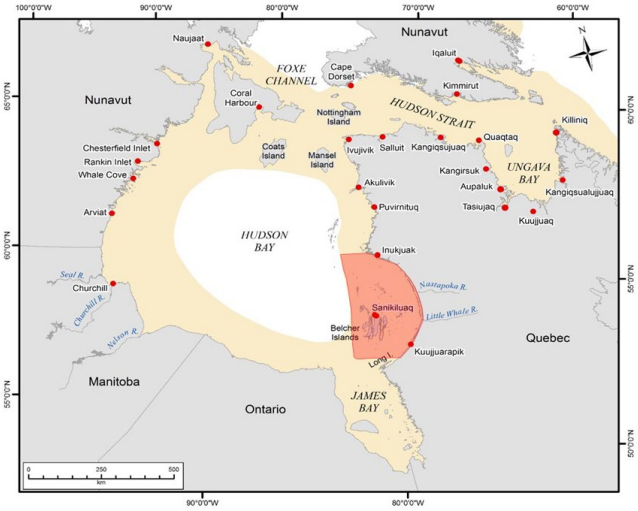


ᑯᐸᐃᒃ ᑕᕐᕋᖓ
ᑲᓇᑕᐅᑉ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᖏᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ

ᐸᐸᑦᑎᔨᖏᑦᑕ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᓂᒃᑳᖏᑦ 2020/031

ᔫᓂ 2020

2020 ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᑉ

ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᕐᓂᒃ (DELPHINAPTERUS LEUCAS)

ᖃᑯᖅᑕᐃᑦ ᕿᓚᓗᒐᐃᑦ (Delphinapterus leucas).
ᐊᔾᔨᓕᐊᖓ ᕕ. ᓚᓵᔾ (ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ
ᑲᓇᑕ)

ᓴᕿᔮᖅᑐᖅ 1. ᕿᓚᓗᒐᐃᑦ ᑕᒫᓃᑦᑐᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᐊᒻᒪᓗ
ᓱᓪᓗᐊᓗᒃ (ᖁᖅᓱᖅᑐᖅ) ᐊᒻᒪᓗ ᐊᐅᔭᕐᕕᖓᑦ ᑕᓯᐅᔭᕐᔪᐊᑉ
ᑲᓇᖕᓇᖓᓂ ᕿᓚᓗᒐᐃᑦ (ᐊᐅᐸᖅᑐᖅ). ᓄᓇᕗᑦ ᐊᒻᒪᓗ ᓄᓇᕕᒃ
(ᑯᐸᐃᒃ) ᓄᓇᖏᑦ ᐊᒻᒪᓗ ᐊᑎᖏᑦ ᓄᓇᐃᑦ ᐅᖃᐅᓯᐅᔪᓂᑦ
ᑎᑎᕋᖅᓯᒪᓪᓗᑎᒃ ᓴᕿᔮᖅᐳᑦ

ᐃᓗᓕᖓ

ᐃᓄᐃᑦ ᓂᕿᒋᖕᒪᒋᑦ ᐊᖑᓇᓱᒃᐸᒃᑕᖏᑦ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᑕᒫᓂ ᑲᓇᖕᓇᖓᓂ, ᐱᓇᖕᓇᖓᓂ ᐊᒻᒪᓗ ᐅᐊᖕᓇᖓᓂ ᓯᒡᔭᖏᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ, ᖃᓂᒋᔭᖓᓂᓴᓂᑭᓗᐊᑉ ᕿᑭᖅᑕᖓ, ᑕᒪᐅᓐᓇ ᓱᓪᓗᐊᓗᒃᑯᑦ ᐊᒻᒪᓗ ᐃᓚᖏᑦ ᑲᓇᖕᓇᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖅ ᓄᓇᓖᑦ. ᐊᖑᓇᓱᒃᑐᑦ ᓄᓇᕕᒻᒥ ᐱᖁᔭᖃᖅᑎᒃ ᑖᒃᑯᑎᒍᑦ ᑲᑎᖓᔪᑦ ᓄᓇᖏᑦ ᒪᑐᕙᖕᓂᖏᓐᓄᑦ, ᐊᒻᒪᓗ ᐊᕐᕌᒍ ᐃᓗᐊᓂ ᐊᒻᒪᓗ ᐊᕕᒃᑐᖅᓯᒪᔪᓂ
ᖃᑦᓯᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ. ᐅᓇ 3-ᐅᑭᐅᓄᑦ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᓂᐊᖅᑐᓄᑦ ᐸᕐᓇᐅᑎ ᓴᕿᑕᐅᓯᒪᔪᖅᓄᓇᕕᒃ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ

ᑲᑎᒪᔨᖏᑦᐃᓱᓕᕕᒃᓴᖃᖅᑐᖅ ᔮᓄᐊᕆ 31, 2020. ᐊᕐᕌᓂ ᐸᕐᓇᐅᑎ, ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᖅᑐᑦ ᐱᔭᐅᓗᐊᓚᐅᖅᑐᑦ ᑖᒃᑯᓇᖓᑦ ᑲᑎᓪᓗᒋᑦ ᐱᔪᓐᓇᖅᑕᖏᓐᓂᑦ ᐃᒻᒪᖄ ᖃᓂᒋᔭᖓᓂ 30 ᓂᕐᔪᑎᑦ.
ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᐃᑲᔫᑎᒃᓴᓂᒃ ᐱᓕᕆᕙᒃᑐᑦ ᐊᐅᓚᑦᓯᔨᖏᑦ ᑐᒃᓯᕋᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᕿᒥᕐᕈᐊᕐᓗᑎᒃ ᒫᓐᓇᐅᔪᖅ ᖃᓄᐃᓕᖓᓕᕐᒪᖔᑕ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ, ᖃᐅᔨᓇᓱᑦᑎᐊᕐᓗᑎᒃ ᐊᒃᑐᖅᑕᐅᓯᒪᖕᒪᖔᑕ ᒫᓐᓇᐅᔪᖅ ᑲᑎᓪᓗᒋᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᓂᑦ ᐊᐅᓚᑕᐅᓗᐊᓕᕐᓂᕐᐸᑕ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ, ᐊᒻᒪᓗ ᓄᖑᑕᐅᕙᓪᓕᐊᓂᐊᓐᖏᒻᒪᑕ ᐋᕿᒃᓯᓯᒪᓗᑎᒃ ᐅᖃᐅᔾᔨᓯᒪᓗᑎᒃ ᐊᒡᒋᖅᑐᓄᑦ ᐱᖓᓱᓄᑦ ᐅᑭᐅᓄᑦ
ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᖅ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᖅ.

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

2

ᓇᐃᓈᖅᓯᒪᔪᖅ

• ᐊᐅᖏᑦᑎᒍᑦ ᖃᐅᔨᓴᕐᓂᖅ ᑕᑯᑎᑦᑎᓯᒪᔪᖅ ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ
ᕿᓚᓗᒐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᓄᓇᕕᒃ ᐊᒻᒪᓗ ᓄᓇᕗᑦ ᓄᓇᖏᓐᓂᒃ ᓴᓂᑭᓗᐊᖅ ᐊᔾᓕᒋᓐᖏᑕᖏᑦ ᓇᒧᖔᓯᒪᓂᐊᖏᑦ ᐊᒻᒪᓗ ᐊᕐᕌᒍᑕᒫᑦ.

• ᐅᓇ ᐅᖃᐅᔾᔨᓂᖅ ᒪᓕᒃᑐᖅ ᖃᓄᖅ ᐅᓄᖅᑎᒋᓂᖏᓐᓂᒃ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ ᑕᒡᕙᖓᑦ ᑭᖑᓪᓕᖅᐹᖓᓂ
ᖃᐅᔨᓴᖅᑕᐅᕕᕕᓂᖓᓂᖅ (2015) ᐊᒻᒪᓗ ᒫᓐᓇ ᕿᓚᓗᒐᖅᑕᐅᓯᒪᔪᑦ (ᑎᑭᓪᓗᒍ ᑭᓯᐊᓂᐅᓕᕐᒪᑦ 2019) ᐊᒻᒪᓗ ᖃᓄᐃᓕᖓᓕᕐᒪᖔᑕ ᐃᓗᓕᖏᑦ ᐊᐅᖏᑦ (ᑎᑭᓪᓗᒍ 2018) ᖃᐅᔨᒪᑎᑦᑎᔾᔪᑎᒋᔭᐅᔪᑦ.

• ᐃᓚᖏᓐᓂ ᐃᒪᕐᓂ ᓄᓇᓂ ᖃᓅᑎᒋᓂᖏᑦ ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᓐᓂᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᐊᓯᑦᔨᖅᑐᖅ ᒥᑭᔪᒥᒃ, ᑭᓯᐊᓂ ᑕᐅᕙᓂ ᐅᐊᖕᓇᖓᓂ ᑲᓇᖕᓇᖓᓄ ᕿᓚᓗᒐᕋᓱᒡᕕᐊ ᐅᓄᖅᓯᔪᑦ ᐊᖏᒡᓕᒋᐊᖅᓯᒪᓕᖅᑐᖅ 30-ᒥᑦ 45%-ᒧᑦ ᖃᐅᔨᒪᔾᔪᑕᐅᔪᖅ ᐅᑭᐊᒃᓵᒃᑯᑦ ᕿᓚᓗᒐᕋᓱᒃᑐᓂᑦ.

