Food independence using the EW-MFA

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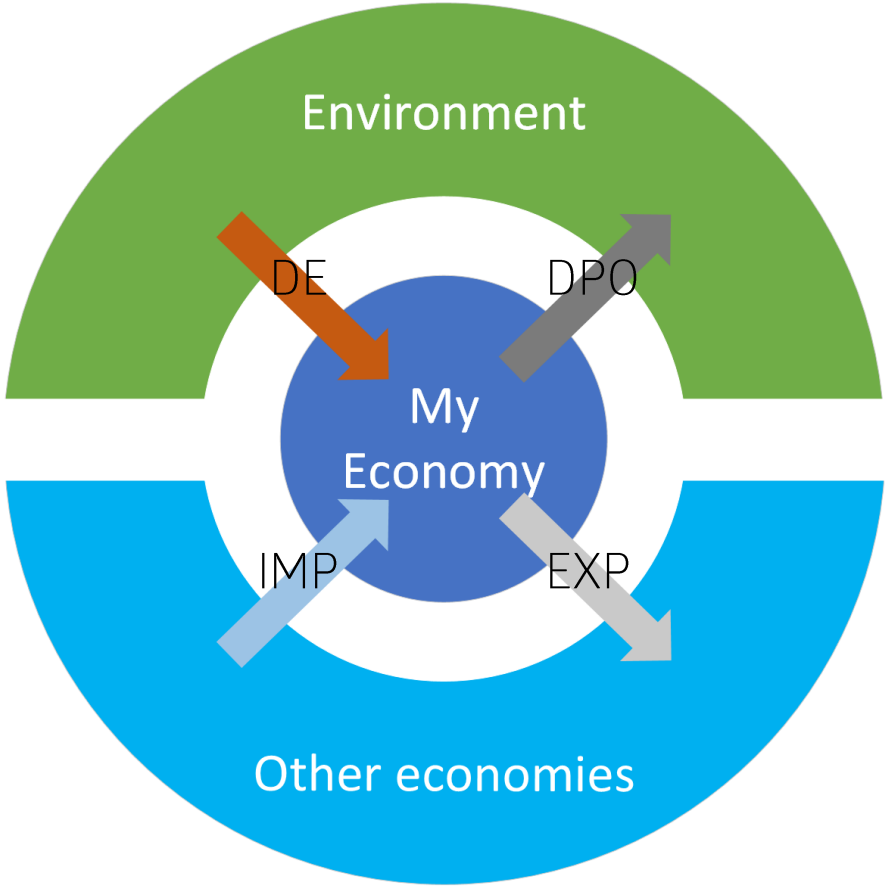
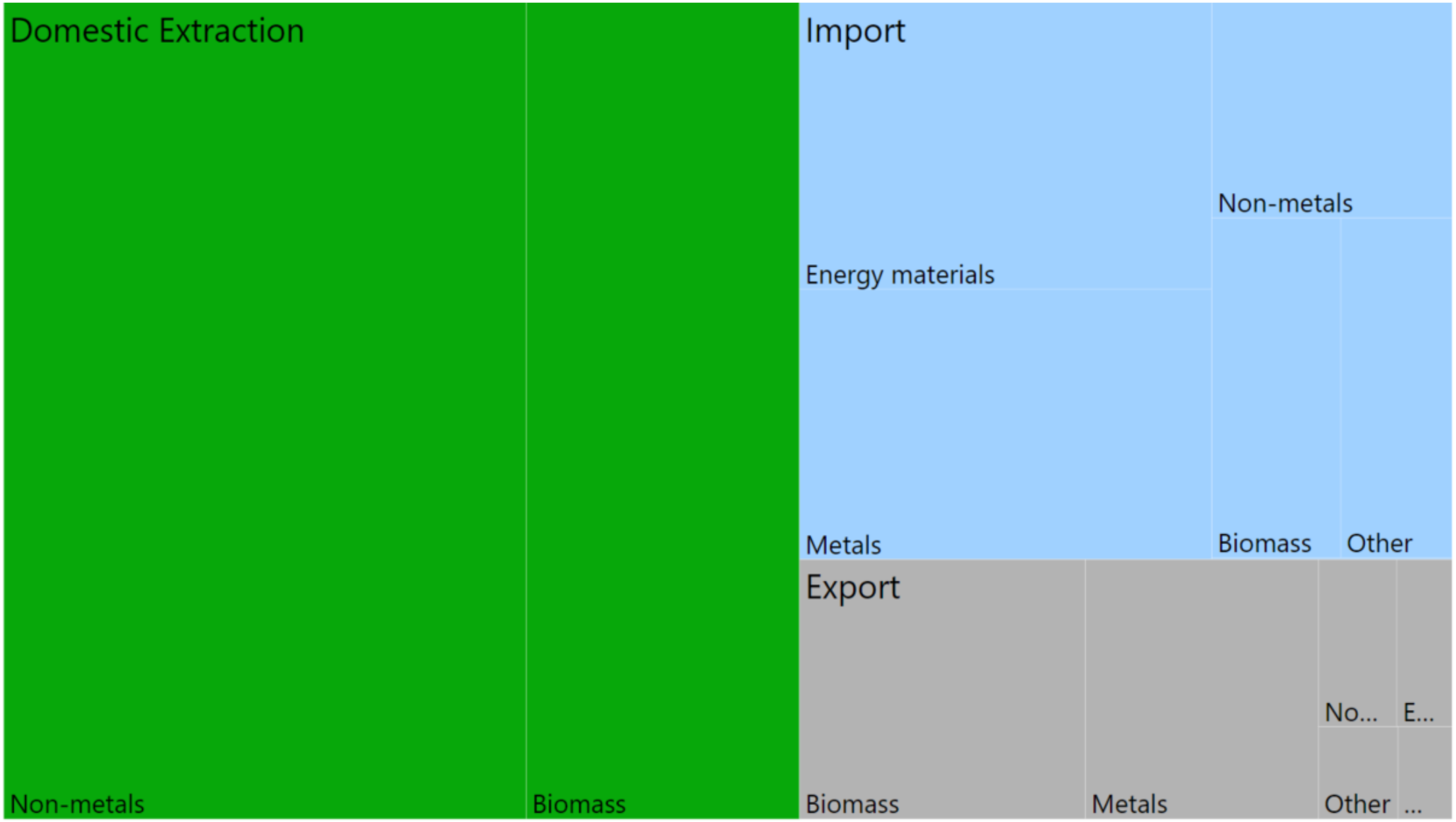
Hagstofa Íslands

