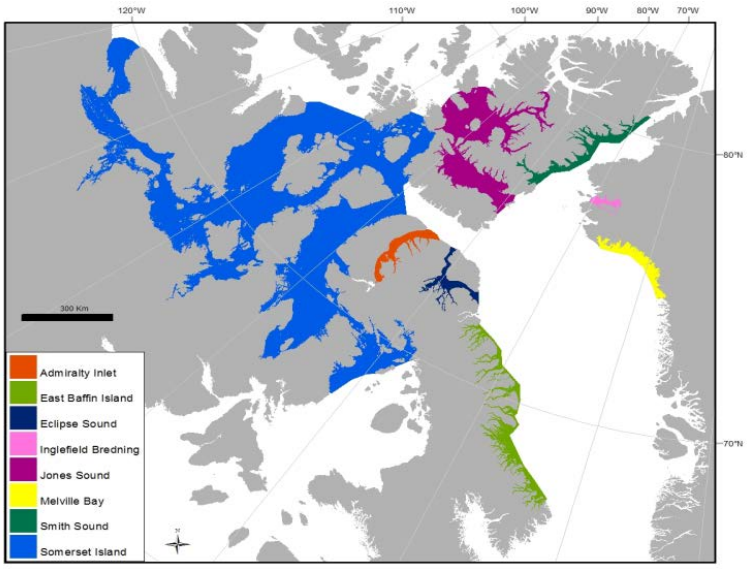
Fisheries and Oceans Canada | Pêches et Océans Canada
Ecosystems and Oceans Science | Sciences des écosystèmes et des océans

ᖃᑎᖅᑕᕐᓂᐊᓕ ᐊᒻᒪ ᐅᑭᐅᖅᑕᖅᑐᓂᖅᑎ
ᐊᓚᖅᑐᖅᓯᒪᓂᖅ

ᑲᓇᑕᒥᓂ ᖃᐅᔨᓴᖅᑎᑦ ᐅᖃᐅᔨᑦᑕᐅᓂᒡᓗᓂ ᐅᖃᐅᔨᑦᑕᕐᓂᖅᑎᑦ ᐅᓂᒃᑳᓕᕐᓂᖅ **2015/046**

ᐊᒥᓱᑎᑎᓂᔅᓚᓂᔅᑲ ᖃᓪᓗᓈᑦᓴᑦ ᑐᑭᓯ ᓇᓪᓕᐅᕆᖅᑕᐅᓯᒪᔪᑦ ᑲᓇᑕᒥᓄ ᐅᑭᐅᖅᑕᖅᑐᓂᔅᓴᓐᓂᒃ 2013–ᒥ

ᖃᓪᓗᓈᖅ ᑐᐃᓪᓕᔪᑦ (ᖃᐅᔨᓴᖅᑎᖅᓚᓐᓂᑦ ᑕᐃᔨᐅᔪᖅ ᐃᐃᒪᖅ (Monodon monoceros) *R. Philips* ᓇ. ᐱᓕᕐ



ᐊᓚᖅᑐᖅᓯᒪᔪᓂᖅ ᑕᑯᑎᑎᕐᓂᔪᓂ 1. ᓄᓇᖓᔪᓂ ᐱᖓᓱᓇᖅᑐᖅᓂᖅ 6–ᓂᖅ ᑲᓇᑕᒥᔨᑕᖅ ᑐᑭᓯᒡ ᐊᐅᔾᔨᒃᑯ ᐃᒪᓕᕐᓂᐊᕐᓇᖅᑐᑦ ᐊᓯᓪᓚᑐ ᒪᓕᒃᖅᓂᖅ 2 ᐊᑯᓂᑎᒥᐅᓂ ᐃᒪᓕᕐᓂᐊᕐᓂᖅᓱᖓᓂ ᐃᓕᓴᕆᔨᐅᓯᒪᔪᓂ ᐃᓕᓴᕐᔪᐅᕐᖑᔪᓂᖅ ᓴᖅᓂᓕᕆᓂᖅᓴᑦ ᐃᒪᓕᖅᓂ ᐱᑕᖅᑎᓂᖅᓂᖅᓂᖅᓂᖅ ᑲᓇᑕᒥᐅᓂ–ᐊᑯᓂᑎᒥᐅᓂᓗ ᑕᒪᐃᖅᓂᖅ ᑲᑎᕐᓯᖅᓂᖅᓂᖅ ᓴᓇᓂᕐᓂᖅᓂᖅᓂᖅ ᐊᐅᓚᑕᐅᓂᖅᓂᖅᓂᖅ ᑐᑭᓯᒡ ᓄᑖᓕᕐᓂᖅ 2013–ᒥ (ᓇᐅᖏᓐᓄᑦ: NAMMCO/SC/21-JCNB/SWG/14-05).

ᑐᐱᓴᕆᑎᑕᐅᔪᖅᓂᐅᑎᓴᑦ:

ᐊᑎᓕ 2013–ᖓᑎᓗᑐᑋ, ᐊᒥᓱᓕᓴᖅᓂᖅ ᖃᖓᓚᕐᓂᖅᓯᒪᓂ ᐃᓴᓴᖅᑕᐅᓚᐅᖏᓚᑦ ᓯᕆᓚᖅᑐᖅᓂᖅ ᐅᓪᓚᕆᓴᐅᓯᒪᓂᖅᓂᖅᓂᖅ ᑲᓇᑕᒥᐅᓂᖅ ᑐᑭᓯᒡ ᐃᓚᐅᖅᓂᖅ ᐃᓚᐅᖅᓂᖅᓂᖅ ᐊᐅᓚᑕᐅᓂᖅᓂᖅᓂᖅ ᐊᑯᓂᑎᒥᐅᓂᖅᓂᖅ ᐃᓚᐅ

ᓇᐅᓴᖅᑕᐅᓯᒪᔨᑦ ᐅᓂᒃᑲᓕᐊᑦ

- ᖃᖅᖢᓚᑕᓴᒃᑯᑦ ᖃᒃᐅᔨᓴᖅᑕᐅᓕᐅᖅᓚᑕ ᐱᖢᓚᑕᔨᖅᑐᑦ 6–ᖢᒍᔨᑦ ᖃᓕᓯᐅᓴᓇᓕᑦ ᑐᐃᓚᖅᑐᓕᓂᖅᖢᑎᑦ ᐊᐅᔪᒃᑯᑦ ᐃᒪᐃᑦ (ᑕᒪᖢᓂ ᑕᐃᔪᐅᓂᐊᖅᑐᑦ ᑐᐃᓚᖅ) ᑲᓇᑕᒥᐅᑦ ᖃᑦᕋᑎᑐᑐᒥ ᐅᑭᐅᖅᑕᖅᑐᑐᖢᓄᓂ ᐋᒥ 2013–ᒥ. ᑕᒪᖢᓇ ᓯᐅᑦᓚᖅᑲᓇᔪᐅᔨᖅ ᓇᔪᖅᑕᐅᓯᒪᓂᖢᓂᓂ ᖃᓄᐃᒍᖅᑐᑐᒥᑕᓂ ᐱᑕᖅᑕᐅᓯᒪᓂᖢᓂᓂ ᖃᓄᐃᓕᐅᕐᓂ ᖃᑕᓕᓚᐃᓂ ᑐᐃᓚᖅ ᐊᑕᐅᓯᖅᑎᑦ, ᐊᓚᒪᓗ ᓯᐅᑦᓚᓇᔪᐅᑦᓗᑎᒃ ᑐᐃᓚᓂᖅᑕᖅᑐᑦ ᐊᐅᓯᐃᑦᑐᑦ ᓂᐅᐸᖅᑕᖢᓚᑕ ᓂᕆᐊᓂ ᐃᒪᖢᓗ ᐊᑕᓯᐅᑕᖢᓂᓂ ᐊᐅᓯᐃᑦᑐᑦ ᓂᐅᐸᖅᑕᓚᖅᑕᐅᑦᓗ ᐊᑕᓯᓂᖅᖢᑎᑦ ᑕᓯᐅᑦᓚᖅᑕᖢᓂᓂ ᐱᓕᕐᓂᖅᖢᑎᑦ. ᑕᒪᑎᒃ ᑲᑎᑦᓗᓂᑦ2 ᑲᓇᑕᐅᑕᐃᑦ ᖃᓄᐃᒍᖅᑎ ᐅᑭᐅᖅᑕᖅᑐᑐᒥ ᑐᐃᓚᖅ ᐊᑕᐅᓯᖅᑎᑦ>ᑦ 141,909 (ᐊᓯᐅᓰᖁᓂᓂᓕᕆᓂᖅᑐᑦ ᑐᐃᓚᖅ ᓇᔪᖅᑕᖢᓂᓂ ᐃᒪᓐᓇᑎᐅᐅᔨᓇᓂᖅᑐᓂᖅ 20–ᓂᒃ 65% ᐳᓴᓐᑎᓄᑦ) ᖃᓕᓯᐅᓴᐃᑦ ᑐᐃᓚᖅᑦ.

