

6.12.2022

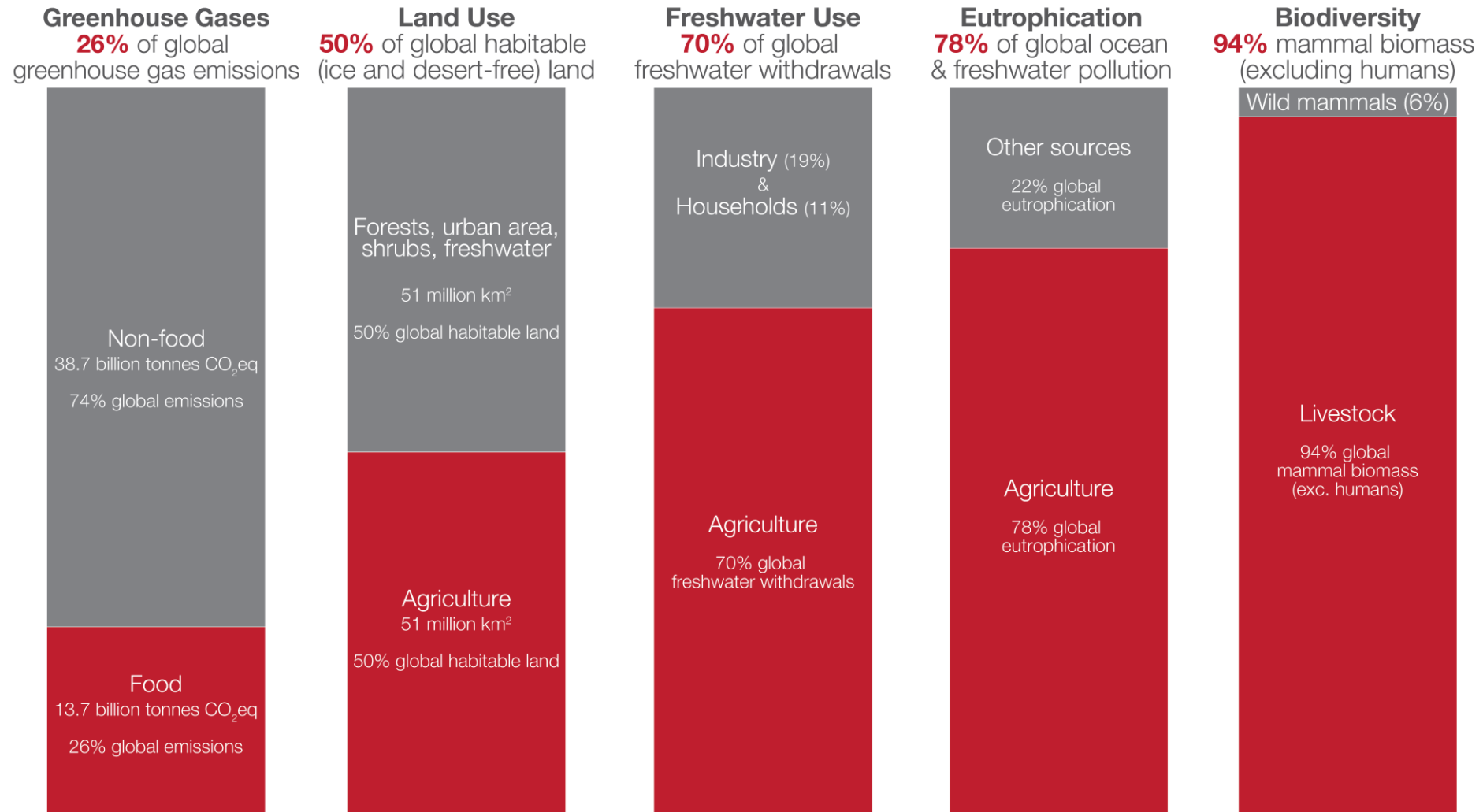
Áhrif matarneyslu okkar og hvað við getum gert

Morgunfundur Grænna skrefa

Sigurður Loftur Thorlacius
Umhverfisverkfræðingur M.Sc.

What are the environmental impacts of food and agriculture?

Our World
in Data



Life on Earth: the distribution of all global biomass

Biomass is measured in tonnes of carbon. The global distribution of Earth's biomass is shown by group of organism (taxa).

Global biomass: 546 billion tonnes of carbon

Plants

450 billion tonnes carbon
82.4% of total biomass



Bacteria
70 billion tonnes carbon
12.8% of total biomass



Fungi
12 billion tonnes carbon
2.2% of total biomass



Archaea
(single-cell microbes)
8 billion tonnes carbon
1.5% of total biomass



Protists
4 billion tonnes carbon
0.7% of total biomass



Viruses
0.2 billion tonnes carbon
0.04% of total biomass



Animal biomass: 2 billion tonnes of carbon (0.4% of total biomass)

