

# **What if we actually cared about climate change?**

**A proposal for constructive changes**

**Chris Mutel, 14.09.2021**

The views expressed here are solely my own!

# So... what if we really cared?

- If we recognised a moral imperative to reduce climate change...
- And we see our skills and limitations...
- Then what can we do as a community?

# So... what if we really cared?

- If we recognised a moral imperative to reduce climate change...
- And we see our skills and limitations...
- Then what can we do as a community?
- LCA can help, but **only** if we...
  - Make sure our answers are correct
  - Make sure our answers are robust
  - Work effectively together beyond our habits and short-term self-interests

# The right numbers

# Confirmation of CO<sub>2</sub> totals

## Compare with Global Carbon Budget 2019

Earth Syst. Sci. Data, 12, 3269–3340, 2020

<https://doi.org/10.5194/essd-12-3269-2020>

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<https://essd.copernicus.org/articles/12/3269/2020/essd-12-3269-2020.html>

### Global Carbon Budget 2020

**Pierre Friedlingstein<sup>1,2</sup>, Michael O'Sullivan<sup>2</sup>, Matthew W. Jones<sup>3</sup>, Robbie M. Andrew<sup>4</sup>, Judith Hauck<sup>5</sup>, Are Olsen<sup>6,7</sup>, Glen P. Peters<sup>4</sup>, Wouter Peters<sup>8,9</sup>, Julia Pongratz<sup>10,11</sup>, Stephen Sitch<sup>12</sup>, Corinne Le Quéré<sup>3</sup>, Josep G. Canadell<sup>13</sup>, Philippe Ciais<sup>14</sup>, Robert B. Jackson<sup>15</sup>, Simone Alin<sup>16</sup>, Luiz E. O. C. Aragão<sup>17,12</sup>, Almut Arneth<sup>18</sup>, Vivek Arora<sup>19</sup>, Nicholas R. Bates<sup>20,21</sup>, Meike Becker<sup>6,7</sup>, Alice Benoit-Cattin<sup>22</sup>, Henry C. Bittig<sup>23</sup>, Laurent Bopp<sup>24</sup>, Selma Bultan<sup>10</sup>, Naveen Chandra<sup>25,26</sup>, Frédéric Chevallier<sup>14</sup>, Louise P. Chini<sup>27</sup>, Wiley Evans<sup>28</sup>, Liesbeth Florentie<sup>8</sup>, Piers M. Forster<sup>29</sup>, Thomas Gasser<sup>30</sup>, Marion Gehlen<sup>14</sup>, Dennis Gilfillan<sup>31</sup>, Thanos Gkritzalis<sup>32</sup>, Luke Gregor<sup>33</sup>, Nicolas Gruber<sup>33</sup>, Ian Harris<sup>34</sup>, Kerstin Hartung<sup>10,a</sup>, Vanessa Haverd<sup>13</sup>, Richard A. Houghton<sup>35</sup>, Tatiana Ilyina<sup>11</sup>, Atul K. Jain<sup>36</sup>, Emilie Joetzjer<sup>37</sup>, Koji Kadono<sup>38</sup>, Etsushi Kato<sup>39</sup>, Vassilis Kitidis<sup>40</sup>, Jan Ivar Korsbakken<sup>4</sup>, Peter Landschützer<sup>11</sup>, Nathalie Lefèvre<sup>41</sup>, Andrew Lenton<sup>42</sup>, Sebastian Lienert<sup>43</sup>, Zhu Liu<sup>44</sup>, Danica Lombardozzi<sup>45</sup>, Gregg Marland<sup>31,46</sup>, Nicolas Metzger<sup>41</sup>, David R. Munro<sup>47,48</sup>, Julia E. M. S. Nabel<sup>11</sup>, Shin-Ichiro Nakaoka<sup>26</sup>, Yosuke Niwa<sup>26,49</sup>, Kevin O'Brien<sup>50,16</sup>, Tsuneo Ono<sup>51</sup>, Paul I. Palmer<sup>52,53</sup>, Denis Pierrot<sup>54</sup>, Benjamin Poulter<sup>55</sup>, Laure Resplandy<sup>56</sup>, Eddy Robertson<sup>57</sup>, Christian Rödenbeck<sup>58</sup>, Jörg Schwinger<sup>59,7</sup>, Roland Séférian<sup>37</sup>, Ingunn Skjelvan<sup>59,7</sup>, Adam J. P. Smith<sup>3</sup>, Adrienne J. Sutton<sup>16</sup>, Toste Tanhua<sup>60</sup>, Pieter P. Tans<sup>61</sup>, Hanqin Tian<sup>62</sup>, Bronte Tilbrook<sup>42,63</sup>, Guido van der Werf<sup>64</sup>, Nicolas Vuichard<sup>14</sup>, Anthony P. Walker<sup>65</sup>,**

# Confirmation of CO<sub>2</sub> totals

Compare with Global Carbon Budget 2019

Observation: 9946

Million tons Carbon

ecoinvent 3.7.1 cutoff

# Confirmation of CO<sub>2</sub> totals

Compare with Global Carbon Budget 2019

Observation: 9946

Million tons Carbon

Model: 582057

ecoinvent 3.7.1 cutoff

# Confirmation of CO<sub>2</sub> totals

Observation: 9946

MMTC	Activity
85935	'heat production, natural gas, at boiler fan burner low-NOx non-modulating <100kW' (megajoule, RoW)
84386	'heat production, natural gas, at boiler atmospheric low-NOx non-modulating <100kW' (megajoule, RoW)
82064	'heat production, natural gas, at boiler atmospheric non-modulating <100kW' (megajoule, RoW)
82064	'heat production, natural gas, at boiler fan burner non-modulating <100kW' (megajoule, RoW)
80515	heat production, natural gas, at boiler modulating <100kW' (megajoule, RoW)
77432	'heat production, natural gas, at boiler atm. low-NOx condensing non-modulating <100kW' (megajoule, RoW)
75869	heat production, natural gas, at boiler condensing modulating <100kW' (megajoule, RoW)
3392	heat production, at hard coal industrial furnace 1-10MW' (megajoule, RoW)
2088	heat production, anthracite, at stove 5-15kW' (megajoule, RoW)
334	'clinker production' (kilogram, RoW)



# Confirmation of CO<sub>2</sub> totals

Observation: 9946

Corrected model: 8307

MMTC	Activity
0	heat production, natural gas, at boiler fan burner low-NOx non-modulating <100kW' (megajoule, RoW)
0	heat production, natural gas, at boiler atmospheric low-NOx non-modulating <100kW' (megajoule, RoW)
0	'heat production, natural gas, at boiler atmospheric non-modulating <100kW' (megajoule, RoW)
0	'heat production, natural gas, at boiler fan burner non-modulating <100kW' (megajoule, RoW)
0	heat production, natural gas, at boiler modulating <100kW' (megajoule, RoW)
0	'heat production, natural gas, at boiler atm. low-NOx condensing non-modulating <100kW' (megajoule, RoW)
0	heat production, natural gas, at boiler condensing modulating <100kW' (megajoule, RoW)
0	heat production, at hard coal industrial furnace 1-10MW' (megajoule, RoW)
0	heat production, anthracite, at stove 5-15kW' (megajoule, RoW)
334	'clinker production' (kilogram, RoW)