- ᒎᒃᓀᐊ ᓄᓴᖅᑕᐅᓕᐅᔪᓂᖅᑎᑦ ᑲᑎᑎᑎᓯᒪᓕᐅᖅᑐᑦ ᒪᕐᕉᓂᒃ ᐊᒥᓯᓂᓗᖢᓂᓂ ᓇᐅᔨᑦᒎᑎᓂᖅᑐᓂᒃ ᖃᒃᐅᔨᓴᕆᔨᐅᑎᓕᐅᖅᑐᓂᒃ ᐱᐅᓯᓇᖅᑐᓂᖅᑐᓂᒃ, ᑲᑎᑎᑎᓯᒪᓕᐅᖅᑐᓂᒃ ᐅᓪᓗᕆᐊᖅᑐᓂᒃ ᓇᐅᔨᑦᒎᑎᓂᖅᑐᓂᒃ ᐃᒃᑐᑦᓴᖅᑕᐅᔨᖅᑐᓂᒃ ᑐᓴᕐᓯᓂᖅᑐᓂᒃ ᐃᓕᓴᕐᓂᖅᑐᓂᒃ ᑕᓪᓕᐊᓂᖅᑐᓂᒃ ᐊᒥᓯᓂᖅᑐᓂᒃ/ᐊᒥᓯᓂᖅᑐᓂᒃ:

  1) ᓇᓂᓂᓂᖅᑐᓂᒃ ᐅᓪᓚᓯᒋᓂᖅᑐᓂᒃ ᐃᔨᐊᖅᓯᓯᒪᓗᑎᒃ ᐊᑐᖅᑕᐅᑕᐅᖅᑐᑦ ᓇᓕᐅᑦᑕᑕᐅᓂᖅᑐᓂᓄᑦ ᖃᓄᖅ ᓂᑕᐸᑎᕐᓂᒪᖅᑕ ᖃᒃᐅᔨᓴᐸᑎᓕᓂᓂᒃ ᑲᓂᓂᖅᓯᓂᖅᑐᓂᒃ; ᐊᓚᒪᓗ

  2) ᓇᓗᓇᐃᒃᑯᑎᖅᑕᐅᓯᒪᔨᑦ ᐱᔨᐅᒃᑲᓂᑦᑎᓂᖅᑐᓂᒃ ᐅᓪᓚᓯᓂᓕᓂᒃ ᐄᒃᑐᑎᖅᑕᐅᖅᑎᑦᑎᓂᖅᓯᐸᑎᒃ ᓇᓕᐅᑦᑕᑕᐅᓕᐅᖅᑐᓂᖅᑐᓂᒃ ᑐᖅᓯᒪᓕᐅᖅᑐᓂᒃ ᑕᓯᐅᑦᓚᖅᑕᖢᓂᓂ ᐊᓯᐊᓂᖅᓱᖅᓯᒪᓕᓂᖅᓯᓂᖅᑐᓂᒃ ᓇᓗᓇᐃᒃᑯᑎᖅᑕᐅᖅᑐᓂᒃ2ᕐᕕᐅᓕᐅᖅᑕᖢᓂᓂᖅᑐᓂᒃ.

- ᑕᒪᑎᒃ ᑲᑎᓕᓂᑦ ᐱᑕᖅᑎᓂᖅᑐᑦ ᓇᓕᐅᑦᑕᑕᐅᑉᑦ ᐃᓕᖅᑕᐅᑎᕐᒥᔨᑦ ᑕᓯᐊᓂᖅᑎᑦᑕᓕᐅᖅᑎᓂᖅᑐᓂᒃ ᖃᒃᐅᓇᓕᓂᖅᓯᓇᓕᐅᖅᑎᑦᑕᐅᖅᑐᓂᒃ (ᑕᓯᐊᓂᖅᑎᑦᑕᐅᓕᐅᖅᑐᓂᒃ ᑐᖓᒪᐅᖅᑎᑦᑕᓕᐅᖅᑐᓂᖅᖢᓂᓂᒃ ᐱᑕᖅᑐᑦᑎᓂᖅᑐᓂᒃ ᐱᓕᕐᓂᖅᖢᑎᑦ ᑕᓯᐊᓂᖅᑎᑦᑕᓕᐅᖅᑎᓂᖅᑐᓂᒃ ᐃᓕᖅᑕᐅᑎᕐᒥᔨᑦᑐᑦ ᑕᓯᐊᓂᖅᑎᑦᑕᓕᐅᖅᑎᓂᖅᑐᓂᒃ ᐱᓕᕐᓂᖅᖢᑎᑦ ᑕᓯᐊᓂᖅᑎᑦᑕᓕᐅᖅᑎᓂᖅᑐᓂᒃ ᐱᓕᕐᓂᖅᖢᑎᑦ ᑕᓯᐊᓂᖅᑎᑦᑕᓕᐅᖅᑎᓂᖅᑐᓂᒃ ᐃᓕᖅᑕᐅᑎᕐᒥᔨᑦᑐ

ᑕᐃᖅᑯᐊᓴᖅᓇᐅᔨᓴᑎᖅ, ᑕᐃᖅᑯᐊ ᑕᒪᕐᒥᖅ ᐱᑕᖅᑕᐅᔪᖅᓯᑎᓂᖅᓯᖅᓄᑦ ᐊᑎᓯᓂᖅᑕ ᑕᐃᒪᓕᐃᖅᓇᖅ ᐃᓕᓴᖅᑕᐅᓯᒪᔪᖅᓇᐅᔭᖅᑎᑦᓯᑦ. ᑕᒪᕐᒥᖅ ᐱᑕᖅᑕᐅᔪᖅᓇᕐᓂᖅᑕ ᑐᓴᕆᔨᓂᖅ ᑎᑎᕐᓂᑦ 542–ᖃᐅᓇᖅᑐᑦ ᑐᓴᕆᔨᓂᖅ.

