





## Demographics and health status of Arctic populations

Tatiana Unguryanu
Department of Hygiene and Medical Ecology
Northern State Medical University (NSMU)
Arkhangelsk, Russia
unguryanu\_tn@mail.ru

#### Content



Arctic populations and migration:



Demographics of Arctic populations:

- Population density
- Population change
- Net migration
- Natural increase

Birth rate

A

Life expectancy

Mortality

Causes of death

Infant mortality

#### The Arctic region

United States: Alaska

Canada: Yukon, Nunavut, Northwest Territories

Denmark: Greenland, Faroe Islands

Iceland

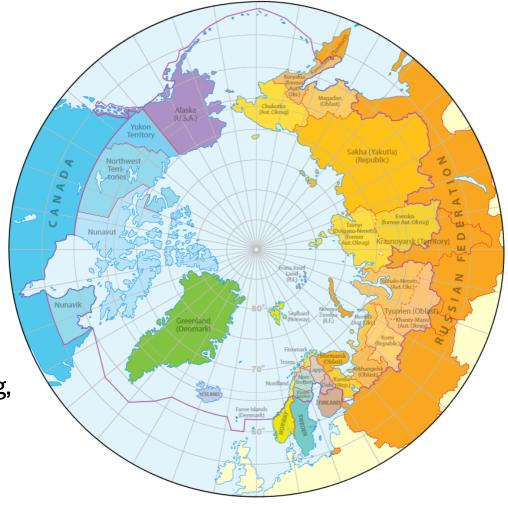
Norway: Finnmark, Troms, Nordland

Sweden: Norrbotten, Västerbotten

Finland: Lapland, Oulu, Kainuu

Murmansk Region

The Russian Federation: Nenets Autonomous Okrug, Chukotka Autonomous Okrug, Yamalo-Nenets Autonomous Okrug, Komi Republic, Sakha Republic, Krasnoyarsk Krai, Arkhangelsk Region,



Map of the Circumpolar Arctic region and Arctic administrative areas (Compiled by Winfried K. Dallmann, Norwegian Polar Institute)

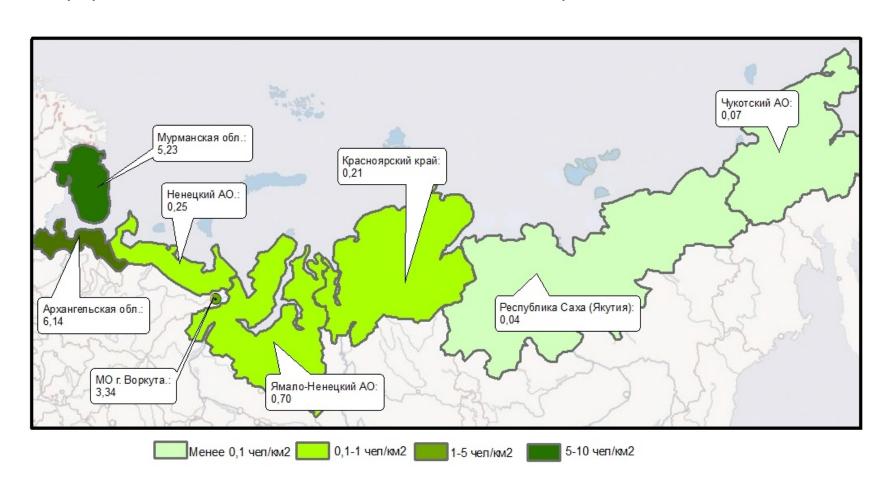
#### The Russian Arctic

Area of the RA is 3630296,82 km<sup>2</sup> (21% of area of the Russian Federation)

Population density is 0.65 people per km<sup>2</sup> (in the Russian Federation it is 8.57 people per km<sup>2</sup>)