• ᐅᓇ ᐊᕐᕌᒍᒥ ᑲᑎᓪᓗᒋᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᐱᔭᐅᔪᑦ ᑕᐃᑲᓂ 2017-ᒥᑦ 2020-ᒧᑦ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᖓᓄᑦ
ᐸᕐᓇᐅᑎᖓᑦᑎᒍᑦ 68-ᖑᓚᐅᖅᑐᑦ ᓂᕐᔪᑎᑦ. ᑲᑎᓪᓗᒋᑦ 70, 74, ᐊᒻᒪᓗ 98 ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᕕᓃᑦ ᓄᓇᓕᖕᓂᑦ ᓄᓇᕕᒻᒥ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᖅ ᑕᐃᑲᓂ 2017, 2018, ᐊᒻᒪᓗ 2019 ᓂᑭᑖᖅᖢᑎᒃ ᐊᑐᓂ.

• ᐅᓇ 2019 ᓇᓚᐅᑖᖅᓯᒪᔪᖅ ᖃᓄᖅ ᐅᓄᖅᓯᒋᓐᓂᕐᒪᖔᑕ ᕿᓚᓗᒐᖏᑦ ᐱᓕᕆᔾᔪᓯᖓᑦᑎᒍᑦ 3300 (95% CI:
1900-5200) ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ (ᖃᓂᓈᖅᖢᒍ ᖃᓂᓛᖓ 100). ᑕᐃᒫᒃᑕᐅᖅ, ᑭᓯᐊᓂ ᐊᔾᔨᒋᓐᖏᐊᕐᔪᒃᑭᓪᓗᒍ ᐊᑦᑎᖕᓂᖅᓴᐅᓪᓗᓂ ᖃᓄᖅ ᐅᓄᖅᑎᒋᖕᒪᖔᑕ ᐱᓯᒪᔪᑦ 2016 ᑕᐃᒪᓐᓇᐅᓚᐅᖅᑐᖅ 3400 (95% CI: 2300-5400) ᑕᐃᑲᖓᑦ ᑭᖑᓪᓕᖅᐹᒥᒃ ᕿᒥᕐᕈᐊᖅᑕᐅᕕᐊᓂᑦ.

• ᑕᒻᒪᖅᓯᒪᔪᖅᑕᖃᕐᒪᖔᑦ ᖃᐅᔨᓴᑦᑎᐊᓚᐅᖅᖢᒋᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ ᐱᔾᔪᑎᒋᓪᓗᒍ ᐊᔪᓕᖅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᐊᓯᐅᔪᑦ
ᐊᒻᒪᓗ ᐅᖃᐅᓯᐅᓐᖏᑦᑐᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᑦ, ᐊᕐᕌᒍᓕᓵᒧᑦ ᐅᖃᐅᓯᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ 58 ᑕᓯᐅᔭᕐᔪᐊᑉ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᑕᐃᒪᓗ 50%-ᐅᔪᖅ ᐅᓄᖅᓯᒋᐊᕐᓂᐊᕋᓱᒋᔭᐅᓂᖓ ᖁᓛᓂ 3400 ᐊᓂᒍᖅᐸᑕ ᑕᓪᓕᒪᑦ ᐊᕐᕌᒍᑦ.

• ᓄᖑᑕᐅᕕᒐᔭᕋᓱᒋᔭᐅᔪᑦ ᐆᒪᔪᑦ ᑖᒃᑯᓇᖓᑦ ᑲᑎᖓᔪᓂᑦ 14-ᖑᔪᖅ ᓂᕐᔪᑎᑦ ᑕᐃᒪᓗ ᐅᑎᖅᑎᓐᓇᓱᒡᓗᒋᑦ
ᐱᑕᖃᖅᑎᑦᑎᒋᐊᖃᕋᔭᖅᑐᑦ 0.25-ᒥᒃ.

ᖃᓄᐃᓐᓂᕆᓯᒪᔭᖓ

ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᓇᒥᑐᐃᓐᓈᖅᑐᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ, ᑕᐃᑲᓂ ᔭᐃᒻᔅ ᐸᐃ ᐊᒻᒪᓗ ᐊᖕᖔᕙ. ᑕᐃᒪᓐᓇᐅᖏᓐᓇᕋᔭᓐᖏᑦᑐᑦ ᐊᐅᐅᔪᖅ ᓇᒧᖔᓯᒪᓂᖏᑦ, ᐊᐅᖏᑦᑎᒍᑦ ᐊᒻᒪᓗ ᐊᓯᖏᑦᑎᒍᑦ ᓇᓗᓇᐃᖅᑐᑦ
ᐊᑐᖅᓯᓗᑎᒃ ᐊᐅᔭᒃᑯᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᓗᓂ ᓄᓇᓕᖕᓂ ᓄᖑᑉᐸᓪᓕᐊᓂᐊᓐᖏᒻᒪᑕ ᐊᒻᒪᓗ

ᑖᒃᑯᐊᑦᑕᐃᓐᓇᐃᑦ ᐊᐅᖃᑎᒌᓐᖏᑦᑐᑦ. ᑎᑭᓪᓗᒍ ᑎᓴᒪᑦ ᐊᐅᔭᒥ ᑲᑎᖓᔪᑦ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᑖᒃᑯᐊᓗ ᐊᓯᐊᒎᓲᑦ ᓇᒧᖓᐅᓪᓗᑎᒃ ᐃᓂᖏᑦ (ᑕᓯᐅᔭᕐᔪᐊᖅ ᐊᑭᓐᓇᖅᐸᓯᐊ, ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓ, ᔭᐃᒻᔅ ᐸᐃ ᐊᒻᒪᓗ ᐊᖕᖔᕙ ᕿᓚᓗᒐᖏᑦ) ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᑕᒫᓂ ᓄᓇᖓᓂ. ᐅᑯᐊ ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᓄᓇᖃᕐᒪᑕ ᑲᓇᖕᓇᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑎᕆᖁᐊᓂ, ᑎᑭᐅᑎᓯᒪᓪᓗᒍ ᐱᓇᖕᓇᖓᓄ ᓴᓂᑭᓗᐊᖅ ᕿᑭᖅᑕᖏ (ᓴᕿᔮᖅᑐᖅ 1). ᑕᐃᑲᓂ 2004, ᑲᑎᒪᔨᕋᓛᑦ ᓄᖑᑕᐅᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᐊᑐᓕᖅᑕᐅᖁᔨᓚᐅᖅᑐᑦ ᑖᒃᑯᐊ ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᑎᙱᕋᖅᑕᐅᖁᔭᐅᓪᓗᑎᒃ ᓄᖑᑕᐅᓕᕐᓂᖏᓐᓄᑦ. ᒫᓐᓇᐅᔪᖅ ᖃᓄᐃᓕᖓᓂᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᑲᓐᓂᖅᓯᒪᔪᑦ. ᐅᑯᐊ ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᐊᒻᒪᓗ ᑕᓯᐅᔭᕐᔪᐊᖅ ᐊᑭᓐᓇᖅᐸᓯᐊ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᐅᑭᐅᖃᑦᑕᖅᑐᑦ ᓱᓪᓗᐊᓗᖕᒥ ᑕᐅᕗᖓ ᑕᓯᐅᔭᕐᔪᐊᒧᑦ ᐊᐅᔭᕆᐊᖃᖅᐸᒡᖢᑎᒃ. ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᓂᕿᒋᔭᐅᔪᑦ ᐃᓄᖕᓂᑦ ᑕᒪᐃᓐᓂᑦ ᓄᓇᕕᑦ ᑕᕆᐅᖏᓐᓂ ᐊᒻᒪᓗ ᓄᓇᓕᒃ ᓴᓂᑭᓗᐊᖅ (ᓄᓇᕗᑦ).