Arthropods

1 billion tonnes carbon
42% of animal biomass



Fish

0.7 billion tonnes carbon
29% of animal biomass



Annelids
0.2 billion tonnes
8% animal biomass



Molluscs
0.2 billion tonnes
8% animal biomass



Cnidarians
0.1 billion tonnes carbon
4% of animal biomass



Buġnaður

Livestock
0.1 billion tonnes carbon
4% of animal biomass



Humans
0.06 billion tonnes carbon
2.5% of animal biomass
0.01% of total biomass

Wild mammals
0.007 billion tonnes carbon
0.3% of animal biomass

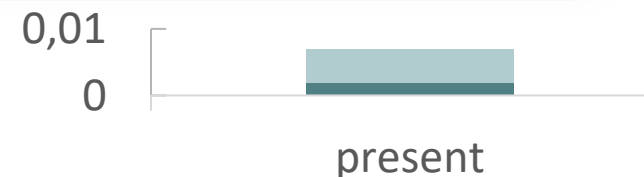
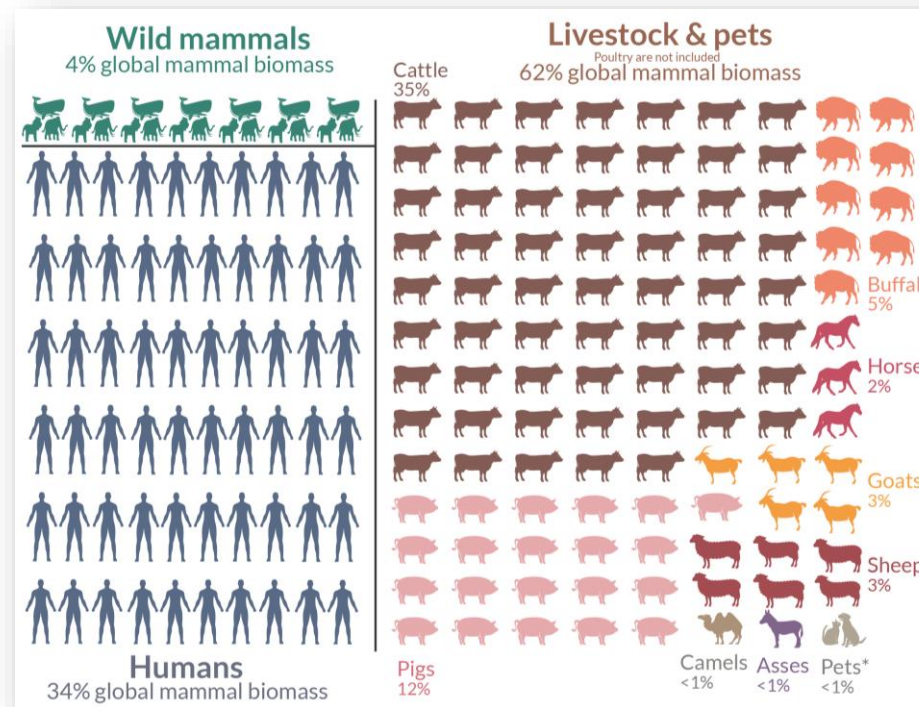
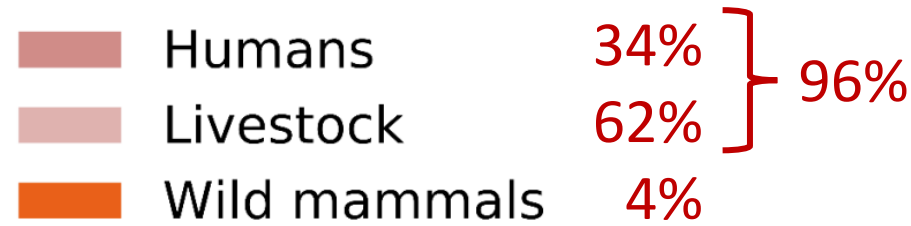
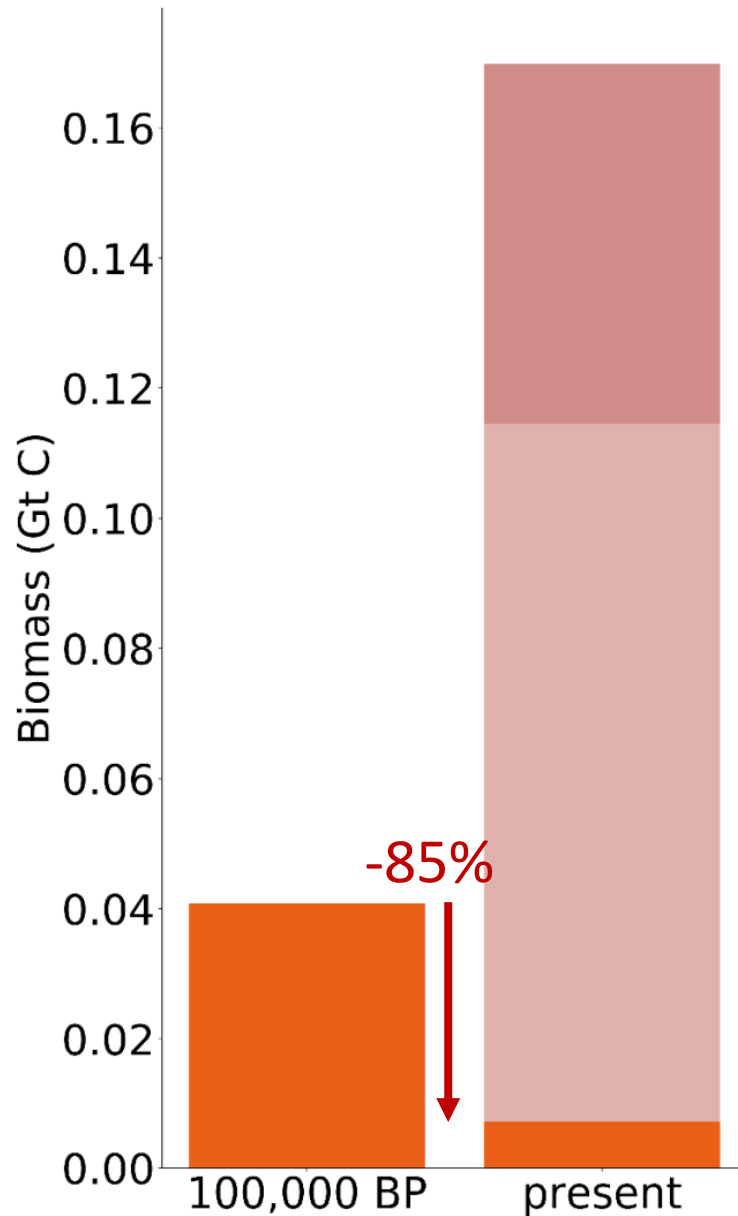
Wild birds
0.002 billion tonnes carbon
0.08% of animal biomass

