

ESERA Early Career Researcher Travel Grant Report



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Host institution: Trabzon University (Trabzon Üniversitesi), Türkiye

Host researcher: **Assoc. Prof. Dr. Nazihan Ursavaş**

This report describes a research visit to Trabzon University in Turkey, conducted from September 5 to 30, 2025, with support from an ESERA Early Career Researcher Travel Grant. The visit aimed to strengthen my doctoral research on water literacy and water-related ecosystem services in science education and to support my professional development through international collaboration.

My research focuses on water literacy, ecosystem services, and education for sustainability. My empirical research site is the Rawa Pening Lake area in Indonesia. While my research so far has integrated literature-based and local-level research, I wanted to deepen my understanding by engaging with a more global educational and environmental context. The ESERA travel grant provided an opportunity for this through a visit that facilitated dialogue and the exchange of academic perspectives. Trabzon University provides a highly suitable research environment for this purpose. The expertise of Assoc. Prof. Dr. Nazihan Ursavaş in biology education, teacher education, and water-related educational initiatives, particularly her role as coordinator of the WET (Water Education Today) Project in Turkey, aligns well with my research interests.

During my visit, I participated in a series of consultative meetings with Dr. Ursavaş. These meetings focused on how her water education practices could be applied to teachers and teacher candidates in Turkey. Discussing my doctoral research in a diverse academic environment helped me critically reflect on how global sustainability education frameworks are interpreted and adapted within specific national and cultural contexts.



Figure 1. Hands-on Activity related to water education simulated during the Research Stay activity

The main activity of the visit was the collaborative refinement of instructional ideas and teaching materials related to water education. Together, we discussed lesson plans, learning media, and pedagogical approaches that connect scientific concepts to local water-related issues. This process supported the further development of my teaching materials and helped clarify how context-sensitive instructional design can enhance relevance in sustainability-oriented science education. With her, I simulated several hands-on water education activities and observed how they were implemented with teachers in Trabzon (Figure 1).



Figure 2. One of the science learning media at the Science Center, in the form of an optical simulation.

Another academic activity carried out during this visit was a visit to the science center in Trabzon city. Trabzon Özdemir Bayraktar Bilim Merkezi is the first and only science center in the Eastern Black Sea Region. This interactive educational center was established through the collaboration of TÜBİTAK, the Eastern Black Sea Development Agency, the Trabzon Metropolitan Municipality, and the T3 Foundation. Its main goal is to teach scientific methods to children and adolescents through hands-on experience, increase their interest in technology, and develop their talents through workshops in the fields of aviation, space, and mathematics.

The visit also included a field trip to Lake Uzungöl, which served as an important reference point for comparative reflection. Observing how environmental conservation, tourism, and local livelihoods are interconnected around the lake provided valuable insights into water-related ecosystem services as a socio-environmental phenomenon. These observations contributed to my ongoing research on lakes as contexts for place-based learning and provided a platform for my comparative reflections on Lake Rawa Pening in Indonesia. I saw how water has different meanings and values in different places. This means that culture and how local communities live shape how they view the existence and sustainability of water resources.

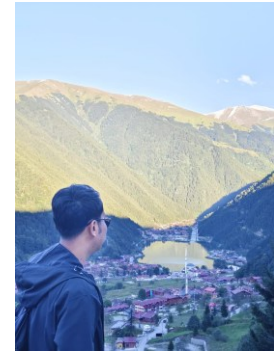


Figure 3. Field Visit to Lake Uzungöl



Figure 4. With colleagues from Recep Tayyip Erdogan University, Rize

In addition to the planned research activities, informal discussions with faculty members and students enriched the visit. Furthermore, these exchanges offered insights into how water and sustainability issues are addressed in Turkish teacher education and highlighted common challenges across different educational systems. Such interactions reinforced the value of dialogue and collaboration in advancing research on science education for sustainability.

Besides Trabzon University, I visited Karadeniz Teknik Üniversitesi, the oldest university in Trabzon. Of course, Dr. Ursavaş introduced her colleagues there. Even more, Dr. Ursavaş also graciously introduced her colleagues at Recep Tayyip Erdoğan University in Rize, where she previously taught. This has allowed me to develop broader connections and networks with academics in Turkey. It was truly beyond my expectations.

The visit clearly yielded several concrete and worthwhile outcomes. A series of lesson plans and teaching materials on water will be developed further in my doctoral research. In terms of professional development, the visit provided an important opportunity to reflect on my research trajectory as an early-career researcher. Engaging in broader academic dialogue beyond my home institution strengthened my ability to articulate my research focus, respond to critical feedback, and position my work within international science education research. The visit also deepened my engagement with the ESERA research community.

I am truly appreciative of ESERA's support through the Early Career Researcher Travel Grant. This funding was essential to making my visit possible, especially since my main funding sources do not cover international research stays. More than just financial help, this grant was a wonderful encouragement and a sign of recognition early in my doctoral journey. I will continue to acknowledge ESERA's support in future publications and conference presentations.