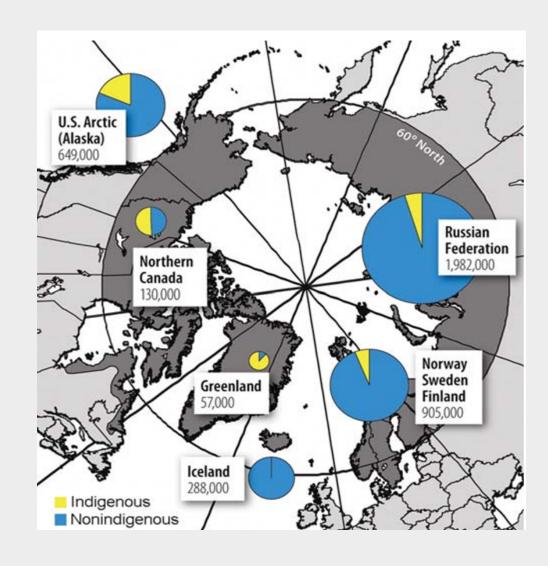


653 settlements: population of 106 settlements is more than 1000, only 35 of them have more than 10 000 people



# Nonindigenous and indigenous populations of the Arctic

- **A** the Eskimo
- the Inuit (Greenland, northern Canada, and Alaska)
- the Yupik (western Alaska)
- North American Indian, the Athabaskan, Eyak,
  Tlingit, Gwich'in, Metis (northern Canada and Alaska)
- Alaska Native (Alaska)
- the Saami people (Norway, Finland, and Sweden)
- the Saami, Nenets, Khanty, Sel'kup, Enets,
  Nganasan, Dolgan, Even, Chukchi, Chuvan, Eskimo/
  Inuit-Yupik (the Russian Federation)



#### Population density of the Arctic territories

Arctic regions		Whole country		
Regions	People per km²	Country	People per km²	
Alaska	0.47	United States	33,5	
Yukon	0.07		3,7	
Northwest territories	0.04	Canada		
Nunavut	0-02			
Greenland	0.03	Denmark	100.1	
Faroe Islands	34-7	Denmark	128,1	
Iceland	3.1	lceland	3,1	
Nordland	6.5		15,9	
Troms	6.3	Norway		
Finnmark	1.6			
Vasterbotten	4.7	Sweden	21,1	
Norrbotten	2.5	Oweden		
Oulu	8.3	Finland	17,6	
Lappi	2.0	Tillalia		
Murmansk oblast	5.8		8,3	
Arkhangelsk oblast	2.1			
Nenets autonomous okrug	0.2			
Komi Republic	2.3	Russia		
Yamal-Nenets autonomus okrug	0.7			
Sakha Republic	0.3			
Chukotka autonomous okrug	0.1			

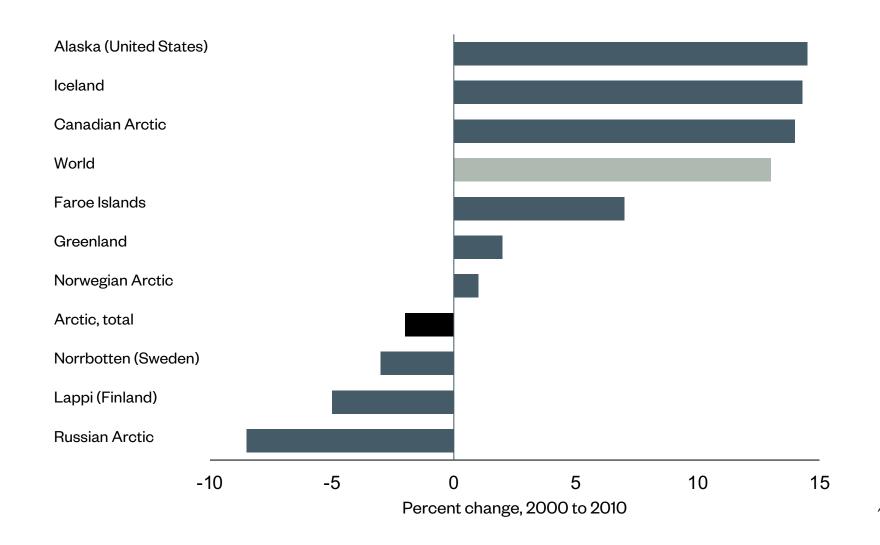
#### Population density of the Arctic territories

Arctic regions		Whole country	
Regions	People per km <sup>2</sup>	Country	People per km <sup>2</sup>
Alaska	0.47	United States	33.5