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

3

ᑕᖏᖅ ᖃᐅᔨᓴᕈᑎᑖᕐᕕᐅᒐᒥ ᓄᓇᕕᒻᒥ ᐱᓕᕆᑎᑦᑎᔾᔪᑕᐅᕙᒃᑐᖅ ᑕᐃᒪᖓᓂ ᕿᑎᐊᓂ 1990-ᓂ. ᐊᖑᓇᓱᒃᑎᑦ ᓇᑭᑐᐃᓐᓇᖅ ᓄᓇᕕᖕᒥ ᓄᓇᓖᑦ ᑐᓂᓯᓚᐅᖅᑐᑦ ᑭᒍᑎᓂᒃ, ᒪᒃᑖᖏᓐᓂᒃ ᖃᐅᔨᓴᕈᑎᑖᕐᕕᒃᓴᓂᒃ ᐊᒻᒪᓗ ᑐᓴᕐᑎᑦᑎᓪᓗᑎᒃ ᓇᑭᑦ ᑐᖁᑕᐅᓚᐅᕐᒪᖔᑦ. ᑖᒃᑯᐊᑦ ᑎᑎᖃᖓᑦ ᐊᑐᖅᖢᒍ ᓈᓴᕈᑎᖏᓪᓗᒋᖅ ᖃᓅᑦᑕᕐᒪᖔᑕ ᓂᕐᔪᑎᑦ ᐊᑐᓂ ᑲᑎᖓᔪᓂᑦ ᕿᓚᓗᒐᕐᓂᑦ ᐱᕕᐅᓚᐅᖅᑐᓂᑦ ᕿᓚᓗᒐᕋᓱᒃᑕᐅᖏᓐᓇᖃᑦᑕᕐᓂᐊᕐᒪᑕ. ᑕᐃᒫᒃᑕᐅᖅ ᐱᓕᕆᑎᑦᑎᔾᔪᑎᖃᖅᑐᑦ ᓴᓂᑭᓗᐊᖅ (ᓄᓇᕗᑦ).

ᖃᐅᔨᓇᓱᒃᓯᒪᔪᑦ

ᐊᐅᖃᑎᒌᑦ ᖃᓅᖕᒪᖔᑦᑕ ᖃᐅᔨᓇᓱᒃᑕᐅᓯᒪᔪᑦ

ᑕᒪᒃᑯᐊ ᐊᐅᖏᓐᓂᒃ ᑎᒥᖓᓂᑦ ᖃᐅᔨᓴᕈᑎᑖᕐᓂᖅ ᖃᓄᖅ ᐊᐅᖃᑎᒌᖕᓂᖃᕐᒪᖔᑕ ᐱᓕᕆᔭᐅᓚᐅᖅᑐᖅ ᐊᒥᓱᓂᒃ ᕿᓚᓗᒐᕐᓂᑦ ᐱᔭᐅᔪᓂᑦᑖᒃᑯᓇᖔᖅᑐᓂᒃ ᐊᑕᐅᓯᖅ ᒪᕐᕉᖕᓂᑦ ᕿᓚᓗᒐᕐᓂᑦ ᐊᔾᔨᒌᓐᖏᑦᑐᓂᑦ, ᓇᓗᓇᐃᑦᑎᐊᕐᓗᒋᑦ
ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᐅᒡᕙᓘᓐᓃᑦ ᑕᓯᐅᔭᕐᔪᐊᑉ ᐊᑭᓐᓇᖅᐸᓯᐊᓂᑦ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ.

ᖃᐅᔨᓇᓱᒃᑕᐅᑦᑎᐊᕋᒥᒃ ᐊᐅᓪᓗᑎᓪᓗᒋᑦ ᑕᖏᖅ ᓄᐊᑕᐅᔪᑦ ᓄᓇᕕᒻᒥ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᖅ (ᓄᓇᕗᑦ), ᐊᕙᑖᓂᑦ 1982
ᐊᒻᒪᓗ 2019 ᖃᐅᔨᓇᖅᓯᓂᐊᕐᒪᑕ ᖃᓅᑎᖏᔪᖅ ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓐᓇᕐᓂᖏᑦ.

ᑕᐅᕙᓐᓇ ᐃᒪᖓ ᑲᑐᑎᔭᐅᕗᖅ ᓄᓇᕕᒃ ᓯᒡᔭᖏᓐᓂ ᑕᒪᐅᓐᓇ ᑕᓯᐅᔭᕐᔪᐊᑉ ᑲᓇᖕᓇᖓᓂ ᐊᒻᒪᓗ ᑕᓯᐅᔭᕐᔪᐊᑉ

ᐊᑭᓐᓇᖅᐸᓯᐊᓂ ᐊᕐᕌᒍᑕᒫᑦ ᑎᑭᑉᐸᒃᑐᑦ ᓯᓪᓗᒃᑰᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓚᐅᖅᑐᑦ ᐊᒻᒪᓗ ᐃᓚᖃᕆᓪᓗᑎᒃ ᐅᐊᖕᓇᖓᓂ ᑲᓇᖕᓇᖓᓄ ᑕᓯᐅᔭᕐᔪᐊᖅ (NEHB), ᓂᒋᐊᓄᑦ ᓱᓪᓗᐊᓗᒃ (HS), ᐊᖕᖓᕙ (UNG) ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᖅ (SAN) ᓄᓇᖏᑦ ᐊᖑᓇᓱᒡᕕᐅᕙᒃᑐᑦ ᑕᒫᓂ ᓴᓂᑭᓗᐊᖅ ᕿᑭᖅᑕᖏᑦ (ᓄᓇᕗᑦ ᓴᕿᔮᖅᑐᖅ 1). ᑖᒃᑯᓄᖓ ᐅᐊᖕᓇᖓᓂ ᑲᓇᖕᓇᖓᓄ ᑕᓯᐅᔭᕐᔪᐊᖅ, ᓱᓪᓗᐊᓗᒃ ᐊᒻᒪᓗ ᐊᖕᖓᕙ, ᖃᐅᔨᓴᕈᑎᑖᑦ ᐊᕕᒃᑕᐅᓚᐅᖅᑐᑦ ᒪᕐᕈᐃᖅᖢᑎᒃ ᕿᓚᓗᒐᕋᓱᒡᕕᖕᓂᑦ: “ᐅᐱᕐᖔᒃᑯᑦ ᕿᓚᓗᒐᕋᓱᒃᑎᓪᓗᒋᑦ ᑕᒫᓂ ᕕᕗᐊᕆ 1-ᒥᑦ ᐋᒍᓯ 31-ᒧᑦ, ᐊᒻᒪᓗ “ᐅᑭᐊᒃᓵᒃᑯᑦ” ᕿᓚᓗᒐᕋᓱᒃᑐᑦ ᓯᑎᐱᕆ 1-ᒥᑦ ᔮᓄᐊᕆ 31-ᒧᑦ.

ᓄᓇᕕᒻᒥ, ᖃᐅᔨᓴᕈᑎᑖᑦ ᐅᐱᕐᖔᒃᑯᑦ ᕿᓚᓗᒐᕋᓱᒃᑐᓂ ᓇᓗᓇᕈᓐᓃᓚᐅᖅᑐᖅ ᐅᓇ 6% ᐊᒻᒪᓗ 11.7% ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᐊᑐᓂ ᐊᖕᖓᕙ ᐊᒻᒪᓗ ᓱᓪᓗᐊᓗᒃ ᕿᓚᓗᒐᕋᓱᒡᕕᖕᓂᑦ ᑖᒃᑯᓇᖔᖅᑐᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ.

ᑕᐃᑲᓂ ᐅᑭᐊᒃᓵᒃᑯᑦ ᕿᓚᓗᒐᕋᓱᒃᑐᑦ, ᓇᓚᐅᑖᖅᖢᒍ ᖃᑦᓯᐊᓂᖏᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ
ᕿᓚᓗᒐᖏᓐᓂᑦ ᐃᓗᐊᓂ ᓱᓪᓗᐊᓗᒃ ᐊᒻᒪᓗ ᐅᐊᖕᓇᖓ ᑲᓇᖕᓇᖓᓄᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᐃᒪᖓᓂ 29.1% ᐊᒻᒪᓗ 44.5% ᐊᑐᓂ.

ᓴᓂᑭᓗᐊᕐᒥᑦ ᐱᓯᒪᔪᑐᐊᑦ, 84% ᐅᖃᐅᓯᐅᓚᐅᖅᑐᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᐅᐱᕐᖔᒃᑯᑦ (“ᐊᑯᓂᐅᓂᖅᓴᐅᓪᓗᓂ ᐅᐱᕐᖔᖓᑦ) (ᓲᕐᓗ ᐊᐃᕆᓕ 1-ᒥᑦ ᑎᑭᓪᓗᒍ ᔪᓚᐃ 14-ᒧᑦ). ᑕᐅᕙᓂ ᐃᒪᖓᓂ, ᑖᒃᑯᐊ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ
ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ ᐅᓄᖅᑎᒋᔪᑦ 4.6% ᕿᓚᓗᒐᕐᕕᐅᔪᑦ. ᐅᓇ ᖃᑦᓯᐅᓂᖓ ᐅᓄᖅᓯᓯᒪᔪᖅ 25.6%-ᒥᒃ ᐊᐅᔭᒥᑦ. ᐱᑕᖃᓐᖏᑦᑐᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ ᐅᖃᐅᓯᐅᔪᓂᑦ ᐅᑭᐊᒃᓵᒃᑯᑦ ᕿᓚᓗᒐᖅᑐᓂᑦ ᓴᓂᑭᓗᐊᕐᒥ.