Nematodes
0.02 billion tonnes carbon
0.8% of animal biomass



Villt spendýr

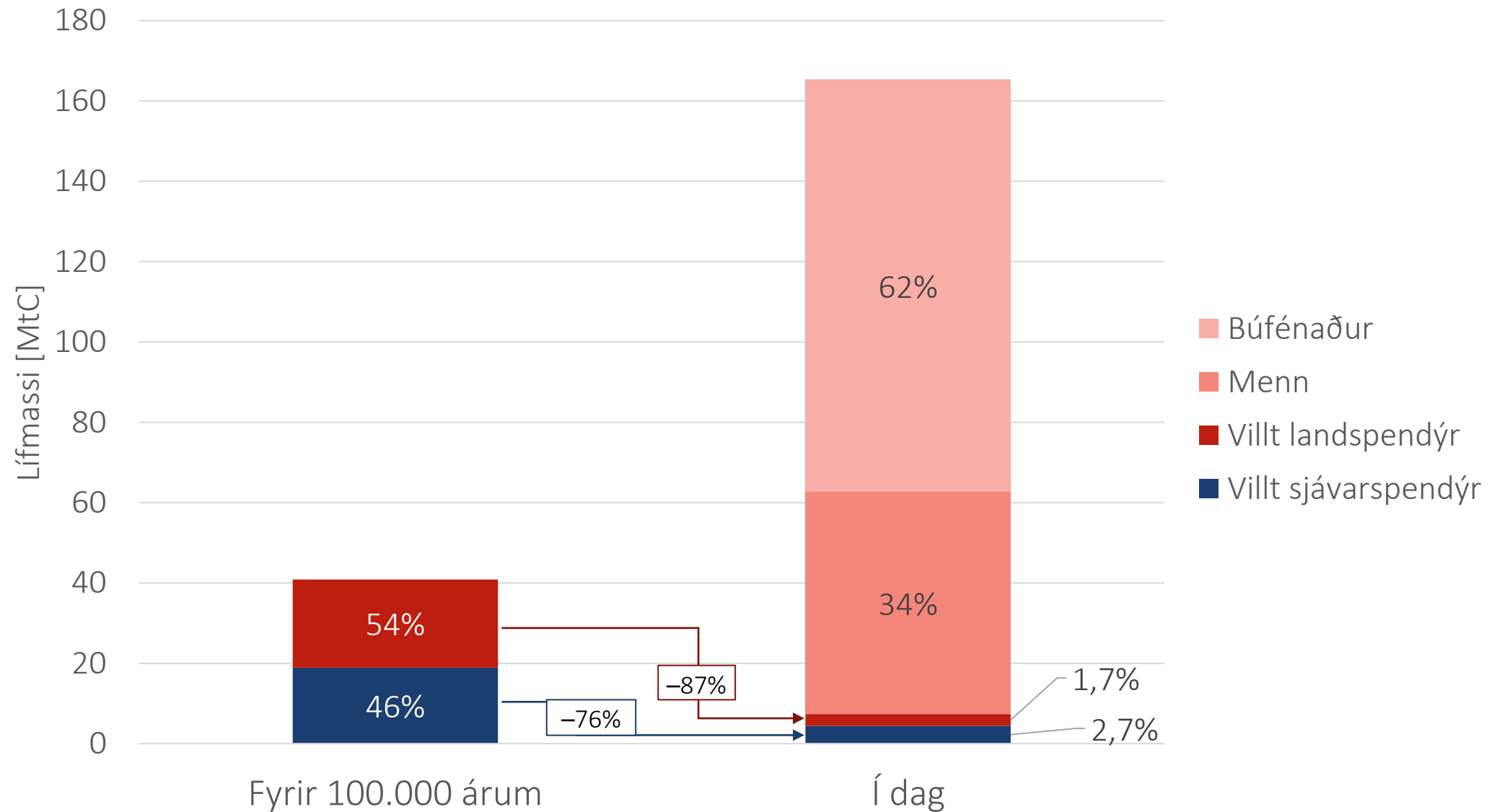
Lífmassi spendýra



Lífmassi fugla

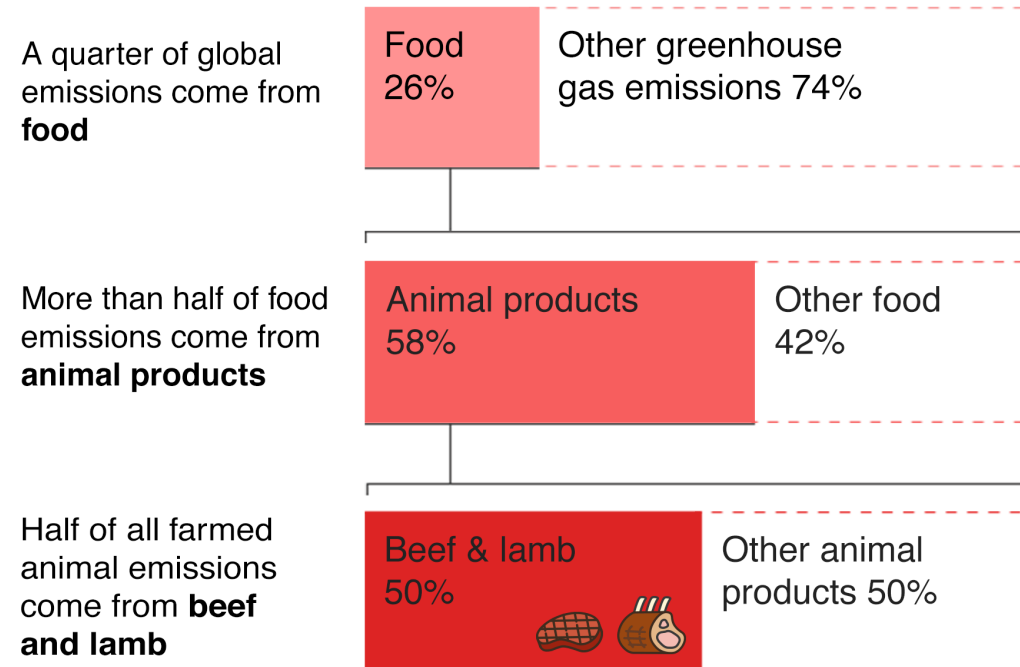


Lífmassi spendýra



How much impact does food have?