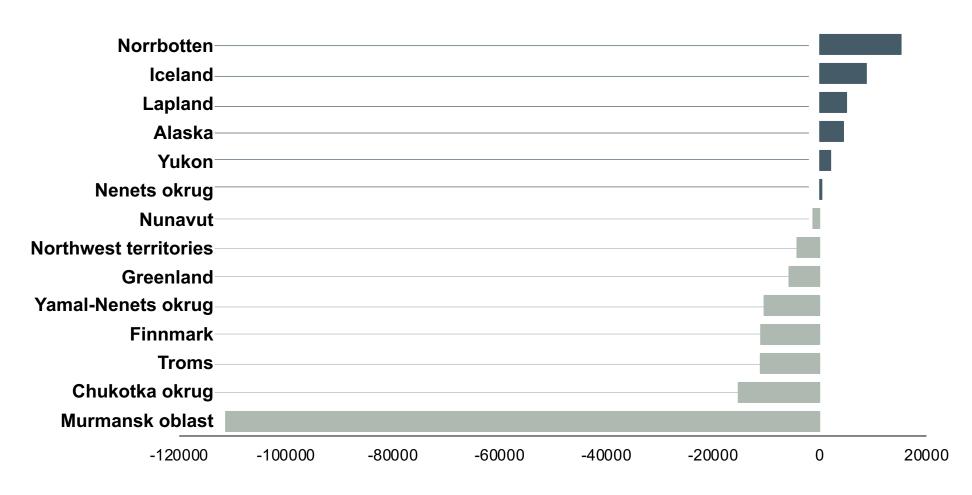
#### Population density of the Arctic territories

Arctic regions		Whole country		
Regions	People per km²	Country	People per km²	
Alaska	0.47	United States	33,5	
Yukon	0-07		3,7	
Northwest territories	0.04	Canada		
Nunavut	0.02			
Greenland	0.03	Denmark	400.4	
Faroe Islands	34-7	Denmark	128,1	
Iceland	3.1	lceland	3,1	
Nordland	6.5		15,9	
Troms	6.3	Norway		
Finnmark	1.6			
Vasterbotten	4.7	Sweden	21,1	
Norrbotten	2.5	Oweden		
Oulu	8.3	Finland	17,6	
Lappi	2.0	Tillialia		
Murmansk oblast	5.8		8,3	
Arkhangelsk oblast	2.1			
Nenets autonomous okrug	0.2			
Komi Republic	2.3	Russia		
Yamal-Nenets autonomus okrug	0.7			
Sakha Republic	0.3			
Chukotka autonomous okrug	0.1			

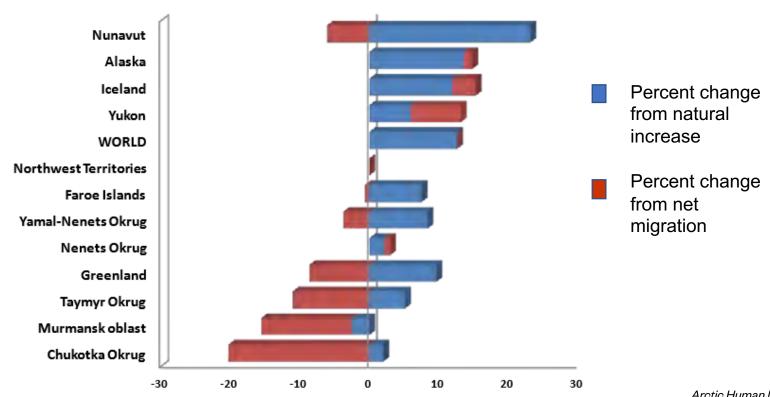
### Population change in the Arctic 2000 – 2010 (%)



### Net migration in the Arctic regions and countries: 2000 – 2014 (number of persons)



# Population change from natural increase and net migration in selected Arctic regions, 2000 – 2014 (%)



#### Key indicators of health (Last, 2001)



**Birth Rate** is a summary rate based on the number of live births in a population over a given period, usually one year. The denominator is the average of midyear population in the area in that year.



**Life Expectancy** at birth is the average number of years a newborn baby can be expected to live if current mortality trends continue.