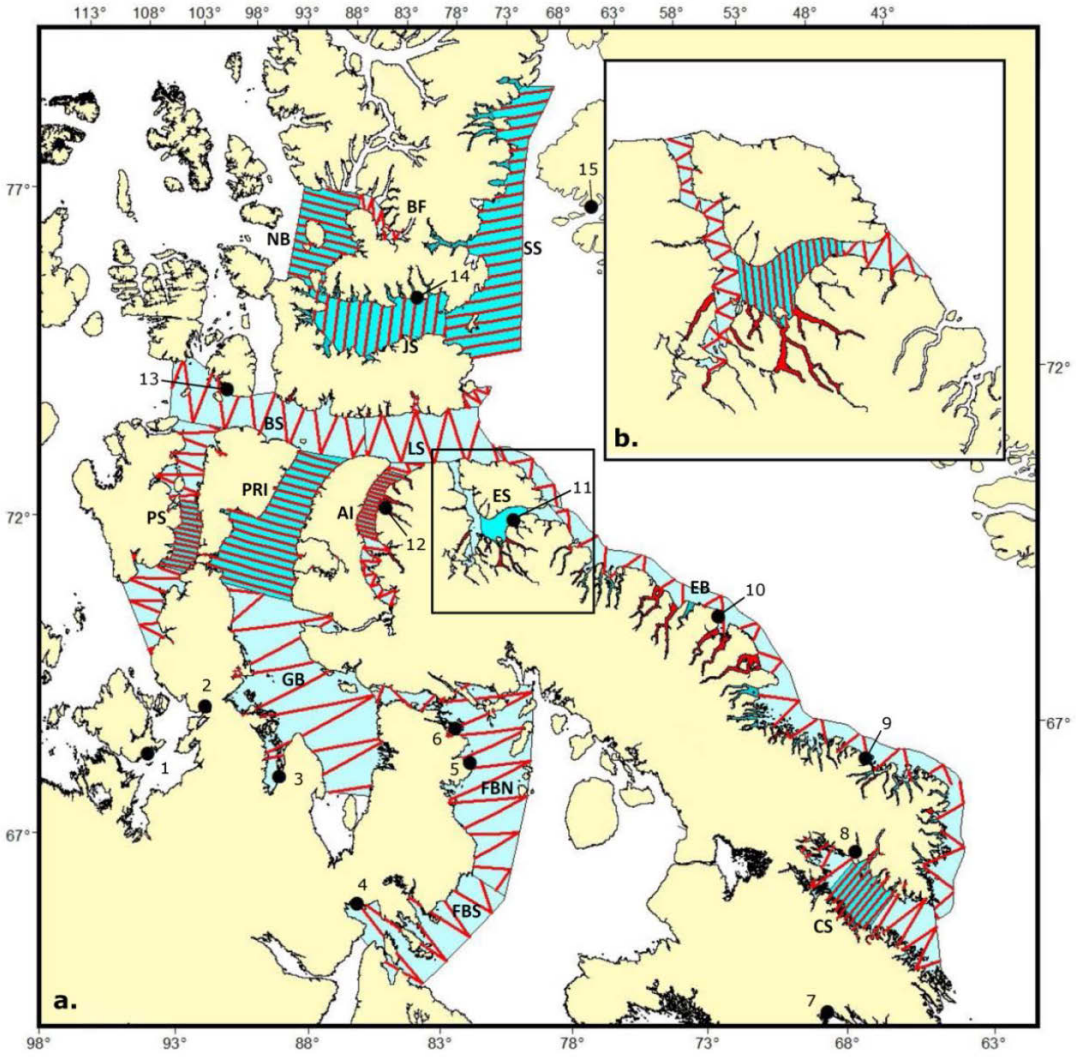
- ᐱᓕᐅᔪᖅᓇᕐᓂᖅᑕ ᑐᓴᕆᔨᓂᖅ ᓄᓇᕗᖅᓄᑦ ᐱᐅᓯᖅᑎᐊᖅᑎᕐᓂᐊᖅᑐᑦ ᓇᓴᖅᑕᐅᖅᑕᐅᖅᑕᕐᑎᑦᓯᑕᐃᓐᓇᖅ ᐃᓐᓇᓂᖅᑯᑦ ᐊᖏᕐᕕᒃᑐᖅ ᐱᑕᖅᑕᐅᖅᑎᑦᓯᓂᖅᑕᐅᖅᑐᖅ ᐊᓯᖏᓂᖅᑕᐅᖅᑐᖅ ᐊᓯᖏᓐᓂᑦᓯ

ᖃᐅᔨᓴᖅᑕᐅᓕᐅᖅᑐᑦ ᑐᑭᓯᓂᐊᑭᑕᐅᓂᖏᑦ

ᐊᑐᖅᑕᐅᓕᐅᖅᑐᑦ ᖃᐅᔨᓴᕐᓯᓚᑦ

ᓄᓴᖅᑕᐅᓂᖅᓯᑦ ᐋᖁᑭᐅᒪᓕᐅᖅᑐᑦ ᑕᒪᐸᖅᑕᐅᔪᓕᒡᓗᑎᒃ ᐊᐅᖃᓴᓂᑦ ᓇᔪᖅᑕᐅᔫᓂᖅᓯᑦ ᐃᒪᐃᑦ ᑐᐃᓐᓇᓐᓂᑦ ᖃᓄᐊᓚᖏᓐᓂᑦ ᑲᓇᑕᒥᐅᑦ ᖃᓄᐅᖅᑕᖅᑐᑦ (ᐊᐃᓴᖅᑐᓂᒪᔪᓂᒃ ᑕᓇᑎᑎᖃᔪᑦ 1), ᐊᑕᐅᑎᒃᓂᑦ (Doniol-Valcroze et al. 2015b). ᑐᐃᓐᓕᑦ ᐃᓱᒪᑎᐅᓱᒪᖏᒪᓕᒡᒪ ᐅᐸᖅᑕᐃᓕᓴᐅᓚᓯᖓᓂᖅ ᐊᐅᖃᓴᓂᑦ. ᑭᓱᐊᓂᓕᐅᖅ, ᐃᓐᓇᔭᖅ ᐃᓱᒪᓇᖅᓱᓕᓕᐅᖅᑎᔪᖅ ᐃᓕᓂᓂᑦ ᐊᒥᓚᖓᑎᑐᓗᒍᓗᓂᒃ ᓂᑭᑦᖅᑕᖅᑎᔪᑦ ᓇᓂᕐᓂᐊᑎᓕᓐᓂᒃᑕᓂᒥᒃᓴᒥᓂᒃ (Dietz et al. 2001, Heide-Jørgensen et al. 2002, Watt et al. 2012). ᑕᐃᒪᐃᓇᐃᓂᖅᓱᓚᓂᑦ, ᓇᔪᓚᕆᐅᕐᓂᖅᑐᑦ ᑕᒪᖅᑐ ᓄᓴᖅᑕᐅᐅᖅᑐᖅᖢᓕᐅᕐᓂᖅᑐᑦ ᐱᖓᓱᓇᖅᑐᑦ 6–ᖓᔪᑦ ᐊᑕᐅᓇᖅᑐᑦ ᑕᖁᐅᓕᐅᖅᑐᒥ, ᐊᑐᖅᓯᒪᓂᒃ ᐱᖓᓱᓇᓂᒃ 3 ᖃᖓᑕᓇᔾᔪᓂᒃ ᒪᕐᑐᐃᖅᑕᖅᑕᐅᓗᑎᒃ ᓄᓴᖅᑕᐅᔾᔪᑎᓕᒡᓗ. ᓇᓱᓕᓂᐅᑎᑕᐅᓕᐅᖅᑐᑦ ᐊᐅᓇᐃᑦᑐᑦ ᖃᖁᕐᑕᕐᓕᒡ ᓂᕆᐊᓂ ᐃᒪᐃᑦ, ᐊᑯᑭᐅᑐᖅᑕᕐᓕᐅᑦᓗ ᐊᑯᓂᒃᓴᓂ ᑕᓇᐅᔾᔨᔪᖏᓐ, ᐊᓪᓚᒍ ᑯᓚᓄᔪᑦ ᐅᓇᖅᓱᓚᓂ ᐃᒪᓐᓕᒡ ᐱᔪᓇᑕᐅᓗᑎᒃ ᓇᓱᓂᐊᒍᑦ ᖃᐅᔨᓴᖅᑐᐃᓐᓇᖅᑐᑦ ᐃᓐᓇᐃᓐᓇᖅᑐᑦ ᐃᓕᓴᕐᓂᐊᓕᖅᑐᑦ, ᐊᓪᓚᒍ ᐊᑯᑭᐅᑐᖅᑕᕐᓕᐅᑦᓗ ᖃᖁᕐᑕᕐᓕᒡ ᓂᕆᐊᓂ ᐃᒪᐃᑦ, ᐊᓪᓚᒍ ᐊᑯᑭᐅᑐᖅᑕᕐᓕᐅᑦᓗ ᑯᓚᓄᔪᑦ ᐅᓇᖅᓱᓚᓂ ᐃᒪᓐᓕᒡ ᐊᒥᐅᓂᖅᓯᑦᓗ ᐊᒥᓚᖓᑎᑐᓗᒍᓗᓂᒃ 17–ᓂᑦ ᐊᑎᖃᔪᓂᑦ ᖃᐅᔨᓴᖅᑕᐅᓕᐅᕐᓇᓂᖅᓯᑦ.

