

# **Understanding the complex east-west relationships in the European geoscience research landscape.**

## **How European is the EGU?**

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# Explanation

This presentation is an update of the talk given to the EGU General Assembly in 2019. The presentation is composed of two parts:

- A statistical view comparing the research output between Western and Eastern Europe;
- A statistical view on EGU orientation and participation between Western and Eastern Europe.

# Disclaimer

- There are certainly more qualified people that handle statistics than us. This presentation contains numbers obtained through several databases. Better insight (or more accurate values) may be obtained by other colleagues;
- Databases are certainly affected by artefacts depending on authors and affiliations. Take the numbers shown as trends used for comparative reasons.
- Some fields contain mixed disciplines, not always obvious in databases, such as Earth and Planetary Sciences versus Physics and Astronomy.
- Opinions presented here are ours alone, they do not reflect any institutional policy or guidelines.

Databases used: Scopus and SciVal 2019.

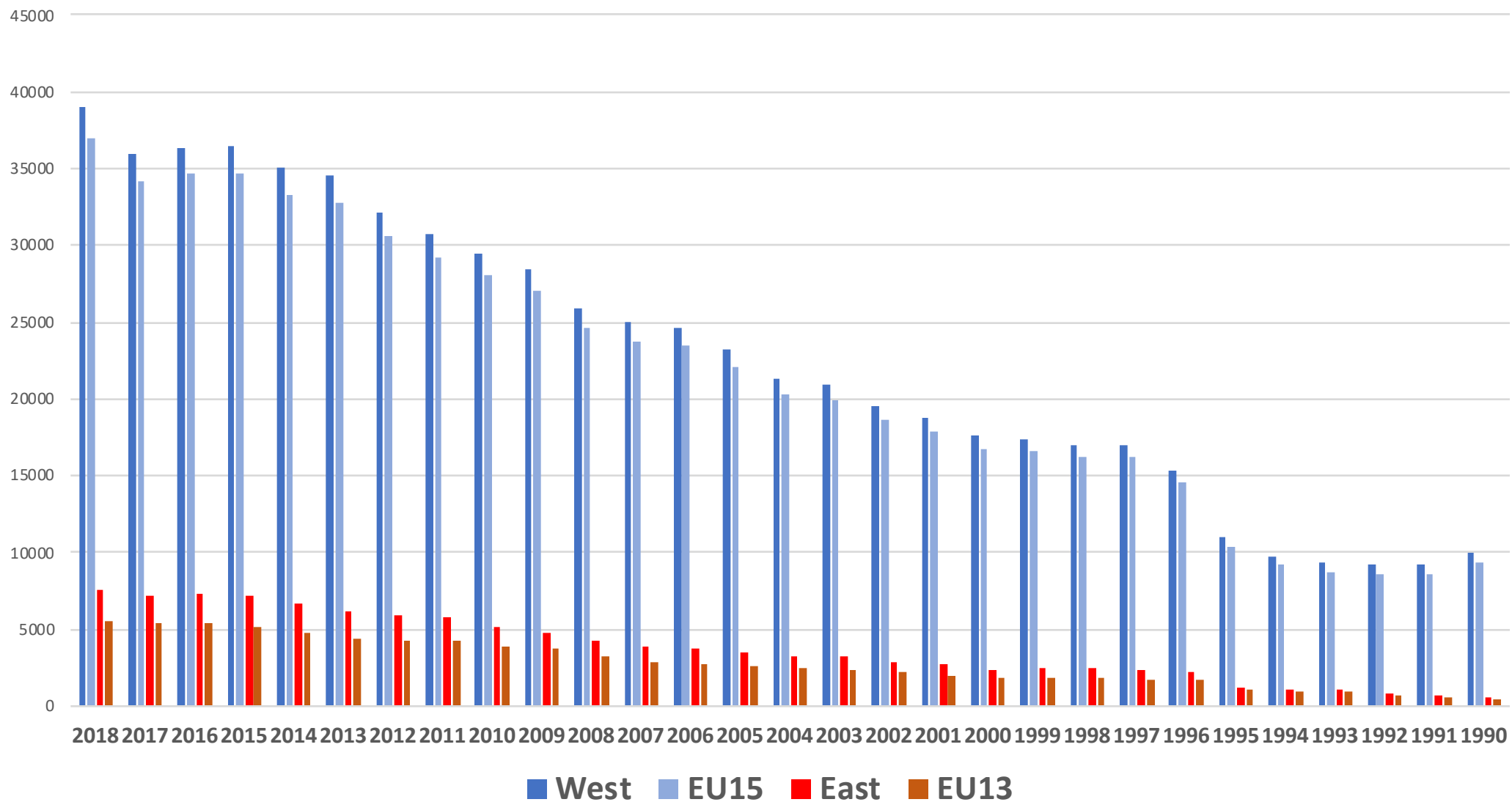
# Definitions of European research for this talk

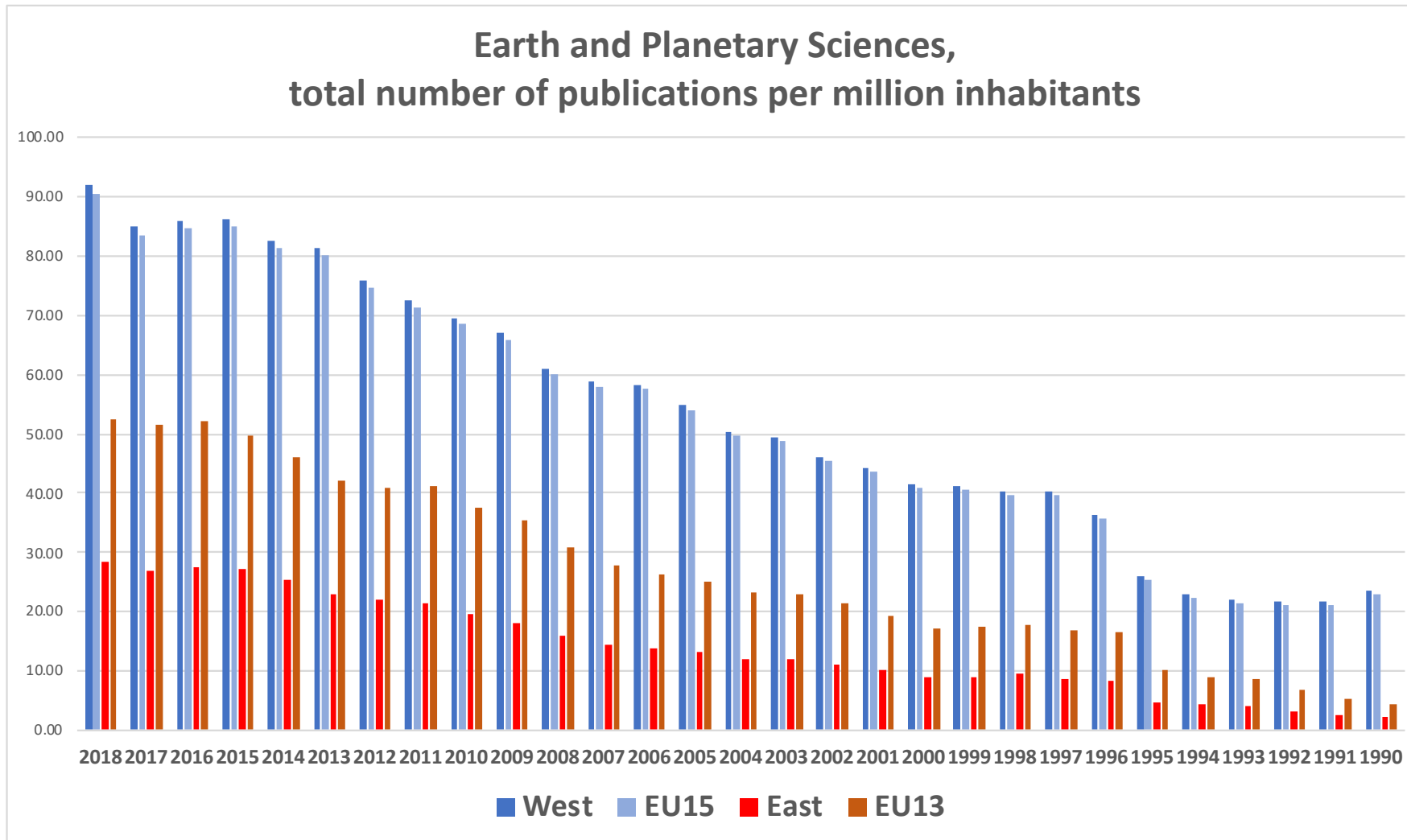
- NOTE: Always in reference to **countries of researchers affiliation**, **NOT** their nationality
- EU15 = affiliation in European Union member countries that joined before 2004 (AUT, BEL, DNK, FIN, FRA, DEU, GRC, IRL, ITA, LUX, NLD, PRT, ESP, SWE, GBR);
- EU13 = affiliation in European Union member countries that joined after 2003 (BGR, HRV, CYP, CZE, EST, HUN, LVA, LTU, MLT, POL, ROU, SVK, SVN);
- “Western” Europe = affiliations in EU15 + ISL, LIE, NOR, CHE, AND, MCO;
  - Includes Greece and some other southern Mediterranean countries.
- “Eastern” Europe = EU13 + ALB, ARM, BLR, BIH, MDA, MNE, NMK, SRB, TUR, UKR;
  - Russian Federation and Georgia not included in statistics for objective reasons;
  - The lists above does not include disputed countries or territories.

