dividing the fixed amount of funding among regions by fiscal year. The calculations are done at the level of the First Nation and the amounts are summed to the regional level.

The various weights applied to population and the factors, e.g., poverty, remoteness, education, are based on assumptions. For instance, the largest weight is attributed to the on-reserve population ages 0-6 because it is assumed that most children accessing services reside in community. In addition, ELCC costs are connected to the number of children served, as well as to contextual factors. While a factor like remoteness reflects the differentiated costs of salaries, capital, etc. in different places, poverty is intended to be a proxy for service needs.

Allocation options analysis

Option	Description	Considerations
Option 1	- Per capita allocation - Total funding amount by fiscal year divided by total eligible child population on-reserve - Same amount of funding per child is allocated to each region	- Equal allocation - Does not consider contextual factors
Option 2	- Weighted per capita allocation - 75% of the population weight is on-reserve and 25% is off-reserve for ages 0-6	- Includes off-reserve population - Does not consider contextual factors
Option 3	- Per capita allocation with remoteness adjustment - 75% of the allocation comes from the on-reserve population and 25% from the remoteness quotient	- Consideration of remoteness
Option 4	- Per capita allocation with poverty adjustment - 75% of the allocation comes from the on-reserve population and 25% from the poverty quotient	- Consideration of poverty
Option 5	- Per capita allocation with adjustments for poverty and remoteness - 75% of the allocation comes from the on-reserve population with 12.5% from the poverty quotient and 12.5% from the remoteness quotient	- One of IFSD's suggested approaches because it includes adjustments for poverty and remoteness
Option 6	- Per capita allocation with adjustments for the off-reserve population, poverty, and remoteness - 75% of the allocation comes from the on-reserve population and 5% from the off-reserve population, with 10% from the poverty quotient and 10% from the remoteness quotient	- One of IFSD's suggested approaches because it includes some of the off-reserve population with adjustments for poverty and remoteness
Option 7	- Per capita allocation with adjustments for the off-reserve population, poverty, remoteness, and education - 75% of the allocation comes from the on-reserve population and 5% from the off-reserve population, with 7.5%	- IFSD does not suggest this approach given the challenges with including the education quotient

	from the poverty quotient, 7.5% from the remoteness quotient, and 5% from the education quotient	- IFSD considers the data insufficient to capture the different forms of knowledge and skills in a First Nation
Option 8	- Per capita allocation with adjustments for the off-reserve population, poverty, remoteness, and the number of communities in the region - 75% of the allocation comes from the on-reserve population and 5% from the off-reserve population, with 7.5% from the poverty quotient, 7.5% from the remoteness quotient, and 5% from the number of communities quotient	- The option includes some of the off-reserve population with adjustments for poverty, remoteness, as well as the number of communities in the region
Option 9	- Current MBF using IRS 2022 data - Population on-reserve and Crown Lands adjusted for remoteness, with the addition of the off-reserve population (not adjusted for remoteness)	- Consideration of population on- and off-reserve, as well as remoteness - Maintains current approach

Conclusion

It is for leadership to determine the most relevant principles to allocate ELCC funding. IFSD considers options 5 and 6 the best reflections of population plus contextual factors (which can influence ELCC) to allocate the remaining fixed funding.

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Appendix A – Overview of quotients

Why are quotients used? How are they developed?

Quotients help to determine how a number can be divided or represented as part of a whole. The number being divided is the **dividend** (the number representing the whole), and the number by which it is being divided is the **divisor** (the number of parts it is being divided into). The resulting number is a **quotient**.

Quotients can also help us to understand the *distribution of a value or characteristic in a group*. This approach is applied to develop quotients to allocate ELCC funding.

There are six factors – poverty, remoteness, education, number of communities, on-reserve population, and off-reserve population – that are applied in different weights and combinations to allocate ELCC funding.

Each of the six quotients is a numerical expression of the relevance of a particular characteristic within the population of First Nations (aggregated to the regional level) eligible to receive ELCC funding. Quotients were developed to determine *what is the relevance of the characteristic for a First Nation relative to the others?*

What do the quotients represent for ELCC funding allocations?
Quotients, when used for distribution, are a representation of the relevance of a characteristic within a group.

To determine each of the quotients, a dividend (i.e., the number representing the whole (for ELCC, the national value)) and divisor (i.e., the number divided by the whole (for ELCC, the provincial/territorial value) are defined. When we divide the divisor by the dividend, we generate a set of numbers. Those numbers (the quotients) are then used to determine how to segment ELCC funding.