The reason for this project

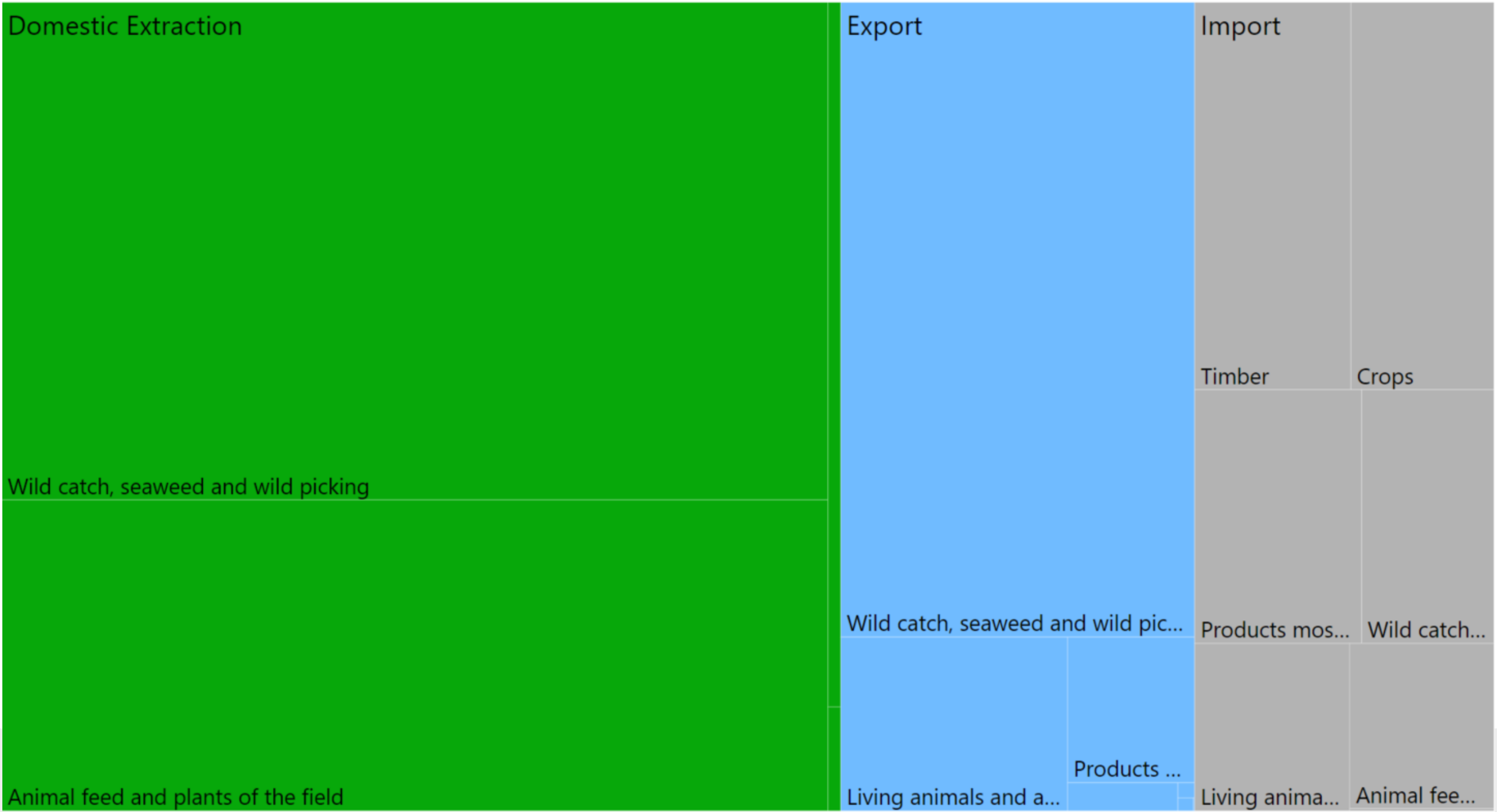
1. Annoyance with shortcoming of the Economy-Wide Material Flow Account (EW-MFA)
2. Curiosity about food issues
3. Gobs‘n‘gobs of information at my nerdy fingertips

The Economy-Wide Material Flow Account




Domestic Extraction
Non-metals
Biomass
Import
Non-metals
Energy materials
Metals
Biomass
Other
Export
Biomass
Metals
No...
E...
Other
...