# Part 1. Background, publications and researchers' statistics

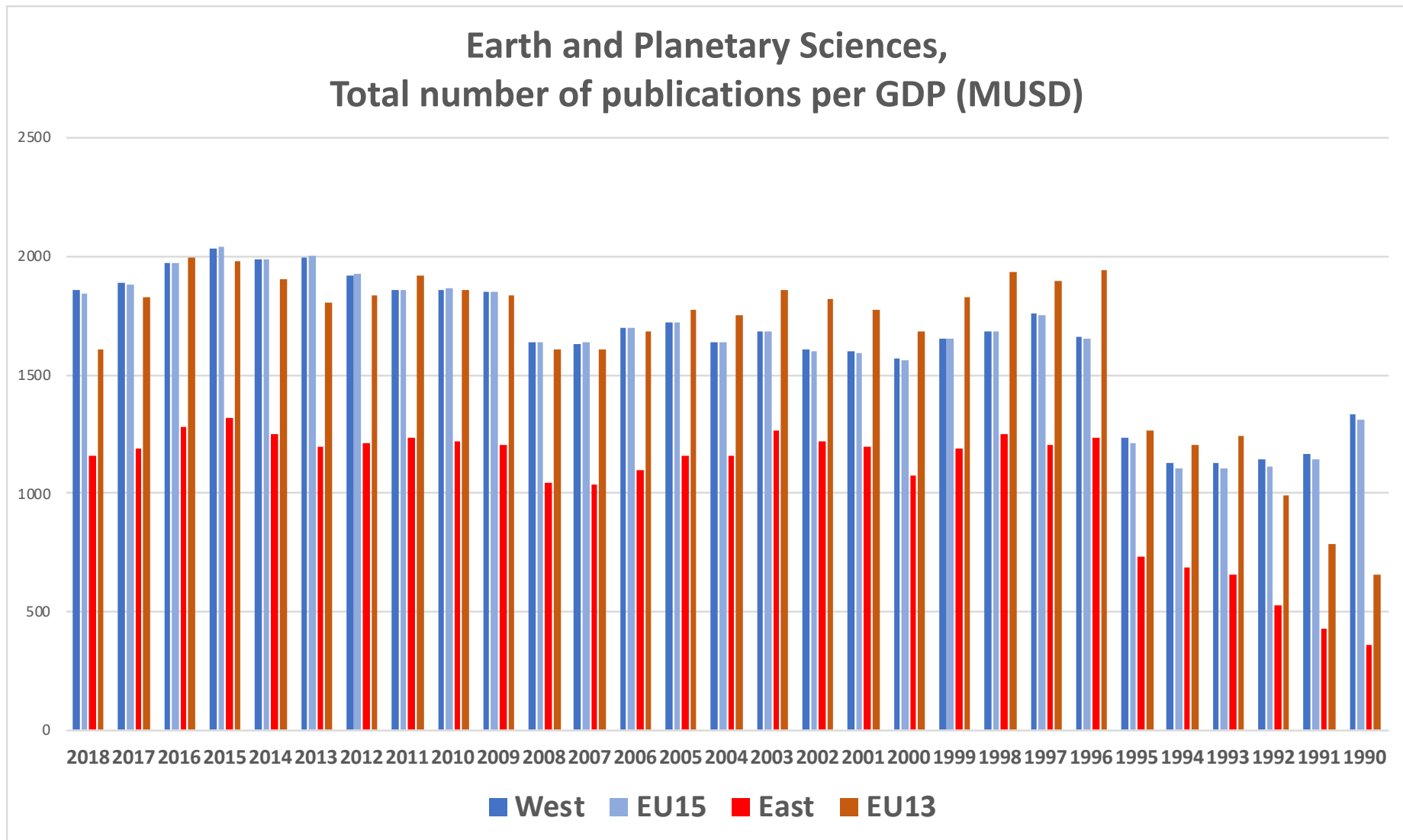
- First we need to understand what are the differences in research interests across Europe;
- Let's take a quick look on some statistics (Scopus, SciVal, 2019).

## Earth and Planetary Sciences, total number of publications





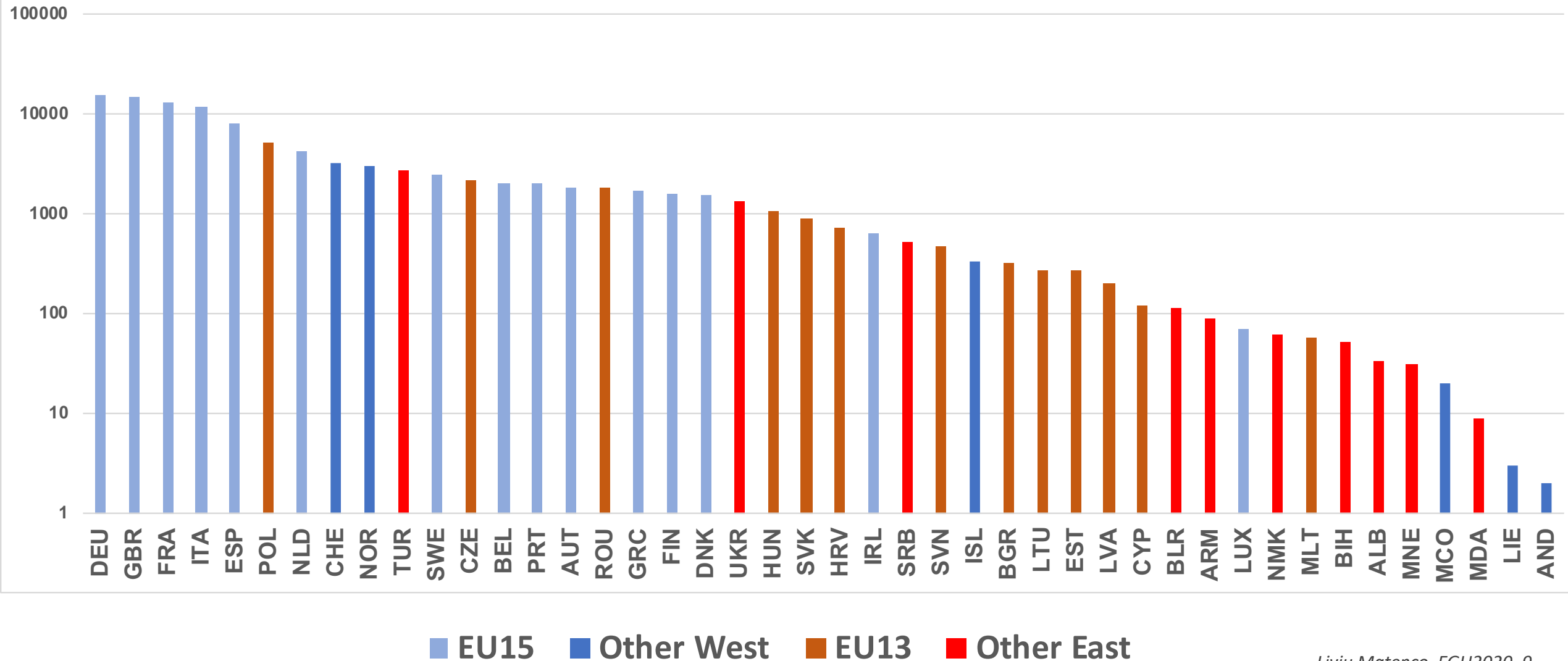
Observation 1: Western Europe has a higher (but comparable) research output when compared with Eastern Europe