ᐊᖑᓇᓱᒃᑕᑦ ᓂᕿᒃᓴᑎᒃ

ᕿᓚᓗᒐᖅᑐᑦ ᐅᓄᕈᓐᓃᖅᑎᑕᐅᓯᒪᔪᑦ ᓄᓇᓕᒃᑎᒍᑦ ᐊᒻᒪᓗ ᐊᓯᑦᔨᖅᑕᖅᐸᖕᓂᖏᑦ ᒪᑐᓯᒪᔪᑦ ᐊᒻᒪᓗ ᑲᑎᓪᓗᒋᑦ

ᖃᑦᓯᐅᓂᖏᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᐱᔭᐅᓯᒪᔪᑦ ᓄᓇᕕᒻᒥ, ᐊᒻᒪᓗ ᐊᕐᕌᒍ ᐃᓗᐊᓂ ᒪᑐᔪᑦ ᓴᓂᑭᓗᐊᕐᒥ (ᓄᓇᕗᑦ). ᑲᑎᓪᓗᒋᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑖᒃᑯᓇᓂ ᐃᒫᓂ ᓄᓇᖏᓐᓂ ᑲᑎᓪᓗᒋᑦ 323, 422, ᐊᒻᒪᓗ 380 ᓂᕐᔪᑎᑦ ᐃᓚᓕᐅᑎᓪᓗᒋᑦ 70, 74 ᐊᒻᒪᓗ 98 ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᓐᓂᑦ 2017, 2018, ᐊᒻᒪᓗ 2019 ᐊᑐᓂ. ᐅᖃᐅᓯᐅᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᒃ ᓴᓂᑭᓗᐊᕐᒧᑦ ᑕᐃᑲᓂ 2019 ᐊᑐᐃᓐᓇᕈᖅᓯᒪᓚᐅᓐᖏᑦᑐᑦ. ᐅᓇ ᖃᐅᔨᓴᕈᓯᖅ ᐊᑐᖅᓯᓚᐅᖅᑐᖅ

ᖃᓂᓈᖅᓯᒪᔪᓂᑦ 2017 ᐊᒻᒪᓗ 2018 ᐅᖃᐅᓯᐅᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᒃ ᐋᕿᒃᓯᒪᔪᑦ (ᓇᓗᓇᐃᖅᓯᒪᔪᖅ 1). ᑖᒃᑯᓄᖓ

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

4

ᑕᒪᑐᒪᓂ ᐱᖓᓱᑦ ᐅᑭᐅᓂᑦ, ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ ᓇᓚᐅᑖᖅᓯᒪᓪᓗᑎᒃ
ᐅᓄᖅᑎᒋᓚᐅᖅᑐᑦ 22% ᑲᑎᓪᓗᒋᑦ ᐅᖃᐅᓯᐅᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᑦ ᓄᓇᕕᒻᒥ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᖅ. ᐅᓇ ᐅᓄᖅᓯᓯᒪᔪᖅ

ᒥᑭᔪᒥᒃ 24%-ᒥᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑕᐃᒪᓗ ᓴᓂᑭᓗᐊᖅ ᐲᖅᖢᒍ ᐃᓚᓕᐅᑎᓯᒪᒐᓂ.

ᓇᓗᓇᐃᖅᑐᖅ 1. ᐅᖃᐅᓯᐅᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᑦ (2017-2019) ᓄᓇᕕᒻᒥ ᓄᓇᖏᓐᓂᑦ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᖅ (ᓄᓇᕗᑦ). ᓴᓂᑭᓗᐊᕐᒧᑦ, ᖃᓂᒋᔮᓂ 2017 ᐊᒻᒪᓗ 2018 ᕿᓚᓗᒐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᑦ 2019-ᒥ. ᐊᐅᖏᓐᓂᒃ ᑐᑭᓯᓇᓱᐊᖅᑐᑦ ᐱᓕᕆᔾᔪᑕᐅᓚᐅᖅᑐᖅ ᖃᑦᓯᑦ ᑲᑎᓪᖢᒋ ᓂᕐᔪᑎᑦ ᐱᔭᐅᖕᒪᖔᑕ ᓈᓴᐅᑎᕈᖅᑎᓪᓗᒋᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᑕ ᖃᖁᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ. ᖃᓄᖅ ᐅᓄᖅᑎᒋᒫᖔᑕ ᓇᓚᐅᑖᖅᓯᒪᔪᖅ ᑕᓯᐅᔭᕐᔪᐊᖅᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᓴᓂᑭᓗᐊᕐᒥᑦ ()-ᑐᒥ ᐃᓚᓕᐅᑎᓯᒪᓪᓗᑎᒃ ᑲᑎᓪᓗᒋᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂᑦ.

ᐊᕐᕌᒍᒥ ᓄᓇᕕᒃ ᓴᓂᑭᓗᐊᖅ (ᓄᓇᕗᖅ) ᑲᑎᓪᓗᒋᑦ

ᑲᑎᓪᓗᒋᑦ
ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ
2017 293 30 323 70 (1)
2018 372 50 422 74 (2)
2019 340 40 380 98 (2)

ᐅᓄᕐᓂᖏᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ

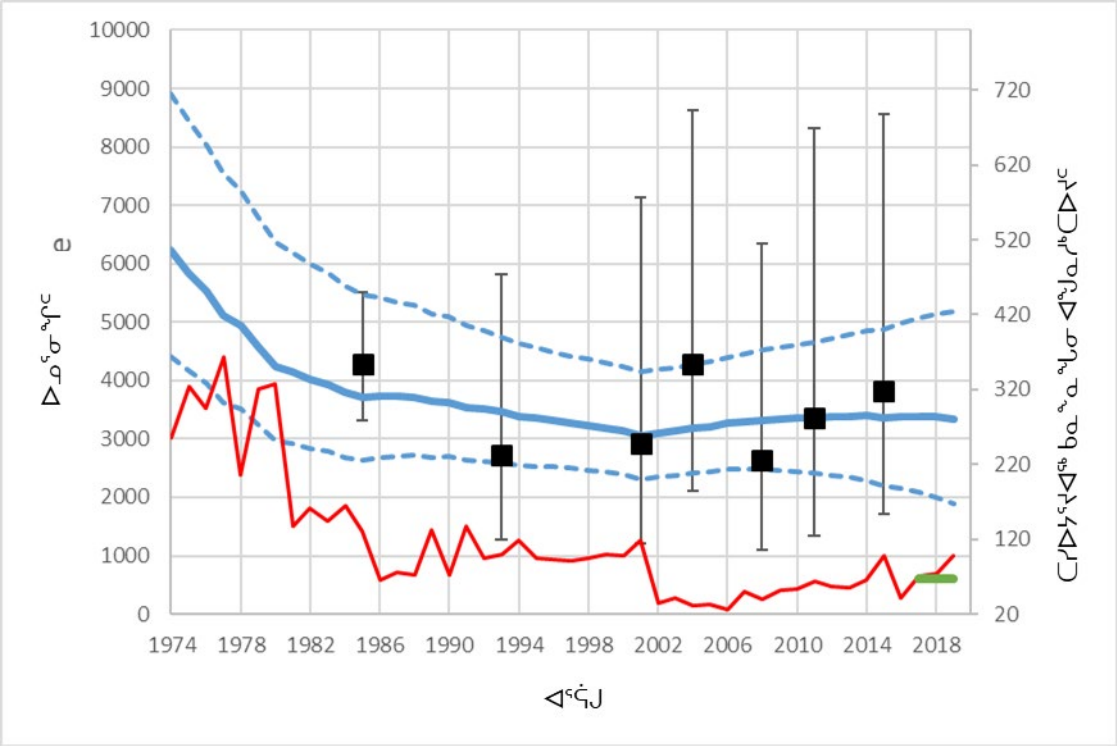
ᐅᑯᐊ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ ᑭᖑᓪᓕᖅᐹᒥᒃ ᓈᓴᖅᑕᐅᓯᒪᔪᑦ 2015-ᒥ, ᓴᕿᑦᑎᓯᒪᔪᑦ ᖃᓄᖅ ᐅᓄᖅᑎᒋᖕᒪᖔᑕ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ 2800 ᕿᓚᓗᒐᐃᑦ (ᖃᓂᓈᖅᓯᒪᔪᑦ 100-ᒃᑯᑦ) (ᓇᓗᓇᐃᖅᑐᖅ 2-ᒥ).

ᓇᓗᓇᐃᖅᑐᖅ 2. ᐅᓄᖅᑎᒋᓂᖏᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ 7-ᖏᖅᖢᑎᒃ ᖃᖓᑕᓲᒃᑯᑦ ᓈᓴᖅᑕᐅᓯᒪᔪᓂᑦ ᑖᒃᑯᓂᖓ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᓄᓇᖏᓐᓂ, ᑕᒻᒪᕈᓐᓃᖅᑎᓯᒪᔪᑦ ᖃᓄᖅ ᐊᑐᐃᓐᓇᐅᓂᖏᑦᑎᒍᑦ ᐱᓯᒪᓪᓗᑎᒃ ᐃᓚᐃᓈᖅᑐᓂᑦ.