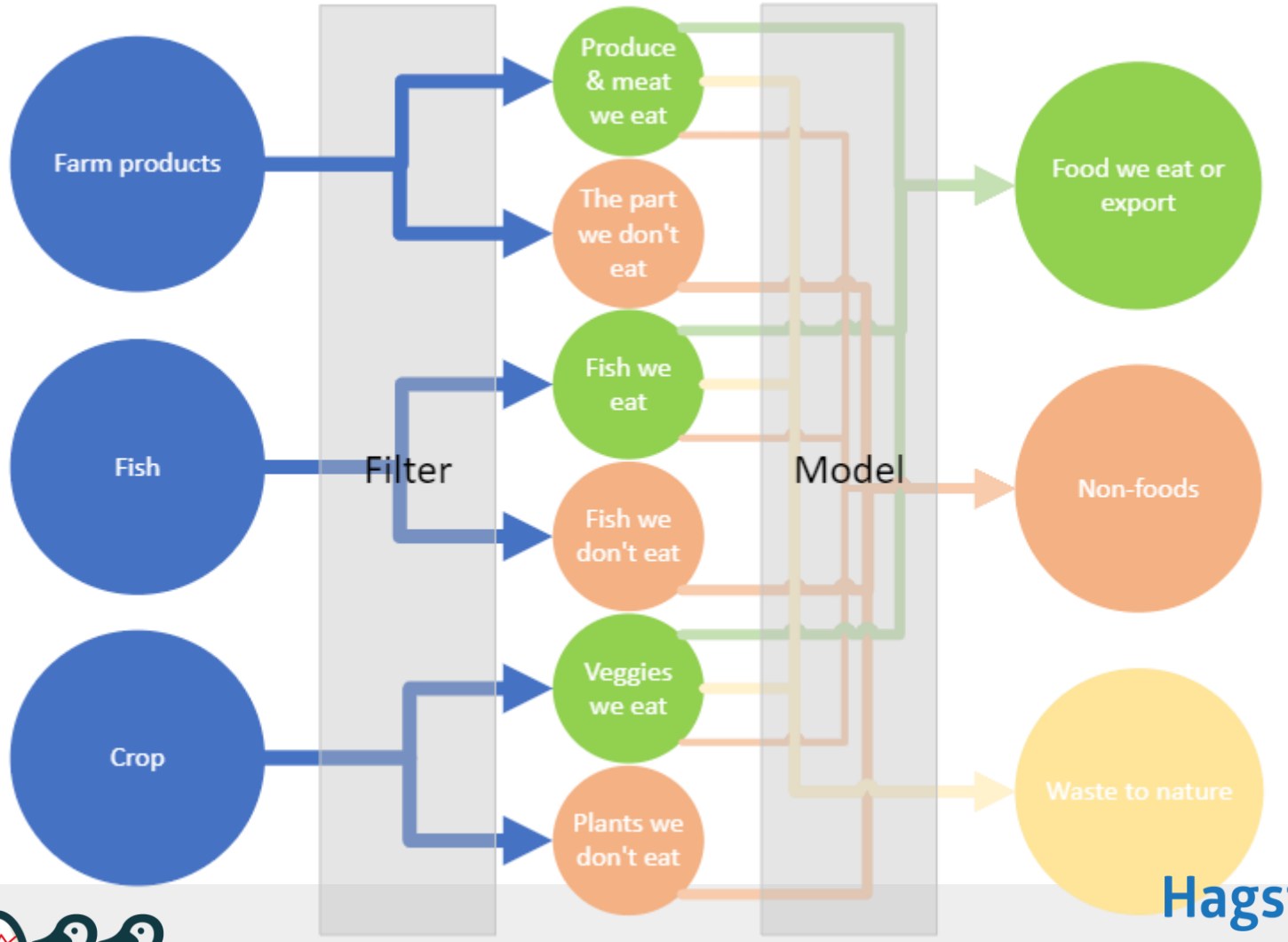
Biomatter


Domestic Extraction
Wild catch, seaweed and wild picking
Animal feed and plants of the field
Export
Wild catch, seaweed and wild pic...
Products ...
Living animals and a...
Import
Timber
Crops
Products mos...
Wild catch...
Living anima...
Animal fee...