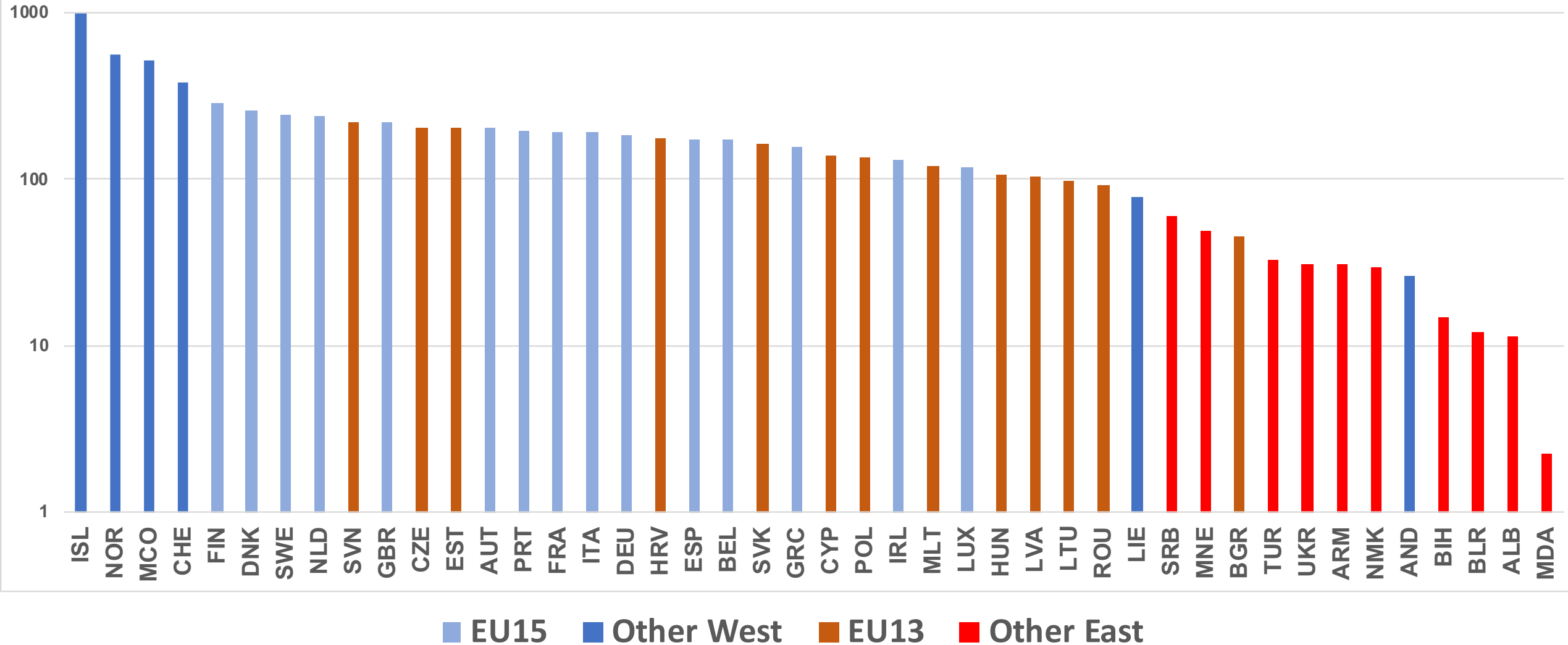
Observation 2: Everyone in Europe has roughly the same research output when compared with funding and possibilities. In other words nobody is better.



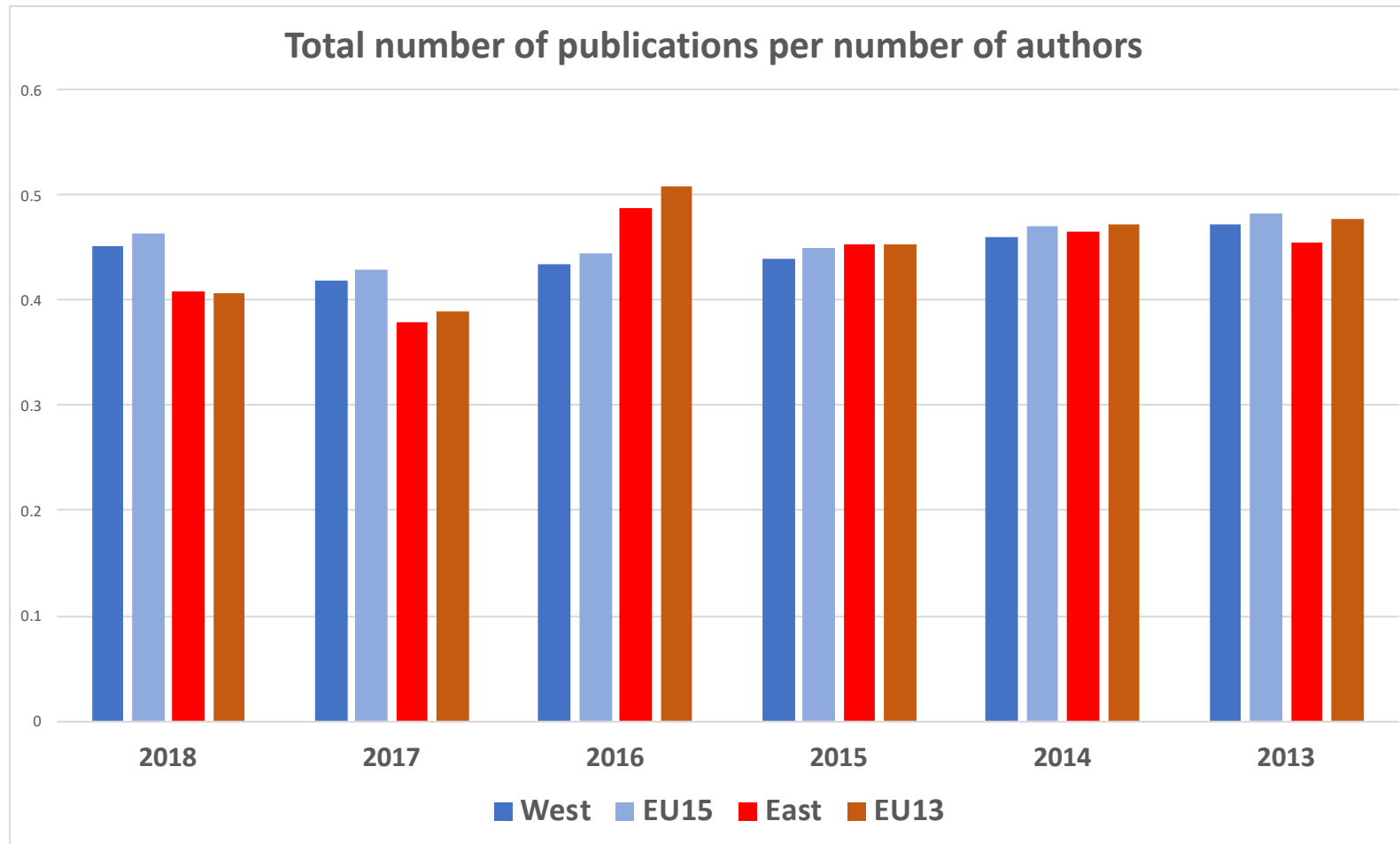
# Earth and Planetary Sciences Number of authors, 2018



# Earth and Planetary Sciences Number of authors per million inhabitants, 2018



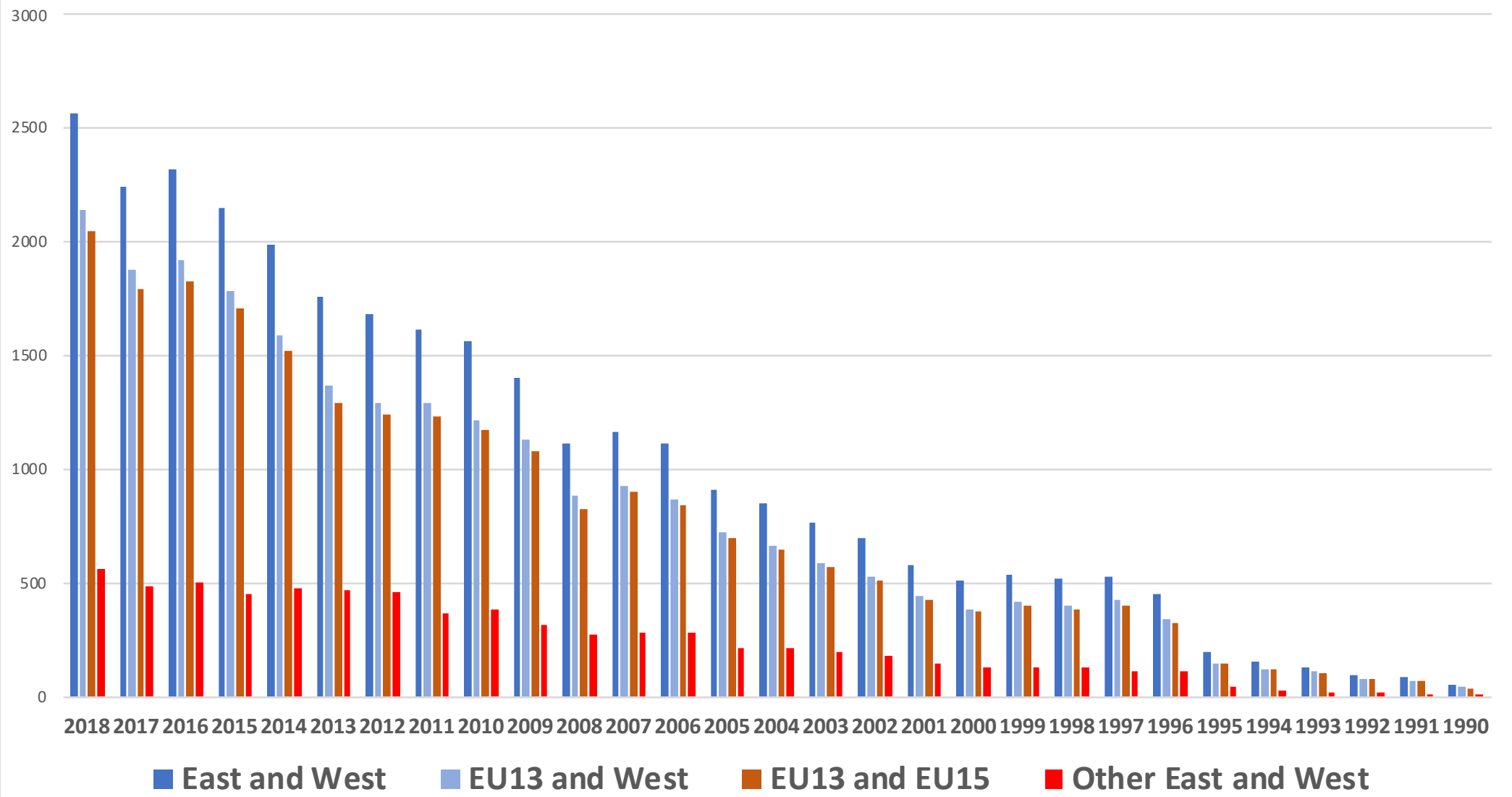
Observation 3: The interest in Earth and Planetary Sciences is highly variable in European countries (note the logarithmic scale!), but one cannot say that only in Eastern Europe the interest is lower.