Proportion of total greenhouse gas emissions from food



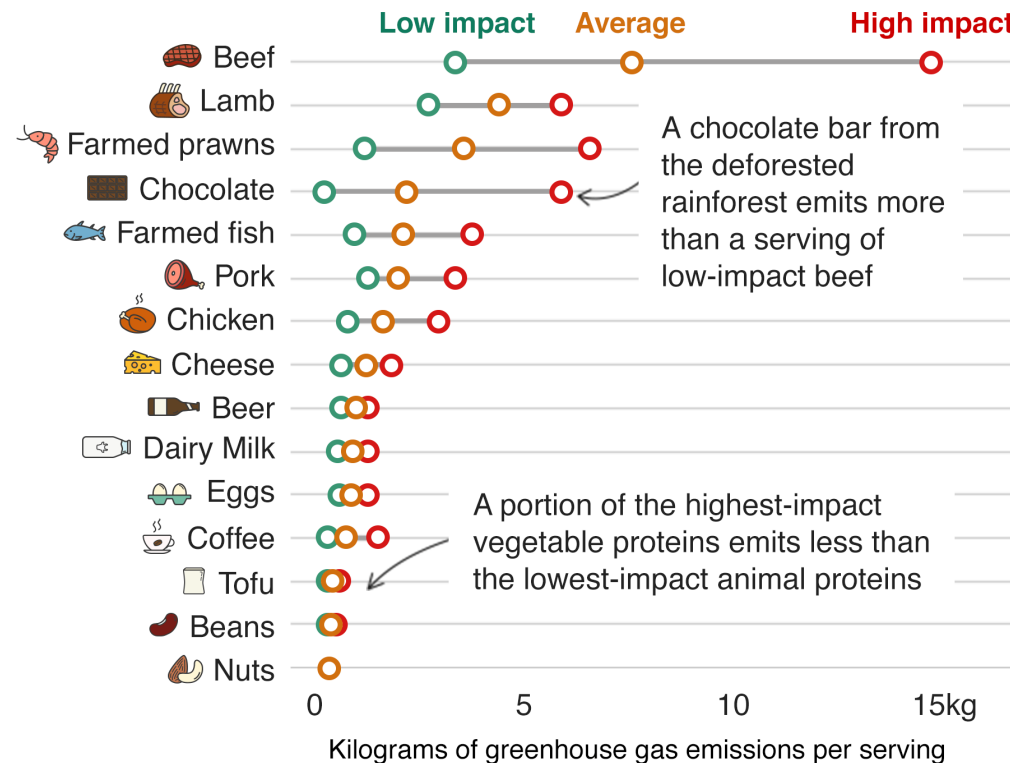
Source: Poore & Nemecek (2018), Science

BBC

Kolefnisspor matvæla

Beef has the biggest carbon footprint - but the same food can have a range of impacts

Kilograms of greenhouse gas emissions per serving



Mikið magn rannsókna sýnir að:

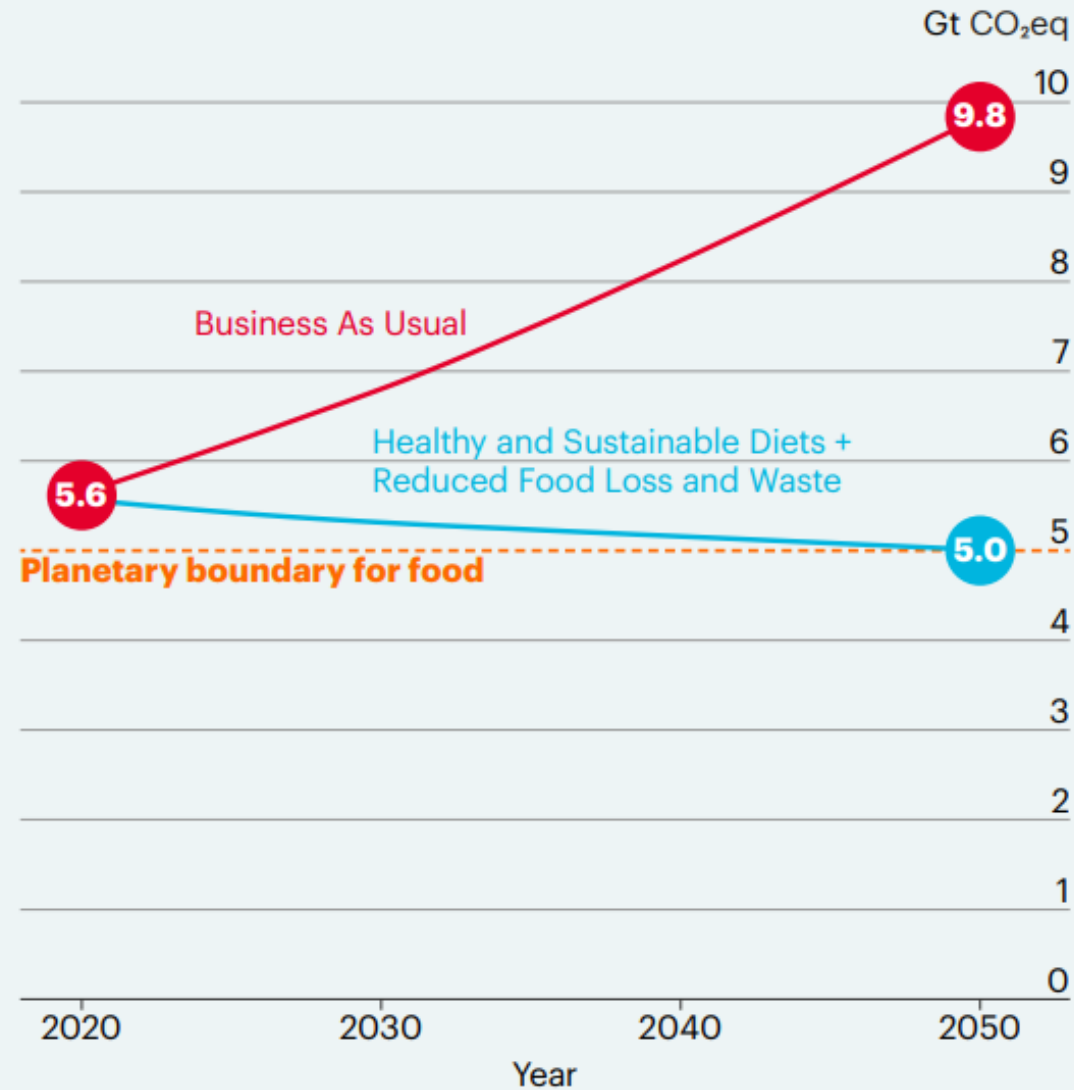
*“Mataræði sem er ríkt af mat úr plönturíkinu og með færri dýraafurðum
veitir bæði bætta heilsu og umhverfislegan ávinning”¹*