The task

- Isolate the flow of food in and out of the economy

Approaching the buffet



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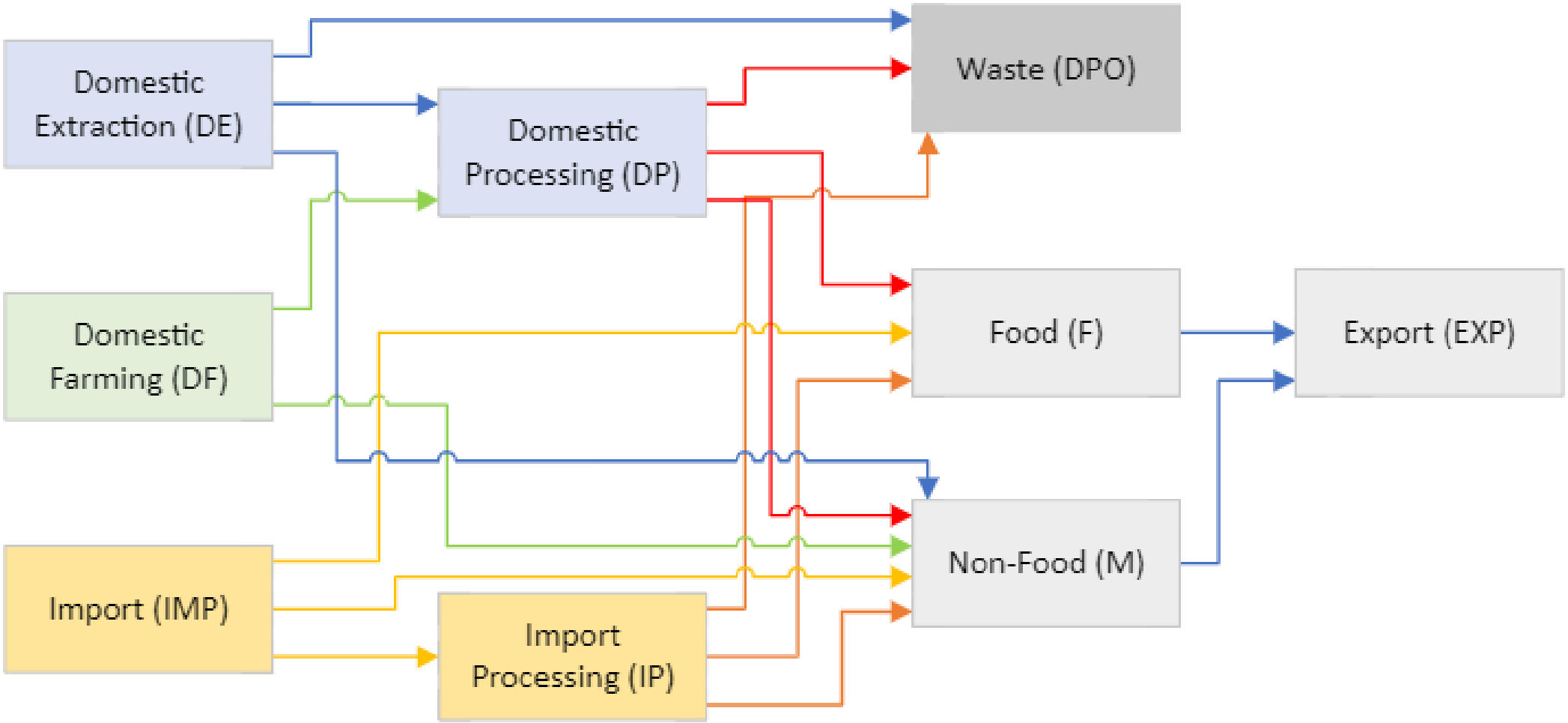
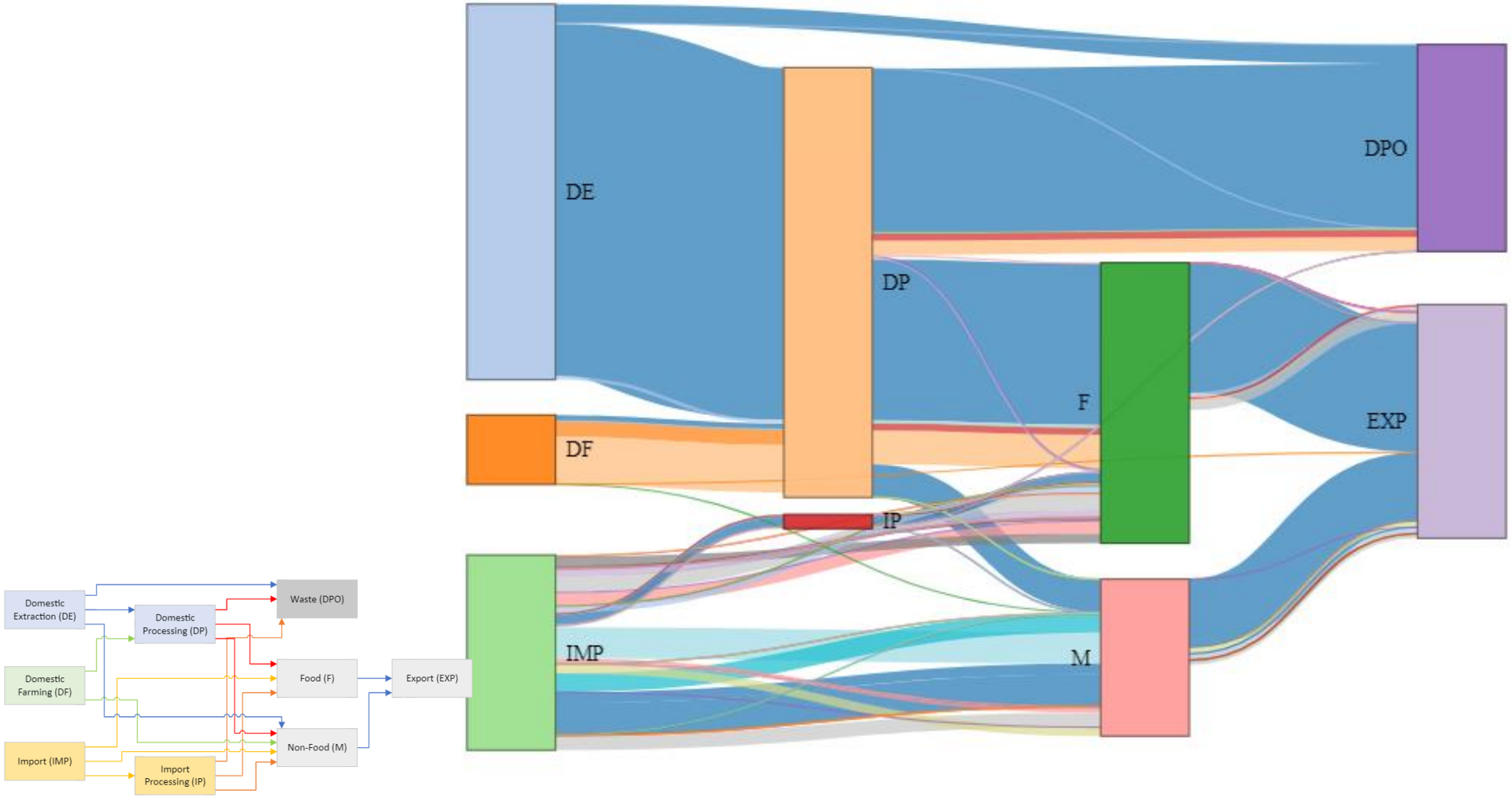
Modeling approach