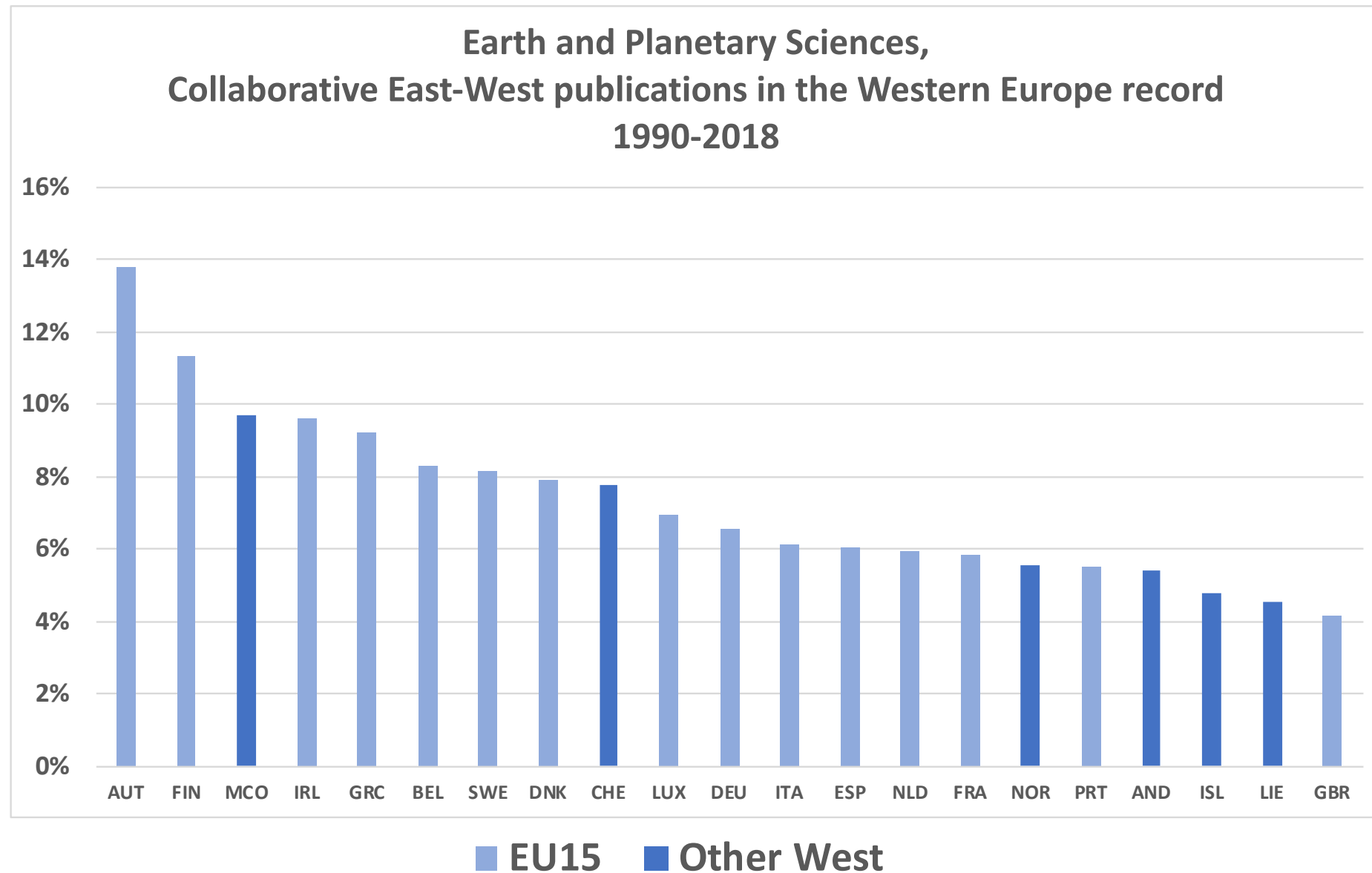


NOTE: Increased by East-West collaborative studies. This is **NOT** number of publications per author

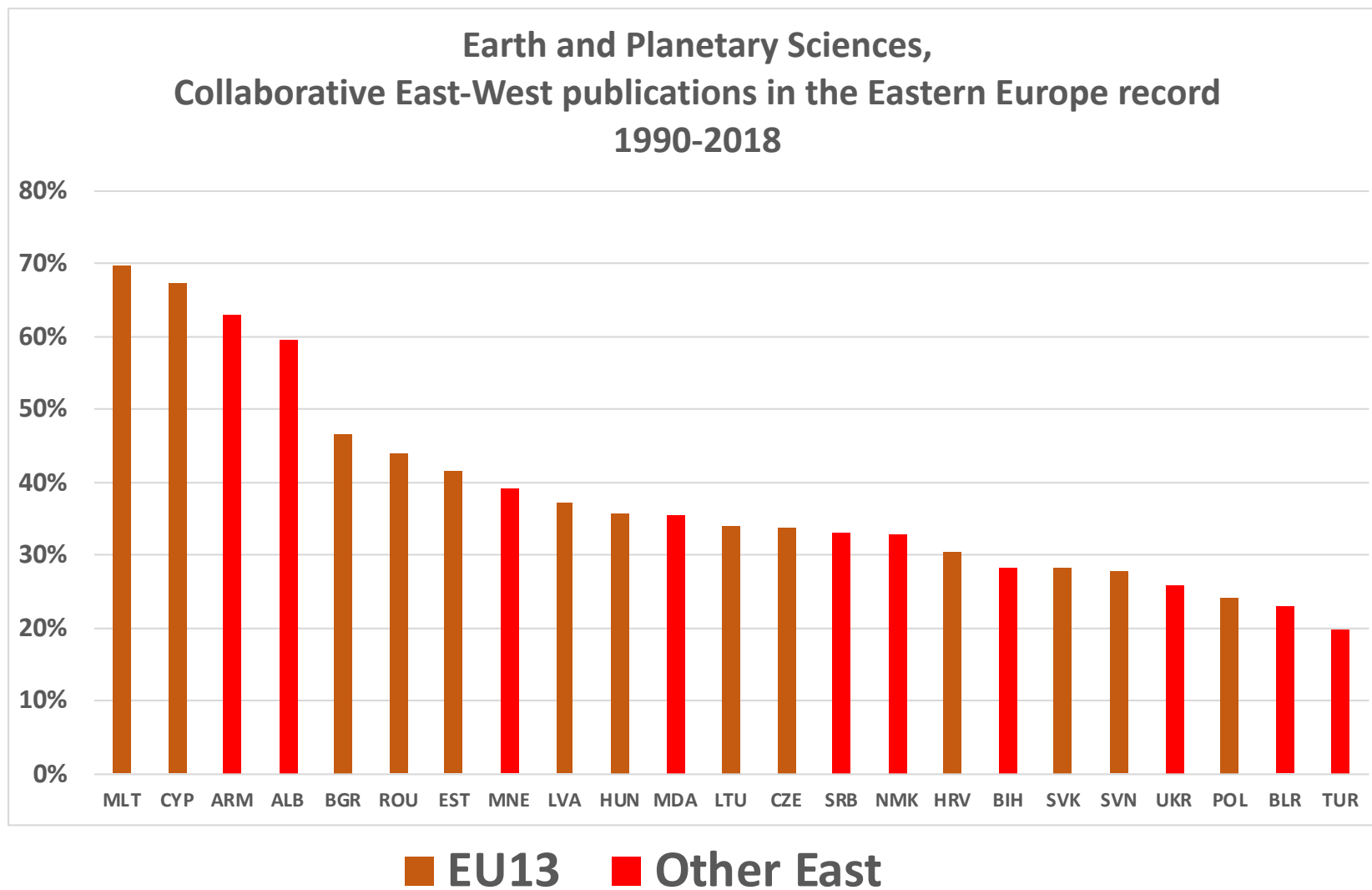
Observation 4: When accounting collaborative studies, everyone in Europe is similarly productive!!