ᐊᑐᓂ ᑕᐃᔨᑯᐊ ᐱᑕᖃᑦᓯ ᖃᐅᔨᓴᓪᓕᐊᑎᐅᓴᖅᓯᒪᓕᖃᓕᓴᐅᖅᑐᑦ (ᐊᐃᓴᖅᑐᓂᒪᔪᓂᒃ 2.), ᑐᖓᓚᐃᖅᑎᖅᓯᒪᒃ ᓇᐅᔨᑯᑦ ᑭᓚᓂᖃᖅᓂᖅᓴᓂᒃ ᐊᓪᓚᒍ ᐱᑕᖃᖅᑎᑎᓂᐊᕐᓇᖅᑐᖓᓂᒃ ᑐᐃᓐᓇᓐᓂᑦ ᓯᕗᓪᓕᖅᑐᑦ ᓄᓴᖅᑕᐅᓂᖅᑎᖃᒋᓐᓂᖅᓴᓂᒃ ᐊᐃᒍᓐᓇᖅᑐᑦ. ᑕᐃᔨᑯᐊ ᖃᐅᔨᓴᓪᓕᐊᑎᐅᓴᖅᑕᐃᓕ ᐱᑕᖃᖅᑎᑎᖃᒋᓐᓂᖅᓴᓂᑦ (ᐊᐃᓴᖅᑐᓂᒪᔪᓂᒃ 2.). ᓴᓂᓕᓵᖅᑐᓴᖅᓂᒃ ᑐᑭᒪᐊᐅᑐᓂᒃ ᓴᓂᒪᑦᓗᒃᑐᓂ ᐊᐃᓴᖅᑐᐃᓕᓕᐅᕐᓇᓂᖅᓯᑦ ᐊᓪᓚᒍ ᐅᑕᖅᑕᕐᓴᖅᓯᒪᔪᓂᒃ ᑐᑭᒪᑦ, ᓴᓂᒪᑦ, ᑐᑭᒪᔪᓗ ᑕᐃᒧᒃ ᑲᔪᓯᓯᒪᔪᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓂᖅᓯᒪᓕᐅᖅᑐᑦ ᕿᑭᖅᑎᐅᓂᖅᓴᐃᓐᓇᖅᑐᑦ (ᓴᓂᓕᓵᖅᑐᑦ ᑐᑭᒪᐊᐅᑐᓂᒃ ᓴᓂᒪᔪᓂᒃ) ᐊᓪᓚᒍ ᐊᖏᔪᓂᒃ ᐃᒪᐅᓂᖏᓂᒃ ᐊᒥᓯᓂᐊᓯᓕᕆᐅᖅᑎᑦᑎᓂᖅᑐᑦ ᑐᑭᒪᐊᐅᑐᓂᒃ ᓴᓂᒪᔪᓂᒃ ᓴᓂᒪᑦᓗᒃᑐᓂᒃ ᐊᐃᓴᖅᑐᐃᓐᓇᖅᑐᑦ ᐊᓪᓚᒍ ᐅᑕᖅᑕᕐᓴᖅᓯᒪᓕᒡᓗᑎᒃ ᑐᑭᒪᑦ, ᓴᓂᒪᑦ, ᑐᑭᒪᓕᒡᓗ ᑕᐃᒪᐃᒃ ᑲᔪᓯᓯᒪᔪᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓂᖅᓯᒪᓂᖅᓯᒪᓕᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖅᓯᒪᓂᖅᓯᒪᓕᖅᑐᑦ ᐊᑐᖅᑕᐅᓕᐅᖅᑐᑦ ᐊᓪᓚᒍ ᐅᑕᖅᑕᕐᓴᖅᓯᒪᓕᒡᓗᑎᒃ ᑐᑭᒪᑦ, ᓴᓂᒪᑦ, ᑐᑭᒪᓕᒡᓗ ᑕᐃᒪᐃᒃ ᑲᔪᓯᓯᒪᔪᓂᒃ



*ᐊᖏᖅᑐᖅᓯᒪᔪᓂᖅ 2. a.) ᓄᓇᕗᑦᖢ ᐃᒪᐃᓪᓗ <ᖃᓇᖅᑕᐅᓯᒪᔪᓂ ᖃᐅᔨᓴᖏᖅᑐᖅᓂᕐᒥᓂᖅ (ᑐᕌᓯᖅᑐᓪᓗᓂ ᐊᔪᓐᓇᕐᓂ), ᐊᖏᖅᑐᖅᓯᒪᔪᓂ ᓇᐅᑭᐅᖅᑕᕐᓂᖅ ᖃᐅᔨᒪᔭᕐᑕᐅᓂᕐᓂ (ᐊᐅᓚᓕᖅᑐᓂ). **AI**: ᓴᓇᓂᕐᑎᐅᓪᓚᑦ ᑐᓄᓇᓕᒫᓂ **BF:** ᐲᐊᐅᒪᓇᓇᖅ ᑲᓂᖅᓯᐊᐅᓂ. **BS:** ᑐᖏᐊᒪᓂᖓᓗ **CS:** <ᓂᖅᑭᑦ ᐃᓂᖏᓂ. **EB**: ᑲᓇᖅᓄᓂ ᖃᓄᖅᑕᓪᓚᑦ. **ES:** ᑕᓯᐅᔭᖅ ᐃᓇᓗᓕᒃ ᑲᓂᖅᓯᐊᖅᑎᖅᓂᓂ. **FBN:** ᓴᓂᕆᔭᖓᓂᐅᑦ ᓯᑯᓕᖓᑕᓪᓚᑦ ᑕᓚᐅᖅᓂᓂ. **FBS:** ᓴᓂᕆᔭᖓᓂᐅᑦ ᓯᑯᓕᖓᑕᓪᓚᑦ ᑕᓚᐅᖅᓂᒃ ᓂᒋᖅᑕᕐᓯᐊᓂ. **GB:** ᖃᓄᖅᑎᐅᓂ ᐃᓄᕆᔨᑦ ᐃᓚᖅᓱᓪᓗᑎᒃ. **JS:** ᐊᐅᓯᐃᑐᑦ ᖃᓄᖅᑕᖅᓯᒪᓂ ᓂᒋᐊᓂ ᐃᓚᖅᓂᓂ. **LS:** ᑕᓪᓕᓇᑎᐅᑦ ᐃᓄᕆᔨᖅ. **NB:** ᐊᐅᓯᐃᑐᑦ ᐃᑎᓕᐊᒃᑕ ᑕᓚᐅᖅᓄᖓ; **PRI:** ᑯᑎᓭᑦ ᖃᓄᖅᑕᖅᓯᒪᓂᒃ ᑲᖏᖅᑐᖅᓄᓂᖅ. **PS:** ᐱᐅᓪ–ᖃᓂᕆᖅᑕᐅᓪᑦ ᖃᑲᓇᑎᑐᑦ ᑕᓚᐅᖅᓄᓂᓂ– *Peel Sound–ᒥ*. **SS**: ᐊᑯᓕᑐᑎᐅᑦ ᖃᓄᖅᑕᓪᓚᖅᑎᐅᓪᓗ ᐊᑯᓂᖅᓄᓂᓂ ᑕᓯᐅᔭᕐᕕᐊᖅ. ᓄᓇᓕᓪ (ᖃᓄᓂᖅᑐᑦ): 1. ᐅᖅᓯᓂᖅᑐᖅ; 2. ᑕᓗᕐᕕᐊᑦ; 3. ᑯᒍᕐᓂᖅ; 4. ᓇᐅᔭᑦ; 5. ᓴᓂᕆᔭᖅ; 6. ᐃᓚᓕᓂᖅ; 7. ᐃᖅᑲᓗᐃᑦ; 8. <ᓂᓂᖅᑐᖅ; 9. ᖃᓄᖅᑕᕐᕕᐊᖅ; 10. ᑲᖏᖅᑐᑎᒪᖅ; 11. ᒥᕆᒪᒋᓕᓂᖅ; 12. ᐃᑦᐱᐊᕐᕕᖅ; 13. ᖃᐅᔨᒪᔭᕐᑕᐅᓂᕐᓂᖅ; 14. ᐊᐅᓯᐃᑐᑦ; 15. ᖃᑲᓇᖅ (ᐊᑯᓂᑐᐃᓪᓕᓂᖅᑕᓪᓚᑦ ᓄᓇᖅᑎᑦ). b.) ᐃᖏᑲᒥᕐᕕᖅ : ᑕᓯᐅᔭᖅ ᐃᓇᓗᓕᒃ ᑲᖏᖅᑐᖅᓯᐊᕐᕕᐊᖅᓄᓂᖅ ᖃᐅᔨᓴᖏᖅᑐᖅᓯᒪᓂᖅᑎᖅᓂᒃ (ᐊᓐᓇᓗᐅᔭᓕᕐᕕᖅ).*