ᐊᕐᕌᒍᑦ

ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓ
ᖃᑦᓯᐅᓂᖏᑦ

ᓇᓚᐅᑖᖅᓯᒪᔪᖅ (95% CI)
1985 4282 (3322 – 5520)
1993 2729 (1282 – 5808)
2001 2924 (1197 – 7140)
2004 4274 (2115 – 8620)
2008 2646 (1102 – 6353)
2011 3351 (1350 – 8319)
2015 3819 (1704 – 8561)



ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

5

ᐊᑐᖅᑕᐅᓯᒪᔪᖅ ᖃᓄᖅ ᐅᓄᖅᑎᒋᖕᒪᖔᑕ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᑕᓯᐅᔭᕐᔪᐊᒥ ᐊᒻᒪᓗ ᐊᒃᑐᐃᓂᖓ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᐱᓪᓗᒋᑦ

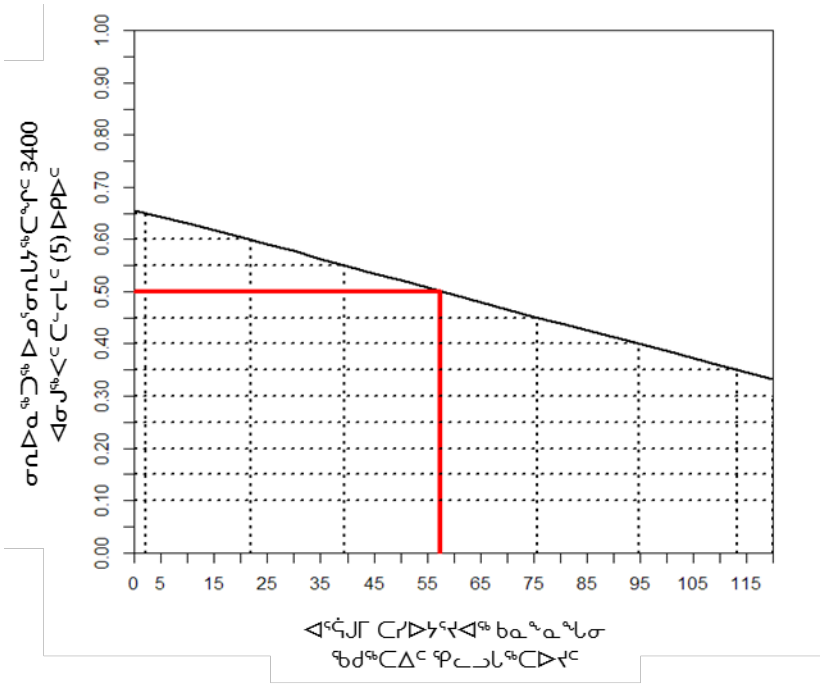
ᐅᓄᕐᓂᖏᓐᓂᒃ ᐊᑐᖅᑕᐅᔪᖅ ᐃᓚᓕᐅᑎᓯᒪᓪᓗᒋᑦ ᒫᓐᓇ ᑐᓴᖅᑕᐅᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᓈᓴᐅᑎᖏᑦ (1974-ᒥᑦ 2019-ᒧᑦ) ᐊᒻᒪᓗ ᑖᒃᑯᐊ ᐊᑐᓂ ᑲᑎᖓᔪᑦ ᖃᓅᑎᒋᕙᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᑦ ᐊᐅᖏᑦᑎᒍᑦ ᖃᐅᔨᓴᖅᖢᒋᑦ (1985-ᒥᑦ 2018-ᒧᑦ) ᓈᒻᒪᒃᓯᓕᖅᓯᒪᔪᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᖓᑕᓲᒃᑯᑦ ᓈᓴᖅᑕᐅᓯᒪᔪᓂᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ ᖃᓄᖅ ᐅᓄᖅᑎᒋᓂᖏᑦ (1985-ᒥᑦ 2015-ᒧᑦ). ᐅᓇ ᐊᑐᖅᑕᐅᔪᖅ ᓇᓗᓇᐃᖅᓯᓯᒪᔪᖅ ᑖᒃᑯᐊ ᐅᓄᕐᓂᖏᑦ ᕿᓚᓗᒐᐃᑦ ᐅᓄᕈᓐᓃᖅᑐᑦ ᑕᐃᒪᖓᓂ 1974, ᑎᑭᓪᓗᒍ ᐊᑦᑎᓛᖓᑦ 3100-ᒥᒃ 2001-ᒥ (ᖃᓂᓈᖅᓯᒪᔪᑦ 100-ᒃᑯᑦ), ᐅᓄᖅᓯᓛᖑᓯᒪᓪᓗᒋᑦ 3400 ᕿᓚᓗᒐᐃᑦ 2014-ᒥ ᐊᒻᒪᓗ ᓱᓕ ᑕᐃᒪᓐᓇᐃᓕᖓᑐᐃᓐᓇᖅᐳᑦ ᑕᐃᒪᖓᓂ

ᓈᓴᖅᑕᐅᓚᐅᕋᒥᒃ ᓇᓚᐅᑖᖅᑕᐅᓪᓗᑎᒃ 2019-ᒥ 3300-ᖑᓚᐅᖅᑐᑦ. (95% CI: 1900 – 5200) (ᓴᕿᔮᖅᑐᖅ 2).

ᓴᕿᔮᖅᑐᖅ 2. ᐊᑐᖅᑕᐅᓚᐅᖅᑐᖅ ᓈᓴᐃᓪᓗᑎᒃ ᓇᓚᐅᑖᕈᙱᑦ ᐊᑐᓂ ᕿᓚᓗᒐᐃᑦ ᐅᓄᕐᓂᖏᑦ ᑲᓇᖕᓇᖓᓄ ᑕᓯᐅᔭᕐᔪᐊᖅ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ (ᑕᑯᔪᖅᑐᖅ ᑎᑎᑯᑖᒃᓯᒪᔪᖅ ±95% CI) ᖃᖓᑕᓲᒃᑯᑦ ᓈᓴᖅᑕᐅᓯᒪᔪᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ (ᕿᓂᖅᑕᐃᑦ ᑭᑉᐹᕆᒃᑐᑦ ±95% CI), ᖃᓄᖅ ᐅᓄᖅᑎᒋᖕᒪᖔᑕ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ (ᐊᐅᐸᖅᑐᖅ ᑎᑎᑯᑖᒃᓯᒪᔪᖅ) ᐊᒻᒪᓗ ᑲᑎᓪᓗᒋᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᐱᔭᐅᔪᑦ 68 (ᐆᔭᐅᔭᖅ ᑎᑎᑯᑖᒃᓯᒪᔪᖅ) ᐊᑖᓂ 2017-
ᒥᑦ 2019-ᒧᑦ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᓂᐊᖅᑐᓄᑦ ᐸᕐᓇᐅᑎᓂᑦ .

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ

ᒫᓐᓇ ᐱᒋᐊᖅᐸᓪᓕᐊᔪᓄᑦ ᐊᐅᓚᑕᐅᓂᐊᕐᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᑎᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᑕ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ, ᓇᓗᓇᐃᖅᑕᐅᓗᑎᒃ ᕿᓚᓗᒐᖅᑕᐅᕙᓪᓕᐊᔪᑎᒍᑦ ᐅᖓᑖᓄᐊᓐᖏᓪᓗᓂ 50% ᐃᓱᒪᒋᔭᐅᔪᖅ ᓄᖑᐹᓪᓕᕈᑕᐅᒐᔭᕆᐊᒃᓴᖓᓂᒃ. ᐅᑯᐊ ᐅᓄᕐᓂᖏᓐᓂᒃ ᐱᓯᒪᔪᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ 2018 ᖃᓄᖅ ᐅᓄᖅᑎᒋᖕᒪᖔᑕ 3300 ᐃᒻᒪᖄ ᐅᓄᕈᓐᓃᖅᑐᑦ. (95% CI: 1900 – 5200) ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ (ᖃᓂᓈᖅᓯᒪᔪᑦ 100-ᒃᑯᑦ), ᐅᑯᐊ ᐊᔾᔨᑎᐊᐸᓗᖏᑦ, ᑭᓯᐊᓂ ᐊᑦᑎᖕᓂᖅᓴᒐᓛᑦ ᐅᓄᕐᓂᖏᑦ ᓴᓚᐅᑖᖅᓯᒪᔪᑦ 3400 (95% CI: 2300-5400) ᕿᓚᓗᒐᐃᑦ ᑭᖑᓪᓕᖅᐹᒥᒃ ᓈᓴᖅᑕᐅᒐᒥᒃ ᐊᒻᒪᓗ ᐅᓄᕐᓂᖏᑦ ᑕᐃᑲᓂ ᐱᒋᐊᓕᓵᖅᖢᑎᒃ ᑭᖑᓪᓕᖅᐹᖓᓂ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᔪᓄᑦ



ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

6

ᐸᕐᓇᐅᑎᑦ. ᐊᕐᕌᒍᒥ ᓄᓇᓕᑦᑐᑦ ᕿᓚᓗᒐᑦ ᑐᖁᔪᑦ 58 ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ 50% ᐅᓄᖅᓯᒋᐊᕋᔭᕐᒪᖔᑕ ᐅᓄᕐᓂᖅᓴᐅᓕᕐᓗᑎᒃ 3400-ᒥᑦ ᑕᐃᒪᖓᓂᑦ ᐊᕐᕌᒍᑦ ᐊᓂᒍᖅᑐᑦ 5-ᓂᑦ (ᓴᕿᔮᖅᑐᖅ 3). ᐅᑯᐊ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ ᓄᓇᓕᑦᑐᑦ ᕿᓚᓗᒐᐃᑦ ᑖᒃᑯᐊᓗ ᐊᔪᓕᖅᑐᑦ ᐊᒻᒪᓗ ᐊᓯᐅᔪᑦ.