# Confirmation of CO<sub>2</sub> totals - Concrete

Compare with Global Carbon Budget 2019

Observation: 427

Million tons Carbon

ecoinvent 3.7.1 cutoff

# Confirmation of CO<sub>2</sub> totals - Concrete

Compare with Global Carbon Budget 2019

Observation: 427

Million tons Carbon

Model: 456

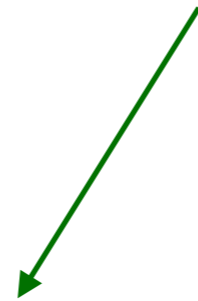
ecoinvent 3.7.1 cutoff

# Confirmation of CO<sub>2</sub> totals - Concrete

Compare with Global Carbon Budget 2019



Calcination emissions



Observation: 427

Million tons Carbon

Model: 456

ecoinvent 3.7.1 cutoff



Combustion & calcination emissions



# Global cement production

Statistics\*: 3191

- China (2015): 2350
- China (2019): 2300

Million tons Cement

Model: 2029

ecoinvent 3.7.1 cutoff

\* <https://www.statista.com/statistics/267364/world-cement-production-by-country/>

# Confirmation of CH<sub>4</sub> totals

## Compare with Global Methane Budget 2017

Earth Syst. Sci. Data, 12, 1561–1623, 2020

<https://doi.org/10.5194/essd-12-1561-2020>

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### The Global Methane Budget 2000–2017

Marielle Saunio<sup>1</sup>, Ann R. Stavert<sup>2</sup>, Ben Poulter<sup>3</sup>, Philippe Bousquet<sup>1</sup>, Josep G. Canadell<sup>2</sup>, Robert B. Jackson<sup>4</sup>, Peter A. Raymond<sup>5</sup>, Edward J. Dlugokencky<sup>6</sup>, Sander Houweling<sup>7,8</sup>, Prabir K. Patra<sup>9,10</sup>, Philippe Ciais<sup>1</sup>, Vivek K. Arora<sup>11</sup>, David Bastviken<sup>12</sup>, Peter Bergamaschi<sup>13</sup>, Donald R. Blake<sup>14</sup>, Gordon Brailsford<sup>15</sup>, Lori Bruhwiler<sup>6</sup>, Kimberly M. Carlson<sup>16,17</sup>, Mark Carrol<sup>70</sup>, Simona Castaldi<sup>18,19,20</sup>, Naveen Chandra<sup>9</sup>, Cyril Crevoisier<sup>21</sup>, Patrick M. Crill<sup>22</sup>, Kristofer Covey<sup>23</sup>, Charles L. Curry<sup>24,71</sup>, Giuseppe Etiope<sup>25,26</sup>, Christian Frankenberg<sup>27,28</sup>, Nicola Gedney<sup>29</sup>, Michaela I. Hegglin<sup>30</sup>, Lena Höglund-Isaksson<sup>31</sup>, Gustaf Hugelius<sup>32</sup>, Misa Ishizawa<sup>33</sup>, Akihiko Ito<sup>33</sup>, Greet Janssens-Maenhout<sup>13</sup>, Katherine M. Jensen<sup>34</sup>, Fortunat Joos<sup>35</sup>, Thomas Kleinen<sup>36</sup>, Paul B. Krummel<sup>37</sup>, Ray L. Langenfelds<sup>37</sup>, Goulven G. Laruelle<sup>38</sup>, Licheng Liu<sup>39</sup>, Toshinobu Machida<sup>33</sup>, Shamil Maksyutov<sup>33</sup>, Kyle C. McDonald<sup>34</sup>, Joe McNorton<sup>40</sup>, Paul A. Miller<sup>41</sup>, Joe R. Melton<sup>42</sup>, Isamu Morino<sup>33</sup>, Jurek Müller<sup>35</sup>, Fabiola Murguia-Flores<sup>43</sup>, Vaishali Naik<sup>44</sup>, Yosuke Niwa<sup>33,45</sup>, Sergio Noce<sup>20</sup>, Simon O'Doherty<sup>46</sup>, Robert J. Parker<sup>47</sup>, Changhui Peng<sup>48</sup>, Shushi Peng<sup>49</sup>, Glen P. Peters<sup>50</sup>, Catherine Prigent<sup>51</sup>, Ronald Prinn<sup>52</sup>, Michel Ramonet<sup>1</sup>, Pierre Regnier<sup>38</sup>, William J. Riley<sup>53</sup>, Judith A. Rosentreter<sup>54</sup>, Arjo Segers<sup>55</sup>, Isobel J. Simpson<sup>14</sup>, Hao Shi<sup>56</sup>, Steven J. Smith<sup>57,58</sup>, L. Paul Steele<sup>37</sup>, Brett F. Thornton<sup>22</sup>, Hanqin Tian<sup>56</sup>, Yasunori Tohjima<sup>72</sup>, Francesco N. Tubiello<sup>59</sup>, Aki Tsuruta<sup>60</sup>, Nicolas Viovy<sup>1</sup>, Apostolos Voulgarakis<sup>61,62</sup>, Thomas S. Weber<sup>63</sup>, Michiel van Marle<sup>64</sup>, <https://essd.copernicus.org/articles/12/1561/2020/essd-12-1561-2020.html> ch<sup>67</sup>, Yi Yin<sup>1,47</sup>, Yukio Yoshida<sup>65</sup>, Wenxin Zhang<sup>66</sup>, Zhen Zhang<sup>68</sup>, Yuanhong Zhao<sup>1</sup>, Bo Zheng<sup>1</sup>, Qing Zhu<sup>53</sup>,

# Confirmation of CH<sub>4</sub> totals

Compare with Global Methane Budget 2017

Observation: 332-406

Million tons CH<sub>4</sub>

Model: 209

ecoinvent 3.7.1 cutoff

**Conclusion: Confirmation is a core aspect of database management, and a driver for how databases plan new data acquisition**