Factor	Dividend	Divisor
Poverty	Total national poverty gap=sum of poverty gap of each band calculated as the difference between Market Basket Measure (MBM) and median after-tax household income multiplied by the number households of each band.	Total provincial /territorial poverty gap.
Remoteness	National sum of the remoteness index of each band.	Provincial/territorial sum of the remoteness index of each band.
Education	Total national value of the percent of people in each band without a diploma or certificate.	Total provincial/territorial value of the percent of people in each band without a diploma or certificate.
Number of communities	Total national number of First Nations bands/communities	Total provincial/territorial number of First Nations bands/communities

Population on-reserve (ages 0-6)	National total on-reserve population of children aged 0-6	Provincial/territorial total on-reserve population of children aged 0-6
Population off-reserve (ages 0-6)	National total off-reserve population of children aged 0-6	Provincial/territorial total off-reserve population of children aged 0-6

Using the dividend and divisors, a quotient for each of the factors is generated for the provinces/territories. Seventy-two quotients are generated for this exercise (one for each of the 12 provinces and territories for 6 factors, 12*6 =72). For each factor, the quotients must add up to 1, representing the full sample (100% of the sample) because the factors represent the distribution of a characteristic within the defined group. See the example of on- and off-reserve population quotients (population aged 0-6) below.

On- and off-reserve population quotients (IRS 2022, population aged 0-6)				
	On-reserve	Off-reserve	Pop(0-6) on-reserve quotient	Pop (0-6) off-reserve quotient
Newfoundland	392	777	0.010661445	0.034647284
Prince Edward Island	41	15	0.0011151	0.000668866
Nova Scotia	1,180	198	0.032093124	0.008829038
New Brunswick	816	225	0.022193211	0.010032997
Quebec	3,774	1,097	0.102643603	0.048916436
Ontario	5,771	4,429	0.156957137	0.19749398
Manitoba	6,692	4,107	0.182006092	0.183135646
Saskatchewan	7,389	4,871	0.200962794	0.217203246
Alberta	6,807	2,728	0.185133812	0.12164452
British Columbia	3,044	3,471	0.082789382	0.154775707
Northwest Territories	703	298	0.019119887	0.013288148
Yukon	159	210	0.004324413	0.009364131
Total	36,768	22,426	1	1

Different weights or impacts of each quotient are applied in the 8 options, e.g., option 2 includes only the on- and off-reserve population quotients. This means that all the funding for the fiscal year is being allocated to regions based on the impact of only these factors. Option 8 includes all the factors other than education. This means that the funding for the fiscal year is allocated to regions based on those factors.

Working with a fixed pot of funding means that you can only allocate what is there. Quotients with different weights are helpful to allocate fixed funding based on characteristics, because their relative impact cannot exceed the size of the group receiving the funding.

Factor	Explanation of data source(s) and limitations
Poverty	- There is no First Nation specific measure of poverty - To impute an income-based measure of poverty, IFSD used available total median household income (after-tax) from the 2016 Census and the provincial/territorial Market Basket Measure (MBM) as the relevant poverty line - The total median household income (after-tax) of a First Nation is subtracted from the relevant MBM. The difference is then multiplied by the number of households to measure the total poverty gap of the First Nation.

	- If the difference is positive, there is a gap, if the number is negative or 0, there is no gap, and the First Nation's total median household income (after-tax) is greater than the relevant MBM
Remoteness	- There are different ways of measuring remoteness - For the ELCC allocation, Statistics Canada's remoteness index was used to develop the quotient - The metric is a continuous index between 0 and 1, which is based on the cost to travel to a population centre, and the size of the population - The index was converted into a quotient by dividing the index value of each band by the total for all the First Nations - This metric was used because it is a continuous index that provides a remoteness value for each band and it has become the preferred remoteness index of most researchers and is used by ISC in its own remoteness approaches
Education	- Data from Census 2021 for the number of people in the labour force that do not have a degree or certificate was used to develop the quotient - This metric was converted into a quotient by dividing the total provincial/territorial value of the percent of people in each band without a diploma or certificate by the total national value of the percent of people in each band without a diploma or certificate - IFSD recognizes the limitations of the data and the approach and does not recommend its use for funding allocation
Number of communities	- There is a cost associated to delivering programs and services and for some First Nations with small populations or without an operating base, this can be a burden - To recognize operating costs of delivering ELCC, a quotient was developed to represent the number of First Nations in a region - The quotient was developed by dividing the total number of First Nations in a province/territory by the total number of First Nations across Canada
On-reserve population (ages 0-6)	- The number of children eligible to access ELCC impacts the cost of service delivery - A quotient was developed to recognize on-reserve population - IRS 2022 data was used - To develop the on-reserve population quotient, the total population of children aged 0-6 by province/territory is divided by the total national population of children aged 0-6 on-reserve
Off-reserve population (ages 0-6)	- Some First Nations children that are not ordinarily resident on-reserve may access services in their community - A quotient was developed to recognize the off-reserve population that may access services - IRS 2022 data was used - To develop the off-reserve population quotient, the total population of children aged 0-6 by province/territory is divided by the total national population of children aged 0-6 off-reserve