ᐅᓇ ᐆᒪᔪᓂᑦ ᐱᑕᖃᕈᓐᓃᕕᒃᑐᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᖅ. ᐊᑐᖅᑕᐅᔪᖅ 3108, ᑖᒃᑯᐊᓗ CV 0.25. ᐊᑐᖅᓯᔪᑦ an FR of
0.25 ᓄᖑᕕᒃᑐᑦ ᓂᕐᔪᑎᑦ 14-ᖑᔪᑦ ᕿᓚᓗᒐᐃᑦ.

ᓴᕿᔮᖅᑐᖅ 3. ᑕᐃᒪᓐᓇᐅᓇᔭᕐᓂᖏᑦᑎᒍᑦ ᓇᓚᐅᑖᖅᓯᒪᔪᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᕿᓚᓗᒐᐃᑦ ᐅᓄᕐᓂᖏᑦ 3400 ᐊᓂᒍᖅᑎᓪᓗᒋᑦ ᑕᓪᓕᒪᑦ (5) ᐅᑭᐅᑦ (y-ᖓ ᑭᑉᐹᕆᒃᑑᑎᓂᑦ) ᖃᓄᖅ ᐊᔾᔨᒋᓐᖏᓂᖓ ᓄᓇᓕᑦᑐᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ (x-ᖓ ᑭᑉᐹᕆᑑᑎᓂᑦ). ᐅᓇ ᐊᐅᐸᖅᑐᖅ ᑎᑎᑯᑖᒃᓯᒪᔪᖅ ᓇᓗᓇᐃᖅᓯᔪᖅ 0.5 ᑕᐃᒪᓐᓇᐅᒐᔭᖅᑐᓂᒃ ᐅᓄᕐᓂᖏᑦ 3400 ᕿᓚᓗᒐᐃᑦ
ᐊᓂᒍᖅᑎᓪᓗᒍ 5 ᐅᑭᐅᓄᑦ ᐱᔭᐅᔪᑦ 58-ᖑᒃᐸᑕ ᕿᓚᓗᒐᐃᑦ.

ᑐᑭᓯᓇᓱᒡᕕᐅᔪᑦ ᖃᐅᔨᓇᖅᓯᓇᓗᐊᓐᖏᑦᑐᑦ

ᐅᑯᐊ ᐅᓄᕐᓂᖏᑦ ᐊᑐᓂ ᕿᓚᓗᒐᐃᑦ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᔪᓄᑦ ᖃᑯᖅᑕᓂᒃ ᕿᓚᓗᒐᕐᓄᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ/ᔭᐃᒻᔅ ᐸᐃ/

ᐊᖕᖓᕙ ᐱᔭᕐᓂᓐᖏᑑᖕᒪᑕ ᒪᓕᒡᖢᒋᑦ ᐊᐅᔭᒥ ᓇᒧᖔᓯᒪᓂᖏᑦ ᓂᕐᔪᑎᑦ. ᐅᑯᐊ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᕿᓚᓗᒐᐃᑦ ᐋᕿᒃᓱᖅᓯᒪᓪᓗᑎᒃ ᐊᐅᖏᑦᑎᒍᑦ ᑖᒃᑯᐊ ᐊᕕᒃᑐᖅᓯᒪᓪᓗᒋᑦ ᖃᓄᖅ ᐊᑯᓚᐃᑦᑑᑕᐅᕙᖕᓂᖏᑦᑎᒍᑦ ᖃᐅᔨᓴᕈᑎᑖᕐᕕᐅᔪᑦ ᐊᖑᓇᓱᒃᑎᓂᑦ ᖃᓂᒋᔭᖓᓂᑦ ᒥᑭᔪᑦ ᐊᕐᕕᒃ ᓄᓇᐅᑉ ᐊᑎᖓ ᐊᒻᒪᓗ ᓇᔅᑕᐳᑲᑰᖏᑦ. ᐃᓱᒪᒋᔭᐅᔪᑦ ᐅᑯᐊ ᓂᕐᔪᑎᑦ ᑕᑯᔭᐅᖃᑦᑕᖅᑐᑦ ᐊᐅᔭᒃᑯᑦ ᓈᓴᖅᑕᐅᓯᒪᔪᑦ ᐃᒪᕕᖓᓂᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᑖᒃᑯᐊᑦᑕᐃᓐᓇᐅᔭᕆᐊᒃᓴᖏᓐᓂᒃ ᓂᕐᔪᑎᑦ ᖃᐅᔨᓴᕈᑎᑖᖑᓯᒪᔪᑦ ᓂᕐᔪᑎᓂᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᖃᓂᒋᔭᖓᓂ ᓯᒡᔭᓂ (ᓴᕿᔭᖅᑐᖅ 1). ᑕᐃᒪᓗ ᐊᐅᖏᑦᑎᒍᑦ ᖃᐅᔨᓇᖅᓯᔪᑦ ᓴᑭᖔᕐᒪᖔᑕ ᓂᕐᔪᑎᑦ ᑕᑯᔭᐅᔪᑦ ᑖᒃᑯᐊ ᐃᒪᕕᖕᓂᑦ ᑖᒃᑯᐊᑦᑕᐃᓐᓇᐅᓚᐅᓐᖏᑦᑐᑦ, ᑕᐃᒪᓗ
ᐊᑦᑎᓈᖅᓯᓯᒪᓗᐊᖅᑐᒃᓴᐅᒐᔭᖅᑐᑦ ᐊᒃᑐᐃᓂᖓᓂᒃ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑕᐃᑲᖓᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂᑦ.

ᐅᓄᓐᖏᑑᖕᒪᑕ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᐃᑦ ᖃᐅᔨᓴᖅᓯᒪᓐᖏᓗᐊᖅᑐᑦ ᖃᓄᖅ ᓱᑲᑎᒋᔪᒥᒃ ᐊᒻᒪᓗ ᐅᑭᐅᖏᑦ ᕿᓚᓗᒐᐃᑦ ᐅᓄᕐᓂᖏᑦᑕ, ᑕᐃᒪᓗ ᐱᕕᖃᕐᑎᑦᑎᓐᖏᓯᒪᔪᑦ ᖃᓄᖅ ᐊᔾᔨᒌᓐᖏᒻᒪᖔᑕ ᑖᒃᑯᐊ ᕿᓚᓗᒐᐃᑦ.

ᓄᓇᒥ ᑕᑯᔭᐅᓯᒪᔪᑦ ᕿᓚᓗᒐᐃᑦ ᓄᓇᒥ ᐊᔪᓕᖅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᑐᖁᑕᐅᔪᑦ, ᑭᓯᐊᓂ ᐅᑎᖅᑎᑕᐅᒐᑎᒃ ᐅᓄᕐᓂᒃᓴᖏᑕ, ᐃᑲᔫᑎᒐᔭᖅᑐᖅ ᐅᓄᕈᓐᓃᕈᑎᒋᓗᒋᑦ ᖃᐅᔨᒪᓐᖏᑕᑦᑎᒍᑦ ᑕᐃᒪᓐᓇᐅᑎᑕᐅᔪᑦ ᑕᒫᓃᑦᑐᑦ.

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

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ᐃᓱᐊ ᐊᒻᒪᓗ ᐅᖃᐅᔾᔨᓂᖅ

ᒫᓐᓇ ᐅᓄᕐᓂᖏᑦ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ 3300-ᖑᔪᑦ. (95% CI = 1900 – 5200) ᓂᕐᔪᑎᑦ. ᑕᐃᒫᒃᑕᐅᖅ ᐊᔾᔨᖓ, ᑭᓯᐊᓂ ᐅᓄᓐᖏᓂᖅᓴᒐᓛᑐᐃᓐᓇᐃᑦ ᑖᒃᑯᓇᖓᓪᓕ 3400 (95% CI: 2300 – 5400) ᑕᐃᑲᖓᑦ ᑭᖑᓪᓕᖅᐹᒥᑦ ᓈᓴᖅᑕᐅᓯᒪᔪᓂᑦ 2016-ᒥ ᐊᒻᒪᓗ ᐅᓄᕐᓂᖏᑦ ᑕᐃᑲᓂ ᐱᒋᐊᖅᓯᒪᓪᓗᑎᒃ ᑭᖑᓪᓕᖅᐹᒥᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᑦ ᐸᕐᓇᐅᑎᑦ. ᐊᕐᕌᒍᒥ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ 58-ᖑᔪᑦ ᑕᐃᒪᓗ 50%-ᖑᔪᖅ ᐅᓄᕐᓂᖏᑦ ᐅᑎᕋᔭᖅᑐᓄᑦ 3400 ᐃᓗᐊᓂ ᑕᓪᓕᒪᑦ (5) ᐊᕐᕌᒍᓂ.