Vistkerafæði

The Planetary Health Diet



Getum við brauðfætt 10 milljarða manna?



A decorative graphic in the top-left corner consisting of several overlapping circles of varying sizes, some with internal line segments, creating a complex, organic pattern.

Hvað með Ísland?

Tvær tegundir kolefnisspor

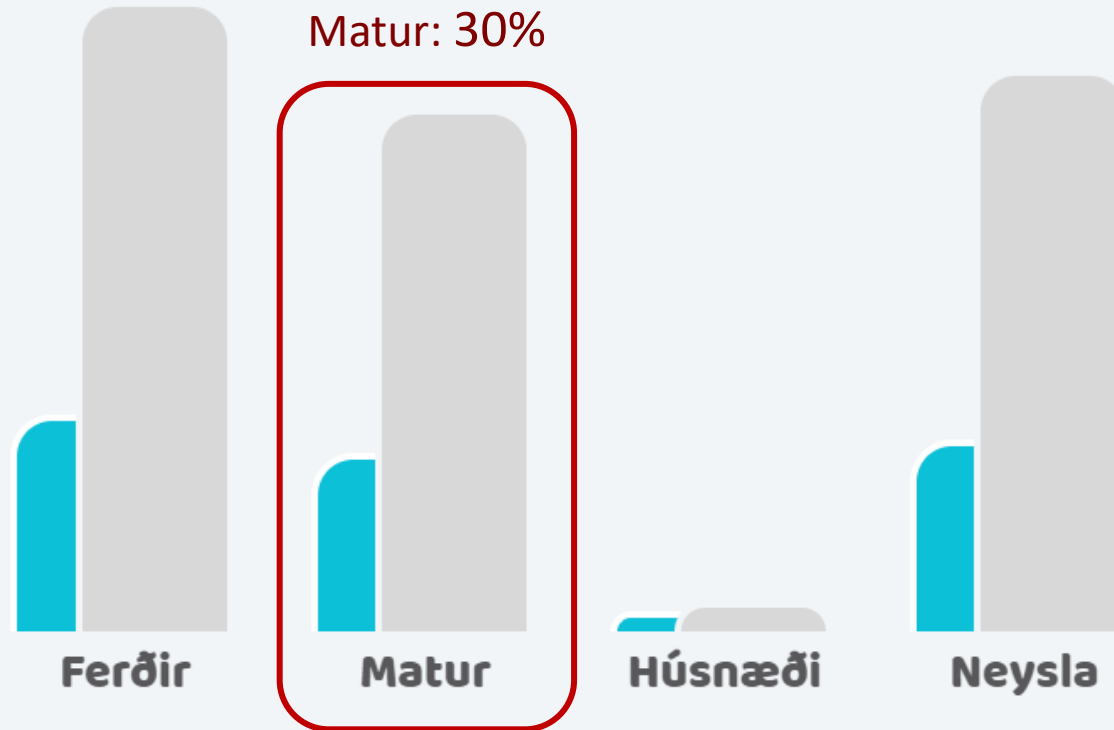
Svæðisbundið kolefnisspor

- Bein losun
- Losun innan landamæra
- Losun vöru tilheyrir framleiðslulandi

Neysludrifið kolefnisspor

- Bein losun og óbein losun
- Óháð landamærum
- Losun vöru tilheyrir neytanda
- Losun rakin upp alla virðiskeðjuna