# Robust numbers

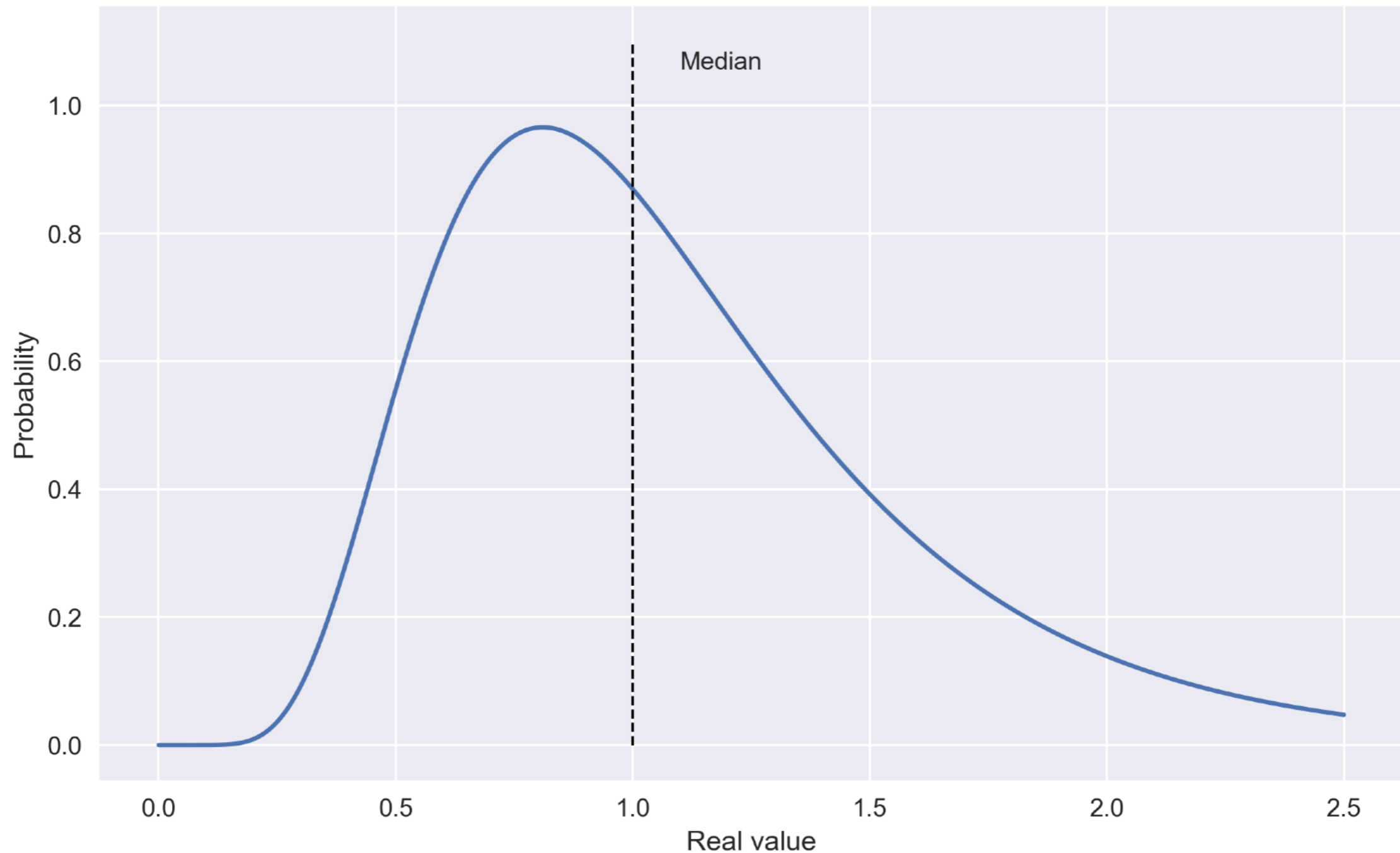
# Sensitivity analysis of Swiss consumption

Results from Aleksandra Kim (PhD student, PSI)  
ecoinvent 3.7.1 cutoff & agribalyse

- 1.petrol, unleaded → petrol production, low-sulfur (EUR w/o CH)
- 2.electricity, high voltage → electricity voltage transformation from high to medium voltage (CH)
- 3.electricity, medium voltage → electricity voltage transformation from medium to low voltage (CH)
- 4.integrated circuit, logic type → printed wiring board production, surface mounted... (GLO)
- 5.electricity, high voltage → electricity voltage transformation from high to medium voltage (CN-SGCC)
- 6.gold → integrated circuit production, logic type (GLO)
- 7.wafer, fabricated, for integrated circuit → integrated circuit production, logic type (GLO)
- 8.diesel, burned in diesel-electric generating set, 10MW → onshore well production, oil/gas (GLO)
- 9.electricity, medium voltage → integrated circuit production, logic type (GLO)
- 10.liquid crystal display, unmounted → display production, liquid crystal, 17 inches (GLO)
- 11.soybean → soybean, feed production (RoW)
- 12.cow milk → cheese production, soft, from cow milk (GLO)
- 13.integrated circuit, logic type → printed wiring board production, surface mounted... (GLO)
- 14.glider, passenger car → passenger car production, petrol/natural gas (GLO)
- 15.reinforcing steel → glider production, passenger car (GLO)
- 16.pig iron → steel production, converter, unalloyed (RoW)
- 17.light fuel oil → heat production, light fuel oil, at boiler 10kW, non-modulating (CH)
- 18.light fuel oil → heat production, light fuel oil, at boiler 10kW condensing, non-modulating (CH)
- 19.printed wiring board, surface mounted... → computer production, laptop (GLO)