- Less is more
  - Use the registry information I have access to
  - Assume European-ish food tradition (none of that „kúttmagi“ stuff)
  - Assume „best case“ behavior of yield from material (using Matís/MAST handbooks)

The output structure



Biomaterials



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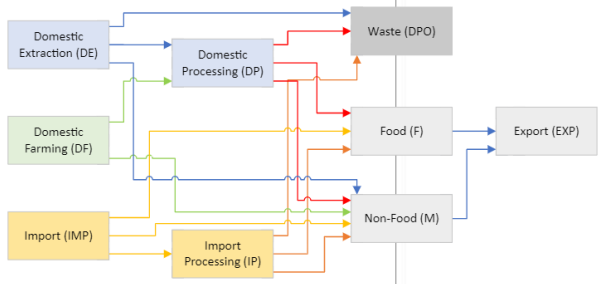
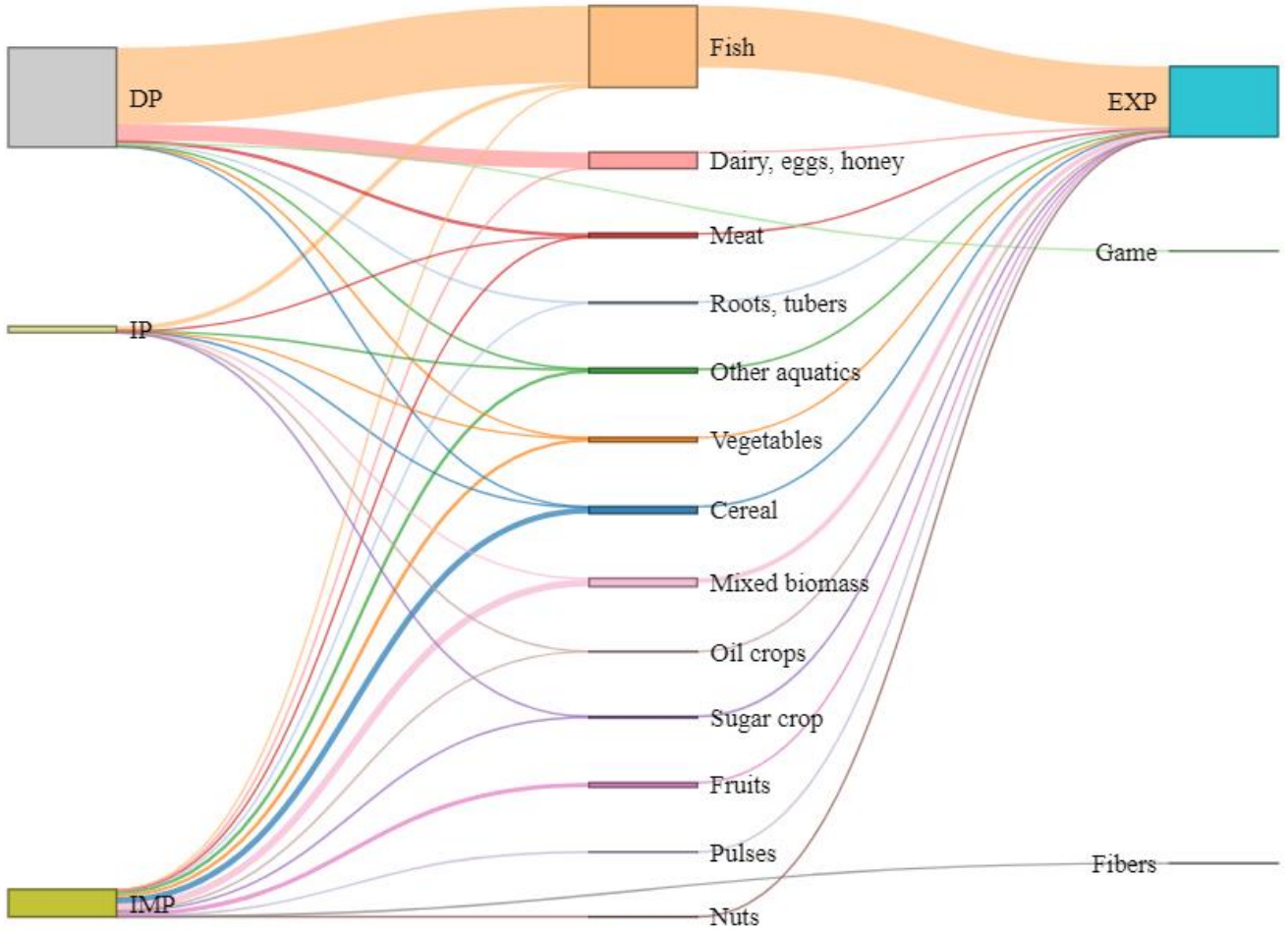
Food avilability