# Earth and Planetary Sciences, collaborative publications

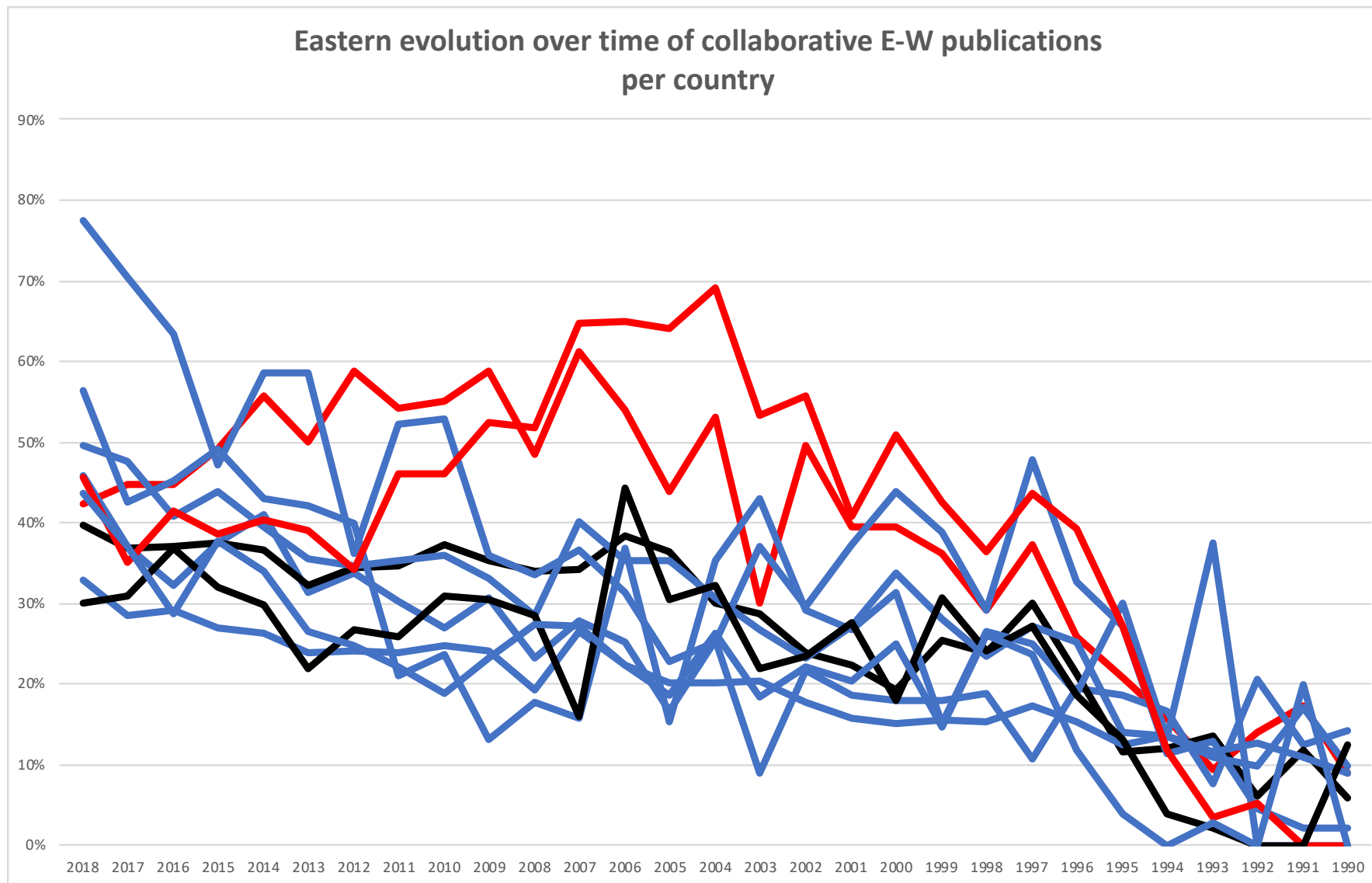




Observation 5: There is very little interest in Western Europe to collaborate with Eastern Europe



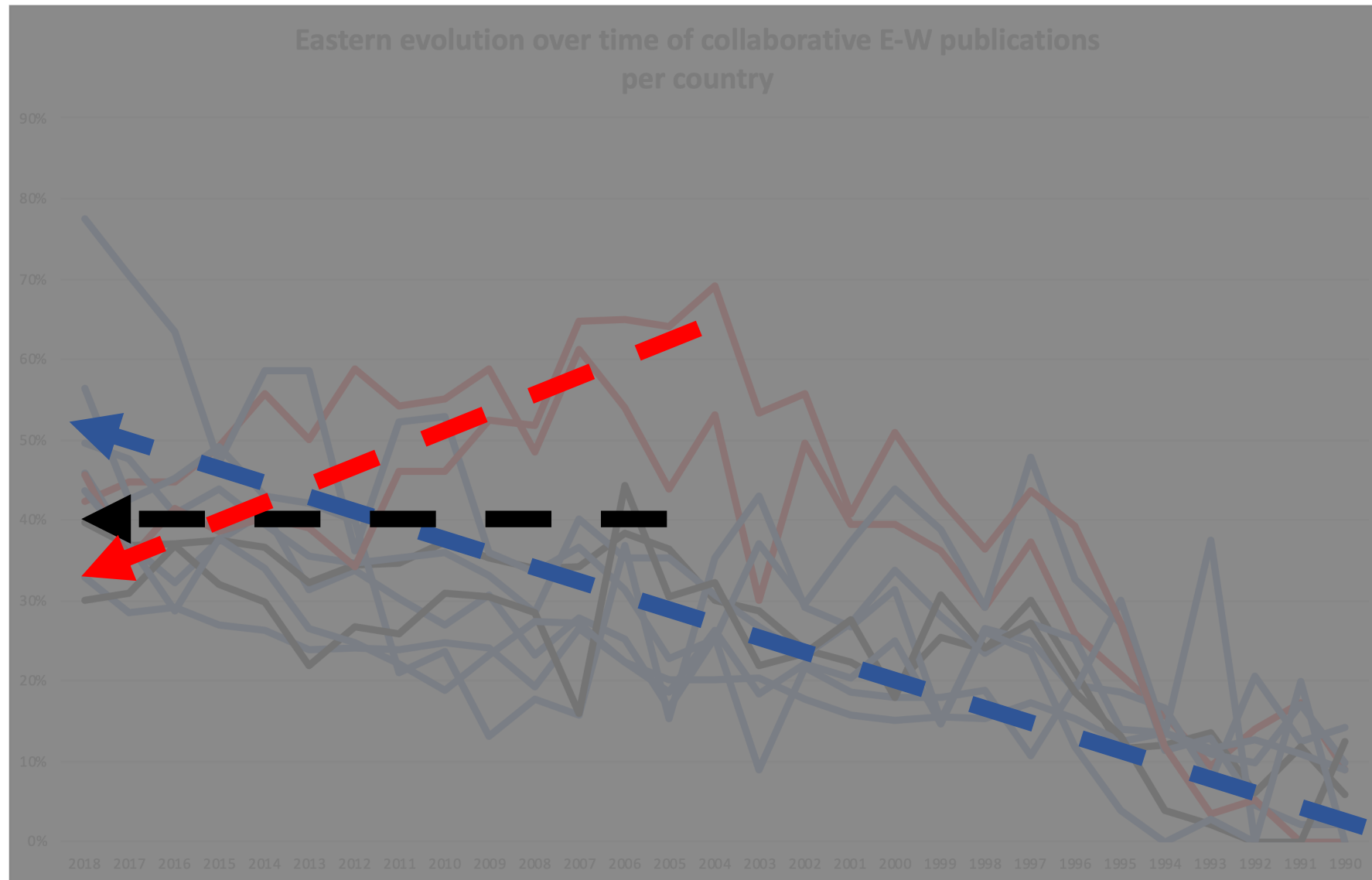
Observation 6: There is a huge interest in Eastern Europe to collaborate with Western Europe (average 6 times higher). One can say that the East is more truly European than the West.