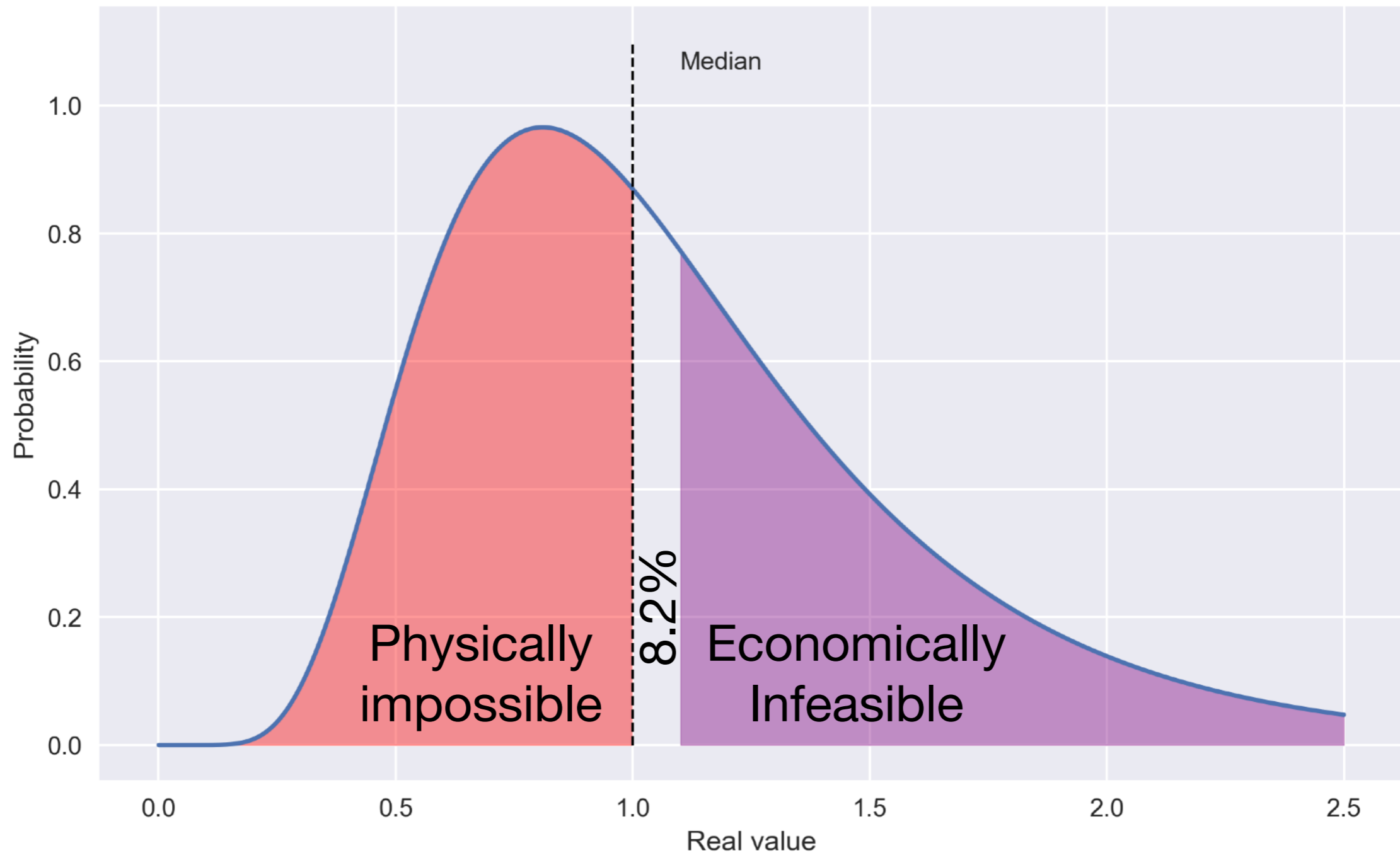
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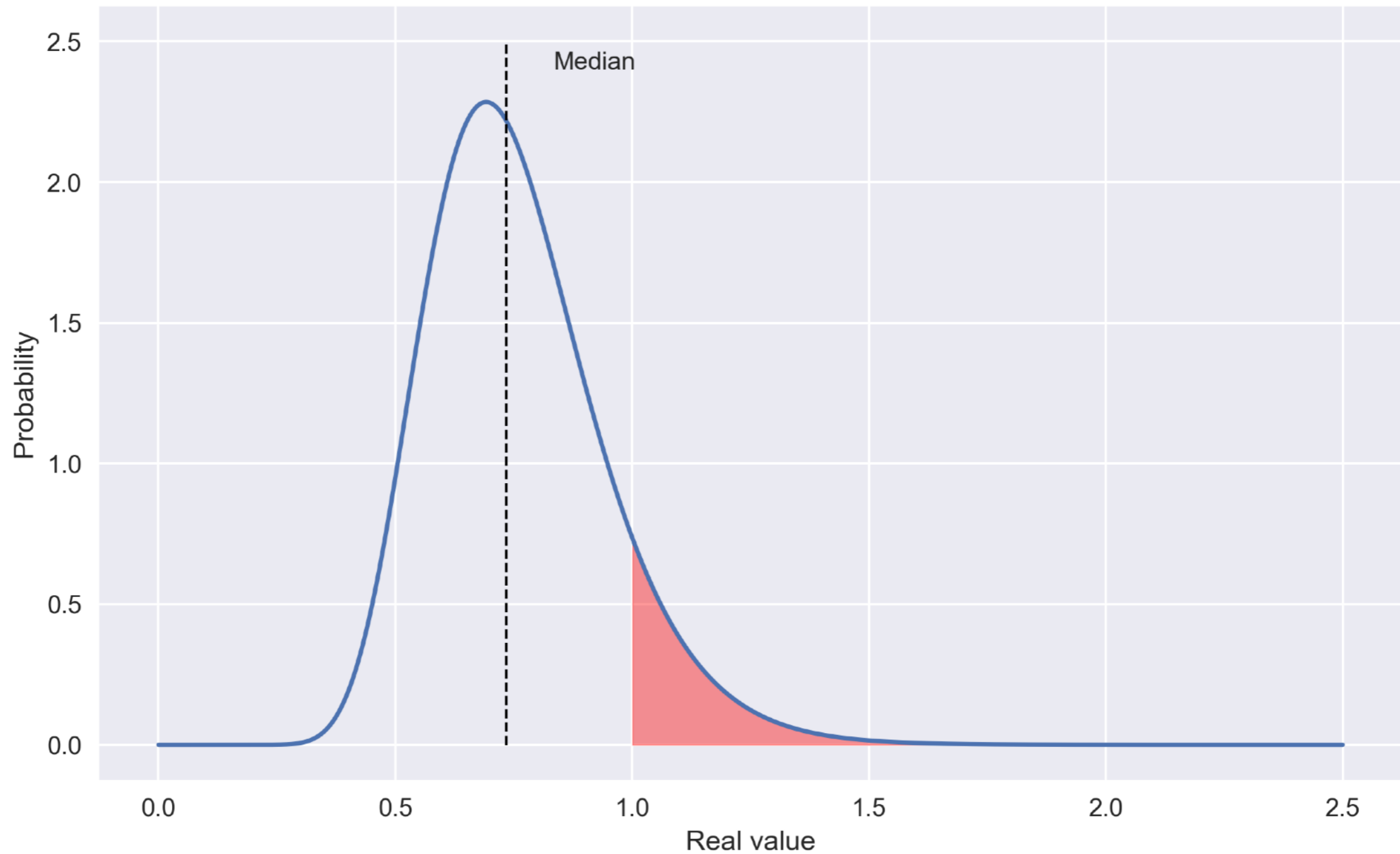
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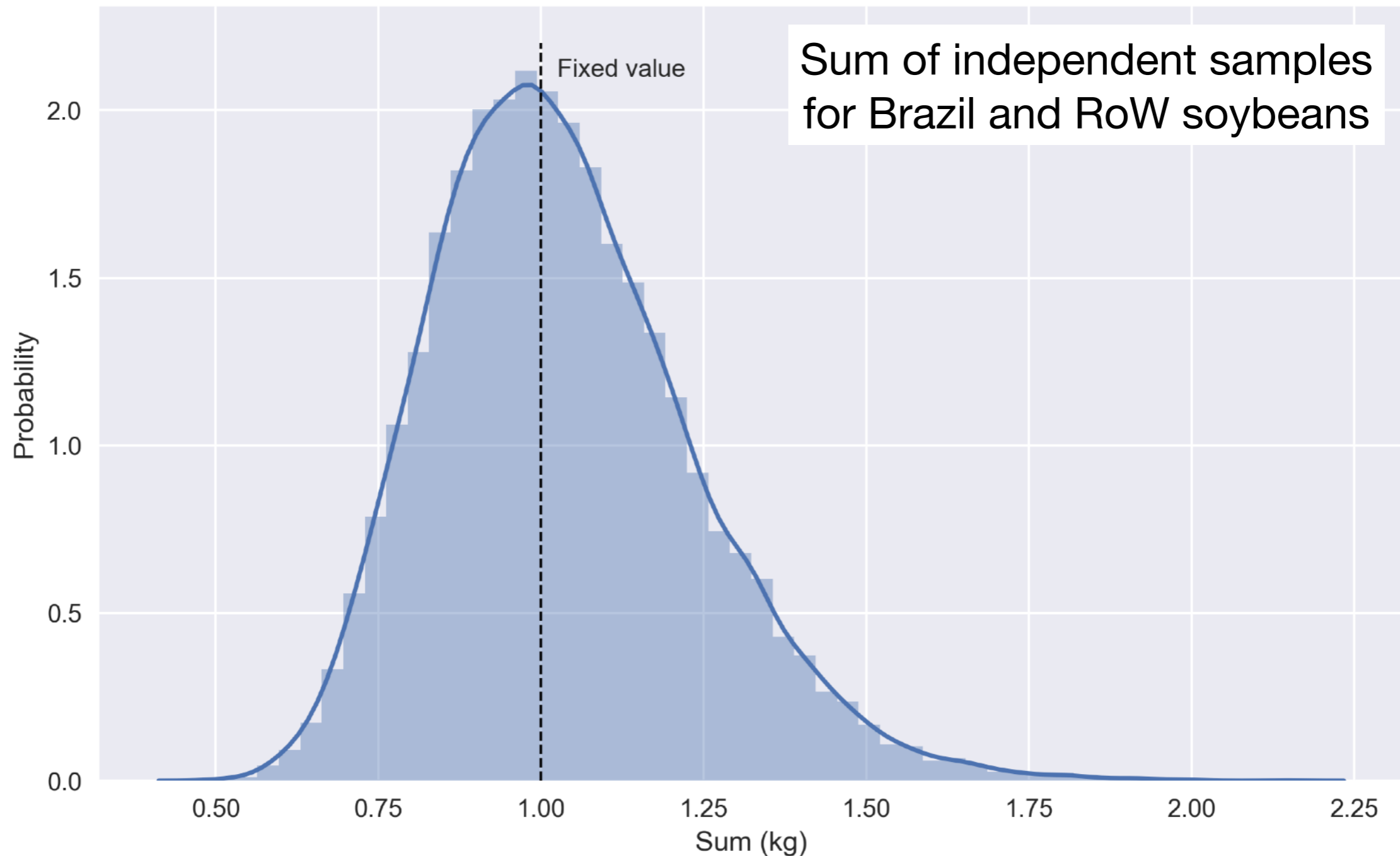
# Sensitivity analysis of Swiss consumption