ᐊᓯᖏᑦ ᐃᓱᒪᒋᔭᕆᐊᖃᖅᑐᑦ

ᒫᓐᓇ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᔪᑦ ᐱᒋᐊᕈᑎᖓ ᐊᔪᕐᓇᖅᑎᑦᑎᔪᖅ ᐋᕿᒃᓱᐃᖃᓐᓂᕈᑎᒋᔭᕆᐊᒃᓴᖓ ᕿᓚᓗᒐᕐᓄᑦ ᐅᒡᕙᓘᓐᓃᑦ ᐊᔾᔨᐅᓐᖏᑦᑐᒥᒃ ᐱᔾᔪᑎᖃᖅᖢᑎᒃ ᑐᖁᖃᑦᑕᕐᒪᑕ. ᐅᓇ ᖃᐅᔨᔪᒥᓇᖅᑐᖅ ᐊᕙᑖᓂᑦ ᐊᖑᓇᓱᒃᑎᑦ ᐃᓇᖐᓂᐊᕐᒪᑕ ᒫᓐᓇᐅᔪᖅ ᐱᓕᕆᔾᔪᑕᐅᔪᕐᒥᒃ ᐃᓚᐅᑎᑦᑎᓂᖅᓴᐅᓗᑕ ᓄᓇᓕᖕᓂᒃ ᐊᒻᒪᓗ ᐊᕕᒃᑐᖅᓯᒪᔪᑎᒍᑦ ᐊᐅᓚᑦᑎᖃᑎᒌᒡᓗᑕ ᖃᓄᖅ ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᖅᑐᓂᒃ ᐊᑖᒍᑦ ᓄᓇᑖᕈᑎᑦ ᐊᖏᕈᑎᖏᑦᑎᒍᑦ. ᑕᐃᑲᓂᑦᑕᐅᖅ, ᐱᒻᒪᕆᐅᔪᖅ ᓇᓗᓇᐃᕐᓗᒋᑦ ᕿᓚᒻᒥᐅᔪᒃᑯᑦ, ᐊᑯᓂᐅᓗᐊᓐᖏᑦᑐᒃᑯᑦ ᐊᒻᒪᓗ ᐊᑯᓂᐅᔪᒃᑯᑦ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᔪᒪᔪᓄᑦ ᐋᕿᒃᓯᒪᔾᔪᑎᒃᓴᐃᑦ ᑖᒃᑯᓄᖓ ᕿᓚᓗᒐᕐᓄᑦ ᐃᓛᒃᑰᖅᑐᓄᑦ.

ᐊᑎᖏᑦ ᑲᑎᒪᔪᓂ ᐃᓚᐅᔪᑦ

ᐊᑎᖅ ᐊᐅᓚᑦᓯᔨ/ᓴᓇᕕᖓ

ᐊᐃᐸᓚᕼᐋ, ᑯᓕᔅᑏᓐ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᐋᑐᕚ ᓄᓇᖏᓐᓄᑦ
ᐊᐅᓚᓂᐄ, ᕗᓘᓕᐊᓐ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ

ᐹᔅᑐᕕᐅᑦ, ᒫᒃ ᓄᓇᕕᒃ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ
ᐹᑭᖕ, ᐸᑉ LGL ᑎᒥᖓ
ᐳᐊᑎᓘ, ᕼᐋᕕᐄ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ
ᑯᑭ, ᐃᒪ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᐋᑐᕚ ᓄᓇᖏᓐᓄᑦ
ᑎᓐ ᕼᐄᔪ, ᓂᐅ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᒥᐊᓕᑕᐃᒻᔅ ᓄᓇᖏᓐᓄᑦ

ᑑᓕᐅᓪ-ᕚᓪᑯᓘᔅ, ᑖᒪᔅ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᐸᓯᕕᒃ
ᓄᓇᖏᓐᓄᑦ

ᕗᑯᓴᓐ, ᒪᐃᑯ ᕿᑭᖅᑖᓗᒃ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ
ᒐᓯᓕᓐ, ᔩᓐ-ᕗᓛᓐᓱᐊ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ

ᒍᓕᐄ, ᐲᑦ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᓅᕙᐅᓛᓐᑦ ᐊᒻᒪᓗ ᓛᐸᑐᐊ ᓄᓇᖏᓐᓄᑦ

ᒎᓪᐳᐊᒃ-ᕼᐋᓐᓯᓐ, ᐅᓕᑭ ᐊᑯᑭᑦᑐᓂ ᐊᐅᓚᑦᓯᕕᖓ ᓄᓇᒥᐅᑕᓕᕆᓂᕐᒧᑦ
ᕼᐋᒧ, ᒪᐃᒃ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

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ᐊᑎᖅ ᐊᐅᓚᑦᓯᔨ/ᓴᓇᕕᖓ

ᕼᐋᕕ, ᕚᓗᓕ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ

ᕼᐋᒡᒪᓐ, ᔪᐊᑕᓐ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ
ᔮᓐᓴᓐ, ᓂᕗ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ– IOM,
ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᐸᓯᕕᒃ ᓄᓇᖏᓐᓄᑦ
ᓛᖕ, ᓯᓪᓕ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᒥᐊᓕᑕᐃᒻᔅ ᓄᓇᖏᓐᓄᑦ

ᓛᓴᓐ, ᔮᒃ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᓅᕙᐅᓛᓐᑦ ᐊᒻᒪᓗ ᓛᐸᑐᐊ ᓄᓇᖏᓐᓄᑦ
ᓖ, ᑕᐃᕕᑦ ᓄᓇᕗᑦ ᑐᓐᖓᕕᒃ ᑎᒥᖓ
ᓚᓵᔾ, ᕗᕋᓃᒃ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ

ᒫᑯᔅ, ᒥᐊᓕᐊᓐ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᕿᑎᐊᓂ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᖅ ᓄᓇᖏᓐᓄᑦ

ᒪᒃᑲᓈᑦᓯ, ᓵᓐ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᐸᓯᕕᒃ
ᓄᓇᖏᓐᓄᑦ

ᒪᔨᐅᓯᑭ, ᓰᓇ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᐸᓯᕕᒃ
ᓄᓇᖏᓐᓄᑦ

ᒫᑎᐅ, ᑯᐊᓕ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᕿᑎᐊᓂ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᖅ ᓄᓇᖏᓐᓄᑦ

ᒥᒃᒥᓚᓐ, ᑯᓕᔅᑎ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ - ᐆᒪᔪᑦ ᐊᑦᑕᕐᓇᖅᑐᓂ,
ᐸᓯᕕᒃ ᓄᓇᖏᓐᓂ

ᒧᐊᔅ ᒨᕕ, ᕼᐃᓗᓕ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᒥᐊᓕᑕᐃᒻᔅ ᓄᓇᖏᓐᓄᑦ

ᒫᔅᓂᐄ, ᐊᕐᓈᑦ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ

ᓂᑰ, ᓕᓐᑕ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᐸᓯᕕᒃ
ᓄᓇᖏᓐᓄᑦ

ᐅᑳᓄ, ᒫᒃ ᒪᑭᕕᒃᑯᑦ ᑎᒥᖓ
ᐹᓪᑲ, ᑎᐱ ᑲᓇᑕᒥ ᐃᒪᕕᓕᕆᓂᕐᒧᑦ ᐊᒻᒪᓗ ᓯᓚᒧᑦ ᐊᓂᖅᓵᖅᑐᖅᑕᖅᑎᓐᓄᖅ
ᐊᐅᓚᑦᓯᕕᖓᑦ

ᐸᐅᔅᒪ, ᓕᐋᓐ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᕿᑎᐊᓂ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᖅ ᓄᓇᖏᓐᓄᑦ
ᐅᓚᑎᐅ, ᓯᑕᕙᓂ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ - ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᒍᐊᓪ
ᓄᓇᖏᓐᓄᑦ

ᓴᕚᑦᓯᑭ, ᓵᓐᑎᓕ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᕿᑎᐊᓂ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᖅ ᓄᓇᖏᓐᓄᑦ

ᓯᒫᑦ, ᐊᐃᕙᓐ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᑯᐸᐃᒃ ᓄᓇᖏᓐᓄᑦ

ᓯᒥᑦ, ᐹᓚ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᕿᑎᐊᓂ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᖅ ᓄᓇᖏᓐᓄᑦ

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

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ᐊᑎᖅ ᐊᐅᓚᑦᓯᔨ/ᓴᓇᕕᖓ

ᓯᑎᓐᓴᓐ, ᔨᐅᓕ (ᐃᒡᓯᕙᐅᑕᖅ) ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᓛᐸᑐᐊ ᓄᓇᖏᓐᓄᑦ
ᑕᑯ, ᓯᑐᓚᕼᐊᓐ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᐸᓯᕕᒃ
ᓄᓇᖏᓐᓄᑦ