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Measure of food avaiability

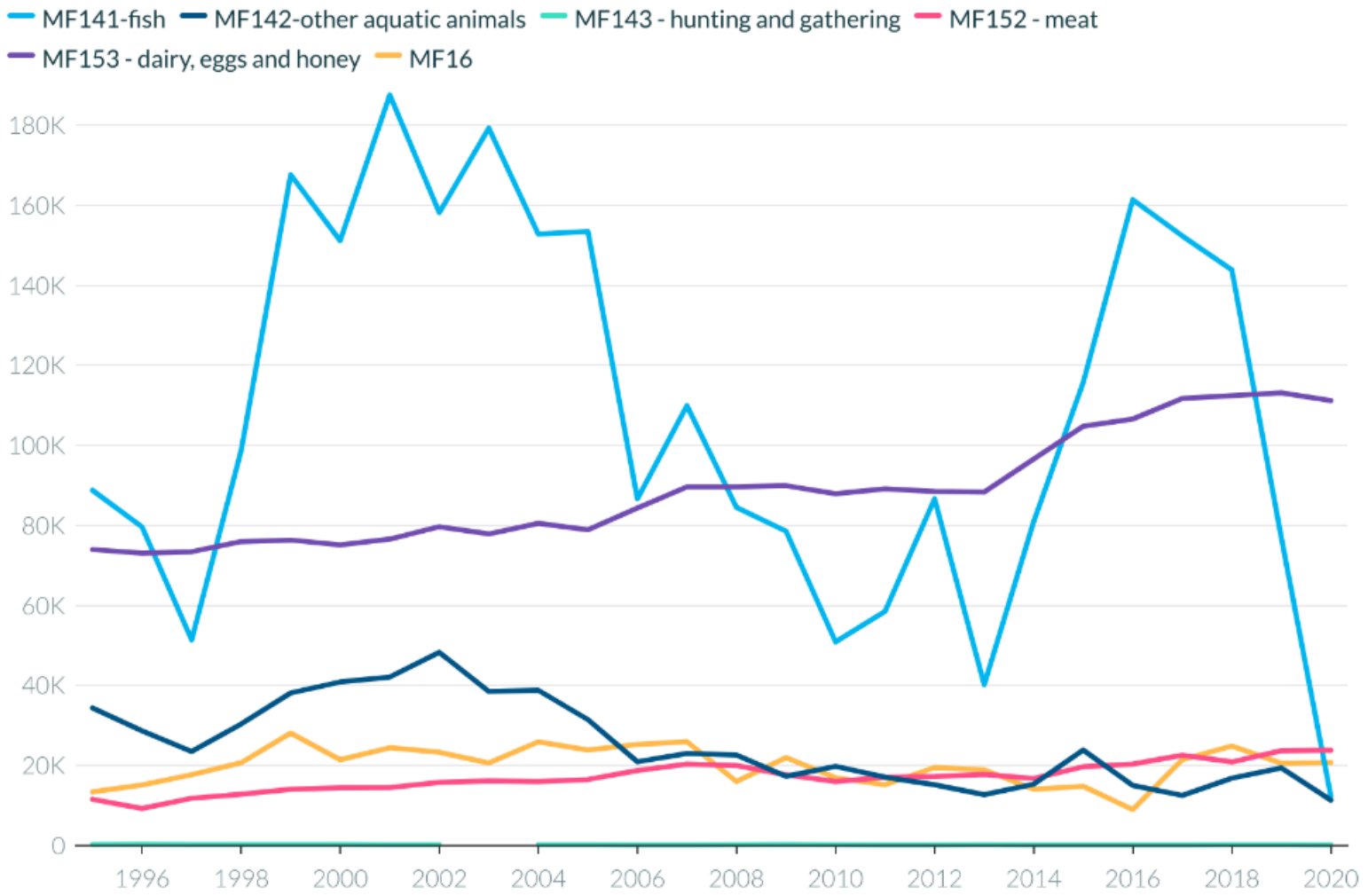
$$FA = \left[m(DP \rightarrow F) + m^{\circ}(IMP \rightarrow F) \right] - m(F \rightarrow EXP)$$

$$m^{\circ}(IMP) = m(IMP \rightarrow F) + m(IP \rightarrow F)$$

Crops food available
tons
MF111-cereals
MF112-roots and tubers
MF113-sugar
MF114-pulses
MF115-nuts
MF116-oil crops
MF117-vegetables
MF118-Fruits
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