11. soybean (RoW) → soybean, feed production (RoW)



# Sensitivity analysis of Swiss consumption

11. soybean (RoW) → soybean, feed production (RoW)



## Conclusions:

- 1. Default values for uncertainty should not be allowed.**
- 2. Physical limits can be applied automatically, economic limits manually.**
- 3. Virtual markets need fixes in data and software.**



**Working effectively  
together**

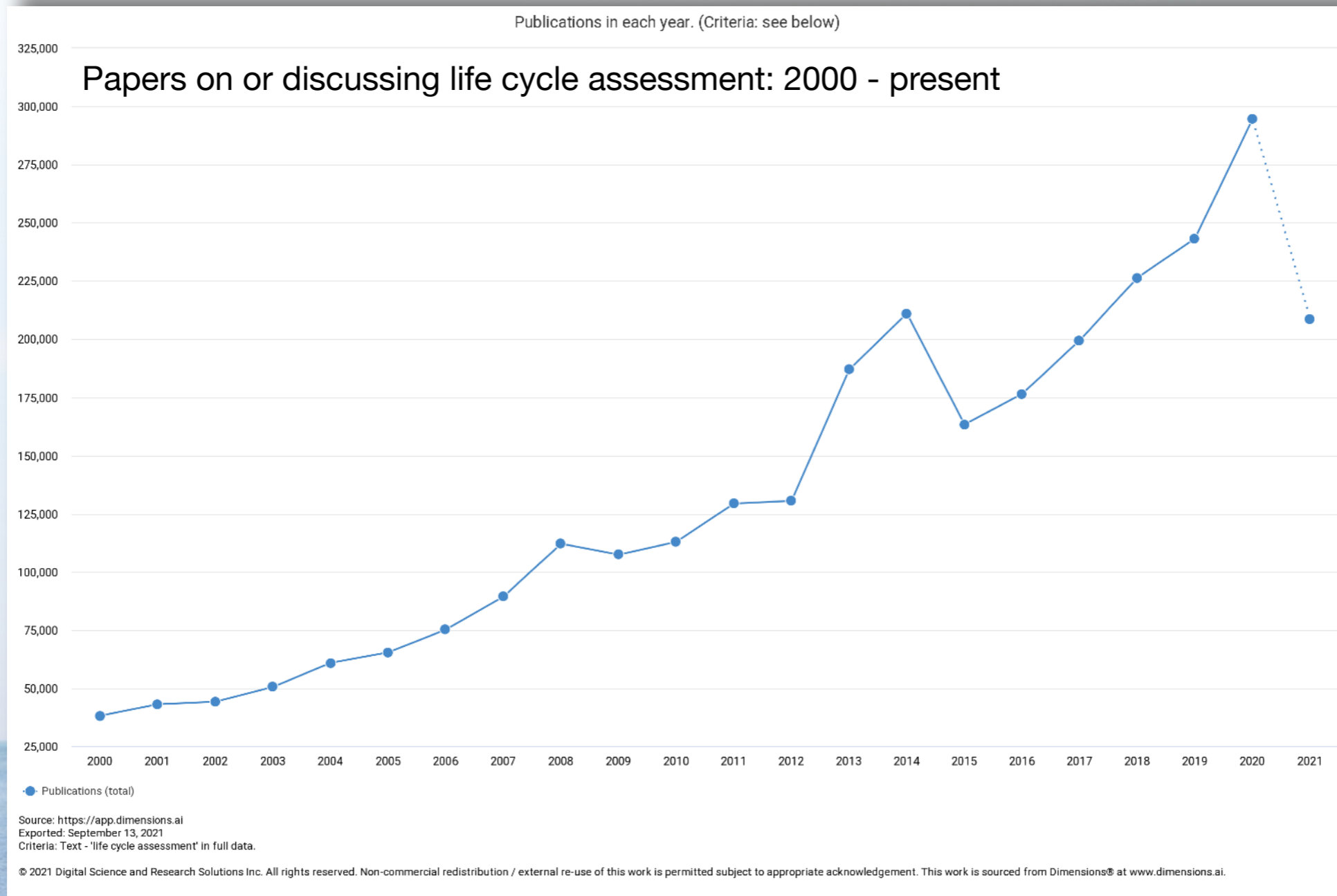
# **Water, water everywhere**

## **Nor any drop to drink**



# Water, water everywhere

## Nor any drop to drink



# Working effectively together

## Common nomenclature is critical

- Data formats: ecospold, ILCD, OLCA, SimaPro CSV, etc
  - War is over, we all won

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EPA/600/R-19/092 | September 2019 | [www.epa.gov/research](http://www.epa.gov/research)

### The Federal LCA Commons Elementary Flow List: Background, Approach, Description and Recommendations for Use

Source

# Working effectively together

## Break out of silos

- Data formats: ecospold, ILCD, OLCA, SimaPro CSV, etc
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- Nomenclature is still the **key blocker** for sharing data
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- Start modelling with a strategy for data reuse (FAIR)
  - Use common or correct names and add proxies

