

## **We can not prevent natural disasters, but we can preserve urban biodiversity**

The concern about the sustainability of places we live in has been a burning issue for a while. We follow the news about natural disasters, climate crises, and biodiversity loss but we still do not have sustainable development education in many schools. By implementing this international collaboration we have two goals - to educate teens on how to become more sustainable by taking simple actions and to make a collaborative impact as a solution to biodiversity loss in cities and towns of Turkey, Portugal, and Japan.

Biodiversity is a major factor in building healthy sustainable communities. By conserving, restoring, and sustainably using biodiversity, we ensure increased resilience to communities in the face of disasters. (1) We applied an online survey on how sustainable Ankara, Osaka, and Pedome are to 144 residents.

Most of the Turkish students stated that we have little greenery and much pollution in Ankara.

Ari YRE Team headed to the 'Forest and Ecosystem Summit' on October 11th, 2022 to interview authorities.

"We depend on forests as our last defense against climate change. We also depend on forests for our livelihoods, for the health of our souls as our imagination of what nature should look like," said the Resident Representative of UNDP, Luisa Vinton.

"We must restore native species that would have once been found in the ecosystem. Planting native trees is quite an appealing solution to mitigate climate change," said Vice Chair of UNFF, İsmail Belen in his interview with the Turkish students.

### **Photo 1: Ari YRE Team interviews İsmail Belen at Forest and Ecosystem Summit in Ankara**



"This can help naturally remove carbon from the atmosphere, and improve biodiversity to repair damaged ecosystems. From a biodiversity point of view, planting local, native species is essential to creating a long-lasting forest," Belen said.

Ari YRE Team then collaborated with Çankaya University to plant 45 pine trees and organize workshops for primary students about native trees and the danger of invasive tree species in Ankara.

Portuguese survey participants replied that they planted native oak trees and ran regular beach clearance campaigns in Pedome.

**Photo 2: YRE teams take actions to battle biodiversity loss in Pedome, Ankara, and Osaka**



To take action further, all three schools hosted a biodiversity hunt on school campuses.

“Surprisingly, we could find even tiny insects, caterpillars, or spider webs,” said Ari student Bilge Uysal, “That is because our school campus is a zero-waste community.”

“Japan collaborates with Turkey on realizing SDGs and communicates the problems and solutions our communities are currently facing,” said Azusa Kitano, an English teacher in Osaka. “Students in Osaka identified air pollution, water resources, and biodiversity loss as main concerns and presented solutions on digital padlet.”

Kitano then hosted an open-door lesson for students and educators in Osaka.

**Photo 3: Tondabayashi High School students collaborate with Ari students on biodiversity problems in Osaka and Ankara**



“I was impressed to see that Turkey is very proactive in its approach to SDGs,” Kitano said. “Turkey, Japan, and Portugal, although far apart, share the same problems, so the world can collaborate more.”

Students from Portugal said that during virtual meetings they realized that the problem of biodiversity loss is common. However, local solutions might be different.

“In Portugal, we witnessed the loss of such species as snails, earthworms, and bees due to the use of insecticides and pesticides,” Vitoria Marques, a Science teacher in Pedome said.

"The disappearance of crickets, grasshoppers, and amphibians makes the situation worrying. It is already rare to see boxer urchins in rural areas because they are decreasing as an important bioindicator," Marques said.

"The solution is clearing up campaigns and building insect hotels to promote the increase of biodiversity in the area of school influence. It's good to see that more local communities are interested in becoming involved in the research and implementation of the solutions for the common good."

The alarming news about floods in Portugal, and hurricanes in Japan vanished when the Kahramanmaraş earthquake hit Turkey. Was there a connection between disasters and damaged ecosystems?

"Recent studies have proposed a causal link between rising sea-level during periods of warming climate, and increased frequency of volcanic eruptions and earthquakes," said Dr. Lorna Strachan, a senior lecturer in sedimentology at the University of Auckland. (2)

"Learning more about how our environment responds to a changing climate and sea-level rise allows us to understand how these hazards might impact us in the future, and how we might better prepare," says Ph.D. student Anthony Shorrock, who is part of a scientists team, led by Dr. Lorna Strachan from the University of Auckland, that investigates the link between long-term sea-level rise due to climate change and the frequency of volcanic eruptions and earthquakes.

YRE project members are determined to engage even more participants.

"We have a clear SDG#11, which says to substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, and resilience to disasters", Efe Aktas, an Ari Schools student said.

"If we take action under this goal we will build a safer and more sustainable world for people and prevent them from dying and being injured in the future."

"We've researched the flora, fruits, and veggies native to our area, and are planting seasonal vegetables in our school greenhouse. I am sure there is a lot every person can do to promote and preserve local biodiversity at home," Duru Toker, an Ari student said.

"I take five-minute showers and turn the water off while washing my hands, doing the dishes, or brushing my teeth. These are all easy ways to conserve water as biodiversity depends on abundant local fresh water," said Kitano.

"I am sure that renewable energy is the future of our country if we want to live in peace with nature," Mert, a Turkish student said on visiting Uşak suburbs.

Didem Atsan, the Vice Principal of Ari Schools said that she always checks the products and the companies she supports for eco-labels to ensure that her buying habits are not contributing to the destruction of habitat elsewhere.

YRE started a School Committee to coordinate international collaboration and wrote a petition letter to UN HPLF, which says:

" We notify you of our concerns about disasters, climate crises, biodiversity loss, and ESD in schools. Seeing devastated city ruins had risen our environmental concerns about the disposal of earthquake debris such as building materials, personal property, and sediment from landslides.

We understand our responsibility towards nature and humanity and believe in the power of small actions. We want to build safer and more sustainable communities and prevent people from dying and being injured in disasters. We strongly believe that education is the key to helping save lives."

## References:

- (1) <https://www.iucn.org/our-work/biodiversity>
- (2) [https://www.preventionweb.net/news/can-climate-change-cause-more-earthquakes-and-volcanic-eruptions#:~:text=%E2%80%9CRecent%20studies%20have%20proposed%20a,Auckland%20\(Morton%2C%202020\).](https://www.preventionweb.net/news/can-climate-change-cause-more-earthquakes-and-volcanic-eruptions#:~:text=%E2%80%9CRecent%20studies%20have%20proposed%20a,Auckland%20(Morton%2C%202020).)

## Dissemination:

### **National Outlet:**

<https://www.ariokullari.k12.tr/haberler/biyocesitliligin-korunmasina-agac-fidani-dikimiyle-farkindalik-olusturduk/>

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### **Interview with Hakan Yazıcıoğlu:**

<https://www.ariokullari.k12.tr/haberler/genc-sozculerimiz-cevrim-ici-roportajda-eylem-plani-onerilerini-paylasti/>

**Forest and Biodiversity Summit:** <https://www.ariokullari.k12.tr/haberler/genc-sozculerimiz-sordu-bm-orman-forumu-baskan-yardimcisi-yanitladi/>

### **International Outlet:**

#### **TATV**

Tondabayashi Junior High School: <https://tonko.ed.jp/topics/6296/>

Escola de Pedome: <https://aepedome.net/site/2022/12/17/eb-de-pedome-selecionada-para-participar-no-international-collaboration-3-o-ano-consecutivo/>