Animal products available

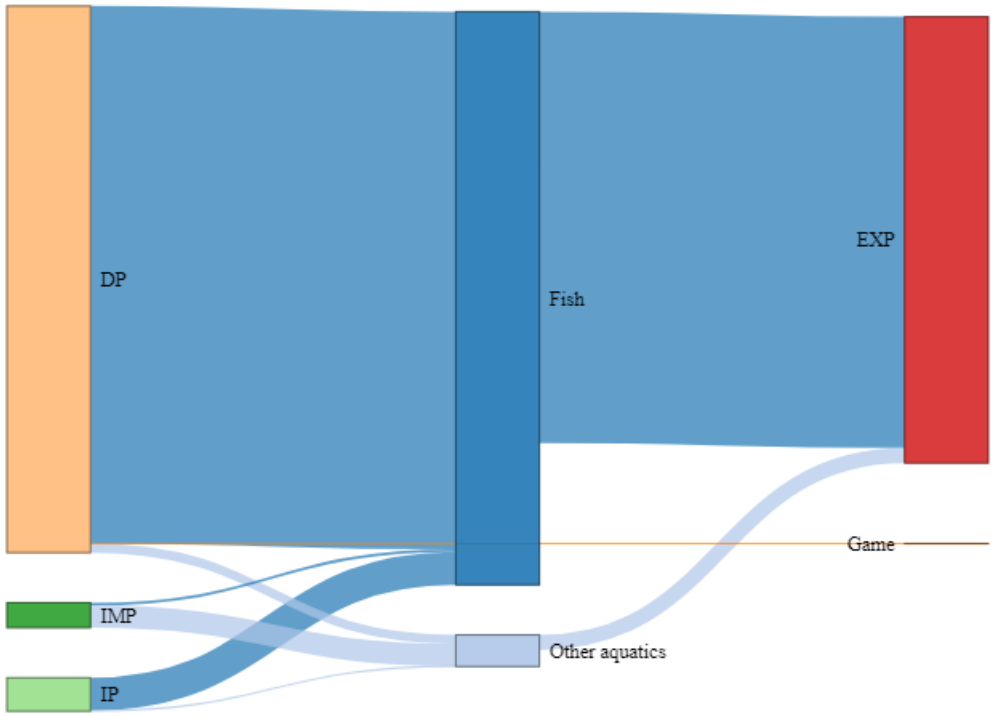
tons



Food independence measure

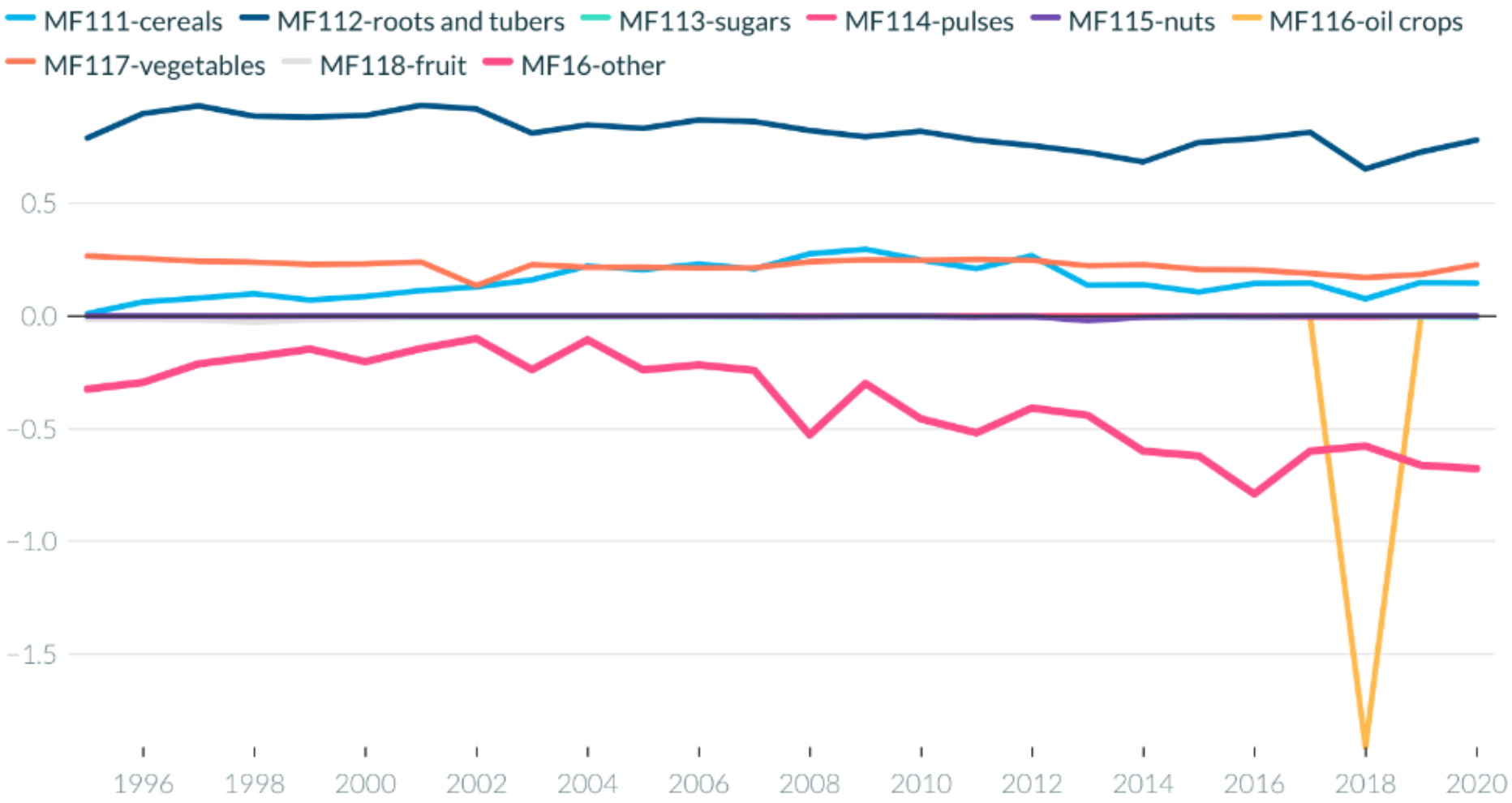
$$\gamma = \frac{m(DP \rightarrow F) - m(F \rightarrow EXP)}{[m(DP \rightarrow F) + m^{\circ}(IMP \rightarrow F)]}$$