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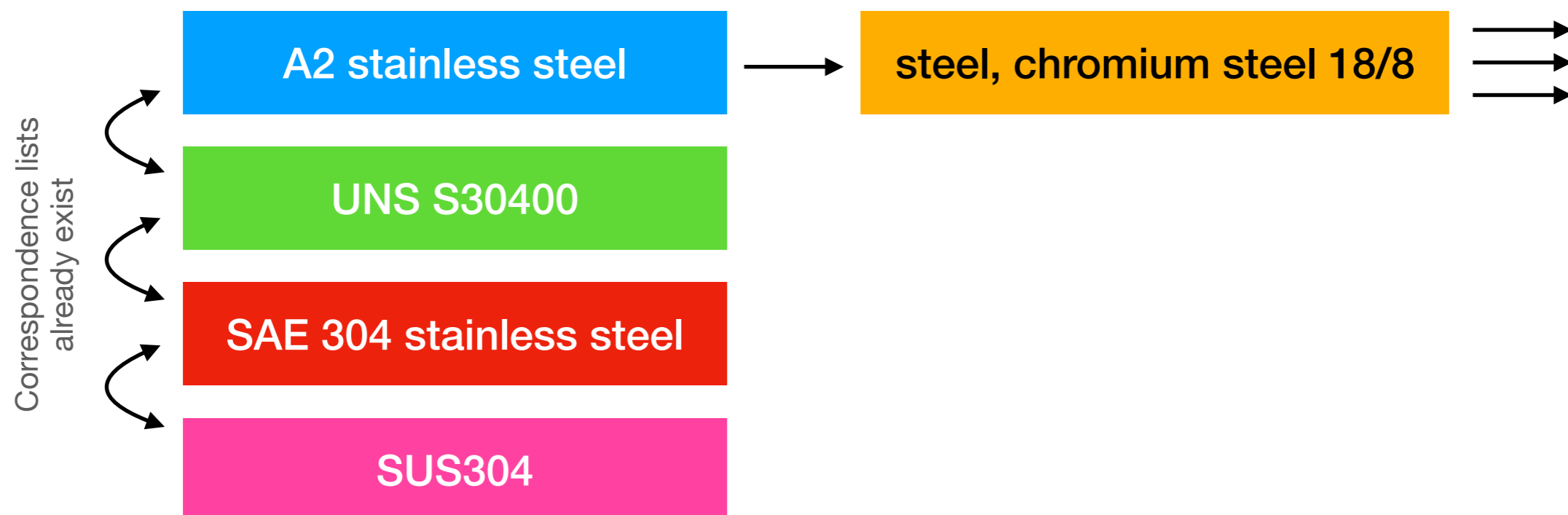




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# Working effectively together

## Using modern data infrastructure

The screenshot shows the GitHub repository page for `nvkelso/natural-earth-vector`. The repository is public and has 77 watchers, 1.2k stars, and 281 forks. It features a navigation bar with links to Code, Issues (141), Pull requests (2), Actions, Projects, Wiki, Security, and Insights. The main content area displays a file tree with folders for different map scales (10m, 110m, 50m) and cultural/physical data, along with a `geojson` folder, `housekeeping`, `packages/Natural_Earth_quick_start`, `tools`, `updates`, and `zips`. A recent pull request #446 is highlighted. The right sidebar contains an 'About' section with a description of the dataset, a link to [www.naturalearthdata.com/](http://www.naturalearthdata.com/), and tags for 'map', 'gis', and 'dataset'. Below this is a 'Releases' section showing the latest version `v4.1.0` from May 2018. At the bottom, there is a 'Contributors' section with 10 contributors.

nvkelso / natural-earth-vector Public

Watch 77 Star 1.2k Fork 281

Code Issues 141 Pull requests 2 Actions Projects Wiki Security Insights

master 7 branches 3 tags Go to file Add file Code

nvkelso Merge pull request #446 from nvkelso/v5-prequel ... b2abeb4 15 days ago 960 commits

10m_cultural	cascade the new names	15 days ago
10m_physical	cascade the new names	15 days ago
110m_cultural	cascade the new names	15 days ago
110m_physical	mapshaper churn	last month
50m_cultural	cascade the new names	15 days ago
50m_physical	mapshaper churn	last month
geojson	add iso_n3_eh for #284, SHP and GeoJSON targets	8 months ago
housekeeping	sideload names	15 days ago
packages/Natural_Earth_quick_start	cascade the new names	15 days ago
tools	update Wikidata scripts for Farsi, Chinese simplified, Chinese tradit...	last month
updates	Github formatting	4 years ago
zips	Minor fix to restore missing Brcko District and portion of Republic S...	7 years ago
.dockerignore	docker: some minor fixes	3 years ago

About

A global, public domain map dataset available at three scales and featuring tightly integrated vector and raster data.

[www.naturalearthdata.com/](http://www.naturalearthdata.com/)

map gis dataset

naturalearthdata

Readme

View license

Releases 3

v4.1.0 Latest on 23 May 2018

+ 2 releases

Contributors 10

# Working effectively together

## Using modern data infrastructure

The screenshot shows the GitHub interface for the repository `nvkelso/natural-earth-vector`. The page displays a list of 141 open issues, sorted by comments in descending order. The top issue is titled "Natural\_Earth\_quick\_start.zip's qgis v2 broken" (#233), opened on 30 Oct 2017 by `kannes`. Other visible issues include "Cannot download naciscdn.org data from naturalearthdata.com" (#581), "README of the table and field descriptions?" (#153), and "Feature request: Mountain Passes" (#465). The interface includes navigation tabs for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, and Insights. A search bar and filter options are also present.

nvkelso / natural-earth-vector Public

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Code Issues 141 Pull requests 2 Actions Projects Wiki Security Insights

Want to contribute to nvkelso/natural-earth-vector? Dismiss

If you have a bug or an idea, browse the open issues before opening a new one. You can also take a look at the [Open Source Guide](#).

Filters is:issue is:open sort:comments-desc Labels 16 Milestones 4 New issue

Clear current search query, filters, and sorts

141 Open	393 Closed	Author	Label	Projects	Milestones	Assignee	Sort
<a href="#">Natural_Earth_quick_start.zip's qgis v2 broken</a>	#233 opened on 30 Oct 2017 by <code>kannes</code>						15
<a href="#">Cannot download naciscdn.org data from naturalearthdata.com</a>	#581 opened 10 days ago by <code>yoheym</code> v5.0.0 (part 1)						14
<a href="#">README of the table and field descriptions?</a>	#153 opened on 25 Oct 2015 by <code>ppKrauss</code>		docs				12
<a href="#">Feature request: Mountain Passes</a>	#465 opened on 7 Jan by <code>Maxszik</code>						11
<a href="#">Add Australia supplemental hydro at 10m</a>			hydro				9

# Working effectively together

## Using modern data infrastructure

The screenshot shows a web browser window displaying a GitHub issue page. The browser's address bar shows the URL `https://github.com/nvkelso/natural-earth-vector/issues/465`. The GitHub navigation bar is visible at the top, with a search bar and links for Pull requests, Issues, Marketplace, and Explore. The repository name `nvkelso / natural-earth-vector` is shown as public, with 77 watchers, 1.2k stars, and 281 forks. The issue title is `Feature request: Mountain Passes #465`, marked as 'Open' and opened by `Maxszik` on 7 Jan with 11 comments. The issue content includes three comments: `Maxszik` suggesting mountain passes, `Andrettin` agreeing and suggesting forest geopolygons, and `nvkelso` (the owner) asking for data or research time. The right sidebar shows sections for Assignees, Labels, Projects, Milestone, and Linked pull requests, all currently empty.

Feature request: Mountain Passes #465

Open Maxszik opened this issue on 7 Jan · 11 comments

**Maxszik** commented on 7 Jan

I wish passes were a part of natural Earth. The Khyber Pass, The Brenner Pass, Torugart and so many others carry historical, cultural and contemporary importance. If we have peaks and capes in the dataset, for example, I think mountain passes deserve a place as well.

**Andrettin** commented on 7 Jan

I definitely agree. And I think the project would also benefit from having forest geopolygons for the physical label geographical areas.

**nvkelso** commented on 7 Jan

Great idea! Do you have any data or research time to contribute for mountain passes?