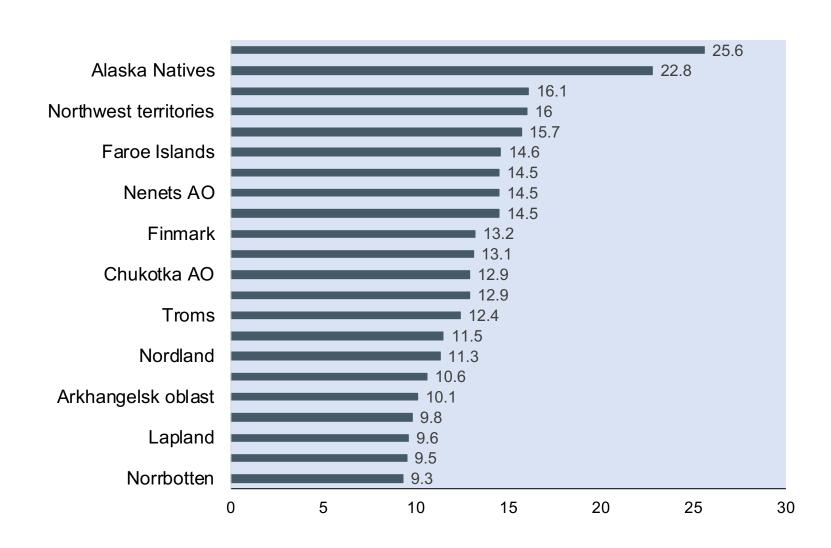


**Death Rate** is an estimate of the portion of the population that dies during a specified period. The numerator is the number of persons dying during the period; the denominator is the number in the population, usually estimated as the mid-year population.



**Infant Mortality** is a measure of the yearly rate of death in children less than one year old. The denominator is the number of live births in the same year.

### Crude birth rates, 2000 – 2004 (per 1000 population)



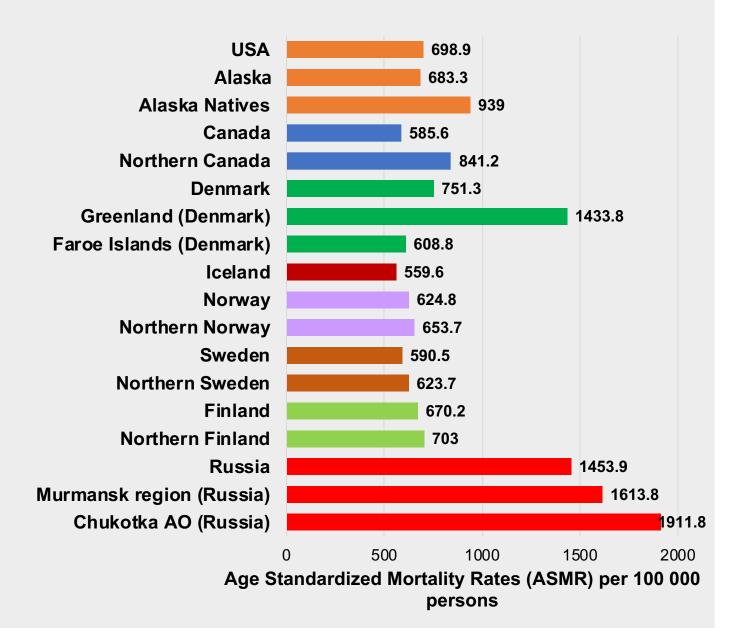
### Circumpolar life expectancy at birth 2000 – 2004 (years)

Country	Males	Females
Alaska (USA)	74.5	80.1
Yukon (Canada)	74.9	80.1
Nunavut (Canada)	66.6	70.9
Greenland	64.6	70.4
Iceland	79.0	82.6
Faroe Islands	77.0	81.3
Troms (Norway)	76.5	81.5
Nordland (Norway)	76.7	82.0
Finmark (Norway)	74.6	80.6
Norbotten (Sweden)	76.6	81.6
Vasterbotten (Sweden)	77.6	82.1
Oulu (Finland)	74.3	81.6
Lapland (Finland)	73.7	81.1