ᑕᐅᑐᕆᓭᓴᖅᑕᐅᓴᖅᑎᑦᑕᓪᓕᐅᓴᖅᑐᑦ ᓂᐱᓕᐅᓕᓴᖅᑎᑦᑕᓪᓕᐅᓴᖅᑐᑦ ᑕᑯᔪᒥᓂᖅ ᑎᐃᒥᐊᓴᖅᑕᖏᓐᓄᓕᓂ ᓂᐱᓕᐅᐅᖃᑎᓕᓂ ᐅᓴᓴᖅᑎᑦᑕᓴᓯᒪᓄᖅ ᓴᖅᓴᔪᒧᐊᓴᖅᑎᓪᓗᑎᑦ ᑲᓚᓪᓗ ᓴᖅᓴᔪᒧᐊᓴᖅᑎᓪᓗᑎᑦᑐᐃᒍ ᓴᖅᐅᓴᓕᐅᑦᑕᓴᖅᑐᖅᓂᒃ ᑐᐃᓪᓚᑦ ᓴᖅᓴᔪᒧᐊᓴᖅᑎᓪᓗᑎᑦᑐᐃᒍ ᑕᑯᔪᒥᓂᖅ ᑕᐃᓴᖅᑐᑦ ᐊᑕᐅᓯᐅᓴᖅᑐᖅᓂᒃ ᐊᓐᓇᐃᓐᓇᕐᓂᖅᑐᖅᓂᒃ ᑕᑯᔪᒥᓂᖅ ᐊᑐᐅᓯᐅᓴᖅᑐᖅᓂᒃᑐᐃᒍ ᓴᖅᐅᓴᓕᐅᑦᑕᓴᖅᑐᖅᓂᒃ ᐊᑐᐅᓯᐅᓴᖅᑐᖅᓂᒃ ᑕᑯᔪᒥᓂᖅ ᐊᑕᐅᓯᐅᓴᖅᑐᖅᓂᒃ ᐊᓐᓇᐃᓐᓇᕐᓂᖅᑐᖅᓂᒃ

2) ᓴᓂᒧᑦᓗ ᑐᑭᒧᑦᓗ ᓴᖅᓂᖏᓪᓗᖅ ᐅᖏᓯᖅᓂᕆᑐᖅᑎᑎᑕᓂᖅ ᑕᐃᓴᐅᐃᖅᑎᖅᓂᖅ; ᐊᓚᒪᓗ

3) ᐊᓯᖅᑎᓂᖅ ᐊᓴᐸᖅᑎᓂᖅᑎᓂᖅ (ᓇᒧᑦ ᐃᖅᑎᕆᓂᖅᑎᓂᖅ, ᐱᑕᕆᔨᓂᖅ ᐱᐊᕆᖅᑎᓂ, ᑐᐃᓴᕆᔨᓂᖅᑕᓗᒍ).

ᐃᓂᒋᔭᖅᑎᑦ ᐊᓚᒪᓗ ᕿᑎᓕᑎᓯᒪᑎᑕᓂᖏᑦ ᕆᖏᖏᑕᖅᑐᑦ ᓂᐱᑕᐅᖅᑕᐅᓂᓕᐊᖅᑎᓂᓇᓕᐅᖅᑐᖅ ᒪᕐᑕᑦᒪᒃ ᓯᕆᓯᐅᓂᖏᖅᑕᐅᔨᖅᓂᒃ ᐊᓂᔪᖅᑐᓂᒃ ᕆᐅᐅᖅᑐᓂᒃ.

ᕆᐅᐅᔨᖅᑕᐅᓕᐅᖅᑐᓂᒃ ᑐᐱᓯᔭᐅᓕᐅᖅᑐᑦ

ᐅᖏᓪᓯᓂᖅᑎᑦ ᐅᐸᑐᕋᐅᑕᐅᓕᐅᖅᑐᑦ ᓇᓕᐅᑦᖅᑕᐅᓂᖅᑎᓇᓂ ᐊᒥᓯᐱᑎᓂᖅᑎᑦ ᑐᐃᓕᑦ ᐃᓗᐊᓂ ᖃᐅᐅᔨᖅᑕᐅᓕᐅᖅᑐᑦ. ᑕᐃᒃᑯᐊ ᐊᑐᖅᑕᐅᓕᐅᖅᑐᑦ ᐃᓯᒪᓇᖏᒪᑦ ᐱᑕᖅᑎᓂᐊᖅᑐᐃᔨᖅᑎᓂᖅᑎᓂᒃᓴᖅ ᖃᐅᐅᔨᓇᐃᐅᔪᓂᖅᓄᑦ ᐱᑕᖅᑎᓂᖅᑎᓂᒃᓴᖅ ᑐᐃᓕᓂᒃ ᐅᖏᓪᓯᓂᖅᑎᖅᑎᑦᑎᓕᐅᖅᑕᐅᔪᖅ ᐊᑯᓂᖅᑎᓂᓂ. ᑭᓯᐊᓂᐅᑦᖅ, ᑕᐅᑐᖅᑎᑕᓇᐅᖅᑐᑦ ᑐᖏᓚᐅᑎᓕᓂᖅᑎᓂᒃ ᑐᐃᓕᓂᒃ ᐱᑕᖅᑎᖅᑐᑦ >ᐃᔪᓂᒃ. ᑕᐃᒪᒪᓐᓇᖅᓄᑦ, ᑕᐅᑐᖅᑕᐅᔪᓐᓇᖅᑎᓂᖅᑎᓂᒃ ᐊᖓᔪᖅᓯᖅᑎᓂᓂ ᐃᓗᐊᓂᒋᖅᑎᑕᐅᓯᖅᑎᖅᑕᐅᓕᐅᖅᑐᑦ (Marsh and Sinclair 1989). ᐅᓗᓇᐃᓐᑯᑎᖅᑕᐅᓂᖅᑎᑦ ᐱᓕᐅᖅᑲᓐᓂᑕᖅᑲᓂᖅᑎᑎᒃ ᐊᑐᖅᑕᐅᓕᐅᕐᒥᔪᑦ ᐊᓴᐸᖅᑐᑐᒃᓴ ᑕᑯᔪᓐᓇᖅᑐᖅᓯᓂ ᒪᕐᖓᓂᑦ ᑕᐅᑐᕐᓂᓇᖅᑎᑕᐅᖅᑎᖅᑕᐅᓕᐅᖅᑐᑦ ᑕᐃᑲᓂᓇᖅᑐᑦ ᑕᐃᒪᓐᓇᖅᑐᑦ ᖃᐅᔨᓴᓇᖅᑐᑦ ᖃᐅᔨᓴᓇᖅᑐᑦ ᑕᐃᒪᓐ

ᑕᐃᒃᓴᐅᑎᐊᖏᓐᓇᕐᓂᑎᑦᓴᐃᓗ ᐃᓕᓴᕆᐅᑐᐃᓇᖅᑕᕋᓚᐅᖅᑐᑦ ᑐᓴᓪᓕᑦ ᑕᐃᒃᓴᐅᔪᓇᖏᓂᖅᓯᓂᖅᑎᑦ ᐊᑕᐅᓕᓵᖅᒥ 1 ᒫᑕᒥᑲ ᖃᐅᓐᓴᓂᖅ ᐅᖏᓕᓂᖅᓂᓪᓕᓪ. ᑐᖅᓴᐊᐅᓪᓴᑎᑲᑎᖅ ᖃᐅᐅᔾᔨᐅᓚᐅᖅᑐᑦ 24-ᖃᒍᓚᐅᖅᑐᑐᖅ ᑐᓴᓕᖅᓂᖅ ᐃᓕᓴᕐᓇᖅ ᐃᓚᓕᕐᓂᖅᑐᖅ ᖃᐃᓕᒍᖏᑕᐅᓯᒪᔪᓂᑦ ᐃᓚᓕᑕᓚᐅᐅᔪᓂᖅ ᖃᐅᓕᕆᖏᖅᓂᐅᓂ ᓄᓇᓪᓕᐅᑦ ᐃᓚᐅᑕᓚᖅᑐᖅᓂᑦ ᐊᑐᓕᓕᓕᖏᓐᓂ ᒥᑎᑕᓚᓕᖅᑐᖅ ᐊᑎᓂᓯᒪᖅ ᐊᑎᓂᓯᑲᖅ 2009–ᒥᖅ 2013–ᓕᑦ, ᑕᐃᐅᑯᐊ ᑐᐃᓪᓕᓪ ᐊᑯᓂᐅᑎᓂᖅᑐᖅ ᐃᓚᕐᓇᑎᑦ 31.4 ± 1.1% ᐳᔪᐅᑎᓂᖅ ᑕᐃᓕᓂᕆᔨᖅᑐᓕᐅᖅᑐᑦ ᐳᐃᓂᒪᖏᓚᖅ ᖃᐅᓂᓂᖃᖅᑎᑕᐅᔪᑲᒃ ᒪᕆᐧᒐᓂᖅ 2 ᒥᑦᓂᖅ ᖃᐅᓚᓂᖅ ᐃᓚᐅᑦ, ᐊᓚᒪᓗ ᐃᓚᓐᓇᑎᑦ 20.4 ± 0.8% ᐊᑕᓂᓐᓇᕆᑲ 1 ᒫᑕᒥᑲ ᐅᖏᓂᓂᓪᓕᑲ ᐳᐃᓂᒪᖏᐅᑦ ᐃᓚᐅᑦ ᖃᐅᓚᓂᖅ. (Watt et al. 2015).