**Assignees**  
No one assigned

**Labels**  
None yet

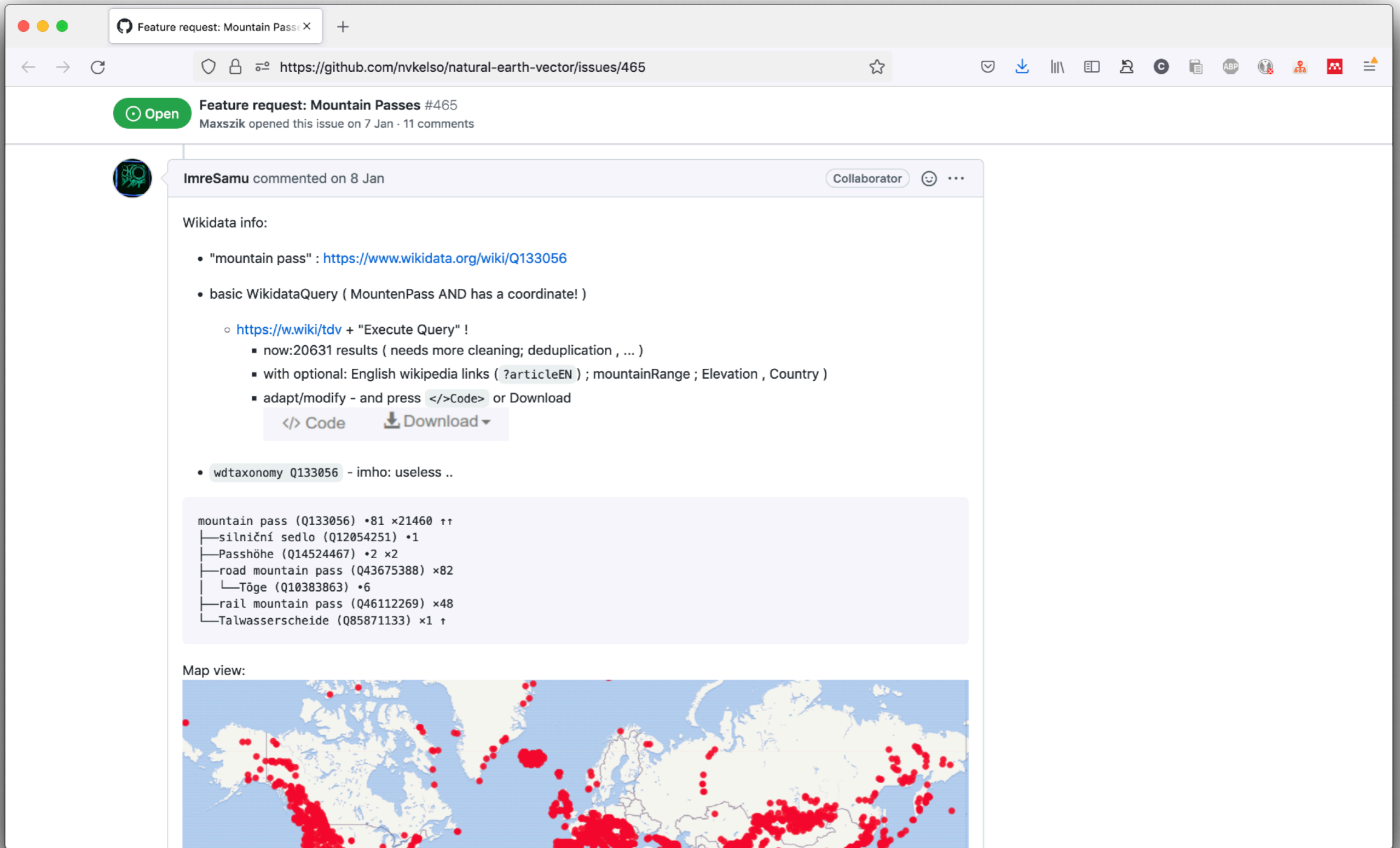
**Projects**  
None yet

**Milestone**  
No milestone

**Linked pull requests**  
Successfully merging a pull request may close this issue.  
None yet

# Working effectively together

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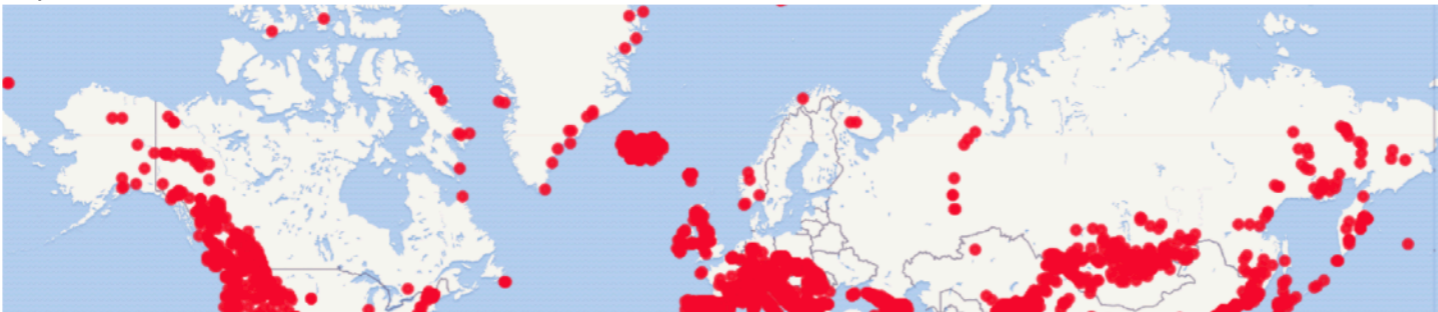
**ImreSamu commented on 8 Jan** Collaborator

Wikidata info:

- "mountain pass" : <https://www.wikidata.org/wiki/Q133056>
- basic WikidataQuery ( MounetenPass AND has a coordinate! )
  - <https://w.wiki/tdv> + "Execute Query" !
    - now:20631 results ( needs more cleaning; deduplication , ... )
    - with optional: English wikipedia links ( ?articleEN ) ; mountainRange ; Elevation , Country )
    - adapt/modify - and press `</>Code` or Download
- `wdtaxonomy Q133056` - imho: useless ..

```
mountain pass (Q133056) •81 ×21460 ↑↑
├─silniční sedlo (Q12054251) •1
├─Passhöhe (Q14524467) •2 ×2
├─road mountain pass (Q43675388) ×82
├─Töge (Q10383863) •6
├─rail mountain pass (Q46112269) ×48
└─Talwasserscheide (Q85871133) ×1 ↑
```

Map view:



# Working effectively together

## Using modern data infrastructure

The screenshot shows a web browser window displaying the GitHub pull requests page for the repository `nvkelso/natural-earth-vector`. The browser's address bar shows the URL `https://github.com/nvkelso/natural-earth-vector/pulls`. The GitHub navigation bar includes a search bar, navigation links for Pull requests, Issues, Marketplace, and Explore, and user profile icons. The repository header shows the name `nvkelso / natural-earth-vector` with a 'Public' badge, and statistics for Watch (77), Star (1.2k), and Fork (281). Below the header, navigation tabs for Code, Issues (141), Pull requests (2), Actions, Projects, Wiki, Security, and Insights are visible. A message box asks if the user is a first-time contributor, suggesting they open a pull request to fix an issue. The pull requests list shows two open pull requests: `[WIP] Add supplemental Australian lakes, rivers and update NA hydro` (opened 10 days ago by nvkelso, v5.0.0 part 1) and `[WIP] point-of-view polishing` (opened 10 days ago by nvkelso, v5.0.0 part 1). A 'New pull request' button is located in the top right of the list. A ProTip at the bottom suggests adding `no:assignee` to see unassigned items. The footer contains copyright information for GitHub, Inc. and various links like Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.

nvkelso / natural-earth-vector Public

Watch 77 Star 1.2k Fork 281

Code Issues 141 Pull requests 2 Actions Projects Wiki Security Insights

First time contributing to nvkelso/natural-earth-vector? [Dismiss](#) ...