Neysludrifið kolefnisspor Íslendinga



Kolefnisspor til að halda hlýnun innan 1,5°C

4 tonn CO₂ ígildi á ári

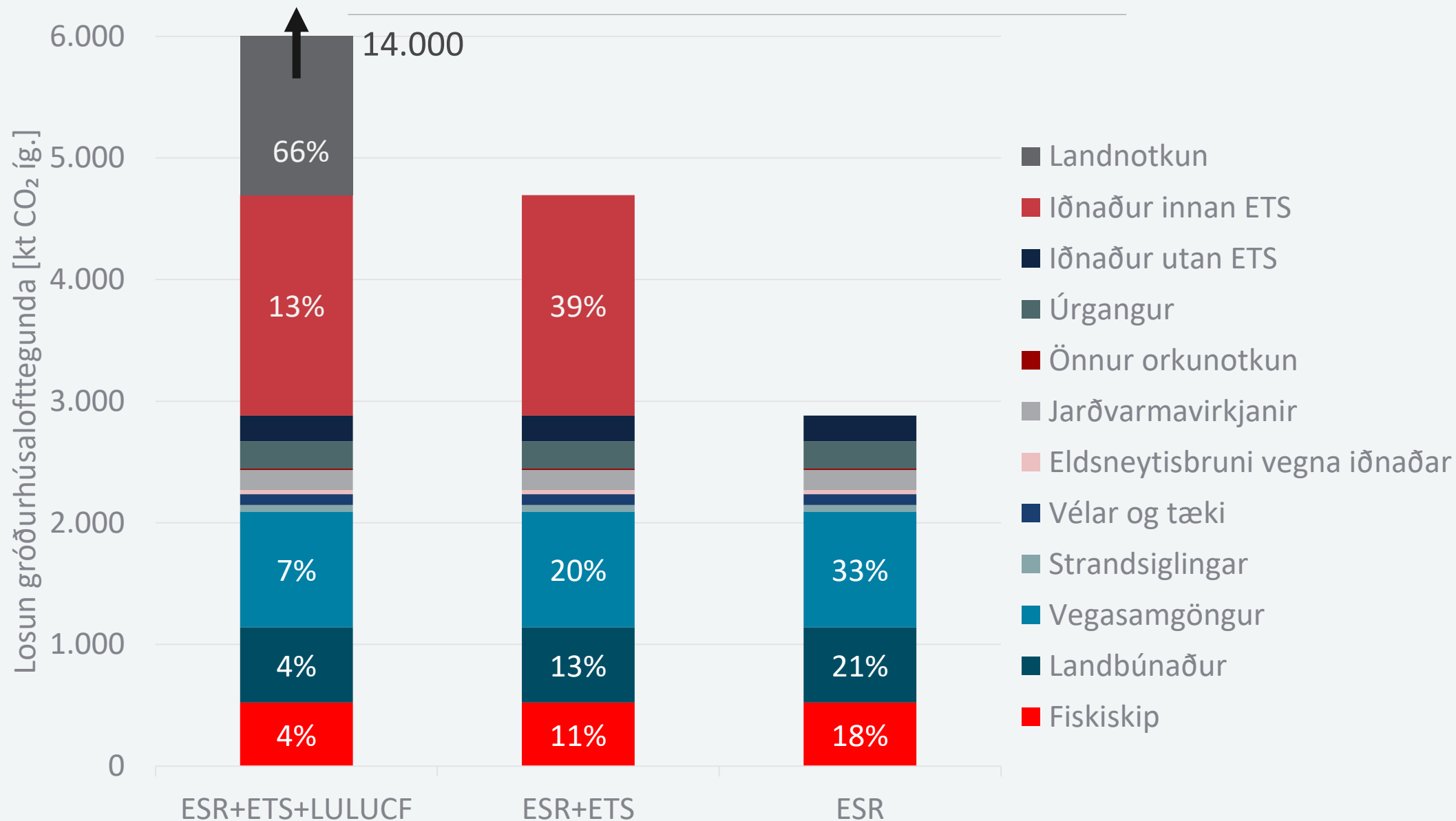
Kolefnisspor einstaklings á Íslandi

12 tonn CO₂ ígildi á ári

Kolefnisreiknir



Svæðisbundið kolefnisspor Íslands



A decorative graphic in the top-left corner consisting of several overlapping circles of varying sizes, some with internal line segments, creating a complex, organic pattern.

Hvað er til ráða?



Hvað er Matarspor?

- Þjónustuvefur fyrir mötuneyti sem reiknar út kolefnisspor máltíða
- Verkfæri til að taka upplýstar ákvarðanir
- Eykur umhverfisvitund notenda
- Samfélagsleg ábyrgð í verki
- Næringargildi og hitaeiningar



Á hverju byggir Matarspor?

- Á vistferilsgreiningum:
 - Stöðluð aðferð til að meta umhverfisáhrif vöru yfir líftíma hennar
- 75+ matvæli
- Bæði íslensk og erlend gögn

Hvað er tekið með?

- Tekur tillit til losunar gróðurhúsalofttegunda vegna:
 - breytinga á landnotkun
 - framleiðslu fóðurs
 - reksturs býlis
 - vinnslu matvöru
 - flutninga
 - umbúða
 - sölu



