



# October 2023 update on the progress of translatE project

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We are glad to share with you our second project update of the year, coveraging our recent outcomes, media coverages, and some other news including a fully funded PhD opportunity. We would like to thank all the collaborators and supporters for our project, who have made all these possible!

 New paper: Amano T, Ramírez-Castañeda V, Berdejo-Espinola V, Borokini I, Chowdhury S, Golivets M, González-Trujillo JD, Montaño-Centellas F, Paudel K, White RL, Veríssimo D. The manifold costs of being a non-native English speaker in science. 2023. PLOS Biology.

We are thrilled to announce our new publication **"The manifold costs of being a non-native English speaker in science"** in PLOS Biology. Here, we surveyed 908 environmental scientists from eight countries (Bangladesh, Bolivia, Japan, Nepal, Nigeria, Spain, Ukraine and the UK) with different linguistic and economic backgrounds, and compared the amount of effort required by individual researchers to conduct a variety of scientific activities in English.

The survey revealed clear and substantial disadvantages for non-native English speakers (Figure 1). Compared to native English speakers, non-native English speakers need up to twice as much time to read and write papers and prepare presentations in English. Papers written by non-native English speakers are 2.5 times more likely to be rejected and 12.5 times more likely to receive a request for revision, simply due to the written English. Many of them also give up attending and presenting at international conferences because they are not confident communicating in English.

We also propose potential solutions that can be adopted by individuals, institutions, journals, funders, and conferences (Figure 2).

This is another product by an amazing team of coauthors. We would like to thank all the collaborators and even more importantly, everyone who participated in the survey (~ 1000 scientists from the eight countries) and shared their struggles and frustrations caused by language barriers, and stories of their efforts to overcome them.

Read the paper <u>here</u>, our <u>Conversation article</u>, and coverage by <u>Nature</u>, <u>Science</u> and <u>ABC</u>.

Alternative language abstracts and Figures 1 and 2 are also available in <u>Japanese</u>, <u>Nepali</u>, <u>Spanish</u>, and <u>Ukrainian</u>.



**Figure 1. Estimated disadvantages for non-native English speakers when conducting different scientific activities.** The height of hurdles indicates the relative length of time taken to read an English-language paper (Reading), to write a paper in English (Writing), and to prepare an oral presentation in English (Presentation), and the relative frequency of an English-language paper being rejected (Paper rejection) or requested to revise (Paper revision) due to English writing, for non-native English speakers (Non-native), compared to native English speakers (Native). The values are for non-native English speakers who have published only one English-language paper (higher value from moderate and low English proficiency nationalities), compared to the values for native English speakers.

	Paper reading	Paper writing   Publication	Dissemination	Conference participation
Supervisors Collaborators	<ul> <li>Acknowledge that non-native English speakers require more time to read articles in English</li> <li>Consider the appropriate use of Al tools</li> </ul>	Acknowledge that non-native English speakers require more time to write in English Provide English editing/find "buddles" to support non-native English speakers     Consider the appropriate use of AI tools	<ul> <li>Value, financially support, and make efforts to disseminate research in multiple languages</li> </ul>	<ul> <li>Provide English editing for the preparation of presentations in English</li> </ul>
Universities Institutions	<ul> <li>Provide training opportunities for English reading</li> <li>Incorporate materials in students' first language into education</li> </ul>	<ul> <li>Provide training opportunities for English writing</li> <li>Financially support English editing / translation (e.g., by establishing grant schemes)</li> </ul>	<ul> <li>Value, financially support, and make efforts to disseminate research in multiple languages</li> </ul>	<ul> <li>Financially support English editing / translation of presentations</li> </ul>
Journals	<ul> <li>Support and encourage publishing the translation of English papers (e.g., by granting a copyright release)</li> </ul>	<ul> <li>Develop guidelines (including double-blind review) to ensure decisions based solely on quality of science</li> <li>Establish a "buddy" system for supporting non-native English speakers</li> <li>Consider the appropriate use of Al tools</li> </ul>	<ul> <li>Promote/provide non-English abstracts of English papers</li> <li>Support and conduct dissemination in multiple languages (e.g., on social media)</li> </ul>	
Funders	<ul> <li>Fund the translation of books and papers for education</li> </ul>	<ul> <li>Establish grant schemes to cover English editing/translation services, especially for those from lower income regions and at an early career stage</li> </ul>	<ul> <li>Value and fund plans to disseminate outcomes in multiple languages</li> </ul>	<ul> <li>Establish grant schemes to cover English editing/translation of presentations</li> </ul>
Conferences			<ul> <li>Publish proceedings in multiple languages</li> </ul>	Establish a "buddy" system to support non-native English speakers     Promote multilingual presentations     Develop linguistically inclusive guidelines

Figure 2. Examples of potential solutions to reducing disadvantages for non-native English speakers in each type of scientific activities. Al, artificial intelligence.