**Constant increase over time = increase in collaboration between East and West = Eastern “scientific integration”**

**Recent stagnating = neither recent increase or decrease in collaboration between East and West**

**Recent decrease = decrease in collaboration between East and West = Eastern “scientific nationalism”**



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# Few preliminary conclusions for Earth and Planetary Sciences

- West is not fundamentally different in terms of number of publications and researchers per capita when compared with East. This is more valid for EU13 and somewhat less valid for remaining EU associated (or not) countries;
- This observation contrasts with remaining discrepancies of national investment in research, strategies, systems, organization, etc;
- There are some worrying trends in the collaboration across Europe, such as Eastern "scientific nationalism";
- **However, East is by far more collaborative across Europe than the West, with an average six times higher preference for collaborative research**

**Are these facts known or acknowledged?**

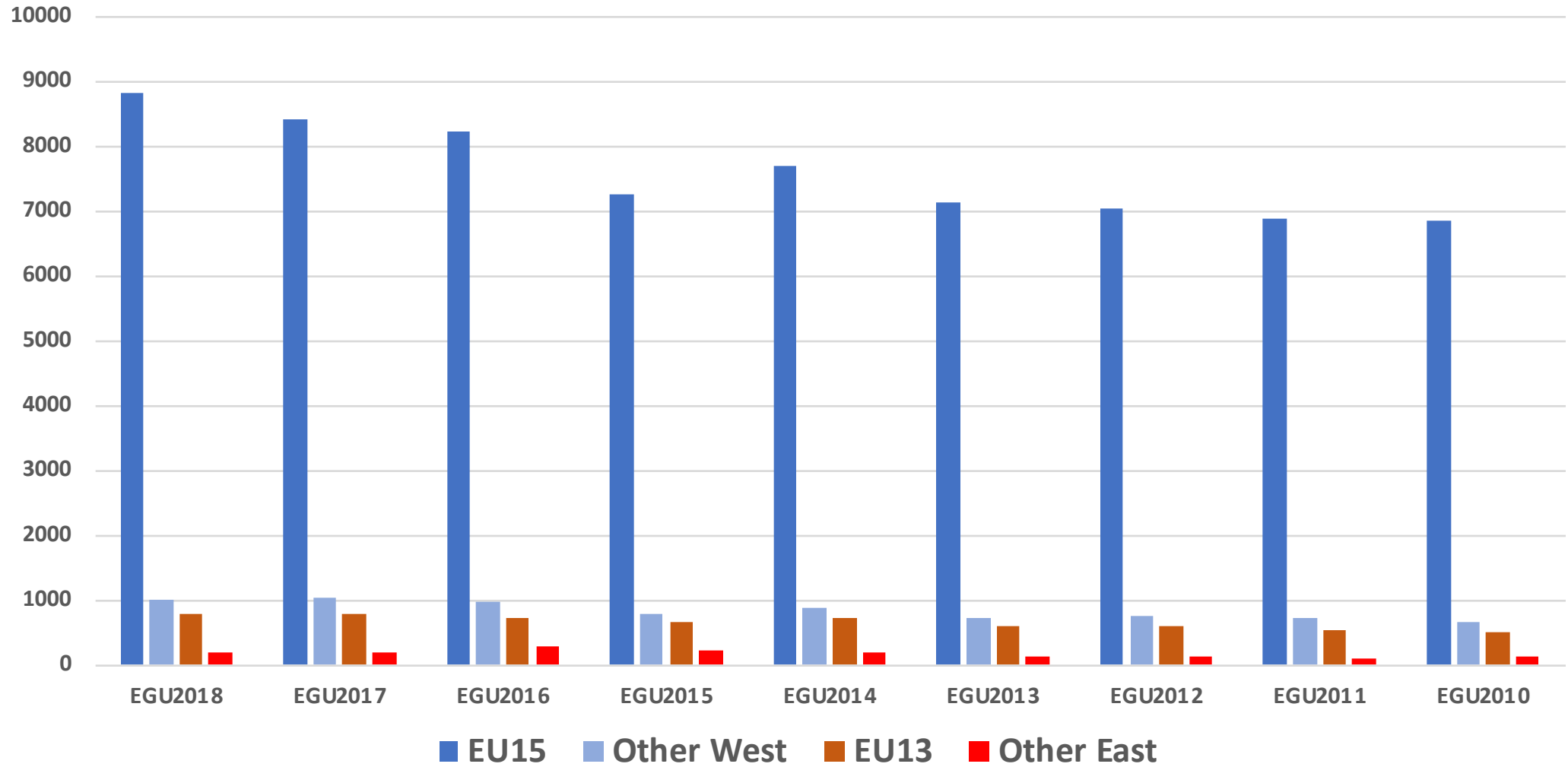
# European Geosciences Union

A quick look on EGU  
Updated 2020 perspective

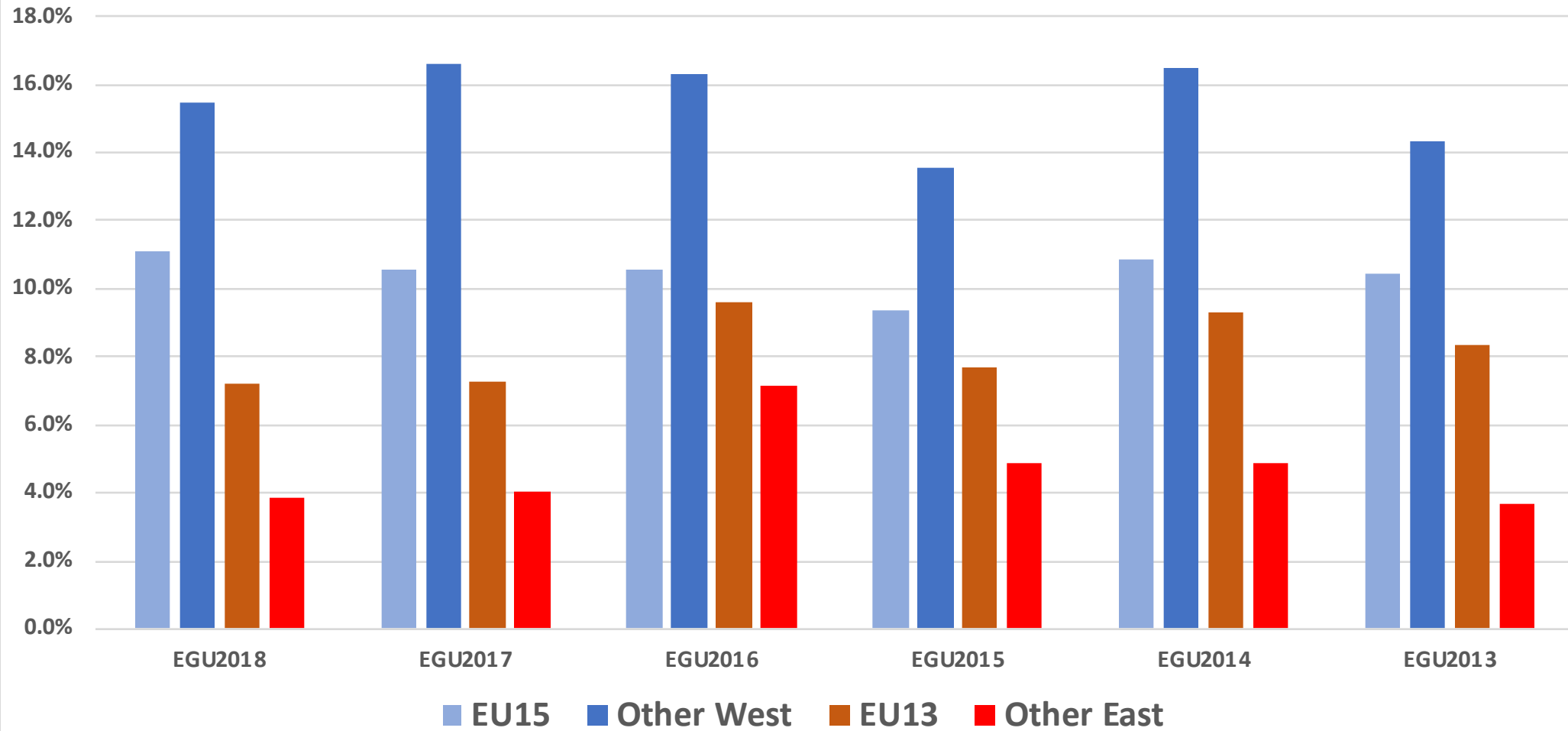
# European Geosciences Union

- We all feel that EGU is our main base organization that provide an outstanding networking environment.
- EGU provides a platform to be true European integrated researchers across national borders way beyond the framework of the European Union;
- We all benefit from extraordinary EGU leadership that has dedicated significant efforts for the distribution, integration and dissemination of Earth and Planetary Sciences in Europe and beyond;
- Fast growing activities across all divisions and journals rapidly expanding due to the dedicated work of our editorial colleagues;
- Everyone is integrated and benefiting from this effort?