ᕚᓐᑐᓛᓐ, ᐋᓐᔨᓕᐊ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᒥᐊᓕᑕᐃᒻᔅ ᓄᓇᖏᓐᓄᑦ
ᒍᐊᑦ, ᑯᐊᑦᓂ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᕿᑎᐊᓂ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᖅ ᓄᓇᖏᓐᓄᑦ

ᐅᓚᐃᑦ, ᐋᑐᓗ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ,
ᒥᐊᑕᐃᒻᔅ ᓄᓇᖏᓐᓄᑦ
ᐅᓚᐃᑦ, ᐳᓕᐊᓇ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ–ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ, ᐸᓯᕕᒃ
ᓄᓇᖏᓐᓄᑦ

ᑐᑭᓯᒋᐊᕐᕕᐅᓯᒪᔪᑦ ᓇᑭᖔᕐᒪᖔᑕ

ᐅᑯᐊ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᐅᓂᒃᑳᖏᑦ ᕕᕗᐊᕆ 17-ᒥᑦ 22-ᒧᑦ, 2020 ᖃᐅᔨᓇᓱᒃᑕᐅᓯᒪᔪᑦ ᐊᒃᑐᖅᑕᐅᓂᖏᓐᓄᑦ ᑲᑎᓪᓗᒋᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᑲᓇᖕᓇᖓᓂ ᑕᐅᓯᔭᕐᔪᐊᖅ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ. ᐅᖃᓕᒫᒐ ᐊᓯᖏᑦ ᑕᒪᑐᒪᖓᑦ ᑲᑎᒪᔪᓂᑦ ᐃᓕᔭᐅᓯᒪᓂᐊᖅᑐᑦ ᖃᕆᓴᐅᔭᖁᑎᖓᓂ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᒪᓕᒐᖏᑦ ᐊᑐᐃᓐᓇᐅᓕᑐᐊᖅᐸᑕ.

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ᒐᓯᓕᓐ, ᔨᒡᐃ ᕼᐋᒧ, ᐃ. ᐆ, ᐊᒻᒪᓗ ᒪᔅᓂᐄ, ᐃ. 2017 ᓇᓂᑦᑎᓯ ᖃᓄᖅ ᐅᓄᕐᓂᖏᓐᓂᒃ ᖃᑯᖅᑐᑦ ᐃᓚᓗᒐᐃᑦ (Delphinapterus leucas) ᔭᐃᒻᔅ ᐸᐃ ᐊᒻᒪᓗ ᑲᓇᖕᓇᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖅ ᐊᐅᔭᖓᓂ 2015. ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ.ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᐱᖁᔨᕗᒑᕈᑎ
ᑎᑎᖃᖓ 2017/067. Iv + 25 ᒪᒃᐱᒐᖅ

ᕼᐋᒧ, ᐃᒻ. ᐆ, ᒫᓯᐃ, ᐃ, ᒐᓯᓕᓐ, ᔨ-ᕕ, ᒫᑎᐅᔅ, ᓰ.ᔩ, ᒫᑯᐊᔅ ᐃᒻ ᐊᒻᒪᓗ ᕘᑲᓴᓐ, ᐃᔅ ᕼ. 2017. ᐊᐅᓚᑦᑎᔾᔪᑕᐅᔪᑦ ᐱᒋᐊᕈᑎᒃᓴᐃᑦ, ᖃᓄᖅ ᐅᓄᕐᓂᖏᓐᓄᑦ ᐅᐃᒍᑦ ᐊᒻᒪᓗ ᑲᑎᓪᓗᒋᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᖃᓅᑎᒋᓂᖏᑦ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᑕᓯᐅᔭᕐᔪᐊᕐᒥ. ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ

ᐅᖃᐅᔾᔪᐃᔨᑦ.ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᐱᖁᔨᕗᒑᕈᑎ ᑎᑎᖃᖓ. 2017/062. iv + 43 ᒪᒃᐱᒐᖅ

ᕼᐋᒧ, ᐃᒻ. ᐆ, ᓯᑎᓐᑕᓐ, ᔨ.ᕼ, ᐊᒻᒪᓗ ᑐᓄᐃᐅ-ᕚᑯᓗᓯ, ᑎ. 2017. ᐊᐅᓚᑦᑎᔾᔪᑕᐅᔪᖅ ᖃᓄᐃᓕᖓᓂᖓᕐᓂᖓ
ᓄᓇᕕᒻᒥ ᖃᑯᖅᑐᓄᑦ ᕿᓚᓗᒐᕐᓄᑦ. ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ

ᐅᖃᐅᔾᔪᐃᔨᑦ.ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᐱᖁᔨᕗᒑᕈᑎ ᑎᑎᕋᖅ 2017/060. v + 34 ᒪᒃᐱᒐᖅ.

ᒫᑎᐅᔅ, ᓰᔨ,ᑎ, ᒫᑯᔅ ᐃᒻ, ᒍᐊᑦ, ᓰ, ᑕᓐ, ᐱ, ᔭᖕ ᕋ, ᕼᐋ, ᐱ.ᔨ, ᐅᐊ, ᔨ, ᐊᒻᒪᓗ ᕗᑯᓴᓐ, ᐃᔅ. ᕼ. 2017. ᓇᓚᐅᑖᖅᓯᒪᔪᑦ
ᑕᓯᐅᔭᕐᔪᐊᖅ ᐊᑭᓐᓇᖅᐸᓯᐊᑕ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᖏᑦ ᐅᓄᕐᓂᖏᑦ ᑕᐃᑲᓂ 2015 ᑕᑯᔭᐅᔪᑦ ᐊᒻᒪᓗ ᐊᔾᔨᓕᐊᖑᔪᑦ ᖃᖓᑕᓲᒃᑯᑦ ᓈᓴᖅᑕᐅᓪᓗᑎᒃ. ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ.ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᐱᖁᔨᕗᒑᕈᑎ ᑎᑎᕋᖅ 2017/061. v + 34 ᒪᒃᐱᒐᖅ.

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ
ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

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ᒪᔅᓂᐄ, ᐃ, ᕼᐋᒧ, ᐃᒻ. ᐆ, ᑑᔨᐊᓐ, ᐃᔅ ᐊᒻᒪᓗ ᐳᔅᑦᒪ, ᓕ 2017. ᒫᓐᓇ ᖃᓄᐃᓕᖓᓕᕐᒪᖔᑕ ᖃᐅᔨᓇᓱᒃᑕᐅᓯᒪᔪᑦ ᐊᐅᖏᑦᑎᒍᑦ ᖃᓄᖅ ᑲᑎᖓᐅᑎᒋᕙ ᐊᕙᑖᑦ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ ᑲᑎᖓᔪᑦ ᐊᑐᓂ ᓄᓇᕕᐅᑉ ᑕᕆᐅᖓᓂ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᖅ ᕿᑭᖅᑕᖏᓐᓂ: ᖃᐅᔨᒪᑎᑦᑎᔪᖅ ᖃᓄᖅ ᓈᓴᐃᔾᔪᑕᐅᔪᓂᒃ ᐊᒻᒪᓗ ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᖅᑐᑦ ᖃᑦᓯᐅᒐᔭᕐᓂᖏᑦ ᓴᓂᖅᕙᒃᑕᐅᔪᑦ. ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ

ᐅᖃᐅᔾᔪᐃᔨᑦ.ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᐱᖁᔨᕗᒑᕈᑎ ᑎᑎᕋᖅ 2017/016. v + 15 ᒪᒃᐱᒐᖅ.

ᒍᐃᑦ, ᐱ. 1998. ᓈᓴᐅᓯᕆᓪᓗᒋᑦ ᖃᑦᓯ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᐃᓄᖕᓂᑦ ᑐᖁᑕᐅᓗᑎᒃ ᕿᓚᓗᒐᐃᑦ. ᒫ. ᐃᒻ. ᖃᐅᔨᓴᖅᑎᒻᒪᕆᒃ
14:1-36 ᒪᒃᐱᒐᑦ

ᑯᐸᐃᒃ ᑕᕐᕋᖓ

ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᒪᖔᑕ ᐅᖃᐅᑎᔭᐅᓯᒪᓂᖅ ᑕᓯᐅᔭᕐᔪᐊᖅ ᑲᓇᖕᓇᖓᓂ ᖃᑯᖅᑐᑦ ᕿᓚᓗᒐᐃᑦ

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ᐅᓇ ᐅᓂᒃᑳᖅ ᐱᔭᐅᔪᓐᓇᖅᑐᖅ ᐅᑯᖕᓇᖓᑦ

ᖃᐅᔨᓴᖅᑎᒻᒪᕆᑦ ᐅᖃᐅᔾᔪᐃᔨᑦ ᑲᑎᖓᕕᖓ (CSA) ᑯᐸᐃᒃ ᓄᓇᖓᓂ
ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᕕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ

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ᑕᒻᒪᖅᓯᒪᓐᖏᓪᓗᒍ ᓇᓂᑦᑎᓯᖓ ᑖᔅᓱᒧᖓ ᐅᖃᓕᒫᒐᕐᒧᑦ:

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Aussi disponible en français:

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