$$m^{\circ}(IMP) = m(IMP \rightarrow F) + m(IP \rightarrow F)$$



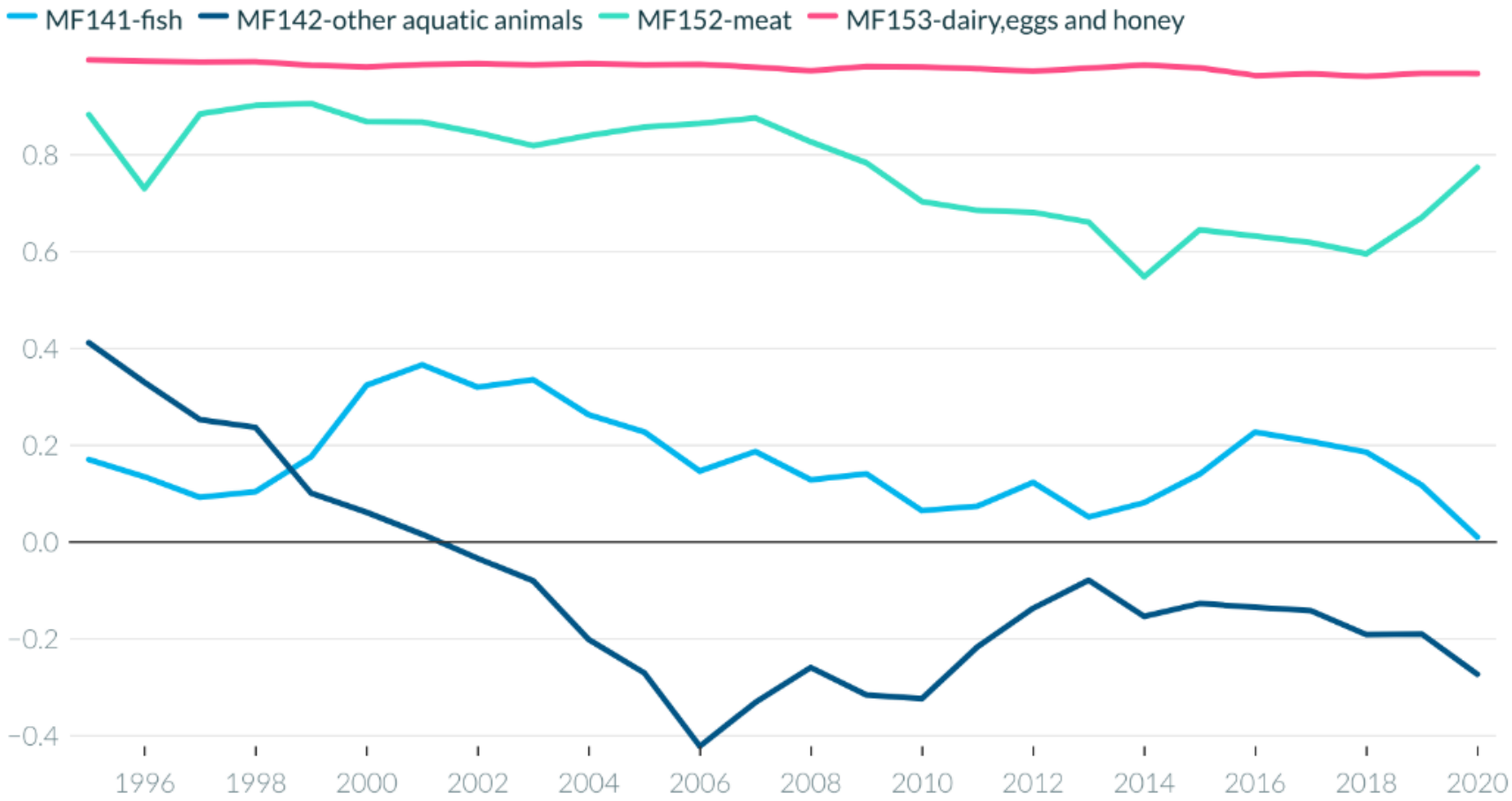
Food independence for Crops

tons



Food independence for meats

tons



To summarise

- Is this method and „enrichment“ of the EW-MFA data viable &|| transferable?
  - Do I believe the outcome?

- This is a „simple“ method to get a measure on food offering
  - What the heck is wrong with the fish?
  - How do I estimate MF.1.6 - other? (or do I)

Thank you!

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