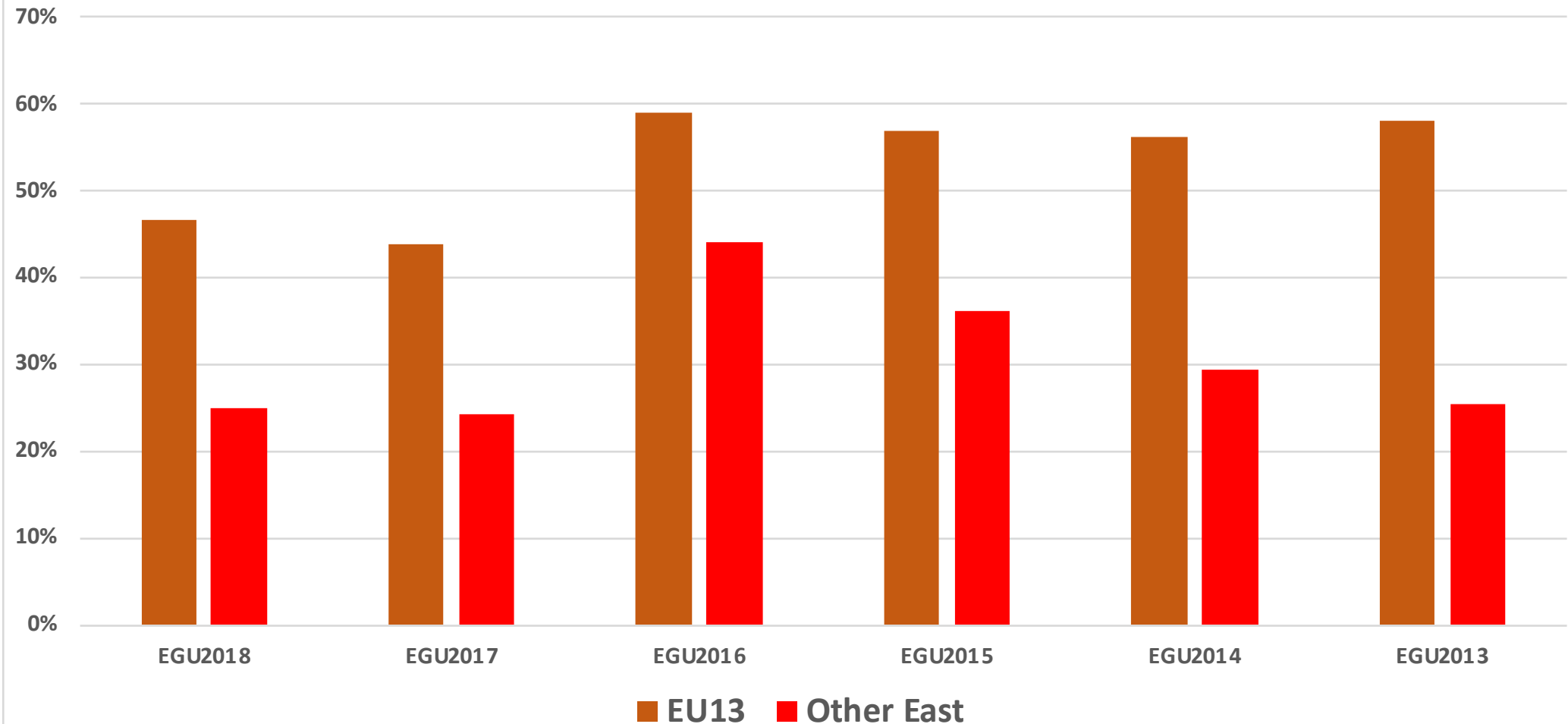
## Participation at European Geosciences Union General Assemblies



### Participation at European Geosciences Union General Assemblies normalized per the total number of publications authors

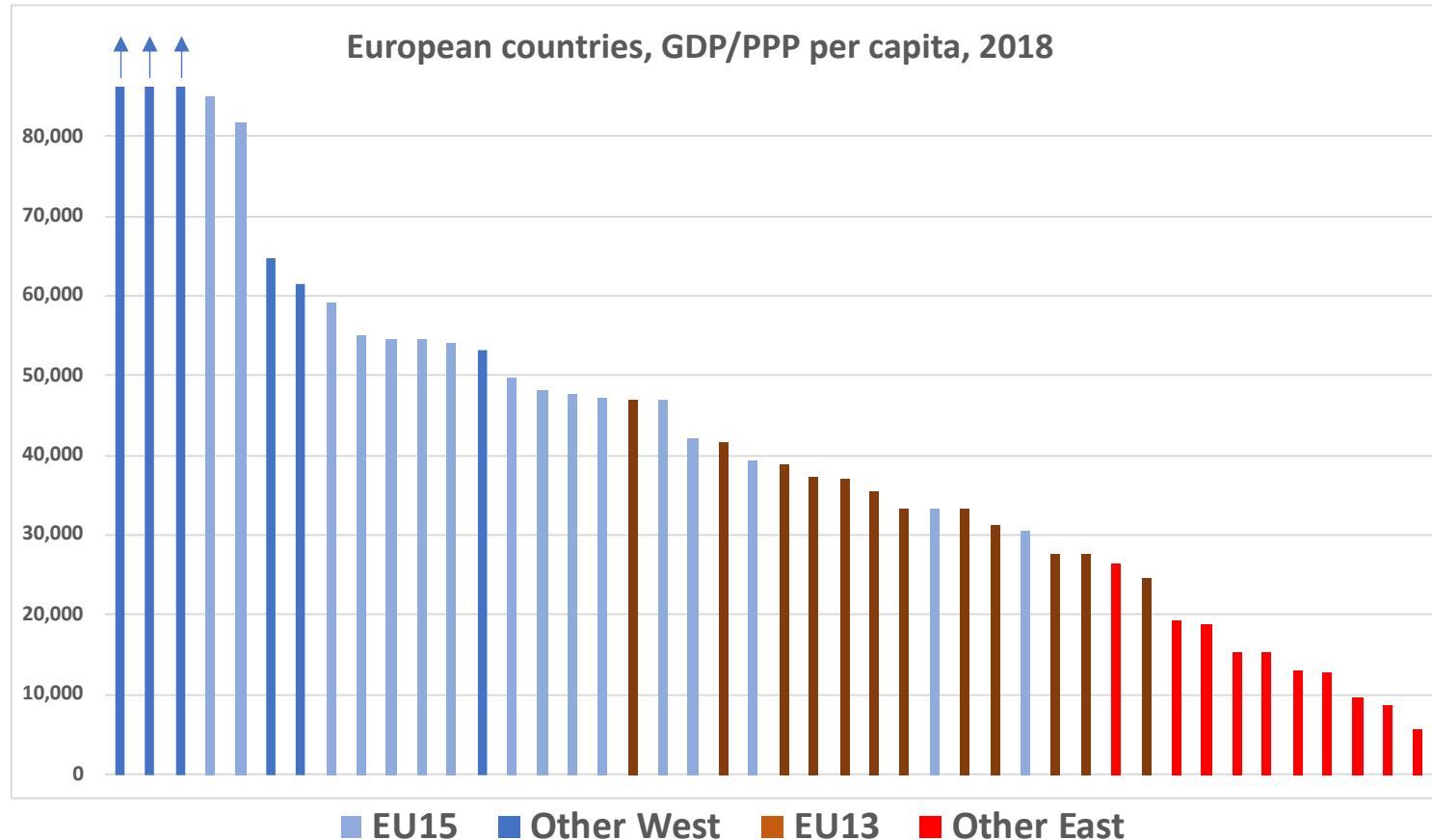


## Participation of the East at European Geosciences Union General Assemblies taking EU15 as a reference



From colleagues that should participate, only ~50% EU13 and ~25% Other East actually do participate.