If you know how to fix an [issue](#), consider opening a pull request for it.

Filters is:pr is:open Labels 16 Milestones 4 [New pull request](#)

2 Open ✓ 53 Closed Author Label Projects Milestones Reviews Assignee Sort

[\[WIP\] Add supplemental Australian lakes, rivers and update NA hydro](#) 1 2

#580 opened 10 days ago by nvkelso v5.0.0 (part 1)

[\[WIP\] point-of-view polishing](#)

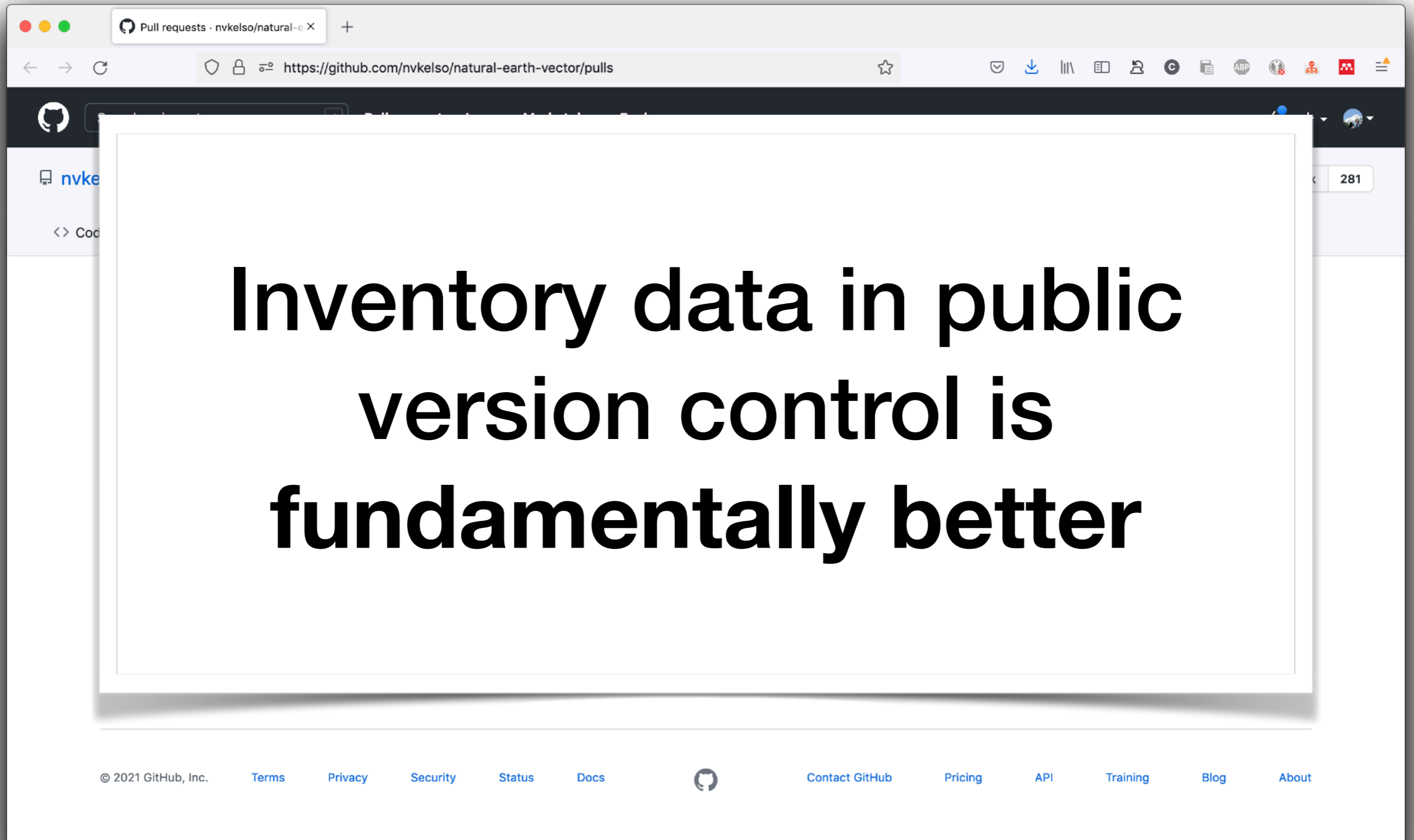
#579 opened 10 days ago by nvkelso v5.0.0 (part 1)

ProTip! Add `no:assignee` to see everything that's not assigned.

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# Working effectively together

## Using modern data infrastructure



# Working effectively together

## Role of ecoinvent

ecoinvent is a  
community resource!

ecoinvent is a private  
organisation!





# Working effectively together

## Role of ecoinvent

ecoinvent is a  
community resource!

**ecoinvent's most important  
job is communication &  
community engagement**



# **Working effectively together**

## **Role of ecoinvent: Some specific suggestions**

- All meeting minutes should be compiled and public

# **Working effectively together**

## **Role ofecoinvent: Some specific suggestions**

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- Open ecoinvent data should be FAIR

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# Working effectively together

## Role ofecoinvent: Some specific suggestions


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# Working effectively together

## Role ofecoinvent: Some specific suggestions

- All meeting minutes should be compiled and public
- Open ecoinvent data should be FAIR
- User community should have an ombudsman
- All substantial decisions should follow a proposal template
- All master data should be on Github

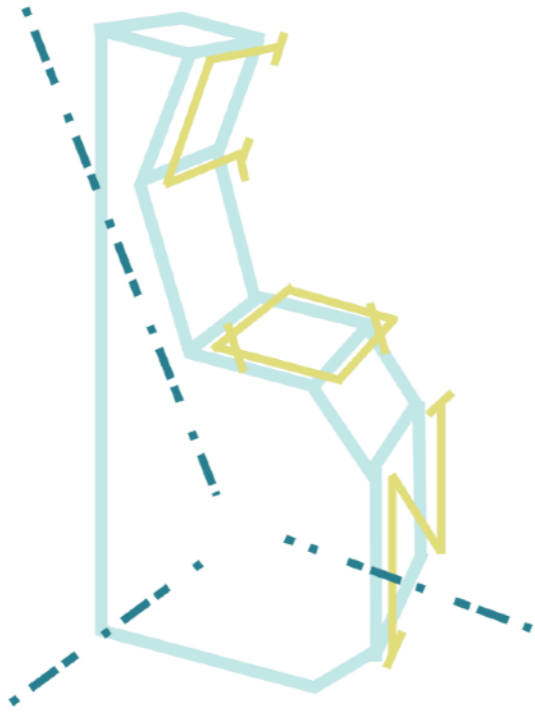
# Why ecoinvent?

You MAKE ME  
cry,  
but I STILL  you

**Conclusion: If we took climate change seriously, we would demand radical change to LCA availability to allow it to inform decisions by everyone everywhere**



# Thanks!



**Brightcon 2021** 🚀 🎉 🧑💻

Sept. 15 (tomorrow), free

Website: [brightcon.link](https://brightcon.link)

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