ᐃᓕᓐᓄᐧᖏᐅᓂᒪᓐᓇᕐᓂᖅᓂᓂᖅ ᐃᓂᒪᕆᐅᐅᓗᑎᖅ 7(PBR–ᖏᓂᕋᑕᖅᐅᔪᓂᖅ) ᐱᐅᓂᓴᐅᑦᓗᑎᖅ (Wade 1998), ᐋᖅᑭᒪᐊᖅᑕᐅᖅᓱᑕᓕᐅᑦᑎᔪᑦ ᑕᐃᒃᑯᓂᖏᓐ ᐃᓕᓱᖅᓂᑎᖅ ᐊᖏᔪᓇᓂᕐᑕᐅᓂᓕᔪᖏᓐᓄᓕᐊᓂᖅ ᕿᑐᐃᐅᓂᓕᐊᓂᖅ (ᓂᔪᓗ ᐅᒪᔪᐃᑦ ᐱᑕᖅᑕᐅᓂᒪᓚᐊᖅᓂᑎᖅ ᕿᑐᐃᐅᓂᖅ), ᐊᑐᖅᑕᐅᖅᓱᑕᓕᐅᖅᑐᑦ ᐅᓴᖅᑕᐅᓂᖏᓐᓄᓐᓄᑦ ᐊᑐᓕᔪᐊᓕᐊᑦ ᑲᑎᓕᑕᓗᑎᑦ ᓄᑎᓕᑕᐅᑦ ᓄᓇᓕᖅᑕᐅᔪᓐᓇᖅᑐᖅ:

$$\text{ᑲᑎᓗᑐᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᖅ ᖃᓄᖏᑦ } TALC = \frac{\text{ᐃᓕ ᖃᓚᐃᐃᐅᓂᒪᖏᓐᓄᓕᐊᓂᖅ } PBR}{\text{ᐊᖏᔪᓐᓇᕆᑕᐅᓂᒪᔪᑦ ᕿᑐᐃᐅᓂᖅᓱᑕᓕᐅᖅᑐᖏᓐᓄᑦ } LRC}$$

ᖃᑲᖓᑐᐃᓐᓇ ᐃᓚᐃᑕᖓᓚᖏᓂᖅᓄᑦ,

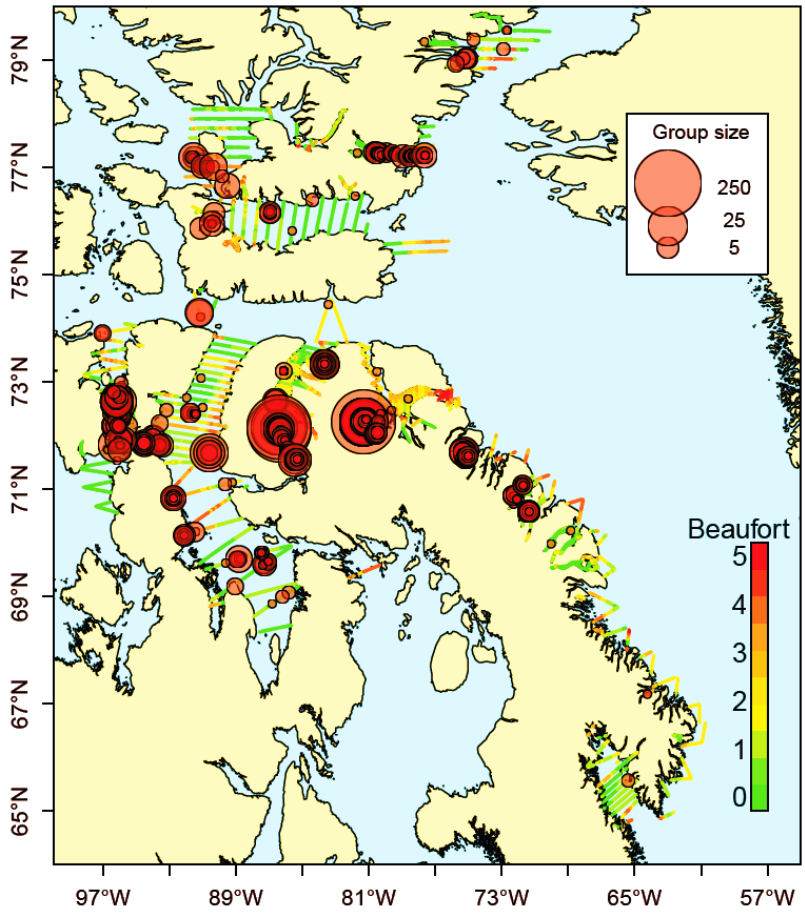
$$PBR \text{ ᐃᓕ ᖃᓚᐃᐃᐅᓂᒪᖏᓐᓄᑦ} = 0.5 \times R_{\text{ᐊᒥᓂᓄᖅᓱᑦ}} \times N_{\text{ᐊᒥᓂᓴᓄᖅᓱᑦ}} \times F_r$$

ᐊᖏᔪᓐᓇᕆᑕᐅᓂᒪᔪᓂᖅ ᕿᑐᐃᐅᓂᖅᑕᐅᓂᒪᓂᖅ ᐋᖅᑭᒪᐊᖅᑕᐅᓂᒪᔪᓂᑦ (LRC-ᖏᓂᑦ) ᓇᓕᒧᑎᓕᐅᖅᑕᖏᓂᑦ ᐃᓚᖅᑕᐅᑎᖅ 1.28 (ᐊᑐᖅᑕᐅᖅᖏᓐᓇᓚᖅᑲᐅᒃ ᑕᓪᓚᖅᓂᒪᑎᑎᓕᖅᓇᓚᖅᓂᑎᖅᖅ, SE=0.15, Richard 2008). $R_{\text{ᐊᒥᓂᓄᖅᓱᒃᑐᓂᖏᓂ}}$ ᐊᖏᓂᓄᖅᓱᒃᑐᓂᖏᓂᑦ ᐊᒥᓂᔅᓯᐊᖅᑕᐅᓂᒪᓕᖅᓄᑦ ᐅᓚᐃᑦ ᐋᖅᑭᒃᑕᐅᓂᒪᓕᓕᐅᖅᑐᑦ ᐃᓚᖅᑕᐅᑎᖅ 0.04 (ᐊᑐᖅᑕᐅᖅᖏᓐᓇᖅᑐᑦ ᑕᓪᓕᐅᖅᑎᑕᓕᓂᑦ ᓴᓴᐅᑎᖅᑲᖅᑎᑕᐅᑕᐅᓂᑦ ᖃᐅᔨᓚᐅᖏᓐᓂᑕᑎᓪᓗᑎᑦ, Wade 1998). $N_{\text{ᒥᓂᖅᓱᒃᑐᑎᑕᐅᓂᖏᓚ}}$ ᐋᖅᑭᐅᓚᐅᖅᓯᖅ 20–ᑎᓴᐅᔪᓕᖅ ᐳᔪᓐᓇᖅᑎᓂᖅᓴᖅ ᒪᓕᖅᑐᓂᖅ ᖃᓄᐃᓕᖅᓂᖏᓐᓇᖅᑐᖅ ᓇᓴᐃᖏᓐᓇᖅᑐᖅ ᓇᓗᓇᐃᖅᑯᓕᓪᓕ N–ᖏᓚᓪᓕᑐᓂᖅ. ᐊᒥᓂᔅᓴᖅ<7ᓕᐊᑎᑎᓂᖅᓂᖏᓐᓇᓂᑦ ᑐᐃᓪᓕᑦ ᓇᓗᓇᐃᖅᑯᑕᖃᖅᑐᓂᑦ (F_r)–ᒥᖅ ᐋᖅᑭᐅᓚᐅᖅᓯᐅᑎᖅᑐᖅ ᐃᓚᖅᑕᐅᑎᖅ 0.5 ᑕᐅᖓᓂ ᐊᐅᓂᐃᑦᑐᑦ ᖃᑎᖅᑭᑕᖏᓚᒃ ᓂᒋᐊᓂ ᐃᓚᖏᓚᓪᓕᑐᓂᖅ ᐊᓚᒪᓗ ᐊᑯᖅᑐᑐᒥᑦ ᖃᑎᖅᑭᒋᓗᖏᓪᓗᑎᓯᓗ ᐊᑯᓂᖅᓄᖏᓚ ᑕᓯᐅᓴᖅᔪᐊᖏᓚᓂᑐᓂᖅ ᑐᓴᓪᓕᑦ (ᓴᓴᖅᑕᐅᓴᖅᑕᐅᓯᓗᑎᓚᓂᖅ ᓇᓗᓇᓂᖅᓄᖏᓚ ᐃᓚᖅᑕᐅᑎᖅ ᐊᑎᓪᓗ ᑐᐃᓪᓕᑦ ᓇᓗ ᓄᐧᐊᐧᑦᑕᓕᐊᓂᖅᓂᑦ) ᐊᓚᒪᓗ ᓴᓴᐅᑎᖅᑲᖅᑎᑕᐅᓂᖅᓂᑦ 1.0–ᒥᖅ ᐊᓯᖏᓐᓂᖅ ᑐᐃᓚᖅᑕᖅᑲᓂᖅᓂᖏᓐᓂᖅ ᐃᓚᖅᑐᑦ (ᐊᑐᖅᑕᐅᑎᓴᖏᓂᖅᓚᓄᑦ ᑕᓚᐅᓐ ᓴᓴᐅᑦ ᐊᑐᖅᑕᐅᑎᐅᒃᑎᑦ ᐃᓂᒪᓕᐅᖅᑐᓄᑦ ᐱᑕᖅᑕᐅᓂᒪᓕᖅᑐᑦ ᐱᑕᖅᑕᐅᖅᓱᓄᑦ ᐃᓚᖅᑐᑦ).