### Life expectancy at birth in the Russian Arctic, 2000 - 2016 (years)

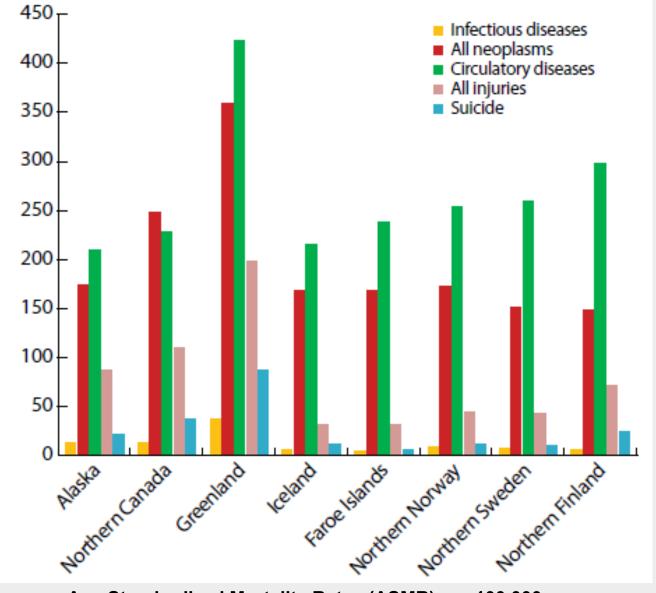
In rural area of the Chukotka AO life expectancy at birth is 53 years (men is 47.5 years, women is 58,5 years)

Areas	2000 year		2016 year	
	Males	Females	Males	Females
Russian Federation	59.0	72.3	66.5	77.0
Nenets AO	54.0	68.3	63.9	78.4
Chukotka AO	54.9	67.1	59.7	69.6
Kareliya Republic	56.4	70.2	63.7	75.7
Krasnoyarsk Krai	56.1	69.8	64.3	75.7
Arkhangelsk Oblast	56.3	70.6	64.9	76.7
Komi Republic	57.8	70.1	63.6	75.3
Sakha Republic	57.9	70.3	65.8	75.9
Murmansk Oblast	58.5	71.0	65.7	75.6
Yamalo-Nenets AO	61.6	72.3	67.2	77.0



### Circumpolar age-standardized mortality rates, all causes (per 100 `000)

### Common causes of death in some **Arctic populations** 2000 - 2004 (per 100 ´000)



Age Standardized Mortality Rates (ASMR) per 100 000 persons

## Causes of death in Russia in 2016 (per 100 \ 000)

Causes of death	Russia	Chukotka region	Arkhangelsk region	Murmansk region
Heart diseases	616.4	406.1	785.2	613.5
Cancer	204.3	156.0	239.4	202.5
External causes	114.2	216.0	146.4	122.3
Respiratory diseases	48.0	40.0	49.0	22.9
Infectious diseases	24.1	32.0	11.0	14.5
Suicide	15.8	62.0	30.6	5.0
Unintentional alcohol poisoning	9.6	8.0	23.5	2.8
Homicide	7.2	22.0	12.0	4.1
All causes	1 289.3	996.2	1 370.9	1 150.0

### Age-standardized mortality rates for select causes: Alaska Native and Alaska

Causes of death	Alaska Native	Alaska
Cancer	247.4	186.0
Diabetes-related	20.0	25.1
Heart diseases	199.8	175.2
Stroke	76.7	56.1
Influenza and pneumonia	38.2	17.3
Chronic lower respiratory tract diseases	54.0	43.1
Chronic liver disease and cirrhosis	22.7	9.3
Unintentional injuries	84.6	55.1
Suicide	42.8	22.1
Homicide	12.3	6.6
All causes	1079.6	790.7

## Infant mortality rate, 2000 – 2014 (per 1000 live births)

Arctic region	Regional rate	National rate
Troms (Norway)	3.0	3.8
Lapland (Finland)	3.2	2.7
Norrbotten (Sweden)	3.5	2.7
Finnmark (Norway)	3.6	3.8
Alaska (United States)	4.7	5.6
Yukon (Canada)	5.7	5.1
Northwest Territories (Canada)	6.7	5.1
Murmansk region (Russia)	9.3	10.2
Yamalo-Nenets autonomous okrug (Russia)	12.1	10.2
Greenland (Denmark)	13.0	4.1
Nenets autonomous okrug (Russia)	13.0	10.2
Nunavut (Canada)	16.1	5.1
Chukotka autonomous okrug (Russia)	22.0	10.2

#### Conclusion

The specific characteristics of the Arctic regions compared to a national level (whole country) are:

- Low population density
- Decrease of population due to net migration and negative natural increase
- Low life expectancy
- A High mortality
- Infant mortality rate is mostly similar to a national level

### Thank you for your attention!