Mán 3.10

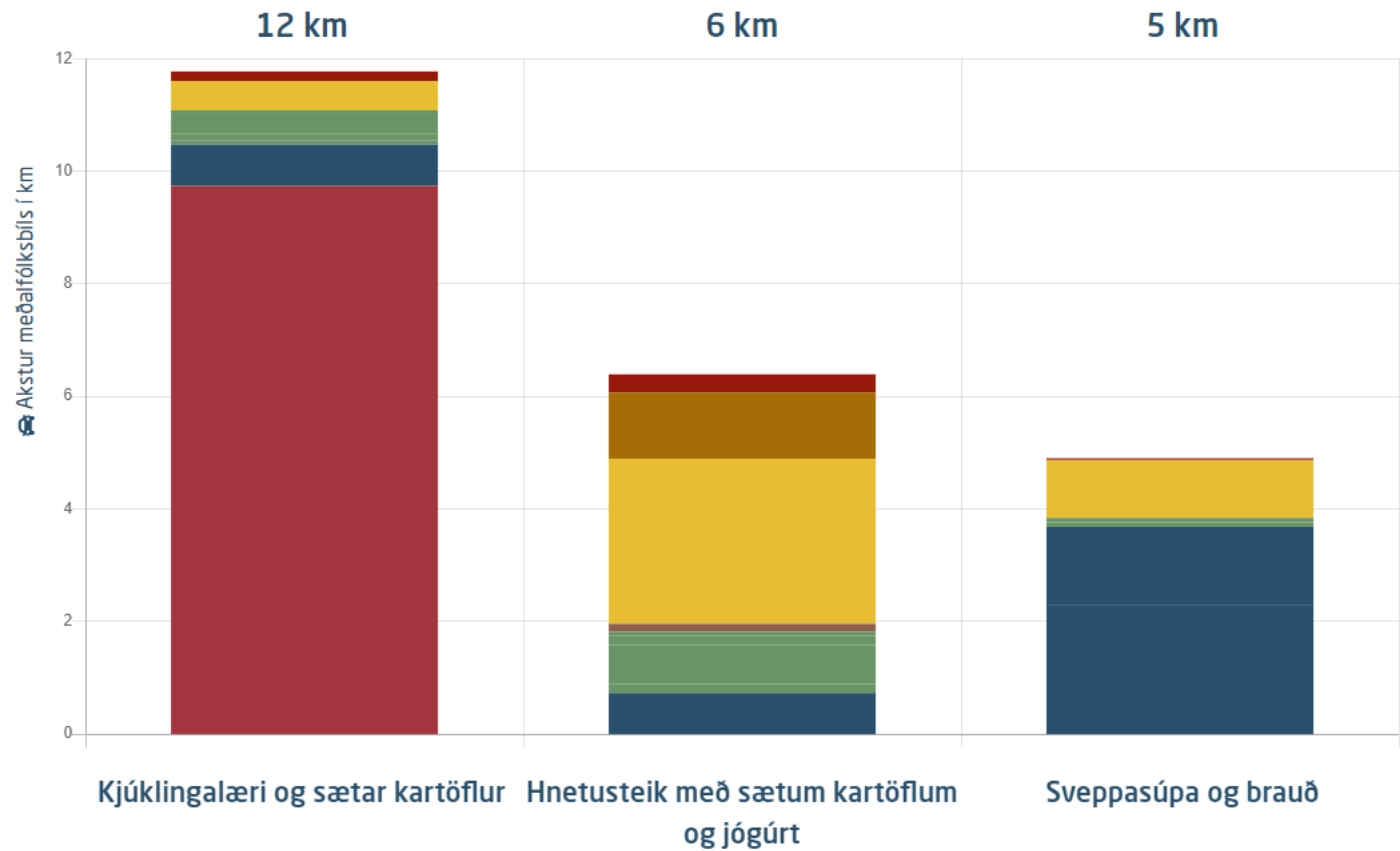
Þri 4.10

Mið 5.10

Fim 6.10

Fös 7.10

Kolefnisspor máltíða



Hráefni

- Flutningar
- Kjöt
- Aðrar dýraafurðir
- Grænmeti
- Kornvörur og sykur
- Hnetur, baunir og sojavörur
- Olía, smörlíki og smjörblöndur

Næringargildi

	Kjúklingalæri og sætar kartöflur	Hnetusteik með sætum kartöflum og jóгурt	Sveppasúpa og brauð
Orka disks (kcal/disk)	499	1240	565
Orka (kcal/100g)	111	292	235
Prótín (g/100g)	8	5	4
Fita (g/100g)	5	20	14
Kolvetni (g/100g)	8	23	22

Hamborgari og franskar með majó

Ný máltíð

Breyta máltíð

Afrita máltíð

Eyða máltíð

Matseðill dagsins

Matseðill vikunnar

Bókhald

Birta matseðil

Matvæli	Magn	Flutningur	Land	Orka(kkal)	Prótein(g)	Fita(g)	Kolvetni(g)	
Franskar kartöflur	100 g	Innlent	Ísland	310	4	16	37	Vista sjálfval
Nautakjöt (frá mjólkurframleiðslu)	120 g	Innlent	Ísland	230	23	16	0	Vista sjálfval
Tómatar	30 g	Innlent	Ísland	5	0.2	0.1	1	Vista sjálfval
Majónes	50 g	Sjófl.	N-Evrópa	362	1	40	0	Vista sjálfval
Gúrkur	30 g	Innlent	Ísland	4	0.2	0	1	Vista sjálfval
Salat og kál	30 g	Innlent	Ísland	6	0	0.1	1	Vista sjálfval
Ostur	20 g	Innlent	Ísland	67	5	5	0	Vista sjálfval
Egg	50 g	Innlent	Ísland	76	6	6	0	Vista sjálfval