ᑐᐳᓴᕆᐅᓯᒪᓕᖅᑐᑦ

ᑐᐅᐃᖏᓕᖅᑕᖅᑕᓂᖅᓂᑦ ᐅᑭᐅᖅᑕᕋᖅᑐᒥ ᖃᐅᔨᓴᓴᖅᑎᐃᓕᐅᓂᖏᓐᓂᖅᓂᖅ ᐃᓚᖅᑐᑦ ᐊᐅᓴᒃᑯᑦ 2013–ᒥ ᐱᓵᔾᑕᐅᖅᑲᑕᓕᐅᖅᑐᑦ ᖃᐅᖏᓐ ᐊᓚᒪᓗ ᖃᐅᔨᓴᓴᖅᑎᐃᓕᐅᓵᖅᑕᖅᑕᓕᐅᖅᓯᓚᐅᓛᑦ ᑐᓗᓪᓕᓐ. ᑕᐃᓚᐃᒃᑲᓗᐊᖅᑎᓂᓪᓕᑦ, ᑕᓚᖅᑎᒃ ᑐᓴᓂᓪ ᐃᓚᖏᓚ ᖃᐅᔨᓴᓴᖅᑎᑕᐅᔾᔨᐃᓐᓇᐅᓕᐅᖅᑐᑦ, ᐱᖓᓕᑕᐃᐊᓱᓪᓕᐊᔪ ᐊᐃᑯᓕᑐᑐᒥᑦ ᖃᑎᖅᑭᒋᓗᖏᓪᓗᑎᓯᓗ ᖃᐅᔨᓴᓴᖅᑎᑕᐅᓂᒪᓕᖅᑐᑦᑐᑦ. ᓄᓇᕆᐊᐃᖅᑎᓚᑕ ᐊᒥᓂᔅᓴᖅᑐᖅᓂᖅᓂᑦ ᑲᑎᖅᓚᐅᓂᒪᖅ ᐃᓚᖅᑐᑦ 2.76 (ᐋᖅᑭᒃᑕᐅᓂᒪᔪᓚᓂᖅᑐᖅ CV 3.8%), ᐊᓚᒪᓗ ᑕᐃᓚᖅᑐᖅ ᖃᐅᔨᓴᓴᖅᑎᑕᐅᓂᒪᓕᖅᑐᖅᓂᖅᓂᑦ ᑲᑎᖅᑭᒃᑕᐅᓂᒪᓕᖅᑐᖅᓂᖅᓂᑦ ᐊᒥᓂᔅᓴᖅᑐᖅᓂᖅᓂᑦ ᐃᓚᖅᑐᑦ 1 ᐊᑕᐅᓂᖅᑎᑦ 3.08–ᖃᐅᔨᓄᑦ. ᐊᐃᒃᑯᖅᓂᓚᐅᓂ ᑕᓄᑎᕐᑎᔨᓂᐅᑎᖅᑐᖅ 3–ᒥᑦᑐᑦ ᑕᓄᑲᑎᐅᑎᕐᑐᖅ ᓇᓕᖅᑕᐅᑕᓚᐅᖅᓱᑕᓕᐅᖅᑐᑦ ᑐᓴᓚᑦᓴᖅᓂᖅᓄᖅ ᐊᑐᓂ ᑕᓄᓐᓂᐊᕐᓂᖅᑐᑦ ᐊᑐᓂ ᐃᓚᖅᑐᑦ ᐱᑕᖅᑕᐅᓂᒪᓕᖅᑐᑦ ᐊᑐᓂ ᐃᓚᖅᑐᑦ ᐱᑕᖅᑕᐅᓂᒪᓕᖅᑐᑦ

ᐱᑕᖅᑕᐅᓯᐅᓇᖅᓂᖅᑐᑦ ᐊᐅᖅᑕᒧᑦ ᑐᑭᓯᐅᑎᓪᓗᑎᑦ ᐅᖃᖅᑎᑦᑕᖅᑐᑦᓴᓂᑦ ᐅᖃᖅᐅᓯᐅᓯᒪᔪᑦ ᑕᑯᑎᑎᕐᔪᐊᑎᖅᓴᓂᖅ ᐃᖏᒥᓂᖅᑐᖅᓴᓯᒪᔪᓂᖅ ᑕᑯᑎᑎᕐᔪᐊᑎᓂᖅ 2-ᒥ.



ᑕᑯᑎᑎᕐᔪᐊᑦ 3. ᐊᖏᐅᖏᑦᑐᐊᒪᓗᓂᑦ ᑕᑯᐅᑕᖅᑕᕈᑕᐅᓴᖅᑐᑦ ᑐᐱᓕᖅᑕᕐᓂᖅᑐᑦ ᑕᐃᑲᓂ 2013–ᒥ ᖃᓄᖅᑐᑐᖅᒥᐅᑕᓂ ᐅᑭᐅᓴᖅᑕᖅᑐᒥ ᐃᒪᖃᒥᐅᑕᖅᑕᓂᖅᓂᓂᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ (ᐊᐅᓚᓗᖅᑐᓂᒃ ᐊᖏᓪᓗᓈᖅᑐᓕᖅ). ᑐᑭᔪᐊᖅᑐᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᑕᑯᖏᓐᓄᑎᑦᑐᑦ ᐊᐃᓐᖅᑐᖅᑐᓂᖅᓂᓂᒃ ᑕᓴᓇᖅᑐᖅᑕᖅᑎᑎᓂᒃ ᑕᒪᒃ ᐊᒻᒪᓕᒃᑐᓂᒃ ᑕᓴᓇᖅᑐᖅᑕᐅᓯᒪᔪᓂ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᓂ.