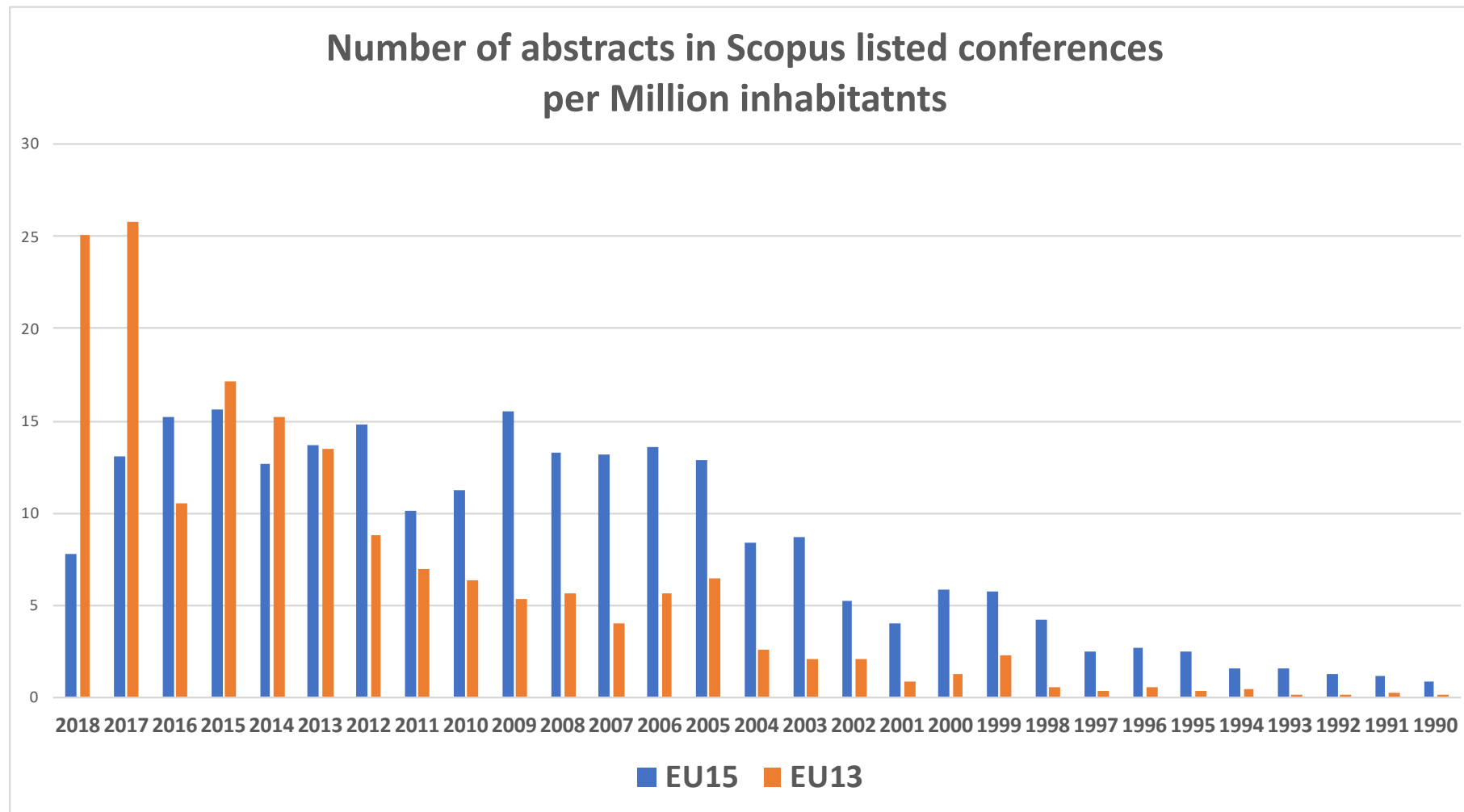
# Is EGU Assemblies participation a problem of funding?



Not that much anymore!

NOTE: take this very approximative, does not account for investment in research and investment in Earth and Planetary Sciences in various countries. Data in some countries is not available.

# East goes to conferences?

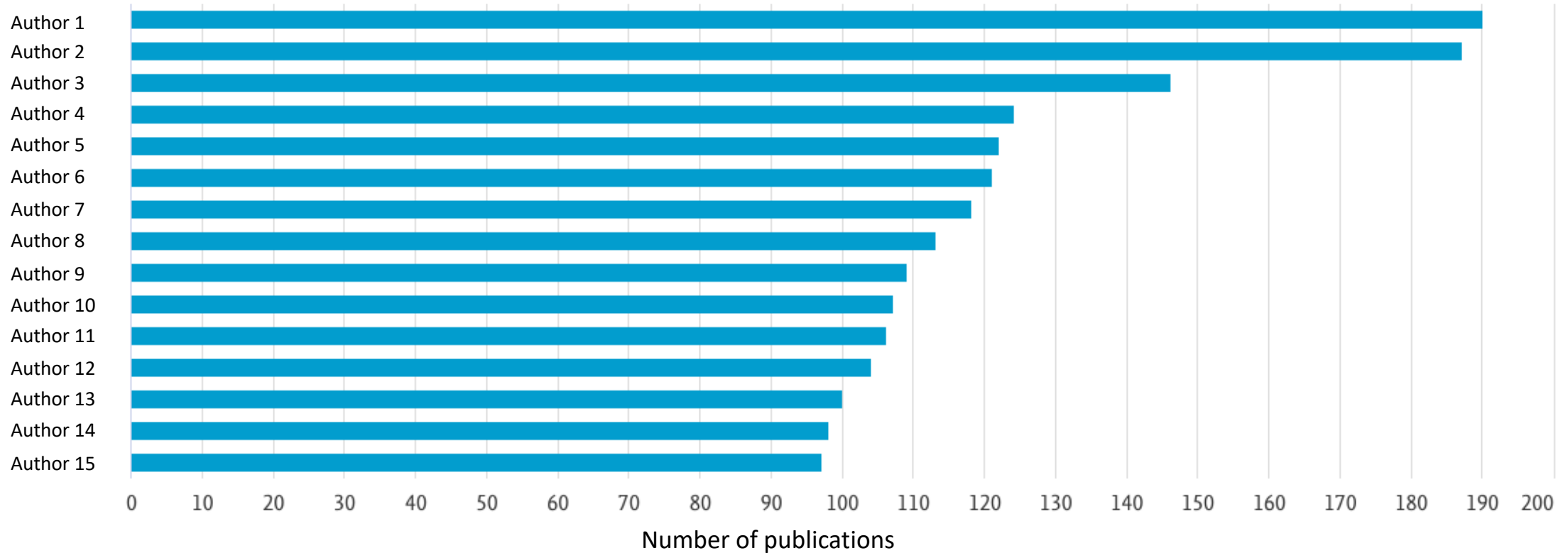


Yes, very much! Just EGU Assemblies are NOT preferred.

NOTE: Just few conferences are listed non-equally in Scopus. Relevant only in comparison and very approximative



# Productive research in the East in EPS?



**Sure, plenty of top researchers, one has to look around**

Note: This is an example of a search result of present number of publications of some most productive authors (Scival, 2019, names changed to anonymous)

## 2019 Statistics shows a shocking situation

The (unconscious?) bias: West selects West and looks after Western interests!

	EU15	Other West	EU13	Other East	Outside Europe	Total
EGU Executive Board	5	0	0	0	0	5
EGU Scientific Divisions Presidents	15	5	0	0	2	22
EGU Scientific Divisions Deputy Presidents	17	2	1	0	1	21
EGU Committee Chairs	6	2	0	0	0	8
EGU Journals (Executive) Editors	57	5	0	0	15	77
Total	100	14	1	0	18	133

The proportional representation should be ~15-30 (instead of 1) out of 133

The same conclusion holds for East's participation in EGU publications or EGU general assembly sessions tailored for the East's interests

# Possible causes

- The main cause is the little Western knowledge on the specificity of Eastern research;
- EU programmes and framework have radically improved the Eastern integration into a common European framework.
- By comparison, EU programmes have led to little change on the Western “integration” (in the sense of knowledge) towards their Eastern colleagues;
- For EGU, it means the more than 30% of Europe is not represented at the level of the European Geosciences Union;

# Data shows that:

- There is a STRONG (unconscious?) bias of "Western" with regard to "Eastern" European affiliated colleagues;
- Non-representation can lead to "scientific nationalism";
- The correct name of EGU at the moment is :

Western European Geosciences Union  
(.... and guests) 🤗

# The basis for a solution proposed in 2019

- EGU cannot solve or be responsible for the imbalances in Europe, but it could surely play a role in bridging the scientific research across the ENTIRE Europe!
- When Western colleagues are aware of this situation, they tend to involve Eastern passports with affiliations in Western Europe (like myself). They are helpful, but that is **not the solution**, because most of times they are out of touch with current realities in Eastern countries.
- Without an intentional plan, people are more likely to include only the usual suspects.

# Suggested solutions in 2019

- Develop an outreach/promotional plan that reaches Eastern research communities that are traditionally not targeted (by the EGU).
- Engage research leaders **affiliated to Eastern countries** and involve them in defining and implementing such a plan. They will promote and bring the real European representation.
- When choosing or nominating research collaborators or leaders, remember that you will find top researchers in the East. **You know them**: they are collaborating with you all the time. Therefore:
  1. *Consciously reduce the bias of always choosing Western colleagues;  
AND/OR*
  2. *Fight your own implicit or explicit bias towards Eastern colleagues.*

## The result in 2020 Statistics: NOTHING CHANGED AFTER ELECTIONS!

The (unconscious?) bias: West selects West and looks after Western interests!

	EU15	Other West	EU13	Other East	Outside Europe	Total
EGU Executive Board	5	0	0	0	0	5
EGU Scientific Divisions Presidents	17	4	1	0	1	23
EGU Scientific Divisions Deputy Presidents	19	1	0	0	1	21
EGU Committee Chairs	6	1	0	0	0	7
EGU Journals (Executive) Editors	57	5	0	0	15	77
Total	104	11	1	0	17	133

The proportional representation should be ~15-30 (instead of 1) out of 133

The same conclusion holds for East's participation in EGU publications or EGU general assembly sessions tailored for the East's interests

# A short discussion

- Noted by the EGU Working Group on Equality, Diversity and Inclusion (EDI), the EGU council acknowledged the lack of representation at the EGU level of Eastern European countries, resulting in a reduced interest from a large part of Europe. An internal discussion was well promoted and launched;
- However, one year later (and after fresh elections) there is no obvious change in representation or orientation of topics promoted by the EGU;
- Changing a bias takes longer than one year, but an organisation such as the EGU should be able to promote or show better realistic actions.



# Thank you for your attention

(remember our original disclaimer!)

# Your feedback is appreciated!