 Media coverage: Preprint featured in Nature: Arenas-Castro H, Berdejo-Espinola V, Chowdhury S, Rodríguez-Contreras A, James A, Raja NB, Dunne EM, Bertolino S, Braga Emidio N, Derez CM, Drobniak SM, Fulton GR, Henao-Diaz LF, Kaur A, Kim CJS, Lagisz M, Medina I, Mikula P, Narayan VP, O'Bryan CJ, Oh RRY, Ekaterina Ovsyanikova, Pérez-Hämmerle KV, Pottier P, Powers JS, Rodriguez-Acevedo AJ, Rozak AH, Sena PHA, Sockhill NJ, Tedesco AM, Tiapa-Blanco F, Jo-Szu Tsai, Villarreal-Rosas J, Wadgymar SM, Yamamichi M, Amano T. Academic publishing requires linguistically inclusive policies.

Our preprint "<u>Academic publishing requires linguistically inclusive policies</u>" led by Henry Arenas-Castro, a previous member of the project, is <u>featured in *Nature*</u>. By analysing author guidelines from 736 journals in biological sciences and survey responses from the editors-inchief of 262 of these journals, the preprint showed that few journals are committed to overcoming language barriers in academic publishing (Figure 3).



**Figure 3. Linguistic policies of journals.** Linguistic policies as communicated in author guidelines (N=736, the upper half of the donut) and answered in our survey by editors-in-chief (N=262, the lower half) alongside the predictors that are associated either positively (upward arrow) or negatively (downward arrow) with the level of linguistic inclusiveness in policies.

**3.** Other news: Tatsuya's presentation at Helsinki Initiative webinar on multilingualism in scholarly communication.





Tatsuya's presentation on language barriers in conservation science, together with two other exciting presentations on multilingualism in science, at the <u>Helsinki Initiative</u> webinar on multilingualism in scholarly communication, is now <u>available here</u>.



Figure 4. Tatsuya's presentation at the Helsinki Initiative webinar on multilingualism in scholarly communication.

### 4. Other news: Violeta started her new position

Violeta has just started her new position at translatE as a Postdoctoral Research Fellow in multilingual evidence synthesis.

She will lead a part of our new ARC Discovery Project—Tapping into non-English-language science in tackling global challenges—through developing multilingual collaboration as well as text classifiers based on machine learning approaches. We would like to thank Violeta for her huge contribution to the project as a senior research technician over the past four years, and look forward to her new work!

## 5. Other news: Fully funded PhD project available

We are recruiting a candidate for a fully-funded PhD project "<u>Tapping into non-English-</u> language science in tackling global environmental challenges".

See the project description and preferred educational background below and more details from the link above. Contact Tatsuya (t.amano@uq.edu.au) if interested or have questions. Look forward to finding someone who is passionate about breaking language barriers in science!

## **Project description**

To date our work has revealed the critical importance of scientific evidence that is available only in languages other than English in efforts to address the biodiversity crisis. Our next





step is to understand the importance of non-English-language science in different subdisciplines within biodiversity conservation science, and in other disciplines related to global environmental challenges, and to explore effective ways of identifying important non-English-language science.

The objectives of this PhD project are fourfold.

- Understanding trends in non-English-language studies on different topics in biodiversity conservation.
- Conducting a multilingual systematic literature review on nature-based solutions for climate adaptation.
- Conducting a multilingual systematic literature review on the emergence of zoonotic diseases.
- Testing the validity of using machine translation in systematic literature searches.

As a whole, this PhD project will demonstrate the potential importance of non-Englishlanguage science in a wide range of environmental science disciplines, while providing a promising and valid way of making non-English-language science accessible to everyone around the world.

## Preferred educational background

Your application will be assessed on a competitive basis. We take into account your:

- previous academic record
- publication record
- honours and awards
- employment history.

A working knowledge of systematic literature review and/or evidence-based conservation would be of benefit to someone working on this project. You will demonstrate academic achievement in the field(s) of conservation science, evidence synthesis, and meta-science and the potential for scholastic success.

A background or knowledge of at least one non-English language where we identified a high number of conservation-related scientific papers (e.g., Chinese, French, German, Japanese, Portuguese, Spanish, etc) is highly desirable.

Thanks for reading our second project update of the year! We are glad to share our progress in our aim to break language barriers for sciences with you. Until next time!