ᐃᖃᓗᐃᓚᐅᖅ 1. ᖃᐅᔨᓴᖏᐅᓕᐅᖅᑐᖅ, ᖃᐅᔨᓴᖏᐅᓕᐅᖅᑐᖅ ᖃᓄᐃᑦᓯᓚᐃᓂᖅ ᑐᑭᓯᓚᐃᓂᖅ (ᐃᓚᐅ ᖃᐅᓚᔪᓂ ᐱᑕᖃᖅᑐᖏᑦ) ᐊᓱᓚᑲ ᐊᒋᑎᐊᖅᑕᐅᓕᒪᓚᑲᓂᖅ ᐊᒥᓱᓂᖏᑦ ᓇᓚᐅᑦᑕᖅᑕᐅᓕᒪᔪᑦ ᐊᐅᓵᖅᑯᑦ ᐱᑕᖃᖅᑐᖏᓐᓂᖅ. ᐊᒋᑎᐊᖅᑕᐅᓕᒪᓂᖏᓐᓄᑦ ᓄᓇᕗᑎᑦ ᐊᑐᖅᑕᐅᓚᐅᑐᑦ 2.94 (ᐊᒋᑎᐊᖅᓕᓪᓗᖅᑎᑦᓯᓚᑦ 3.4% ᐳᔨᓐᖏᓕᒋᑦ), ᐱᖏᑕᑐᐊᓪᓚᑦᓯᓚᕐᒉ ᑲᓇᖃᓕᐊᓂ ᖃᑎᖅᑕᐅᓚᐅᖅ, ᐊᑐᖅᑕᐅᓚᐅᖏᓪᓕᑕ ᓄᓇᕗᑎᖏᑦ ᐃᓕᓐᓄᑎᒋ 4.53 (CV 3.8% ᐳᓐᓂᖏᓕᒋᑦ).

ᐱᑕᖃᖅᑐᖏᑦ /ᖃᐅᔨᓴᖏᐅᔪᑦ	ᐊᖏᓂᖏᑦ (km ᑭᓚᒃᑕᑎᒍᑦ)	ᐳᔨᑎᒃᓯᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ	ᖃᐅᔨᓴᖅᑐᖏᑦ ᐱᑕᖃᖅᑐᖏᑦ ᐊᒥᓱᓂᖏᑦ	ᐊᒥᓱᓂᖏᑦ (ᐊᒋᖃᑦᑕᖅᑕᐅᓗᑎᒃ)	ᐊᒋᖃᑦᑕᖅᑕᐅᓚᓗᑎᒃ
ᐊᐅᓚᐅᔅᓴᑦ ᖃᖃᖅᑕᓚᑕ ᓂᒋᐊᓂ ᐃᓚᖏᑦ	35,357	13%	4,316	12,694	0.33
ᐊᑯᒃᑐᑎᒥᐅᑦ ᖃᖃᖅᑕᓗᖏᐅᑦᓗ ᐊᑯᓂᑐᓚᓂ ᕆᓚᐅᖅᓯᒪᔪᖅ	40,669	4%	5,563	16,360	0.65
ᑯᓚᓇᔨᑦ ᑲᓇᓕᓚᓂ	115,309	9%	16,921	49,768	0.20
ᔭᓐᓄᕆᐊᖅᑐᑦ ᐃᓚᖏᑦ	9,419	26%	11,915	35,043	0.42
ᕆᓚᐅᖅᑲᖅ ᐃᓐᓇᓗᒃ ᑲᑎᕐᓯᒪᔪᖅ	8,459	26%	3,566	10,489	0.24
ᐃᓇᓐᓇᖏᓂ ᖃᖃᖅᑕᓗᑦ ᑕᓪᓕᐅᖏᓂ	53,510	8%	3,799	17,555	0.35
ᐃᑎᖏᓪᓗᓂᒃ ᐊᓐᓂᕆᐊᑎᑦ ᑐᓴᐅᒪᓕᐅᑦ ᐊᓚᓗ ᕆᓚᐅᖅᑲᖅ ᐃᓐᓇᓗᒃ ᑲᑎᕐᓯᒪᔪᖅᑕ	17,878	26%	15,481	45,532	0.33

*ᑕᐃᑎᖏᓪᓗᓂ ᐃᓗᒥᔪᓚᐃᓂᖅ 2. ᑕᒪᕐᒥᖅ ᑲᑎᕐᓂᑐᓂ ᓄᓇᖅᑕᐅᓂᕐᔪᑦ ᐱᑕᖅᑕᐅᔨᒃᓇᔭᖅᑎᓂ ᐱᖓᓱᓚᐃᖅᑐᓂᖅ 6-ᖁᓪᓂᖅ ᑐᑭᓯᒪᔪᖅᑕᖅᑐᓂᖅ ᑲᓇᑕᒥᐅᑕᐃᓕᑦ ᖃᐃᑎᖅᑐᑐᖅ ᐅᑭᐅᖅᑕᖅᑐᑦᓯᒪᓂᖅ. ᐊᒥᓱᑉᖅᓯᐊᓚᓴᐅᓂᖅᓄᓇᓕᑦ (ᖃᓪᓗᓇᑎᑐᑦ ᐃᓚᓇᐃᖅᑲᓐᓂᑦ ᐃᓕᖅ Fr) ᐊᖏᖅᑕᐅᓯᒪᓕᐅᖅᑐᑦ ᐃᓴᓴᑎᓕᖅᑐᒃ 0.5 ᑕᐅᖅᓂ ᐊᐅᓯᐃᑦᑐᑦ ᖃᑭᖅᑕᖅᓯᒪᓕ ᓂᒋᐊᓂ ᐃᓕᖅᓂᓂ ᐊᒻᒪᓗ ᐊᐃᑭᖅᑐᑦᑐᑦ ᖃᑭᖅᑕᒋᐊᕐᑐᑦᓗ ᐊᐃᓄᓂᖅᓯᒪᓂ ᑕᓯᐅᔾᔨᐊᖏᖅᓯᒪᓂ, ᐃᓯᒪᒋᔭᐅᓯᒪᔭᓇᐊᖏᖅᑎᓂᖅᓄᓇᓕᑦ ᐃᓚᐅᔨᓂᖅᓂᑦ ᐱᕕᖅᑎᓂᖅᓂᑦ ᑕᐃᖅᐃᓐᓇᓂᓂ ᐃᓕᓂ ᐊᒻᒪᓗ ᐃᓗᓕ ᐃᓱᒪᓕᕐᓂᖅᓄᓇᓕᖅᑐᖅ ᑐᐃᓐᓇᑦ. ᐊᒥᓱᑉᖅᓯᐊᓚᓴᐅᓂᖅᓄᓇᓕᑦ ᐃᓚᐅᔨᓂᖅᓂᑦ (Fr–ᖃᓐᓇ) ᐊᖏᖅᑕᐅᓯᒪᓕᐅᖅᑐᖅ 1.0–Γ ᐊᓯᖏᓪᓗᓂ ᑐᑭᓯᒪᔪᖅᑕᖅᑐᕐᔪᓂ ᐃᓯᒪᒋᔭᐅᓂᖅᑐᖅ ᐃᓱᒪᓂᖅᓄᓇᓕᖅᑐᖅ ᐊᒥᓱᓕᓴᖅᓯᐊᓂᖅᓄᓇᓕᖅᑐᖅ ᖃᐅᔨᓴᖅᓯᐊᓂᖅᓄᓇᓕᖅᑐᖅ ᖃᐅᔨᓴᖅᑕᐅᔾᔨᖃᑦᑕᖅᓯᒪᓕᐅ

- ᑕᐅᖕᓂᓕ ᐊᐅᓯᐅᑦᑐᑦ ᖃᑭᖅᑕᖏᑦᑐᑕ ᓂᒋᐊᓂ ᐃᒪᖏᓂ, ᐊᑎᓯᐊᑐᖅᑐᕌᒐᑦ ᖃᓄᐃᓕᓴᐅᑎᑦ ᑐᓴᕆᔨᒃᑯᑦ ᑐᓄᓇᕗᑦ ᖃᓄᐃᓕᓴᐅᑎᑦ ᐅᑎᖅᐊᑕ ᑕᓇᐅᖏᓂ. ᐊᑎᓯᓐᓂᑕᑯᓚᐅᓪᓗᒃ ᑕᑯᐅᖅᑐᕌᒐᖅᑐᑦ ᖃᓄᐃᓕᓴᐅᑎᑦ ᑕᐅᖕᓂᓕ ᐊᐅᓯᐅᑦᑐᑦ ᐅᒪᖏᓂᓂ ᐃᖏᒍᔪ, ᑕᐅᖕᓂᓗ ᐊᖏᓚᓯᓐᓂᖅᓴᐅᓂᑯᑲᑎᐅᓂᖅ ᖃᓄᐅᓂᖅᓴᐅᑎᒃ ᓄᓇᕗᓂᓚᐅᒃ ᒪᑐᐊᖅᑐᑦ.
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ISSN 1919-5087
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ᑕᓪᓕᖅᓯᓚᕐᑕᓂᑐᑦ ᑕᐃᔪᑎᖃᓄᐊᑦᑐᑦ Ċᓐᓇ ᐅᖃᓕᒫᖅ ᐅძᓂᖏᓚ:

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