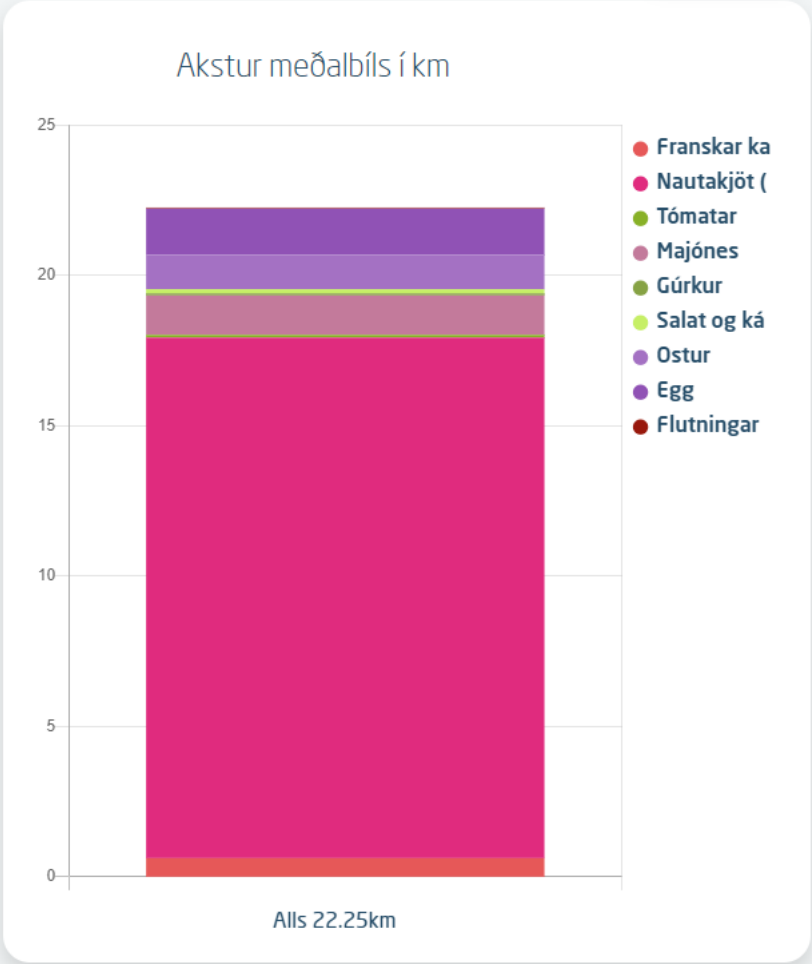
Magn 430g / Oml

Orka 1060kcal

Prótein 39g

Kolvetni 40g

Fita 83g



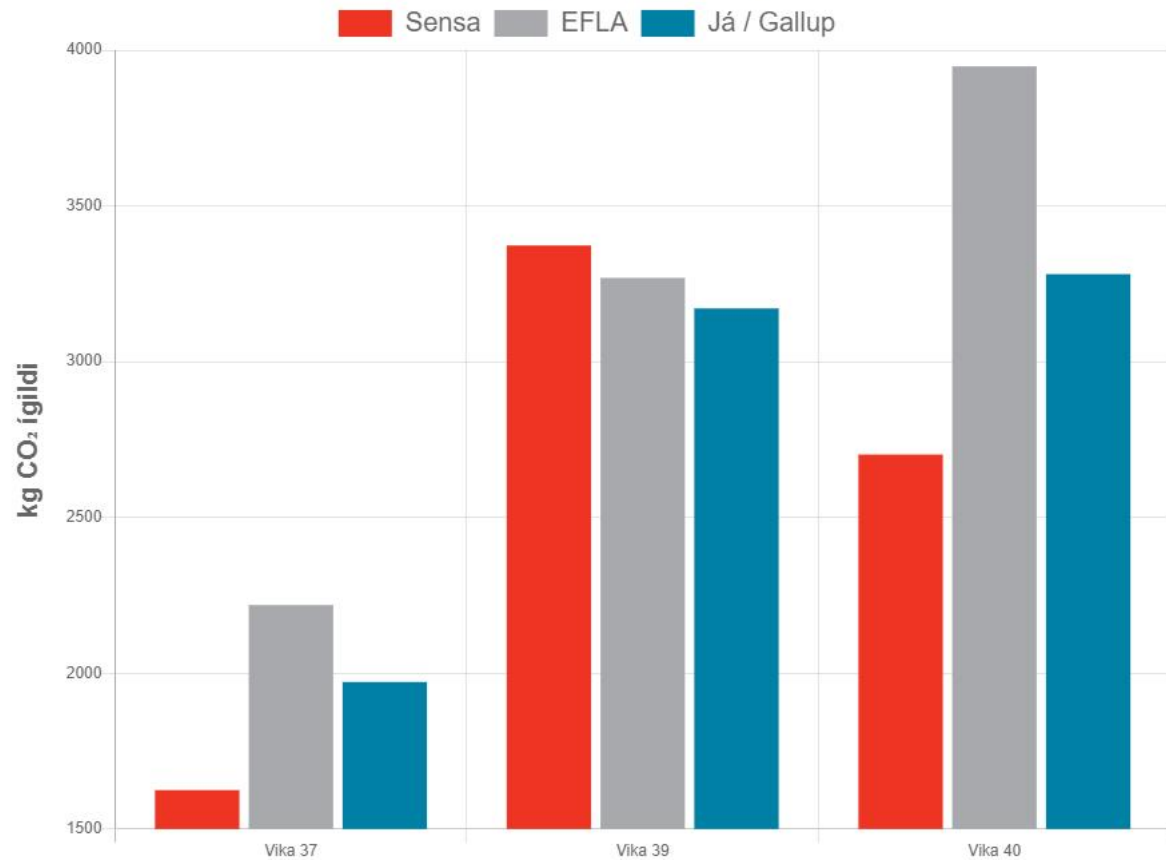
Dagur

Vika

Mánuður

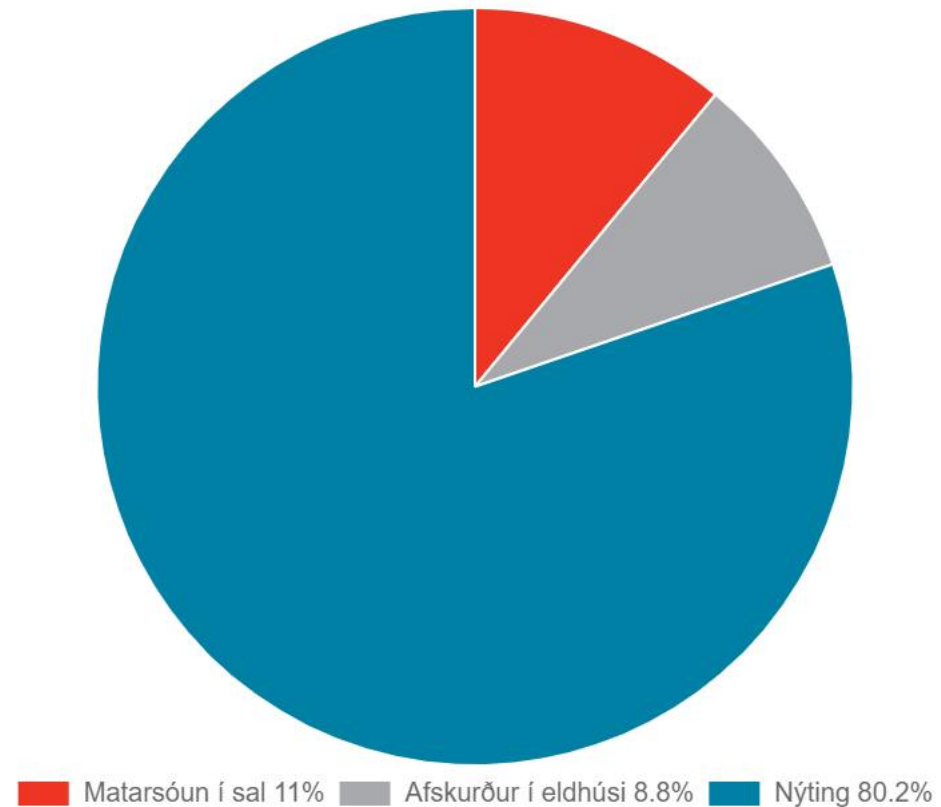
Ár

Kolefnisspor mótuneytis



Matarsóun og nýting

03. okt. - 07. okt.



Takk fyrir!



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🌐 efla.is – matarspor.is